

Health & Science

New Books Preview

July 2024



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N.B. Please note prices and publication dates may be subject to change without prior notice. Late Addition titles are ones that missed the corresponding New Books Preview Month.

Support for ebook access issues

We are having some short-term difficulties with access to our new Elsevier eBooks+ platform (previously Student Consult and Expert Consult on Inkling) and to the online ancillaries accompanying Elsevier titles.

If end-user customers experience any issues, trade should send end-users directly to [Elsevier eBooks+ customer support](#) where there is live Q&A and links to customer support with individual customer help via phone, email and live chat.

eBooks+



Urgent Care Medicine Secrets, 2e

Edited by : **Robert P. Olympia**, MD, FAAP, Professor, Departments of Emergency Medicine & Pediatrics, Penn State College of Medicine, Assistant Director of Research, Department of Emergency Medicine, Attending Physician, Department of Emergency Medicine, Penn State Milton S. Hershey Medical Center/ Penn State Children's Hospital Department of Emergency Medicine, Hershey, Pennsylvania; **Rory O'Neill**, DO, Owner & Chief Operating Officer, All Better Care Urgent Care Centers and **Matthew L. Silvis**, MD, Associate Chief Medical Officer, Primary Care, Penn State Hershey, Program Director, Penn State Primary Care Sports Medicine Fellowship, Hershey, Professor, Departments of Family and Community Medicine & Orthopedics and Rehabilitation, Penn State Milton S. Hershey Medical Center

ISBN: 9780443107528
PREVIOUS ISBN: 9780323462150
PUB DATE: Jul 10, 2024
LIST PRICE: £38.99 / \$49.99 / €44.99
DISCOUNT: Textbook
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 410
ILLUSTRATIONS: 144
AUDIENCE: Family medicine residents; NPs, PAs
BIC CODES: MBPC
THEMA CLASSIFICATION: THEMAMBPC

Get the answers you need for successful patient care

A Volume in the *Secrets* Series

KEY FEATURES

- The **proven Secrets Series® format** gives you **the most return for your time** – succinct, easy to read, engaging, and highly effective.
- **Fully revised and updated throughout**, covering the full range of topics for understanding today's practice of adult and pediatric urgent care—essential information for physicians, nurse practitioners, and physician assistants.
- Provides an **evidence-based approach to medical and traumatic complaints presenting to urgent care centers**, focusing on presenting signs and symptoms, differential diagnosis, office management, and when to refer for higher level of care.
- **New chapters** on Head and Neck Trauma, Chest and Abdominal Trauma, Toxicology, Diagnostic Imaging, Obstetrical Complaints, and more.
- **Top 100 Secrets** and **Key Points boxes** provide a fast overview of the secrets you must know for success in practice and on exams.
- Clear **illustrations, figures, and flow diagrams** expedite reference and review.
- **Portable size** makes it easy to carry with you for quick reference or review anywhere, anytime.
- **An eBook version is included with purchase.** The eBook allows you to access all of the text, figures, and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud.

DESCRIPTION

For more than 30 years, the highly regarded Secrets Series® has provided students and practitioners in all areas of health care with **concise, focused, and engaging resources for quick reference and exam review.** *Urgent Care Medicine Secrets, 2nd Edition*, offers practical, up-to-date coverage of the full range of essential topics in this dynamic field. This highly regarded resource features the Secrets' **popular question-and-answer format** that also includes lists, tables, pearls, memory aids, and an easy-to-read style – making inquiry, reference, and review quick, easy, and enjoyable.



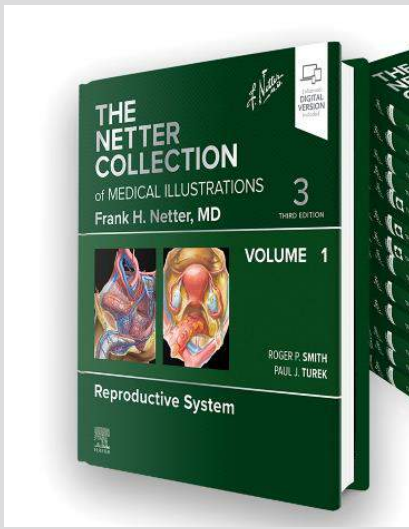
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Medical Education Clinical Student
<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





The Netter Collection of Medical Illustrations Complete Package, 3e

Frank H. Netter, MD

ISBN: 9780323881890

PREVIOUS ISBN: 9780702070358

PUB DATE: Jul 15, 2024

LIST PRICE: £711.99 / \$1099.00 / €826.99

DISCOUNT: Textbook

FORMAT: Hardback

TRIM:

PAGES: c. 3000

ILLUSTRATIONS: 2600 illustrations (2600 in full color)

AUDIENCE: Diverse worldwide market; both practitioners and trainees across medical and health professions; institutions For the series: medical schools with a systems-based curriculum (students, instructors, staff, library); clinical practitioners at all levels (especially nonspecialists and specialists interested in areas outside of their specialty); Netter fans and gift-buyers for Netter fans.

BIC CODES: MJ

THEMA CLASSIFICATION: THEMAMFG; THEMAMJ

An exquisite visual overview of every body system, as only Netter can provide

A Volume in the *Netter Green Book Collection Series*

KEY FEATURES

- Provides a **highly visual guide** to each major body system in 14 lavishly illustrated books, including **new and updated topics** throughout.
- Offers a **concise overview of complex information** by integrating anatomical and physiological concepts with clinical scenarios.
- Compiles **Dr. Frank H. Netter's master medical artistry**—an aesthetic tribute and source of inspiration for medical professionals for over half a century—along with new art in the Netter tradition for each of the major body systems, making this series a powerful and memorable tool for building foundational knowledge and educating patients or staff.
- **NEW! An eBook version is included with purchase.** The eBook allows you to access all of the text, figures, and references, with the ability to search, make notes and highlights, and have content read aloud.

DESCRIPTION

Offering a **concise, highly visual approach** to the basic science and clinical pathology of every body system, the nine updated volumes (fourteen books) in *The Netter Collection of Medical Illustrations, 3rd Edition*, (the CIBA "Green Books") contain unparalleled didactic illustrations reflecting the latest medical knowledge. Each volume has been revised under expert editorial leadership and **integrates core concepts of anatomy, physiology, and other basic sciences with common clinical correlates** across health, medical, and surgical disciplines. **Classic Netter art, updated and new illustrations, and modern imaging** continue to bring medical concepts to life and make this timeless work an essential resource for students, clinicians, and educators.



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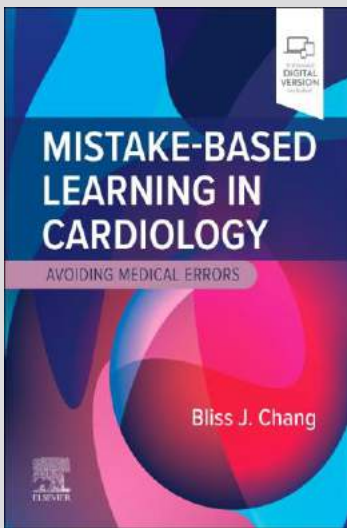


Medical Education Clinical Student -
Internal Med

<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Mistake-Based Learning in Cardiology

Avoiding Medical Errors

Bliss J. Chang, MD, Resident, Internal Medicine, New York Presbyterian Hospital, Columbia University, New York, NY and Bliss J. Chang, MD, Resident, Internal Medicine, New York Presbyterian Hospital, Columbia University, New York, NY

ISBN: 9780323931571
PUB DATE: Jul 10, 2024
LIST PRICE: £38.99 / \$49.99 / €44.99
DISCOUNT: Textbook
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 316
AUDIENCE: 3rd and 4th year medical students; year 1 residents
BIC CODES: MB, M, MQ
THEMA CLASSIFICATION: THEMAMB

Learn what is rarely taught in medicine: what **NOT** to do—and **why**

KEY FEATURES

- **Identifies the most common errors** associated with each disease and clinical action.
- **Dissects** each mistake into potential reasoning errors and **pinpoints** the major clinical principles related to the error.
- Helps you understand **why the mistake was made** and **how to avoid similar mistakes**, empowering you with pre-emptive thoughts that act as an **excellent first-line defense** against medical mistakes.
- **Supports** you with timely, point-of-care solutions if the medical error were to occur.
- Uses a **concise, templated format** for quick reference and review.
- Helps prepare you for clinical rotations and future practice, as well as for the medicine and cardiology board exams.
- **An eBook version is included with purchase.** The eBook allows you to access all of the text, figures and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud.

DESCRIPTION

Medical errors are one of the leading causes of death.

Deliver the highest quality care to your patients by recognizing and minimizing common mistakes.

Providing quality care free of clinical errors isn't just a matter of knowing what to do in any given situation—it's about actively knowing **what not to do**. *Mistake-Based Learning in Cardiology: Avoiding Medical Errors* provides healthcare professionals with a summary of the common ways to inadvertently cause medical errors for each major clinical action. This resource also provides **valuable information on why the mistake may be made and openly discusses medical errors** to facilitate growth, learning, and psychological safety in today's workplace.



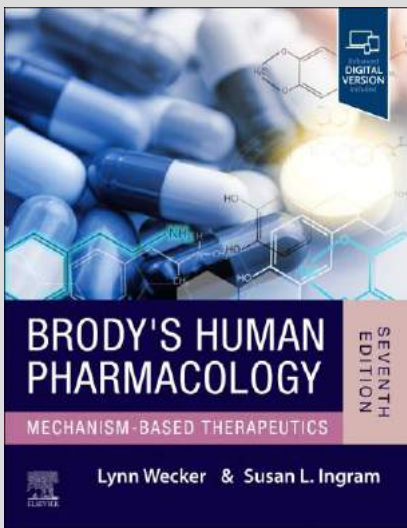
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Brody's Human Pharmacology, 7e

Edited by : **Lynn Wecker**, PhD, Distinguished University Professor, Departments of Psychiatry and Behavioral Medicine and Molecular Pharmacology and Physiology, Director, Laboratory of Neuropsychopharmacology, USF College of Medicine, Tampa, Florida and **Susan L. Ingram**, PhD, Professor of Neurological Surgery, School of Medicine, Oregon Health & Science University, Portland, Oregon

ISBN: 9780323846738
PREVIOUS ISBN: 9780323476522
PUB DATE: Apr 16, 2024
LIST PRICE: £58.99 / \$80.99 / €69.99
DISCOUNT: Textbook
FORMAT: Paperback
TRIM: 8.50w x 10.875h
PAGES: c. 786
AUDIENCE: medical students, junior doctors, pharmacology students
BIC CODES:
THEMA CLASSIFICATION:
THEMAMF

Guide for health professionals to establish a strong foundation in the fundamental and clinical aspects of pharmacology

KEY FEATURES

- Contains all the essential aspects of pharmacology – suitable for exam preparation
- Full color illustrations explain important processes and color-coded boxes enhance understanding
- Therapeutic overviews, clinical problems and trade names – everything you need to know
- Self-assessment questions and further reading to reinforce learning
- Current developments for each class of drugs and how information relates to students in the healthcare professions bring learning to life

DESCRIPTION

Brody's Human Pharmacology is a well-established and much-loved textbook that guides students of medicine, pharmacology and other health professions through pharmacology from both basic and clinical perspectives.

What can be a very difficult and complex topic is divided into easily digestible chapters, each of which is clearly structured from a therapeutic overview to mechanisms of action, relationships to clinical responses, pharmacokinetics, pharmacovigilance, new developments, and clinical relevance for all health professionals.



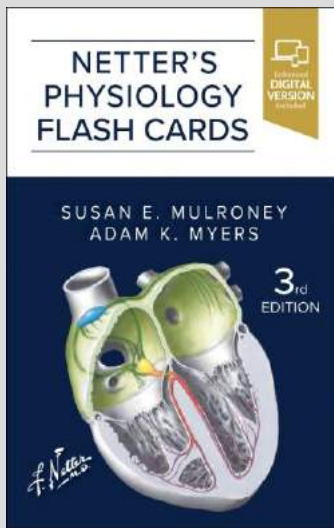
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Medical Education Basic Science
<https://virtuale.elsevier.com>, www.elsevier.com

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Netter's Physiology Flash Cards, 3e

Susan Mulroney, PhD, Department of Physiology, Georgetown University Medical Center, Washington, District of Columbia and **Adam Myers**, PhD, Department of Physiology and Biophysics, Georgetown University School of Medicine, Washington, District of Columbia

ISBN: 9780443113444
PREVIOUS ISBN: 9780323359542
PUB DATE: Jul 18, 2024
LIST PRICE: £37.99 / \$45.99 / €42.99
DISCOUNT: Textbook
FORMAT:
TRIM: 4.00w x 6.00h
PAGES: c. 450
AUDIENCE: Anyone using the companion Netter's Essential Physiology textbook of Netter's Physiology Coloring Book; Students of physiology (programs range from medicine to allied health)
BIC CODES: MFG
THEMA CLASSIFICATION: THEMAMFG

Still the *best* way to study and review physiology

A Volume in the *Netter Basic Science Series*

KEY FEATURES

- **More than 200 hole-punched cards**, organized by body system, provide concise, quick-access information on key physiology concepts for the perfect, portable review.
- **Superb illustrations** by Frank H. Netter, MD, and other esteemed medical illustrators, plus hidden labels or questions on one side of each card; the reverse side includes answers to hidden labels, questions, and a short reminder of key points on the topic.
- **Expanded pathophysiology coverage**, improved illustrations throughout, and conveniently cross-referenced to *Netter's Essential Physiology, 3rd Edition*—but also highly effective when used with any preferred physiology text.
- **Ideally suited for individual or group study** – and universally appreciated by undergraduate, nursing, allied health, and medical students!
- **NEW! An eBook version is included with purchase.** The eBook allows you to access all of the text, figures and references, with the ability to search, make notes and highlights, and have content read aloud.

DESCRIPTION

Flash cards are a **proven way to reinforce learning and improve recall** of complex information, and *Netter's Physiology Flash Cards* remain a **student favorite for a quick review and self-test** of human physiology essentials. The fully revised, 3rd Edition of this bestselling study tool features beautifully illustrated cards with images and questions on the front, answers and explanations on the reverse.



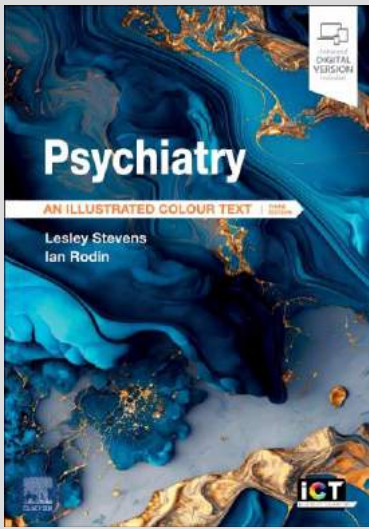
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Medical Education Physiology
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Psychiatry, 3e

An Illustrated Colour Text

Lesley Stevens, MB, BS, FRCPsych, Director of Community, Mental Health and Learning Disabilities, Isle of Wight NHS Trust, Isle of Wight, United Kingdom and **Ian Rodin**, BM, MRCPsych, Consultant Psychiatrist, Dorset Healthcare University NHS Foundation Trust, Dorset, United Kingdom

ISBN: 9780323935807

PREVIOUS ISBN: 9780702033964

PUB DATE: May 08, 2024

LIST PRICE: £31.99 / \$39.99 / €37.99

DISCOUNT: Textbook

FORMAT: Paperback

TRIM: [x] 210 x 297

PAGES: c. 110

AUDIENCE: Medical students

BIC CODES: MMH

THEMA CLASSIFICATION:

THEMAMKL

Essential concepts at a glance

A Volume in the *Illustrated Colour Text* Series

KEY FEATURES

Approx. 110 pages

DESCRIPTION

Approx. 110 pages



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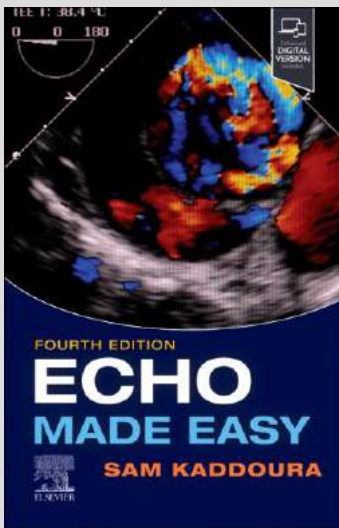


Medical Education UKNL Clinical
Students

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Also includes resources via:





Echo Made Easy, 4e

Sam Kaddoura, BSc(Hons), BMBCh(Oxon), PhD, DIC, FRCP, FESC, FACC, Consultant Cardiologist at Chelsea and Westminster Hospital and Royal Brompton Hospital, London; Honorary Consultant Cardiologist, Royal Hospital Chelsea, London and Honorary Senior Lecturer, Imperial College School of Medicine, London, UK

ISBN: 9780702083600

PREVIOUS ISBN: 9780702066566

PUB DATE: Jun 17, 2024

LIST PRICE: £32.99 / \$44.99 / €38.99

DISCOUNT: Textbook

FORMAT: Paperback

TRIM: is 5.25w x 8.5h / 216 x 140mm

PAGES: c. 276

BIC CODES: MJD, MMPH, MMPF

THEMA CLASSIFICATION:

THEMAMJD

Practical and clinically useful introduction to echocardiography

A Volume in the *Made Easy* Series

KEY FEATURES

- Covers latest advances in the field, including diseases of the heart and aorta, and therapies such as cardiac re-synchronisation therapy (CRT) and transcatheter aortic valve implantation (TAVI)
- Easy to read and navigate – organised in a logical way to take you through the topic and techniques
- High quality images throughout to illustrate concepts
- Provides practical clinical advice for non-experts
- Features 60 online questions including multiple-choice questions, cases and echo exams to test your knowledge
- An enhanced eBook version is included with purchase. The eBook allows you to access all the text, figures and references, with the ability to search, customise your content, make notes and highlights, and have content read aloud

DESCRIPTION

For those who are likely to request or perform an echocardiogram (echo), this highly accessible, simple guide will be of great use.

Written by consultant cardiologist Dr Sam Kaddoura, *Echo Made Easy* provides a full introduction for using echocardiography effectively. It covers the basic principles of the techniques used, diseases and therapies of the heart and aorta, and practical advice such as how to perform and report an echo.

Fully updated in its fourth edition, this highly-praised book is a great refresher for those experienced in echo as well as doctors in training and medical students, physicians, surgeons, general practitioners, physiologists, technicians, nurses and paramedics.



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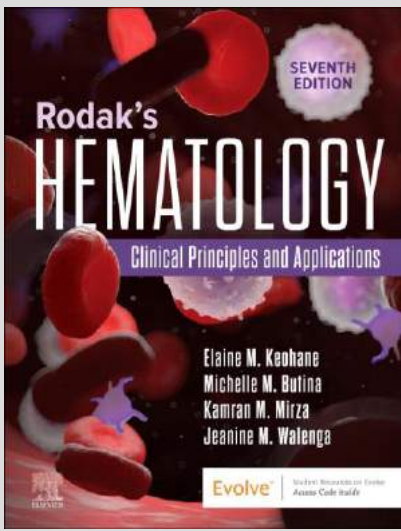


Medical Education UKNL PO -
Postgraduate

<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Rodak's Hematology, 7e

Clinical Principles and Applications

Edited by : **Elaine M. Keohane**, PhD, MLS(ASCP)SHCM, Professor Emeritus, Clinical Laboratory and Medical Imaging Sciences, School of Health Professions, Rutgers, The State University of New Jersey, Newark, New Jersey; **Michelle Montgomery Butina**, PhD, MLS(ASCP)CM, Associate Professor, Pathology, Anatomy, and Laboratory Medicine, Vice Chair, Biomedical Laboratory Diagnostics Program Director, Medical Laboratory Science, School of Medicine, West Virginia University, Morgantown, West Virginia; **Kamran M. Mirza**, MD, PhD, FCAP, FASCP, MLS(ASCP)CM, Clinical Professor of Pathology, Director, Division of Education Programs, Pathology, Michigan Medicine, Ann Arbor, Michigan and **Jeanine M. Walenga**, PhD, MLS(ASCP)HCM, Professor, Thoracic-Cardiovascular Surgery, Pathology, and Physiology, Co-Director, Hemostasis and Thrombosis Research Unit.

ISBN: 9780323936507
PREVIOUS ISBN: 9780323530453
PUB DATE: Jul 24, 2024
LIST PRICE: £105.99 / \$141.99 / €118.99
DISCOUNT: Textbook
FORMAT: Paperback
TRIM: 8.50w x 10.875h
PAGES: c. 914
BIC CODES: MJF

Prepare for a successful career in the hematology and hemostasis clinical laboratory

KEY FEATURES

- Content throughout the text reflects the **latest information on hematology and hemostasis**.
- **Hematology and hemostasis instruments** are described, compared, and contrasted.
- **More than 700 full-color illustrations and photomicrographs** make it easier to visualize hematology concepts and show what you'll encounter in the laboratory.
- **Instructions for laboratory procedures** include detailed figures and sources of errors.
- **Case studies in each chapter** provide opportunities to apply hematology concepts to real-life scenarios.
- **Hematology and hemostasis reference intervals** are listed on the inside front and back covers for quick reference.
- **Bulleted chapter summaries** make it easy for you to review important points.
- **Learning objectives** begin each chapter and indicate what you should achieve, with review questions appearing at the end.
- Appendices provide easy access to a list of **key formulas, abbreviations, and a detailed glossary** to complement learning.

DESCRIPTION

Make sure you are thoroughly prepared to work in a clinical laboratory. **Rodak's Hematology: Clinical Principles and Applications, 7th Edition** uses hundreds of full-color photomicrographs to help you understand the essentials of hematology and hemostasis. This new edition details the parts and functions of the cell; shows how to accurately identify cells; covers normal hematopoiesis through diseases of erythroid, myeloid, lymphoid, and megakaryocytic origins; and simplifies hemostasis and thrombosis concepts and disorders. Easy to follow and understand, this book also covers key topics, including working in the hematology and hemostasis laboratory; complementary testing areas such as flow cytometry, cytogenetics, and molecular diagnostics; and laboratory testing of blood cells and body fluid cells.



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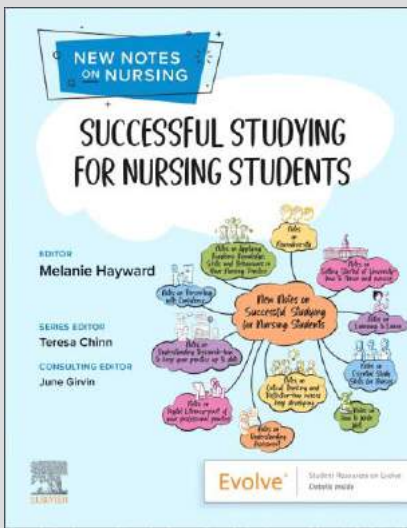


Health Professions II (HP2) Clinical Lab Science

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Also includes resources via:





Successful Studying for Nursing Students

Edited by : **Melanie Hayward**

ISBN: 9780443107115
PUB DATE: Aug 05, 2024
LIST PRICE: £28.99 / \$35.99 / €33.99
DISCOUNT: Textbook
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 0
AUDIENCE: Pre-registration students of nursing in all years and especially their first year.
BIC CODES: MQC
THEMA CLASSIFICATION: THEMAMQC

A Volume in the *New Notes on Nursing Series*

KEY FEATURES

- Case studies and storytelling approaches help link theory to practice
- Graphics, icons and mind maps enhance the text and aid visual learners
- Written to show how specific knowledge relates to wider concepts
- Learning is presented in small, self-contained sections for quick location and digestion
- Terms and concepts are explained using simple language
- Content is clearly mapped to latest NMC standards
- Accompanying videos provide additional insights and bring study to life

DESCRIPTION

Welcome to nursing! *Successful Studying for Nursing Students* is part of the *New Notes on Nursing* series, a series created especially for you, the nursing student at the start of your nursing journey. This book is an in-depth look at all the study skills you will need in your first year of being a student and beyond. From getting started at university to critical thinking, *Successful Studying for Nursing Students* is your essential guide.

The *New Notes on Nursing* series presents key topics in a highly accessible way, without making assumptions about your existing knowledge. Concise volumes cover critical and emerging areas, including cultural competence, digital professionalism, politics and activism, clinical placements and more. The aim is to make content engaging and easy to absorb, focussing just on what is essential for success on your course. Using a relaxed writing style and an all-new design, these unique books provide personal guidance from experts and students alike. So when you are in a hurry and need a study companion you can trust, reach for *New Notes on Nursing*!

RELATED TITLES

Elliott, *How to be a Successful Nursing Student* 1e 9780323881791



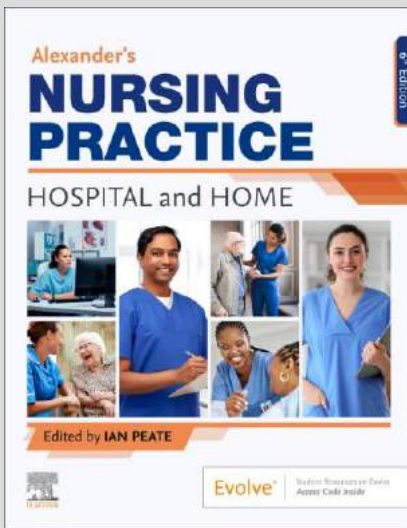
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Nursing UK Pre-Registration Edu
<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Alexander's Nursing Practice, 6e

Hospital and Home

Edited by : **Ian Peate**, OBE FRCN EN(G) RGN DipN (Lond) RNT BEd(Hons) MA(Lond) LLM,
Visiting Professor St Georges University of London and Kingston University London

ISBN: 9780443110221

PREVIOUS ISBN: 9780702062308

PUB DATE: Jul 11, 2024

LIST PRICE: £37.99 / \$47.99 / €43.99

DISCOUNT: Textbook

FORMAT: Paperback

TRIM: 8.50w x 10.875h

PAGES: c. 0

AUDIENCE: Pre registration senior nursing students (BSc and Sc level)

BIC CODES: MQC

THEMA CLASSIFICATION:

THEMAMQC

Essential reading for all aspiring Registered Nurses

KEY FEATURES

- Designed to help the reader navigate the demands of the latest NMC educational requirements
- Expert team of contributors led by renowned editor, Ian Peate OBE FRCN
- Fully updated with the latest evidence and trends - incorporates the latest practice guidelines, research findings and clinical standards relevant to the nursing field
- Addresses the role of nurses in primary care settings, general practice nursing responsibilities, chronic disease management, health screening and the delivery of integrated, patient-centred care within the UK primary care landscape
- Richly illustrated throughout to reinforce key concepts, demonstrate clinical procedures and engage students in active learning
- Includes a wide range of helpful learning features including case studies and critical thinking exercises – helps the reader to analyse complex situations, make evidence-based decisions and communicate effectively with patients and healthcare team members
- Pedagogical features to help students navigate the textbook, organise their learning and review key concepts efficiently
- Supplemented with online material including MCQs, image bank, critical thinking questions, extra online material (supplementary text), website figure references and extra online images

DESCRIPTION

Alexander's Nursing Practice is the most comprehensive textbook available for undergraduate nursing students today.

This resource will prepare students for their future role as healthcare professionals in a variety of settings. It covers all the basics of nursing, including care of patients with common disorders, core nursing issues like medicines management and infection prevention and control, and how to nurse specific patient groups. The sixth edition has been fully updated to incorporate the latest evidence, policies and registration requirements, and reflects the transformative changes currently occurring in healthcare policies, procedures and technologies.

With a host of features to enhance the learning and teaching experience, this book will make a significant contribution to preparing compassionate nurses who will deliver patient-centred, high quality and holistic care.



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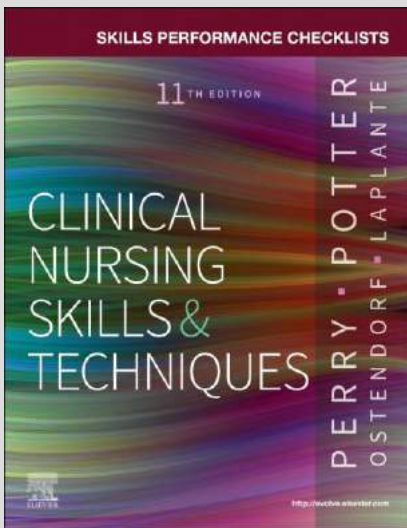


Nursing UK Pre-Registration Edu

<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Skills Performance Checklists for Clinical Nursing Skills & Techniques, 11e

Anne G. Perry, RN, MSN, EdD, FAAN, Professor Emerita, School of Nursing, Southern Illinois University, Edwardsville, Illinois; **Patricia A. Potter**, RN, PhD, FAAN, Director of Research, Patient Care Services, Barnes-Jewish Hospital, St. Louis, Missouri; **Wendy R. Ostendorf**, RN, MS, EdD, CNE, Contributing Faculty, Masters of Science in Nursing, Walden University, Minneapolis, Minnesota, USA and **Nancy Laplante**, PhD, RN, AHN-BC

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DISCOUNT: Textbook
FORMAT: Paperback
TRIM: 8.50w x 10.875h
PAGES: c. 0
BIC CODES: MQC
THEMA CLASSIFICATION:
THEMAMQC

Practical checklists make it easier to perform and document nursing skills and techniques

KEY FEATURES

- **More than 200 skills performance checklists** provide step-by-step instructions for each of the basic, intermediate, and advanced nursing skills in the *Clinical Nursing Skills & Techniques, 11th Edition* textbook.
- **Thorough and convenient documentation of skill mastery** makes it easier for instructors to evaluate your performance of each skill and for you to do self-evaluations.
- **Perforated pages** make it easy to submit forms to instructors during clinical skills lab.

DESCRIPTION

Track your performance of clinical nursing skills with this convenient resource! **Skills Performance Checklists** makes it easy to document and assess your proficiency in each of the more than 200 skills and procedures presented in the *Clinical Nursing Skills & Techniques, 11th Edition* text. Simply follow these checklists step by step, mark the completion of each step, then tear off the perforated pages to submit your work for evaluation. It's an excellent tool for building and assessing essential nursing skills!



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Nursing Nursing
<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Miller's Anesthesia Review, 4e

Edited by : **Lorraine M. Sdrales**, MD, Assistant Clinical Professor, Department of Anesthesia and Perioperative Care, University of California, San Francisco, School of Medicine, San Francisco, CA; Staff Anesthesiologist, Cedars-Sinai Medical Center, Los Angeles, CA and **Manuel Pardo**, MD, Professor of Anesthesia, University of California, San Francisco, San Francisco, California

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PREVIOUS ISBN: 9780323400541
PUB DATE: Jul 05, 2024
LIST PRICE: £84.99 / \$104.99 / €97.99
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 8.50w x 10.875h
PAGES: c. 558
AUDIENCE: Anesthesiology residents and fellows
BIC CODES: MMB
THEMA CLASSIFICATION: THEMAMKA

Make the most of your study time with this outstanding review tool

KEY FEATURES

- Uses an **efficient, bulleted outline format** for each chapter, summarizing core content and providing self-test questions and workbook tasks that test your conceptual knowledge and rationale.
- Brings you fully up to date with **revised questions throughout**, progressing logically from basic to advanced topics.
- Includes selected **figures, tables, and clinical pearls** boxes to emphasize key concepts.
- Features **new chapters** that reflect the breadth and scope of the practice of anesthesiology, including Clinician Well-Being, Perioperative Point-of-Care Ultrasound, Environmental Impact of Anesthesia, and Perioperative Medicine.
- Provides up-to-date coverage of **hot topics** such as anesthesia neurotoxicity, sleep medicine, and more.
- Corresponds to *Miller's Basics of Anesthesia* to help you make the most of your study time, learn more efficiently, and pursue further information if needed.
- Ideal for anesthesia providers of all levels, from new learners to more experienced practitioners.
- **An eBook version is included with purchase.** The eBook includes **interactive multiple-choice questions**, and allows you to access all of the text, figures, and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud. Any additional digital ancillary content may publish up to 6 weeks following the publication date.

DESCRIPTION

Covering all anesthesia topics from basic to advanced, *Miller's Anesthesia Review, 4th Edition*, is an ideal resource for **self-assessment and deepening your understanding** of this ever-expanding and challenging field. Edited by Drs. Lorraine M. Sdrales and Manuel C. Pardo, Jr., this authoritative guide provides **high-yield study points** in an easy-to-read, bulleted format, along with **hundreds of questions, answers, and rationales** to help you test your knowledge and identify knowledge gaps for further study. **Conveniently cross-referenced** to the latest edition of *Miller's Basics of Anesthesia*, it covers everything from physiologic and pharmacologic principles through anesthetic machine systems, anesthetic delivery in a variety of settings, and anesthesia administration for a full range of disease states.



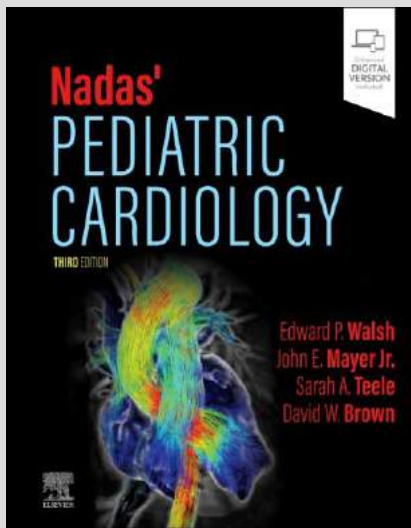
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Speciality Medicine Anesthesiology
<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Nadas' Pediatric Cardiology, 3e

Edited by : **Edward P. Walsh**, MD, Associate Chief of Cardiology for Clinical Affairs, Professor of Pediatrics, Harvard Medical School, Boston Children's Hospital Boston, Massachusetts; **John E. Mayer**, MD, Senior Associate, Department of Cardiac Surgery, Boston Children's Hospital, Professor of Surgery, Harvard Medical School Boston, Massachusetts; **Sarah A. Teele**, MD, Assistant Professor of Pediatrics, Harvard Medical School, Assistant in Cardiology, Department of Cardiology, Director, Fellowship in Cardiac Intensive Care, Boston, Massachusetts and **David W. Brown**, MD, Director of Fellowship Training Program Department of Cardiology, Boston Children's Hospital, Associate Professor of Pediatrics, Harvard Medical School, Boston, Massachusetts

ISBN: 9781455705993

PREVIOUS ISBN: 9781416023906

PUB DATE: Sep 01, 2018

LIST PRICE: £134.99 / \$166.99 /

€157.99

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 830

ILLUSTRATIONS: Approx. 250 illustrations (50 in full color)

AUDIENCE: Pediatric cardiologists and surgeons; fellows US: 3000 pediatric cardiologists, 300-400 pediatric cardiology surgeons, -200 new residents, fellows/year

BIC CODES: MJD

THEMA CLASSIFICATION:

THEMAMJD

Practical tools for diagnosis and management of the pediatric patient with heart disease

KEY FEATURES

- Provides comprehensive coverage of the foundational and practical aspects of care for complex heart problems in children, covering both therapy and surgery from basic information through complex, team-based clinical applications.
- Includes new chapters on cardiomyopathies, structural heart disease, interventional procedures, genetics, electrophysiology, and imaging.
- Discusses the latest information on diagnosis and treatment of congenital heart disease, including in the fetus and young adult.
- Covers current drugs used in pediatric heart conditions and surgical therapy.
- Shares the knowledge and expertise of editors and authors at Boston Children's Hospital, one of the world's largest and most highly rated pediatric cardiology and congenital heart surgery institutions, using a team-based approach.
- Covers the full spectrum of care, including anesthesia, the ICU, and nursing considerations.
- An eBook version is included with purchase. The eBook allows you to access all of the text, figures and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud. Additional digital ancillary content may publish up to 6 weeks following the publication date.

DESCRIPTION

In recent years, the field of pediatric cardiology has undergone rapid change, resulting in earlier diagnoses and improved long-term outcomes for many patients. Nadas' Pediatric Cardiology, 3rd Edition, offers an easy-to-understand, practical, and team-based approach to this complex field, addressing the current needs of pediatric cardiologists, surgeons, fellows, and other members of the pediatric cardiology team. It thoroughly covers all diagnostic and management aspects of both acquired and congenital heart disease, providing a strong foundation and an actionable approach to care of the pediatric cardiology patient and family.



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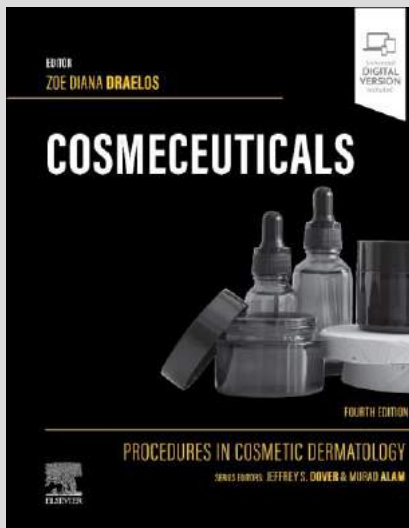


Speciality Medicine Cardiology

<https://virtuale.elsevier.com>, www.elsevier.com

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Cosmeceuticals, 4e

Procedures in Cosmetic Dermatology Series

Zoe Diana Draelos, MD, Clinical Associate Professor, Department of Dermatology, Wake Forest University School of Medicine, Winston-Salem, NC, USA; President, Dermatology Consulting Services, High Point, NC, USA; **Jeffrey S. Dover**, MD, FRCPC, FRCP, Director, SkinCare Physicians, Chestnut Hill, Massachusetts; Associate Clinical Professor of Dermatology at Yale University School of Medicine, and Adjunct Associate Professor of Dermatology at Brown Medical School, Providence, Rhode Island; **Murad Alam**, MD, MSCI, MBA, Professor and Vice Chair, Department of Dermatology and Professor, Departments of Surgery, Otolaryngology, and Medical Social Sciences, Northwestern University Feinberg School of Medicine, Chicago, IL

ISBN: 9780443118081
PREVIOUS ISBN: 9780323298698
PUB DATE: Jul 01, 2024
LIST PRICE: £120.99 / \$149.99 / €141.99
DISCOUNT: Reference
FORMAT: Hardback
TRIM: 7.50w x 9.25h
PAGES: c. 272
AUDIENCE: Dermatology
BIC CODES: MJK
THEMA CLASSIFICATION: THEMAMJK

Improve your knowledge of cosmeceuticals and treat patients with confidence

A Volume in the *Procedures in Cosmetic Dermatology Series*

KEY FEATURES

- Guides you on **how to advise patients** regarding normal skincare routines, including new categories of cosmeceuticals.
- Helps you **expand your repertoire and increase your knowledge** with expert content on hyaluronic acid, hydrocolloid patches, antioxidants, retinoids, stem cells, growth factor cosmeceuticals, oral collagens, peptides, clean beauty, sunscreens, cleansers, oral supplements, platelet rich plasma (PRP), and more.
- Includes **eight new chapters** on exosomes, cannabinoids, circadian rhythm cosmeceuticals, autologous growth factors, hair growth cosmeceuticals, nutraceuticals, and more.
- Includes **49 all-new videos** in which Dr. Draelos answers reader questions such as: Do you need both hyaluronic acid and a moisturizer to optimize the skin barrier? When should you start anti-aging interventions? Does topical PRP work? Are mineral sunscreens better than chemical sunscreens? What are your favorite products to incorporate into every skin care routine, and what is the order in which to apply them?

DESCRIPTION

Stay on top of more than "just the basics" concerning cosmetics and skin care and deliver the state-of-the-art expertise your patients are looking for. *Procedures in Cosmetic Dermatology: Cosmeceuticals, 4th Edition*, improves your knowledge and expertise with the cutting-edge cosmeceuticals that produce the superior results your patients expect. Dr. Zoe Diana Draelos, along with **hand-selected experts in each individual area**, provides expert guidance on all of today's principal cosmeceuticals, including how to evaluate their efficacy and how to advise patients on their use. A **substantial, all-new video library** from Dr. Draelos answers frequently asked questions and dispels commonly held myths.



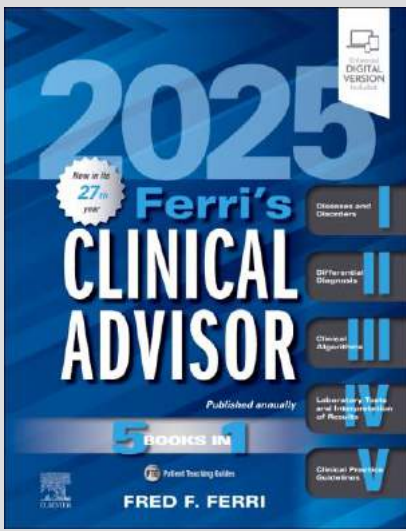
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Speciality Medicine Dermatology
<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Ferri's Clinical Advisor 2025

5 Books in 1

Edited by : **Fred F. Ferri, MD.,** Clinical Professor, The Warren Alpert Medical School, Brown University, Providence, Rhode Island

ISBN: 9780443117244
PREVIOUS ISBN: 9780323755764
PUB DATE: Jul 13, 2024
LIST PRICE: £80.99 / \$99.99 / €92.99
DISCOUNT: Reference
FORMAT: Hardback
TRIM: 8.50w x 10.875h
PAGES: c. 1860
ILLUSTRATIONS: 2630 images
AUDIENCE: Family Physicians and Primary Care Practitioners
BIC CODES: MBPC
THEMA CLASSIFICATION: THEMAMBPC

Fast answers to facilitate your daily diagnosis and treatment decisions

KEY FEATURES

- Contains significant updates throughout all 5 sections, covering **all aspects of diagnosis and treatment.**
- Features **26 all-new topics** including eosinophilic gastroenteritis (EGE), retroperitoneal abscess, adenomyosis, periprosthetic joint infection, tonic pupil, rectal adenocarcinoma, nightmares and dream disturbances, avoidance/restrictive food intake disorder (ARFID), hypokalemia, cardiac implantable electronic device infection, heparin resistance, and hypertrophic pyloric stenosis, among others.
- Includes **useful appendices** covering palliative care, preoperative evaluation, nutrition, poison management, commonly used herbal products in integrated medicine, and much more.
- Offers online access to newly revised and updated **Patient Teaching Guides** in both English and Spanish.
- **An eBook version is included with purchase.** The eBook allows you to access all of the text, figures and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud. Any additional digital ancillary content may publish up to 6 weeks following the publication date.

DESCRIPTION

For more than 25 years, *Ferri's Clinical Advisor* has provided immediate answers on the myriad medical diseases and disorders you're likely to encounter in a unique, easy-to-use format. A bestselling title year after year, this popular "**5 books in 1**" reference delivers vast amounts of information in a user-friendly manner. It is **updated annually** to provide current and clinically relevant answers on over 1,000 common medical conditions, including **diseases and disorders, differential diagnoses, clinical algorithms, laboratory tests, and clinical practice guidelines**—all carefully reviewed by experts in key clinical fields. Extensive algorithms, along with hundreds of high-quality photographs, illustrations, diagrams, and tables, ensure that you stay current with today's medical practice.



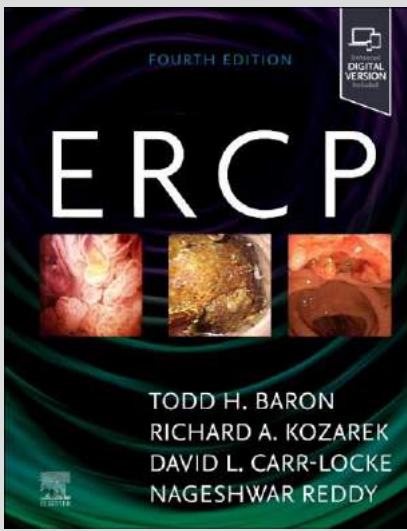
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Speciality Medicine Family Medicine
<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





ERCP, 4e

Edited by : **Todd H. Baron**, MD, Director of Advanced Therapeutic Endoscopy University of North Carolina; **David L Carr-Locke**, Clinical Director, The Center for Advanced Digestive Care, Professor, Weill Cornell Medicine, New York Presbyterian Hospital; **Richard A. Kozarek**, MD, FASGE, Executive Director, Digestive Disease Institute, Virginia Mason Medical Center; Clinical Professor of Medicine, University of Washington, Seattle, Washington and **Nageshwar Reddy**, MD, DM, FRCP, FACP, MWGO, MASGE, FAGA, FJGES, Chairman, Asian Institute of Gastroenterology and AIG Hospitals, Gachibowli, Hyderabad, India

ISBN: 9780323933629

PREVIOUS ISBN: 9780323481090

PUB DATE: Jul 23, 2024

LIST PRICE: £212.99 / \$262.99 / €248.99

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 622

AUDIENCE: GI fellows, practitioners

BIC CODES: MJH

THEMA CLASSIFICATION:

THEMAMJH

Master the use of this challenging and important tool in the diagnosis and treatment of pancreaticobiliary disorders

KEY FEATURES

- Provides **detailed, full-color illustrations** and **in-depth instructions** for performing all procedures.
- Depicts each procedure in **dozens of step-by-step videos** that clearly show ERCP techniques and imaging interpretation, including many new or recently improved procedures.
- Covers **recent advancements** in balloon assisted endoscopy, and provides guidance on performing ERCP on patients with surgically altered anatomy.
- Includes **new chapters** on endoscopic disinfection to address antibiotic resistant bacterial infections traced back to duodenoscopes; the environmental implications of ERCP; and magnetic biliary anastomosis.
- Contains **clear therapeutic guidelines** that help you determine when and when not to perform ERCP.
- **An eBook version is included with purchase.** The eBook allows you to access all of the text, figures, and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud. Any additional digital ancillary content may publish up to 6 weeks following the publication date.

DESCRIPTION

Recent years have brought major shifts in the way endoscopic retrograde cholangiopancreatography is used in everyday practice, including the incorporation of endoscopic ultrasound (EUS) techniques with ERCP. The 4th Edition of this practical reference helps you make the most of today's ERCP in your practice, with **authoritative, highly illustrated guidance** on every aspect of this complex tool, including coverage of **the latest techniques both in print and on video.**



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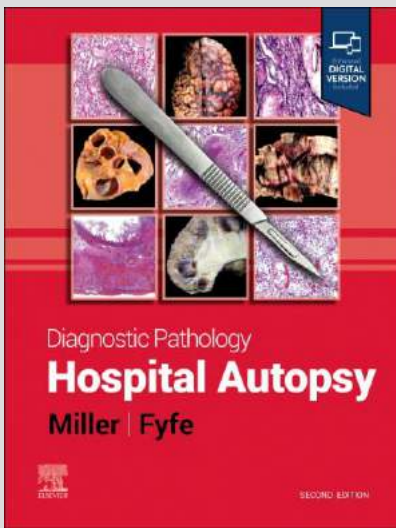


Speciality Medicine Gastro

<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Diagnostic Pathology: Hospital Autopsy, 2e

Dylan V. Miller, MD, Dylan V. Miller, MD Professor (Clinical) Department of Pathology University of Utah School of Medicine Director of Electron Microscopy and Immunostains Intermountain Central Laboratory Salt Lake City, Utah and **Billie S. Fyfe, MD**, Professor of Pathology, Rutgers Robert Wood Johnson Medical School, New Brunswick, New Jersey

ISBN: 9780443235023
PREVIOUS ISBN: 9780323376761
PUB DATE: Jul 29, 2024
LIST PRICE: £212.99 / \$262.99 / €243.99
DISCOUNT: Reference
FORMAT: Hardback
TRIM: 8.50w x 10.875h
PAGES: c. 426
ILLUSTRATIONS: Approx. 1330 illustrations (1330 in full color)
AUDIENCE: General pathologists at all levels of experience
BIC CODES: MMF
THEMA CLASSIFICATION: THEMAMKF

Expert, up-to-date coverage of hospital autopsy in a visually stunning, easy-to-read format

A Volume in the *Diagnostic Pathology Series*

KEY FEATURES

- Features **complete coverage of every aspect of autopsy practice**—including clinical presentation with chart review, technical and diagnostic aspects of autopsy performance, and reporting
- Presents classic autopsy techniques while also emphasizing the role of **molecular studies and other laboratory and ancillary tests** not commonly thought of during autopsy practice
- Contains **new chapters** on emerging pathogens and medical entities (deaths from COVID-19 or vaccine complications, multisystem inflammatory disorders in children, adenoviral hepatitis in children, and more), toxicity/pathology associated with new drug therapies (CAR-T, mRNA vaccine-related immune events, etc.), and new cardiac and other medical devices
- Features **new or updated content** on morgue/autopsy suite maintenance, enhanced biosafety techniques, the role of the autopsy practitioner in a pandemic setting, and more
- Provides important clinical and diagnostic information through **more than 1,100 clinical and gross pathology photographs**, histologic images, full-color illustrations, and radiologic images

DESCRIPTION

This expert volume in the *Diagnostic Pathology* series is an **excellent resource for practitioners at all levels of experience and training**. Covering all aspects of hospital autopsy in the way it is practiced clinically, this volume incorporates the most up-to-date scientific and technical knowledge to provide a **comprehensive overview of all key issues** relevant to today's practice, helping pathologists accurately determine the cause and mechanism of in-hospital death. Richly illustrated and easy to use, *Diagnostic Pathology: Hospital Autopsy*, second edition, is a **visually stunning, one-stop resource** for every practicing pathologist, resident, student, or fellow as an ideal day-to-day reference or as a reliable training resource.



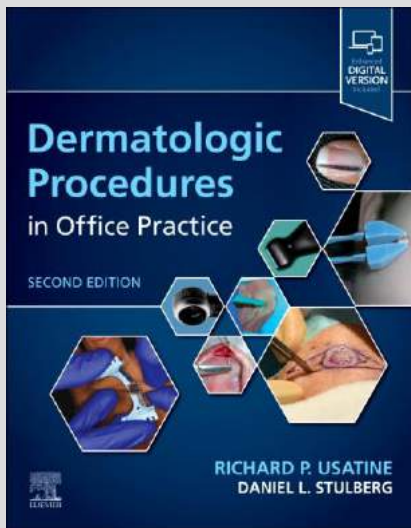
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Amirsys General Amirsys 2
<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Dermatologic Procedures in Office Practice, 2e

Edited by : **Richard P. Usatine**, MD, Professor of Family and Community Medicine, Professor of Dermatology and Medicine, Assistant Director, Medical Humanities Education University of Texas Health Science Center at San Antonio; Medical Director, Skin Clinic, University Health System, San Antonio, TX. and **Daniel L. Stulberg**, MD, Associate Professor, Department of Family and Community Medicine, University of New Mexico, Albuquerque, New Mexico.

ISBN: 9780323930628
PREVIOUS ISBN: 9781437705805
PUB DATE: Jul 12, 2024
LIST PRICE: £84.99 / \$104.99 / €99.99
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 544
ILLUSTRATIONS: Approx. 800 illustrations (800 in full color)
AUDIENCE: Family Medicine
BIC CODES: MBPC
THEMA CLASSIFICATION: THEMAMBPC

Step-by-step, highly visual guidance on the dermatologic procedures you can perform in your office

KEY FEATURES

- Covers in-office dermatologic procedures **focused on today's primary care practice**.
- Uses a **concise, step-by-step, bulleted format**, including set-up, complication avoidance, pearls and pitfalls, and recovery for each procedure.
- Features an exclusive online library of **more than 100 videos**, as well as **procedural images and patient photographs**, photographs of devices and instruments, diagrams, and medical illustrations throughout the text from expert clinicians.
- Contains **new chapters** on Biopsies and Excisions in Challenging Locations (face, ears, nose, genital areas) and Dermoscopy of Other Lesions in General Dermatology.
- Includes **handy appendices** with sample consent forms, patient education handouts, and a table recommending when to use various procedures based on the diagnosis.
- **An eBook version is included with purchase**. The eBook allows you to access all the text, photographs, figures, and references with the ability to search, customize your content, make notes and highlights, and have content read aloud. Any additional digital ancillary content may publish up to 6 weeks following the publication date.

DESCRIPTION

Now in a convenient and easy-to-use softcover format, *Dermatologic Procedures in Office Practice, 2nd Edition*, offers **clear, step-by-step guidance** on the many dermatologic procedures successfully performed in the office setting. This highly visual reference provides **full-color photographs and drawings** in combination with **high-definition, narrated videos** to demonstrate key procedures, including the diagnosis and treatment of benign and malignant lesions; cryosurgery; electrosurgery; dermoscopy; excision of skin cancers, cysts, lipomas; and more. The eBook and online videos are the perfect companion when adding a new procedure to your practice.



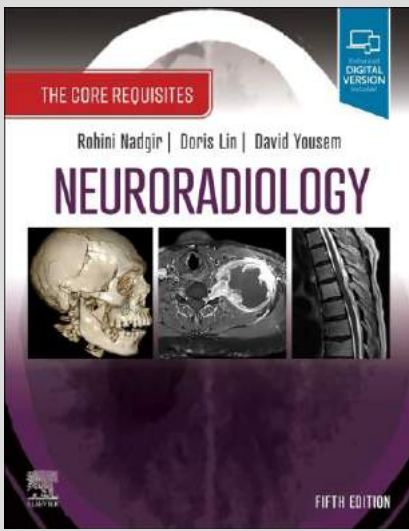
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Speciality Medicine Family Medicine
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Also includes resources via:





Neuroradiology, 5e

The Core Requisites

Edited by : **Rohini Nadgir**, MD, Assistant Professor, Radiology and Radiological Science Johns Hopkins School of Medicine Faculty, Division of Neuroradiology Johns Hopkins Medical Institution Baltimore; **Doris Lin** and **David M. Yousem**, MD, MBA, Associate Dean for Professional Development, Johns Hopkins University School of Medicine, Vice Chairman of Program Development, Department of Radiology, Johns Hopkins Medical Institution, Baltimore, Maryland

ISBN: 9780323759755

PREVIOUS ISBN: 9781455775682

PUB DATE: Mar 28, 2024

LIST PRICE: £71.99 / \$99.99 / €83.99

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 8.50w x 10.875h

PAGES: c. 566

BIC CODES: MMPH

THEMA CLASSIFICATION:

THEMAMKSH

Master the core knowledge you need in neuroradiology

A Volume in the *The Core Requisites* Series

KEY FEATURES

- Emphasizes the essentials in a templated, quick-reference format that includes numerous outlines, tables, pearls, boxed material, and bulleted content for easy reading, reference, and recall.
- Prioritizes and explains key information to help you efficiently and effectively prepare for board exams.
- Helps you build and solidify conceptual, technical, and interpretive core knowledge needed for imaging the brain, spine, and head and neck.
- Features hundreds of high-quality images, including diffusion weighted imaging, perfusion imaging, MR and CT angiography, and MR spectroscopy.
- Published as part of the newly reimagined Core Requisites series, an update to the popular Requisites series aimed at radiology trainees and today's busy clinicians.
- Enhanced eBook version included with purchase. Your enhanced eBook allows you to access all of the text and figures from the book on a variety of devices. Any additional digital ancillary content may publish up to 6 weeks following the publication date.

DESCRIPTION

Focusing on high-yield information, *Neuroradiology: The Core Requisites, 5th Edition* emphasizes the basics to help you establish a foundational understanding of neuroradiology during rotations, prepare for the core and certifying exams, and refresh your knowledge of key concepts. This completely rewritten and reorganized edition emphasizes the essential knowledge you need in an easy-to-read format, with thorough updates that cover new imaging modalities, the latest guidelines, and integration of physics information throughout.



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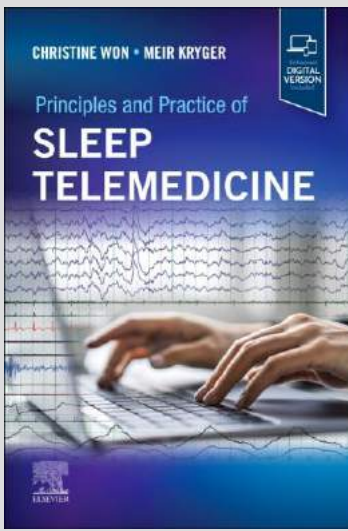


Speciality Medicine Radiology

<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Principles and Practice of Sleep Telemedicine

Christine Won, MD, MSc and Meir H. Kryger, MD, FRCPC, Professor, Pulmonary, Critical Care, and Sleep Medicine, Yale School of Medicine, New Haven, Connecticut

ISBN: 9780323870412
PUB DATE: Jul 10, 2024
LIST PRICE: £84.99 / \$104.99 / €99.99
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 8.50w x 10.875h
PAGES: c. 334
AUDIENCE: Sleep Medicine practitioners
BIC CODES: MMZS
THEMA CLASSIFICATION: THEMAMKZS

A practical, easy-to-follow roadmap for sleep telemedicine—in one convenient resource

KEY FEATURES

- Presents the **knowledge and expertise** of Dr. Christine Won, who has served in the AASM's development of updated telemedicine guidelines, and renowned author and sleep medicine expert Dr. Meir Kryger.
- Covers the **telemedicine topics that sleep medicine practitioners most want to know**—not only clinical topics on virtual interaction with patients, but also logistical, technical, and administrative details.
- Includes **resources for setting up a telemedicine service**, information on legal and regulatory issues, and insight on how COVID-19 has changed the telemedicine landscape.
- Contains **pearls and advice on common pitfalls** practitioners are likely to encounter when administering virtual patient care, provided by pioneers in the field of telemedicine.
- **An eBook version is included with purchase.** The eBook allows you to access all of the text, figures, and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud. Additional digital ancillary content may publish up to 6 weeks following the publication date.

DESCRIPTION

Today more than ever, sleep specialists can take advantage of **innovative telemedicine technologies for optimal treatment of sleep disorders**. In recent years, the American Academy of Sleep Medicine (AASM) has been committed to advancing the adoption of telemedicine in order to improve access to high-quality, patient-centered care. *Principles and Practice of Sleep Telemedicine* is the **first reference of its kind to provide direction to sleep physicians** on using telemedicine in clinical practice. In a single convenient volume, this new resource serves as a **step-by-step guide** for practitioners to effectively treat and diagnose their patients in this contemporary clinical setting.



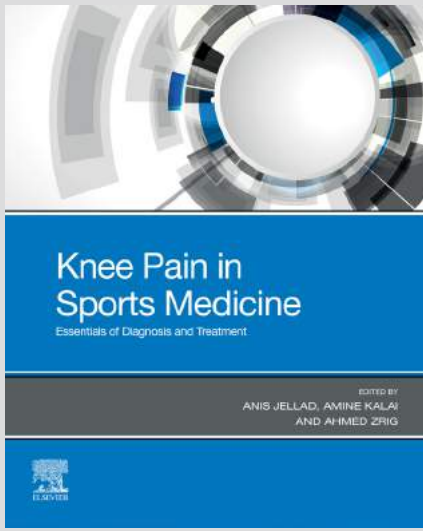
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Speciality Medicine Sleep Medicine
<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Knee Pain in Sports Medicine

Essentials of Diagnosis and Treatment

Anis Jellad, M.D, Professor, Department of Physical Medicine and Rehabilitation, Faculty of Medicine, University of Monastir and University Hospital of Monastir, Tunisia; **Amine Kalai**, M.D, Assistant Professor, Department of Physical Medicine and Rehabilitation, Faculty of Medicine, University of Monastir and University Hospital of Monastir, Tunisia and **Ahmed Zrig**, M.D, Associate Professor, Department of Radiology, Faculty of Medicine, University of Monastir and University Hospital of Monastir, Tunisia

ISBN: 9780323880695
PUB DATE: Feb 29, 2024
LIST PRICE: £84.99 / \$104.99 / €99.99
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 104
AUDIENCE: Sports medicine practitioners, fellows, Physiatrists, Orthopaedic surgeons
BIC CODES:
THEMA CLASSIFICATION:
THEMAMKW

Authoritative guidance on diagnosing and managing non-traumatic knee pain

KEY FEATURES

- Contains **numerous helpful illustrations**, including patient photographs, anatomical drawings, and imaging results.
- Concludes each chapter with **take-home messages** that help readers remember key points regarding the specific pathology.
- Includes a valuable **self-assessment section** with clinical cases and multiple-choice questions that allow readers to evaluate their own work and learning progress.
- Consolidates today's available information on this timely topic into a **single, convenient resource**.

DESCRIPTION

Clinicians, physiatrists, and fitness trainers are daily faced with challenges regarding the diagnosis and management of microtraumatic knee injuries. These conditions are particularly complex and misdiagnosis or delayed diagnosis may lead to performance limitations and a prolonged absence from sports activities. *Knee Pain in Sports Medicine: Essentials of Diagnosis and Treatment* helps readers accurately diagnose these conditions and provides effective guidance on management, allowing for prompt recovery and return to play.



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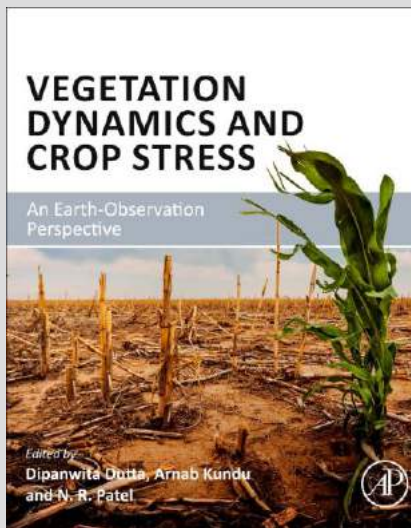


Speciality Medicine Phy Med & Rehab

<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Vegetation Dynamics and Crop Stress An Earth-Observation Perspective

Edited by : **Dipanwita Dutta**, Assistant Professor, Department of Remote Sensing and GIS Vidyasagar University Midnapore, West Bengal, India; **Arnab Kundu**, Faculty, Department of Geo-Informatics P.R.M.S. Mahavidyalaya Bankura University, West Bengal, India and **N.R. Patel**, Scientist (SG), Department of Agriculture and Soil, Indian Institute of Remote Sensing, Indian Space Research Organization (ISRO), Uttarakhand, India

ISBN: 9780323956161
PUB DATE: Jul 01, 2024
LIST PRICE: £155.00 / \$200.00 /
€175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 321

AUDIENCE: Advanced undergraduate and graduate students as well as researchers in the fields of agriculture, crop science, agronomy, environmental sciences, geography, remote sensing and GIS, ecology

BIC CODES: TVK, KNAC, UFL, TGBN1, UB, TV, PSAF, RN

THEMA CLASSIFICATION:

THEMATVK; THEMAKJT;
THEMAUFL; THEMAKNA;
THEMAUB; THEMATQ; THEMATV;
THEMATGB; THEMASAF

A comprehensive guide to recent advancements in geo-spatial technologies and their application to understanding vegetation dynamics and crop health

KEY FEATURES

- Provides a quantitative analysis of vegetation and crop stress based on EO datasets
- Offers descriptions of the spatially explicit vegetation and crop model development, implementation, and validation
- Covers the impact of soil-water stress on crop performance and vegetation response to climate change using earth observation techniques

DESCRIPTION

Vegetation Dynamics and Crop Stress: An Earth-Observation Perspective focuses on vegetation dynamics and crop stress at both the regional and country levels by using earth observation (EO) data sets. The book uniquely provides a better understanding of natural vegetation and crop failure through geo-spatial technologies. This book covers biophysical control of vegetation, deforestation, desertification, drought, and crop-water efficiency, as well as the application of satellite-derived measures from optical, thermal, and microwave domains for monitoring and modeling crop condition, agricultural drought, and crop health in contrasting monsoon/weather episodes.



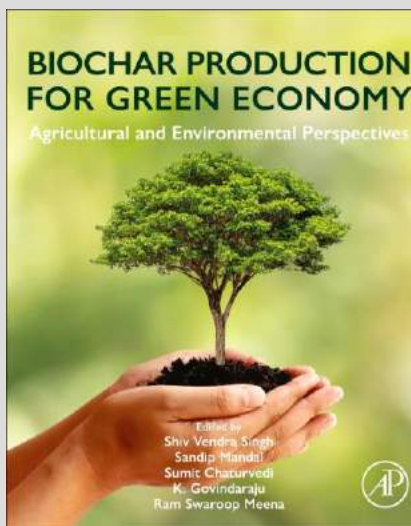
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FOOD SCIENCE, TECHNOLOGY & NUTRITION

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Biochar Production for Green Economy

Agricultural and Environmental Perspectives

Edited by : **Shiv Vendra Singh**, Assistant Professor, Graphic Era Hill University, India; **Ram Swaroop Meena**, PhD, Institute of Agricultural Sciences, Banaras Hindu University, Varanasi-221005, (UP), India; **Sandip Mandal**, Senior Scientist, ICAR-Central Institute of Agricultural Engineering, India; **Sumit Chaturvedi**, Associate Professor, G.B. Pant University of Agriculture and Technology, India and **Govindaraju K.**, Scientist E/Associate Professor, Sathyabama Institute of Science and Technology, Chennai, India

ISBN: 9780443155062
PUB DATE: Jun 28, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 465

AUDIENCE: Researchers, and professors who are interested in learning of current insights of high-quality biochar synthesis, enrichment, modification, and their applications in agricultural production system, soil quality restoration, remediation of soil and water system and renewable energy production with special reference to alluvial soil and forest eco-systems. Advanced students in agriculture, soil science and environmental sciences

BIC CODES: RBGB, TV, RN, KNAC, TVK

THEMA CLASSIFICATION: THEMATVB; THEMARBGB; THEMATQ; THEMATV; THEMAKNA; THEMAKCM; THEMATVK



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Provides innovative techniques surrounding biochar production, surface modification, treatment, and uses in crop production, soil health improvement, bioremediation and biofuel production

KEY FEATURES

- Includes aspects of advancement in pyrolysis techniques to produce cost-effective, high quality pyrolysis products and their multipurpose applications
- Highlights biochar's role in boosting the circular bioeconomy, carbon footprint, GHGs mitigation, and environmental sustainability high-quality visual representation
- Compiles the trending multidisciplinary approach of nanotechnology, magnetic field, surface tailoring, and engineering for efficient and sustainable development goals

DESCRIPTION

Biochar Production for Green Economy: Agricultural and Environmental Perspectives addresses the advancements and developments for the efficient diversification of biochar toward achieving improved agricultural and environmental benefits. This comprehensive and cohesive volume is the first to address the potential multi- and transdisciplinary opportunities of effective biochar production and use.

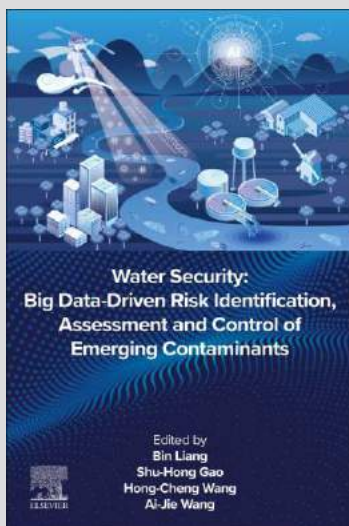
Including the potential applicability of not only crop waste biochar but weeds, agroforestry, agroindustry, municipal waste, as well chapters explore surface modified, enriched or tailored biochar for soil amendment, GHGs mitigation, bioremediation of organic, inorganic, metals and other emerging pollutants, as well as soil remediation. It also covers the trending multidisciplinary approaches of nanotechnology, surface chemistry and thermal decomposition advancements being adopted for capacity enhancement and versatile applicability in the field of agriculture, environment science and green energy synthesis. Composition and characteristics of tailored biochar, their interactions, and transformation into the soil and water ecosystem are illustrated.

This book is a valuable resource for those pursuing biochar related areas as well as those seeking environmentally sustainable solutions to crop, soil or water issues.

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Water Security: Big Data-Driven Risk Identification, Assessment and Control of Emerging Contaminants

Edited by : **Bin Liang**, Professor, Harbin Institute of Technology, School of Civil & Environmental Engineering, Shenzhen, P.R. China; **Shu-Hong Gao**, Assistant Professor, Harbin Institute of Technology, School of Civil & Environmental Engineering, Shenzhen, P.R. China and **Hongcheng Wang**

ISBN: 9780443141706

PUB DATE: Jun 28, 2024

LIST PRICE: £141.99 / \$175.00 / €163.99

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 353

AUDIENCE: Researchers and students in the following fields: Environmental Science and Engineering, Intelligent Systems and Knowledge Engineering, Environmental Microbiology and Microbiome, Environmental Informatics and Bioinformatics, Environmental Health, Environmental Management, Environmental Epidemiology, Ecotoxicology, Environmental Chemistry, Environmental Ecology, Environmental Geochemistry, etc. Their main responsibilities are to guide undergraduate and postgraduate students to engage in related research, assist policy agencies to formulate relevant management standards, regulations, and laws, and to manage related businesses and administrative departments. Environmental management and protection, public health and other administrative and educational departments, scientific research institutions, and environment-related water companies, etc. Moreover, environmental policy decision makers, hydrologists, as well as managers and R&D personnel in environmental protection and water companies

BIC CODES: RN, TQSR, TQSW

THEMA CLASSIFICATION: THEMATQ; THEMARNH; THEMATQSR; THEMATQSW

Resource for researchers and students on big data driven risk identification, assessment, and intelligent management of emerging chemical and biological contaminants

KEY FEATURES

- Covers the detection, high-throughput analyses, and environmental behavior of the typical emerging chemical and biological contaminants
- Focuses on chemical and biological big data driven aquatic ecological risk assessment models and techniques
- Highlights the intelligent management and control technologies and policies for emerging contaminants in water environments

DESCRIPTION

Water Security: Big Data-Driven Risk Identification, Assessment and Control of Emerging Contaminants contains the latest information on big data-driven risk detection and analysis, risk assessment and environmental health effect, intelligent risk control technologies, and global control strategy of emerging contaminants. First, this book highlights advances and challenges throughout the detection of emerging chemical contaminants (e.g., antimicrobials, microplastics) by sensors or mass spectrometry, as well as emerging biological contaminant (e.g., ARGs, pathogens) by a combination of next- and third-generation sequencing technologies in aquatic environment. Second, it discusses in depth the ecological risk assessment and environmental health effects of emerging contaminants. Lastly, it presents the most up-to-date intelligent risk management technologies.

This book shares instrumental global strategy and policy analysis on how to control emerging contaminants. Offering interdisciplinary and global perspectives from experts in environmental sciences and engineering, environmental microbiology and microbiome, environmental informatics and bioinformatics, intelligent systems, and knowledge engineering, this book provides an accessible and flexible resource for researchers and upper level students working in these fields.



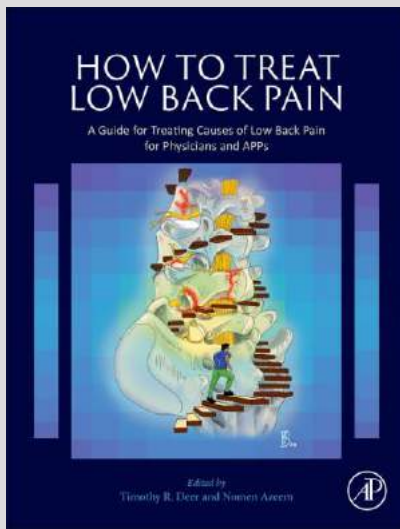
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EARTH & ENVIRONMENT

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How to Treat Low Back Pain

A Guide for Treating causes of Low Back Pain for Physicians and APPs

Edited by : **Timothy R. Deer**, President and CEO, The Spine and Nerve Centers of the Virginias, USA and **Nomen Azeem**, Founder and CEO, Florida Spine and Pain Specialists, FL, USA

ISBN: 9780443159626
PUB DATE: Dec 01, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 372

AUDIENCE: Medical

Residents/Fellows in the fields of Emergency Medicine, Pain Medicine, Orthopedics, Anesthesiology, Physical Medicine & Rehabilitation, Neurology, Family Medicine, also Advanced Practice Providers in Family Practice and other clinical settings treating low back pain, Spine Surgeons, Rehab physicians, Medical Students

BIC CODES: PSA

THEMA CLASSIFICATION:

THEMAPS

A guide to typical interventional low back pain practice

KEY FEATURES

- Provides a step-by-step approach for each cause of back pain, including diagnosis, imaging, anatomy of the problem, abnormal anatomy, differential diagnosis, and treatment options
- Presents evidence-based treatment options, ranging from conservative treatments, physical medicine, surgery, and many minimally invasive techniques
- Summarizes the data for each problem, from disc to joint and ligament

DESCRIPTION

How to Treat Low Back Pain: A Guide for Treating Causes of Low Back Pain for Physicians and APPs focuses on current technology and cutting-edge treatment options, all validated by data. Each chapter presents a thorough review of patient selection, procedure technique, and potential adverse complications for each recommended treatment. Written by experts in the field for practitioners and clinicians treating low back pain, and with anatomic artwork and illustrations throughout, the book covers all aspects of lower back pain, the leading cause of disability in developed countries, with the number of people affected worldwide increasing annually.

In recent years, there has been a substantial increase in health care costs to treat low back pain, and most of these treatments simply provide symptomatic relief with few strategies that actually contribute to correcting the underlying cause.



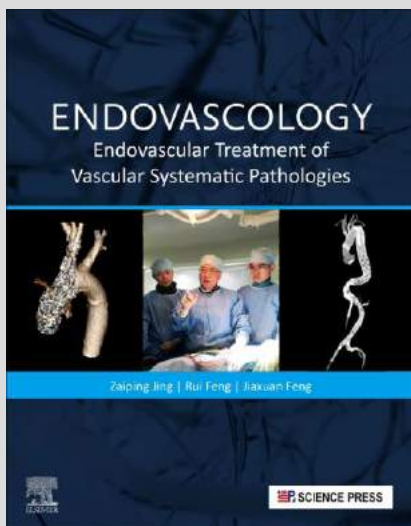
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Endovascular Treatment of Vascular Systematic Pathologies

Endovascular Treatment of Vascular Systematic Pathologies

Zaiping Jing, Professor, Vascular Surgery Department, Changhai Hospital, China; **Rui Feng** and **Jiakuan Feng**, Deputy Chief Physician and Associate Professor, Vascular Surgery, Changhai Hospital, China

ISBN: 9780323899277
PUB DATE: Nov 01, 2024
LIST PRICE: £115.00 / \$150.00 / €131.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 567

AUDIENCE: Surgeons, including vascular surgeons and interventional cardiologists, Trainees in minimally invasive cardiovascular techniques, Vascular disease researchers, Medical students, Regulatory agencies

BIC CODES: PSA

THEMA CLASSIFICATION: THEMAPS

Access the latest research, clinical outcomes, and research frontiers from one of the leading institutes in China on vascular diseases

KEY FEATURES

- Gives an international audience access to many years of research and practice in endovascular techniques, including clinical outcomes, from clinicians at the Vascular Surgery Department of Changhai Hospital, a pre-eminent institute in China
- Offers an exhaustive survey of vascular diseases including the history of their treatment, current practices, and potential future developments
- Presents the latest research, clinical results, and research frontiers from one of China's leading vascular surgery departments
- Looks to the future of new endovascular interventions and technologies, encouraging innovation in the treatment of vascular disease

DESCRIPTION

Vascular diseases have high incidence, disability and mortality rates. Endovascular treatment is an important option as an alternative to open surgery, with the proven ability to counter severe pathologies. China-based research into vascular diseases and endovascular surgery has been proceeding apace. Endovascular presents, for the first time, the latest research, clinical outcomes, and research frontiers from one of the leading institutes in China specializing in endovascular surgery — the Vascular Surgery Department of Changhai Hospital. Specifically, in this book, chapters cover each aspect of vascular disease: Vascular heart disease; Congenital heart disease; Arteriosclerotic heart disease; Thoracic aortic pathology; Thoracoabdominal aortic pathology; Infrarenal abdominal aortic pathology; Cerebral perfusion arteries; Upper limb vessels; Abdominal visceral arteries; Iliac artery; Lower limb artery; Varicose veins; Deep venous thrombosis of the lower limb; Pelvic congestion syndrome; Inferior vena cava and portal vein; Pulmonary artery; and Lymphatic diseases. *Endovascular: Endovascular Treatment of Vascular Systematic Pathologies* presents a global medical audience with an ambitious, systematic and exhaustive review of vascular diseases, and the state-of-the art in clinical research and practice in endovascular. It will be of use to surgeons, trainees in minimally invasive cardiovascular techniques, vascular disease researchers, and medical students alike.



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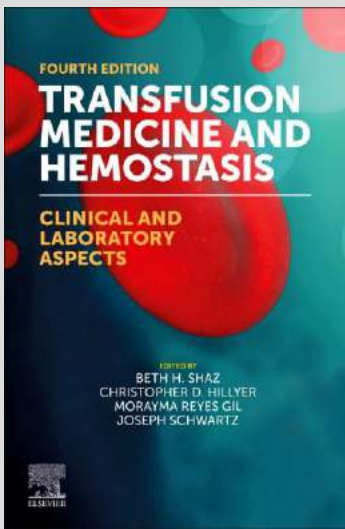
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Transfusion Medicine and Hemostasis, 4e

Clinical and Laboratory Aspects



Edited by : **Beth H. Shaz**, MD, Chief Medical and Scientific Officer and Executive Vice President, New York Blood Center and Adjunct Assistant Professor, Department of Pathology and Cell Biology, Vagelos College of Physicians and Surgeons, Columbia University, New York, NY, USA; **Christopher D. Hillyer**, MD, President and Chief Executive Officer, New York Blood Center and Professor, Department of Medicine, Weill Cornell Medical College, New York, NY, USA; **Joseph (Yossi) Schwartz**, MD, MPH, Professor of Pathology, Molecular and Cell-based Medicine, Icahn School of Medicine, Mount Sinai, NY, USA and **Morayma Reyes Gil**, Director of Hematology and Coagulation Laboratories, Montefiore Medical Center and Associate Professor, Department of Pathology and Laboratory Medicine, Albert Einstein College of Medicine, New York, NY, USA

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FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 930
AUDIENCE: Transfusion Medicine practitioners, Transfusion Medicine fellows, Pathology residents, Hematology practitioners, Hematology fellows, Laboratory personnel
BIC CODES: PSA
THEMA CLASSIFICATION: THEMAPSA

A "pocket-size" handbook which offers practical clinical and laboratory information for the overlapping fields of hemostasis and transfusion medicine

KEY FEATURES

- Includes COVID-19 coagulopathy and Vaccine Induced Thrombotic Immune N94 Thrombocytopenia
- Provides all information regarding the clinical and laboratory aspects of Transfusion Medicine and Hemostasis in one place
- Presents user-friendly, up-to-date information in a book that can be carried around either to the lab or bedside

DESCRIPTION

Transfusion Medicine and Hemostasis: Clinical and Laboratory Aspects, Fourth Edition continues to be the only "pocket-size" quick reference for pathology and transfusion medicine for residents and fellows. It is helpful to all physicians and allied health professionals who order and administer blood components, cellular therapies, specialized factors for hemostatic abnormalities, coagulation testing, and those who consult and care for these often very ill patients. This book is ideal for pathology, medicine, surgery, and anesthesia residents, transfusion, hematology, and anesthesia fellows, and certified and specialized practitioners, as well as medical technologist in transfusion, cellular therapy, hematology, and coagulation. This new edition covers the many new developments that have occurred since the previous edition to include new blood products, new indications, or clinical conditions in which blood products are used. Similarly, new hemostasis testing is introduced as well as new clinical scenarios due the COVID-19 pandemic that area relevant to hemostasis and transfusion medicine. This includes COVID coagulopathy, Vaccine Induced Thrombotic Immune Thrombocytopenia, Pediatric reference range in coagulation testing, Platelet rich plasma and MNC products – CAR-T cells.



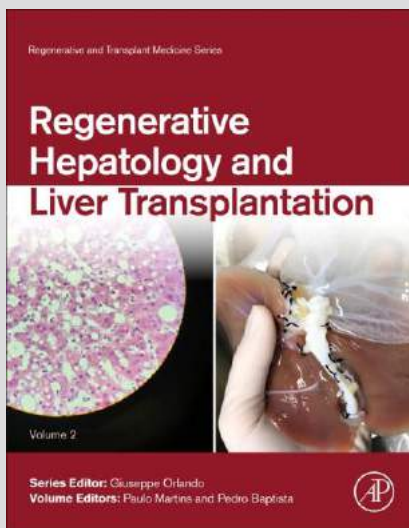
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Regenerative Hepatology and Liver Transplantation, Vol 2

Edited by : **Paulo Martins**, Associate Professor of Surgery, University of Massachusetts, USA and **Pedro Baptista**, Assistant Professor, Department of Biomedical and Aerospace Engineering, University Carlos III of Madrid, Spain

ISBN: 9780128235249
PUB DATE: Sep 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00
DISCOUNT: Reference
FORMAT: Hardback
TRIM: 8.50w x 10.875h
PAGES: c. 697
AUDIENCE: Transplant operators, researchers, regenerative medicine operators, tissue engineering operators, biotech operators, Academia, Industry and Regulatory agencies and operators. General surgery, transplant fellows in regenerative medicine
BIC CODES: PSA
THEMA CLASSIFICATION: THEMAPS

An essential reference that addresses all aspects of liver transplantation and regeneration

A Volume in the *Regenerative and Transplant Medicine Series*

KEY FEATURES

- Presents the latest volume in the *Regenerative and Transplant Medicine* series, focusing on the liver
- Covers the liver and diseases, transplantation, cell transplantation, liver preservation and machine perfusion
- Builds on previous works and demonstrates how regenerative and transplant medicine work together to provide an increased ability to improve health care outcomes for individuals

DESCRIPTION

Regenerative Hepatology and Liver Transplantation, Volume Two in the *Regenerative and Transplant Medicine* series, is an essential resource as no field in the biomedical sciences has seen more interest than organ transplantation with regard to regenerative medicine, primarily because of the urgent need to improve transplant outcomes and increase transplantation rates. The goal of this book is to bridge regenerative and transplant medicine by illustrating the state-of-the-art of clinical liver transplantation, as well as of the progress of regenerative medicine (RM) investigations aimed at the bioengineering, regeneration and repair of the liver. This volume will be well-recognized in the current global trend toward increasing organ donation by utilizing such cutting-edge technologies. Written by the world's experts in the field of liver disease, it is perfect for transplant operators, researchers, regenerative medicine operators, tissue engineering operators, biotech operators, and those in academia, industry and regulatory agencies working to advance the field.



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COVER IMAGE
FORTHCOMING

$\gamma\delta$ T Cell Cancer Immunotherapy

Evidence-Based Perspectives for Clinical Translation

Edited by : **Marta Barisa**, University College London, Experimental Paediatric Oncology Research Group and Allogeneic Immunotherapy Research Group Zayed Centre for Research, Great Ormond Street Hospital, University College London Great Ormond Street Institute of Child Health, London, UK

ISBN: 9780443217661

PUB DATE: Sep 01, 2024

LIST PRICE: £134.00 / \$175.00 /

€155.00

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 7.50w x 9.25h

PAGES: c. 266

AUDIENCE: Cancer researchers, medical oncologists, clinicians, pharmacologists, translational investigators, immunologists, immunotherapists, scientists and clinicals interested in allogeneic adoptive cell therapy, medical students, translational research students, academic institution libraries, commercial developers of $\gamma\delta$ T cell immunotherapy

BIC CODES: PSA

THEMA CLASSIFICATION:

THEMAPS

Provides comprehensive insights into the current state of $\gamma\delta$ T cell immunotherapy

A Volume in the *Breaking Tolerance to Anti-Cancer Cell-Mediated Immunotherapy* Series

KEY FEATURES

- Addresses the possible advantage of combining $\gamma\delta$ T cell-based immunotherapy with conventional chemotherapy or other therapeutic approaches, such as antiangiogenic drugs
- Provides an up-to-date, well-rounded discussion of a translationally, commercially, and scientifically relevant field
- Enables users to familiarize themselves with an overview of the most important aspects of the field with ease or gain an up-to-date objective perspective on various aspects of the field
- Includes helpful illustrative diagrams covering the breadth of the field as carried out by leading experts

DESCRIPTION

$\gamma\delta$ T Cell Cancer Immunotherapy: Evidence-Based Perspectives for Clinical Translation discusses the current pre-clinical and clinical $\gamma\delta$ T cell landscape. The book not only focuses on the promises of what's to come, but also on the challenges faced by the field. Particular attention is given to summarizing recent advances on what is known about relevant areas of $\gamma\delta$ T cell biology on summarizing the 'big picture' clinical situation, an up-to-date systematic clinical trial review covering autologous, allogeneic, engineered and non-engineered therapies, and perspectives on the types of cutting-edge gene-engineering that may be required to enhance the effect-size and durability of therapeutic efficacy. Content provides updated and comprehensive insights into the current state of $\gamma\delta$ T cell immunotherapy, including discussions on the promise as well as challenges of the field that is of interest to existing translational $\gamma\delta$ T cell specialists, the proliferating range of academic scientists and commercial scientists entering the field, as well as clinicians who may encounter $\gamma\delta$ T cell immunotherapy in the clinic or are wishing to familiarize themselves with non-canonical lymphocyte immunotherapy.



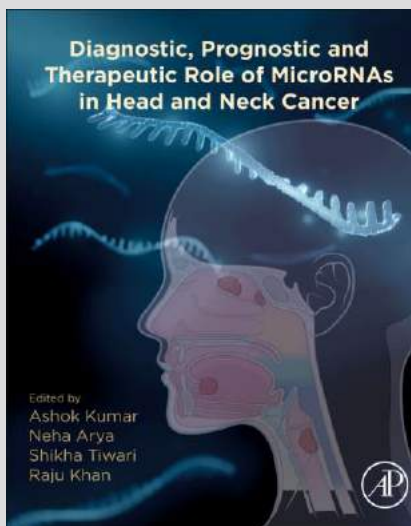
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Diagnostic, Prognostic, and Therapeutic Role of MicroRNAs in Head and Neck Cancer

Edited by : **Ashok Kumar**, PhD, Associate Professor, Department of Biochemistry, All India Institute of Medical Sciences (AIIMS), Bhopal, MP, India; **Neha Arya**, PhD, Assistant Professor at the Translational Medicine Centre, AIIMS Bhopal.; **Shikha Tiwari**, PhD, DHR-Women Scientist, Department of Biochemistry, All India Institute of Medical Sciences Bhopal, India and **Raju Khan**, Industrial Waste Utilization, Nano and Biomaterials, CSIR-Advanced, Materials and Processes, Research Institute (AMPRI), Bhopal, Madhya, Pradesh, India

ISBN: 9780443159688
PUB DATE: Jul 21, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 251

AUDIENCE: Clinicians, biochemists, molecular biologists, pathologists, medical oncologists, radiation oncologists, pharmacologists, medical practitioners, bioengineers, academic institutes, etc. Pharmaceutical companies for the development of novel diagnostic and therapeutic technologies for the management of HNSCC

BIC CODES: PSA

THEMA CLASSIFICATION: THEMAPS

Comprehensive overview of currently available miRNAs associated with HNSCC and their extensive application for early diagnosis, prognosis, and treatment

KEY FEATURES

- Covers the role of the tumor microenvironment in head and neck cancer
- Provides information on oncogenic and tumor suppressor miRNAs dysregulated in HNSCC patients
- Elucidates the role of miRNAs in metastasis, recurrence, and chemoresistance in HNSCC
- Includes the current state-of-art in miRNA-based clinical trials for head

DESCRIPTION

Diagnostic, Prognostic and Therapeutic Role of MicroRNAs in Head and Neck Cancer provides detailed information on various miRNA-based approaches for the diagnosis, prognosis, and treatment of HNSCC. The book encompasses various miRNA-based point-of-care diagnostics and drug delivery systems for HNSCC, along with information on clinical trials for improved clinical outcomes in HNSCC patients. In addition, it provides a comprehensive overview of currently available miRNAs associated with HNSCC and their extensive application for early diagnosis, prognosis, and treatment. Scientists and clinicians looking to win the battle against HNSCC will benefit from the book's sections on early diagnosis to improve treatment, increase treatment response rates, and reduce mortality rates. Recently, miRNA-based diagnostics and therapeutics have gained considerable attention among the scientific community. MiRNAs are known to have great potential as biomarkers for early diagnosis, prediction, and prognosis of HNSCC, and play a role in development of targeted gene therapy.



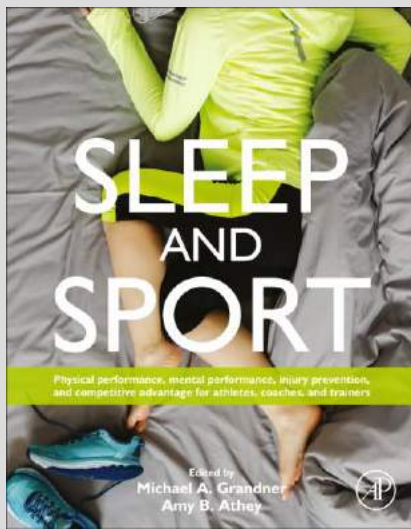
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Sleep and Sport

Physical Performance, Mental Performance, Injury Prevention, and Competitive Advantage for Athletes, Coaches, and Trainers

Edited by : **Michael A. Grandner**, The University of Arizona, Banner-University Medical Center, USA. and **Amy B. Athey**, Executive Director, Student Wellness and Retention, University of Arizona's Student Success and Retention Innovation, USA

ISBN: 9780128229699
PUB DATE: Jul 19, 2024
LIST PRICE: £129.00 / \$165.00 / €145.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 8.50w x 10.875h

PAGES: c. 335

ILLUSTRATIONS: 350 illustrations (300 in full color)

AUDIENCE: Sleep medicine researchers, pulmonary medicine researchers, sleep medicine physicians, sports medicine physicians, sports science researchers, performance psychologists, exercise physiology, behavioral medicine, Athletics professionals interested in learning more about sleep, including athletics trainers, coaches, other professionals, and athletes themselves, Psychiatry, public health, kinesiology, physical therapy, occupational therapy

BIC CODES: PSA

THEMA CLASSIFICATION: THEMAPS

Explores the important role that sleep and circadian rhythms play for athletes, in terms of training/recovery, mental health, physical performance, cognitive performance, physical health, and competitive advantage

KEY FEATURES

- Highlights the importance of sleep and its relations to various aspects of athletics
- Provide useful, actionable, evidence-based suggestions for promoting sleep health in athletes
- Contains accessible reviews that point to relevant literature in often-overlooked areas, serving as a helpful guide to all relevant information on this broad topic area

DESCRIPTION

The relationship between sleep and both mental and physical performance in athletes has become a key issue over the past several years. *Sleep and Athletes: Physical Performance, Mental Performance, Injury Prevention, and Competitive Advantage for Athletes, Coaches, and Trainers* aims to synthesize the growing scientific evidence in this area to help researchers, clinicians, and others interested in sport to understand the fundamentals of sleep health and how these factors relate to athletes. Serving as an important bridge between the sleep and athletics field, the book educates sleep professionals about how their field of expertise relates to various aspects of athletics, whilst educate sports professionals about the basics of sleep and how it relates to their field of expertise. This is accomplished by explaining some of the basics of sleep health; reviewing the literature on sleep disorders, treatments, risk factors for athletes; discussing ways that sleep health impacts physical and mental performance; and addressing key specific areas where these fields overlap. In all cases, this text will draw from the existing peer-reviewed literature, in order to provide evidence-based guidance that is objective and well-explained.



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Mitochondrial Transplantation and Transfer

Biology, Methods, Applications, and Disease

Edited by : **Gokhan Burcin Kubat**, Department of Mitochondria and Cellular Research, Gulhane Health Sciences Institute, University of Health Sciences, Ankara, Turkey; **Oner Ulger**, Department of Mitochondria and Cellular Research, Gulhane Health Sciences Institute, University of Health Sciences, Ankara, Turkey and **Serdar Gunaydin**, Professor of Cardiovascular Surgery, University of Health Sciences, Ankara City Hospital Campus, Turkey

ISBN: 9780443188589
PUB DATE: Jul 19, 2024
LIST PRICE: £142.00 / \$175.00 / €170.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 400
AUDIENCE: Active researchers in biochemistry, molecular biology, cell biology, oncology, and pharmacology, Students and Clinicians
BIC CODES: PSB, PHVN, PSBZ, PSD
THEMA CLASSIFICATION: THEMPSB; THEMAPHVN; THEMPSD

An in-depth but accessible treatment of mitochondrial transplantation and transfer, considering fundamental biology, methods, and applications

A Volume in the *Translational and Applied Bioenergetics Series*

KEY FEATURES

- Provides an in-depth discussion of mitochondrial transplantation, considering fundamental biology, disease implications, research methods and applications
- Discusses recent advances in the field and their meaning for future research and clinical utility
- Considers ethical dimensions of mitochondrial transplantation research and use in therapeutics
- Examines mitochondrial transplantation across a range of disease types, from neurological to cardiovascular disease and ischemia

DESCRIPTION

Mitochondrial Transplantation and Transfer: Biology, Methods, Applications, and Disease, a volume in the *Translational and Applied Bioenergetics series*, offers a detailed overview of mitochondrial transplantation across fundamental biology, disease and early therapeutics research. Here, more than twenty experts in the field discuss transplantation and transfer of healthy mitochondria and define future steps to improve new therapeutic applications across a variety of diseases. Emphasis is placed on the physiology of mitochondrial transfer, isolation processes and their applications, transfer methods, and diagnostic and treatment use across cardiovascular, metabolic, and neurological diseases, among other disease types.

Step-by-step instruction is provided around research protocols and methods discussed, along with careful attention to the ethical implications of mitochondrial transplantation research and application.



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LIFE SCIENCES Molecular Biology

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COVER IMAGE
FORTHCOMING

Metabolic Steatotic Liver Disease

Current Knowledge, Therapeutic Treatments, and Future Directions

Edited by : **Mindie Nguyen**, MD, MAS, Professor of Medicine and Director, Hepatology Fellowship, Division of Gastroenterology and Hepatology and Liver Transplant Program; Courtesy Professor of Epidemiology and Population Health, Stanford University Medical Center; Director, Hepatology Clerkship for Stanford University School of Medicine and **Linda Henry**, Academic Researcher, Stanford University, USA

ISBN: 9780323996495

PUB DATE: Jul 01, 2024

LIST PRICE: £134.00 / \$165.00 / €160.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 279

AUDIENCE: Translational and clinical science researchers in digestive medicine; gastroenterologists and hepatologists, Bariatric surgeons, transplant surgeons, nutritionists, endocrinologists, cardiologists, public and health policy makers

BIC CODES: PSA

THEMA CLASSIFICATION: THEMAPS

Comprehensive reference on metabolic fatty liver disease, with current examinations of all aspects of research, current gaps, and future research recommendations

KEY FEATURES

- Compiles the latest, up-to-date science from key experts in the field on metabolic fatty liver disease
- Reviews best practices and current guidelines for a comprehensive overview
- Identifies recommendations for future research endeavors

DESCRIPTION

Metabolic Fatty Liver Disease: Current Knowledge, Therapeutic Treatments, and Future Directions provides the most updated research findings and defines the current data gaps on metabolic fatty liver disease. The book extensively covers key areas in metabolic fatty liver disease research, including epidemiology (adults and children), economic burden, patient-reported outcome burden, natural history, current treatments, current diagnostic methods, controversies (NAFLD/MAFLD), current guidelines, fatty liver disease in the presence of other liver diseases as well as guidance on future research.

This book will provide translational researchers with a current and comprehensive resource dedicated to all aspects of research in metabolic fatty liver disease, identify current gaps in research and make future research recommendations. It also offers clinicians a look at important background information in metabolic fatty liver disease and thoroughly reviews the latest research in this area to inform treatment outcomes.



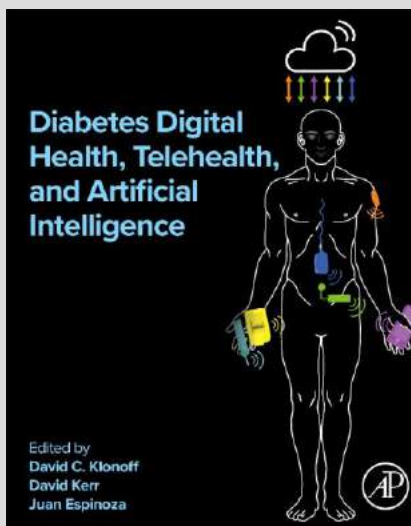
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Diabetes Digital Health, Telehealth, and Artificial Intelligence

Edited by : **David C. Klonoff**, M.D., FACP, FRCP (Edin), Fellow AIMBE, Clinical Professor of Medicine, U.C. San Francisco, Mills-Peninsula Medical Center, San Mateo, California, USA.; **David Kerr**, MD, FRCP, FRCP (Edin), Rice University, Sansum Diabetes Research Institute, Santa Barbara, California, USA and **Juan Espinoza**, MD, FAAP, Children's Hospital Los Angeles | Keck School of Medicine of USC, Los Angeles, California, USA

ISBN: 9780443132445
PUB DATE: Jul 01, 2024
LIST PRICE: £126.00 / \$165.00 / €143.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 279

AUDIENCE: Diabetes healthcare professionals (physicians, nurses, educators, researchers, clinicians) Hospital and clinic administrators Public health epidemiologists/ funding allocators IT engineers and mobile app developers Medical record database developers Sociologists Diabetes device entrepreneurs Regulators and intellectual property attorneys Mathematicians / algorithm developers for medical devices Computer scientists working in the medical device industry Diabetes patients who are interested in technology

BIC CODES: MJGD

THEMA CLASSIFICATION: THEMAMFGM; THEMAMJG

Helps readers better understand barriers and solutions to the most important issues for developing, regulating, and applying new technologies to diabetes

KEY FEATURES

- Includes Artificial intelligence (AI) data for the prediction, diagnosis, treatment, and prognostication for diabetes as a model disease
- Describes the most important issues of our time that comprise the most important technologies currently being applied to diabetes
- Presented in a consistent easy to help those new to the field understand and compare/contrast various elements of digital health, telehealth, and artificial intelligence for diabetes

DESCRIPTION

Diabetes Digital Health, Telehealth, and Artificial Intelligence explains how to develop and use the emerging technologies of digital health, telehealth, and artificial intelligence to address this important public health problem to deliver new hardware, software, and processes. The book explores trends in developing and deploying the three most important emerging technologies for diabetes: digital health, telehealth, and artificial intelligence. This book is essential to clinicians, scientists, engineers, industry professionals, regulators, and investors, offering the tools that will be used to create the next generation products to support a precision medicine approach to manage diabetes.

According to the CDC, in the US there are 37 million people with diabetes and 96 million people with prediabetes. Diabetes triples the risk of myocardial infarction and stroke and is the leading cause of blindness, end stage renal failure, and amputations. The management of diabetes is becoming increasingly dominated by digital health tools consisting of wearable sensors, mobile applications providing decision support software, and wireless communication tools. Digital health provides new data streams that can be combined to create unique approaches for diabetes based on a precision medicine paradigm.



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COVER IMAGE
FORTHCOMING

Overcoming Cancers Resistant to HER-2 Antibodies, Vol 3

Edited by : **Benjamin Bonavida**, Professor, Department of Microbiology, Immunology and Molecular Genetics, David Geffen School of Medicine, University of California, Los Angeles, USA

ISBN: 9780128164082
PUB DATE: Jun 28, 2024
LIST PRICE: £115.00 / \$150.00 / €131.00
DISCOUNT: Reference
FORMAT: Hardback
TRIM: 7.50w x 9.25h
PAGES: c. 232
AUDIENCE: Cancer researchers, medical oncologists, clinicians, pharmacologists, translational investigators
BIC CODES: MJCL, MBNH, KNDH1
THEMA CLASSIFICATION: THEMAMJCL; THEMAMF; THEMATCB

General updated information on the resistance of various human cancers to anti-HER2 therapeutic antibodies

A Volume in the *Breaking Tolerance to Antibody-Mediated Immunotherapy Series*

KEY FEATURES

- Provides a general summary of various sensitizing agents that can work effectively when used in combination with anti-HER2 antibodies to reverse resistance
- Offers potential underlying mechanisms by which cancer cells are either inherently resistant or become unresponsive to antibody treatment
- Discusses how to develop new targeted agents to underlie resistance in order to expand research on this field

DESCRIPTION

Overcoming Cancers Resistant to HER-2 Antibodies provides general updated information on the resistance of various human cancers to anti-HER2 therapeutic antibodies. The book also discusses the description of various sensitizing agents that can reverse resistance when used in combination with anti-HER2 antibodies. There have been a lot of reports in which the treatment with anti-HER2 antibodies for various cancers has resulted in clinical responses; however, there have been also subsets of cancer patients who did not respond initially, and several responding patients developed resistance following treatments. Sections cover Lapatinib, Ganetespib, Paclitaxel, Celecoxib, Emantasine, Liposomal Doxorubicin, and Kinase Inhibitors.

This book is a valuable source for cancer researchers, oncologists, pharmacologists and different members of the biomedical field interested in fighting cancer resistance to HER-2 antibodies.



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Transpathology

Molecular Imaging-Based Pathology

Edited by : **Mei Tian**, President-elect of the World Molecular Imaging Society (WMIS), Director of Medical Imaging and Nuclear Medicine Program of Zhejiang University, the Vice President of Zhejiang University Medical Center, the Vice President of Hangzhou Riverside Hospital of Zhejiang University School of Medicine.

ISBN: 9780323952231
PUB DATE: Jun 28, 2024
LIST PRICE: £127.00 / \$165.00 / €144.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 298

AUDIENCE: Professionals in the fields of pathology, molecular imaging, nuclear medicine, radiology, Medical students, clinical residents, postgraduate students who should aware of the importance of non-invasive diagnosis-based precision medicine and future medicine

BIC CODES: PSA

THEMA CLASSIFICATION:
THEMAPS

Helps readers understand the current development and future direction of transpathology, molecular imaging-based pathology

KEY FEATURES

- Introduces a new concept of molecular imaging-guided precise biopsy
- Links in vivo and ex vivo information at various scales by using multi-modality imaging technologies
- Integrates future technologies for the non-invasive cross-validation of underlying mechanisms

DESCRIPTION

Transpathology: Molecular Imaging-Based Pathology is a multidisciplinary reference on molecular imaging and pathology. The book is intended for professionals in the fields of molecular imaging, nuclear medicine, radiology, and pathology as well as students and clinical residents. The book describes the importance of non-invasive diagnosis-based precision medicine and presents a detailed description of current transpathological approaches in different aspects essential for the future development of precision medicine. It's molecular imaging approach to experimental research and clinical practice will drive the field forward and improve research outcomes.



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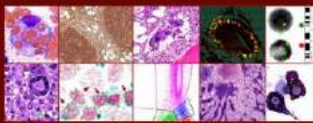


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Atlas of Hematopathology with 100 Case Studies



FARAMARZ NAEIM

P. Nagesh Rao
Sophie X. Song



Atlas of Hematopathology with 100 Case Studies

Faramarz Naeim, MD, Professor Emeritus, Department of Pathology, David Geffen UCLA School of Medicine, Hematopathologist, Department of Pathology and Laboratory Medicine, VA Greater Los Angeles Healthcare System, Los Angeles, California, USA; **P. Nagesh Rao**, Professor, Pathology and Laboratory Medicine, and Pediatrics, Chief, UCLA Cytogenetics Center, David Geffen UCLA School of Medicine, CA, USA and **Sophie X. Song**, Professor, Director, Clinical Flow Cytometry & Bone Marrow Laboratories, Department of Pathology and Laboratory Medicine, David Geffen UCLA School of Medicine, CA, USA

ISBN: 9780443188381
PUB DATE: Jun 28, 2024
LIST PRICE: £195.00 / \$250.00 / €220.00

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 11.00h

PAGES: c. 500

AUDIENCE: Pathologists, pathology residents and fellows, Hematologists and hematology/oncology fellows, A reference book for laboratory directors, and basic researchers in the field of hematology, cytogenetic and molecular pathology.

BIC CODES: PSA

THEMA CLASSIFICATION:
THEMAPS

A reference rich in microscopic color images and text to help you visualize and better understand hematopathology disorders

KEY FEATURES

- Includes case studies that provide a brief clinical history, along with images with relevant questions and answers
- Provides user-friendly tables and graphs, along with correlations between microscopic findings and images of ancillary test results
- Features over 250 color photographs that demonstrate various pathologic aspects of the disease

DESCRIPTION

Atlas of Hematopathology with 100 Case Studies is a practical guide useful for pathologists and hematologists, residents and fellows, laboratory directors, researchers, and students in the field of hematology, cytogenetic, and molecular pathology. The book offers important information to practicing physicians and those in pathology and hematology training to improve their diagnostic skills. It covers the most important aspects of hematopathology, including classifications, clinical symptoms, hematopathologic features, diagnostic criteria, differential diagnosis, and the use and importance of ancillary testing, such as immunohistochemistry, flow cytometry, and cytogenetics.



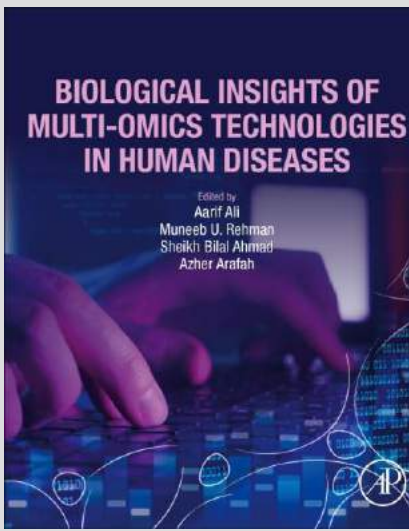
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Biological Insights of Multi-Omics Technologies in Human Diseases

Edited by : **Aarif Ali**, Department of Clinical Biochemistry, School of Biological Sciences, University of Kashmir, India; **Muneeb U Rehman**, College of Pharmacy, King Saud University, Riyadh, Saudi Arabia; **Sheikh Bilal Ahmad**, PhD, Division of Veterinary Biochemistry, Faculty of Veterinary Sciences, SKUAST-K, Shuhama, Alustang, Srinagar, India and **Azher Arafah**, Department of Clinical Pharmacy, College of Pharmacy, King Saud University, Riyadh, Saudi Arabia

ISBN: 9780443239717
PUB DATE: Jun 28, 2024
LIST PRICE: £141.99 / \$175.00 / €166.99
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 191 x 235
PAGES: c. 396
AUDIENCE: The primary audience will be basic, translational, clinical & interdisciplinary researchers, practicing pathologist/oncologists, industrial and pharmaceutical scientists working on drug discovery/development and biomarkers
BIC CODES: MBF
THEMA CLASSIFICATION: THEMAPSAX

Provides a comprehensive overview of novel technologies under omics including genomics, metabolomics, transcriptomics, and proteomics in various human diseases

KEY FEATURES

- Explains the in-depth role of multi-omics on drug discovery/metabolism, diseases, and highlights progress in both the research and clinical areas of computation, as well as relevant implementation experience and challenges
- Describes the practice of multi-omic technologies in the treatment of several diseases
- Includes practical application and machine learning approaches of multi-omics

DESCRIPTION

Biological Insights of Multi-Omics Technologies in Human Diseases provides detailed information about the basics of multi-omic technologies, including ethics, historical perspective, science, drug discovery, and development and metabolism. With a strong focus on the practical application of omics approaches in cancer, cardiovascular, neurology, respiratory, viral, gastroenterology, autoimmune diseases, PCOS and tuberculosis, this book also includes special topics related to COVID-19 and Machine learning approaches. In 13 chapters, this book provides comprehensive coverage of the challenges and opportunities facing the therapeutic implications of multi-omics from academic, regulatory, pharmaceutical, socio-ethical, and economic perspectives.

The chapters are designed in a well-defined chronology such that readers will intuitively understand the central idea. This book is an ideal resource for health professionals, scientists and researchers, nutritionists, health practitioners, students, and all those who wish to broaden their knowledge in the allied field.



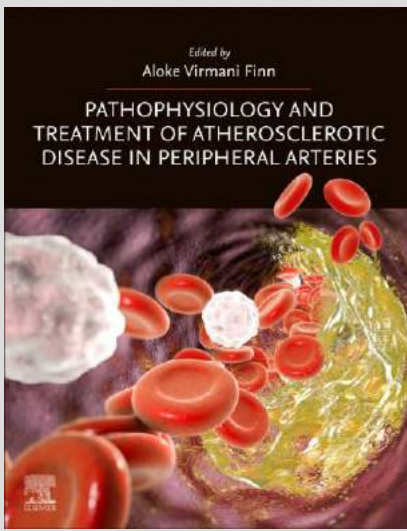
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Pathophysiology and Treatment of Atherosclerotic Disease in Peripheral Arteries

Edited by : **Aloke Virmani Finn**, MD, Director and Chief Scientific Officer, CVPath

ISBN: 9780443135934
PUB DATE: Jun 26, 2024
LIST PRICE: £126.00 / \$165.00 / €143.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 191 x 235

PAGES: c. 298

AUDIENCE: Researchers and physicians interested in the field of PAD Vascular Medicine specialists, Cardiologists, Vascular Surgeons, Interventional radiology and cardiology specialists, students, Industry who makes some of the devices discussed

BIC CODES: UFL, MBF

THEMA CLASSIFICATION:

THEMAKJT; THEMAUFL

A review of the pathophysiology of lower extremity atherosclerosis for current and future medical and interventional treatments

KEY FEATURES

- Provides understanding for the pathophysiology of PAD from pathologic and molecular perspectives
- Reviews state-of-the art modalities for its detection as well as the data surrounding new medical and interventional treatment for PAD
- Elucidates the impact of new treatment modalities such as drug coated balloons and atherectomy devices such a lithotripsy

DESCRIPTION

Pathophysiology and Treatment of Atherosclerotic Disease in Peripheral Arteries is a thorough review of the disease written by experts studying its detection and treatment. These state-of-the-art chapters summarize emerging knowledge about this important area of medicine. The pathophysiology and treatment of peripheral artery (PAD) disease remains poorly understood even by practitioners. Often it is assumed that PAD should be treated in a similar fashion to coronary artery disease (CAD), when in fact recent data suggest a distinct pathophysiology with genetic risk having some but not complete overlap with CAD.

This is a novel reference of emerging data on the factors behind its development and progression, detection, and treatment suggest an emerging paradigm for this disease.



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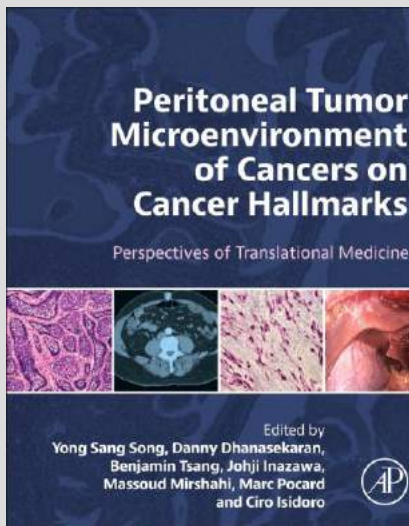
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Peritoneal Tumor Microenvironment of Cancers on Cancer Hallmarks

Perspectives of Translational Medicine

Edited by : **Yong Sang Song**, Professor, Seoul National University, College of Medicine, Seoul, South Korea; **Danny N. Dhanasekaran**, Samuel Roberts Noble Foundation Endowed Chair in Cancer Research, Deputy Director for Basic Sciences, Director, SCC-COBRE & Center for Basic Cancer Research, Stephenson Cancer Center, University of Oklahoma Health Science Center, USA; **Benjamin K. Tsang**, Director, Reproductive Biology Unit, Professor, Department of Obstetrics and Gynaecology and Cellular & Molecular Medicine and the Interdisciplinary School of Health Sciences, University of Ottawa, Canada; **Johji Inazawa**, Director, Bioresource Research Center, and Professor, Department of Molecular Cytogenetics, Medical Research Institute, Tokyo Medical and Dental University, Japan.



ISBN: 9780128240403
PUB DATE: Jun 25, 2024
LIST PRICE: £141.00 / \$180.00 / €158.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 232
AUDIENCE: Cancer researchers, oncologists, medical scientists, clinicians, graduate students
BIC CODES: PSA
THEMA CLASSIFICATION: THEMAPS

Presents recent findings on tumor microenvironment leading to diagnosis, prediction of prognosis, and individualized treatment of cancer

KEY FEATURES

- Discusses how to apply tumor microenvironment knowledge to diagnosis, prediction of prognosis, and individualized treatment of cancer
- Provides readers with up-to-date knowledge on translational medicine, focusing on bench-to-bedside approach for cancer treatment and diagnosis
- Presents collaborative research works from the perspectives of medical doctors, cancer researchers, basic biological scientists, and bioinformaticians to provide integrative insights on tumor microenvironment

DESCRIPTION

Peritoneal Tumor Microenvironment of Cancers on Cancer Hallmarks: Perspectives of Translational Medicine provides readers with cutting-edge knowledge on tumor microenvironment. By exploring multiple aspects on tumor microenvironment, it gives an integrative insight on cancer diseases ranging from diagnosis to prediction of prognosis and individualized treatment. The book discusses topics such as clinical significance of tumor microenvironment, tumorigenesis and cancer progression, histopathological features of cancer in peritoneum, immune cells in tumor, exosomal cell-to-cell interactions, and therapeutic approaches to target tumor microenvironment. In addition, it discusses tumor evolution during chemotherapy and metastasis and future perspectives on identification and validation of biomarkers using liquid biopsy. This book is a valuable resource for cancer researchers, oncologists, medical doctors, and several members of biomedical field who want to understand the complex microenvironment of peritoneal tumors.



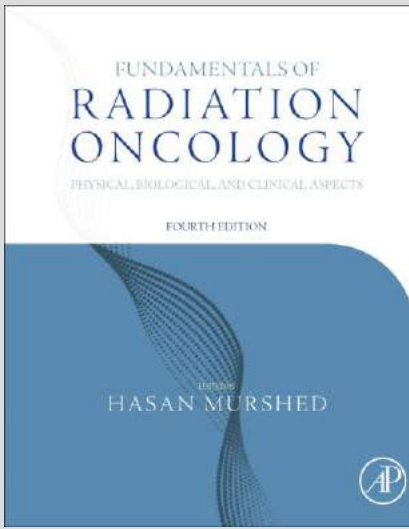
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Fundamentals of Radiation Oncology, 4e

Physical, Biological, and Clinical Aspects

Edited by : **Hasan Murshed**, Radiation Oncologist, Hope Regional Cancer Center, FI, USA

ISBN: 9780443222085
PREVIOUS ISBN: 9780128141281
PUB DATE: Jun 21, 2024
LIST PRICE: £121.00 / \$150.00 / €142.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 539
AUDIENCE: Radiation oncology residents, practicing radiation oncologists, radiation dosimetrists, radiation physicists, Surgical oncologist, medical oncologist, oncology nurse
BIC CODES: MBNH, KNDH1
THEMA CLASSIFICATION: THEMAMF; THEMATCB

Provides comprehensive information regarding new applications of radiotherapy, while maintaining a strong backbone of basic radiation oncology, radiobiology, and physics

KEY FEATURES

- Comprehensively provides an overview of radiation oncology indications and techniques for busy practicing radiation oncologists
- Updated with new chapters on applications of radiotherapy, including big data and artificial intelligence in cancer care
- Includes color figures to visualize the technical diagrams, radiation treatment target volumes, and radiation treatment isodose lines

DESCRIPTION

Fundamentals of Radiation Oncology: Physical, Biological, and Clinical Aspects, Fourth Edition continues to provide current, concise, and a readily available source of clinical information for busy, practicing radiation oncologists. This book provides updated information regarding new applications of radiotherapy, while still maintaining a strong backbone of basic principles of radiation oncology, radiobiology, and physics. It creatively organizes and summarizes major clinical trials, frequently using helpful tables in each disease site. The edition is updated with content on immunotherapy, combined modality therapy for cancer treatments, the latest radiation therapy techniques for cancer treatments, and landmark clinical trials to support cancer treatment recommendations.

In four parts and 30 chapters, the book describes not only the basic science of radiation oncology, the techniques and modalities of radiation oncology, and the clinical science of radiation oncology, but also palliative radiation treatments to improve the quality of life of cancer patients. Figures have been upgraded to color to aid in visualization of technical diagrams, radiation treatment target volumes, and radiation treatment isodose lines. This book is a must-have for all radiation oncology residents, radiation oncologists, and all professionals engaged in the care of cancer patients.



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**NANO-ENZYME
INCORPORATED PARTICLES**

Fundamental Concepts, Synthesis and Applications


 Edited by
 Chaudhery Mustansar Hussain,
 Veleeswaran Ananthi, Alagarsamy Arun


Nano-Enzyme Incorporated Particles

Fundamental Concepts, Synthesis and Applications

Edited by : **Ananthi Veleeswaran**, PhD, Assistant Professor, Department of Microbiology, PRIST University, Madurai; **Arun Alagarsamy**, Professor and Head, Department of Microbiology, Alagappa University, Karaikudi and **Chaudhery Mustansar Hussain**, PhD, New Jersey Institute of Technology, Newark, NJ, USA

ISBN: 9780443188107

PUB DATE: Jun 03, 2024

LIST PRICE: £134.00 / \$175.00 /

€155.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 336

AUDIENCE: researchers, academicians, students in life science, NanoSciences, and engineering, researchers and scientists searching for new advancements in biofuel & research technology

BIC CODES: PSB, PHVN**THEMA CLASSIFICATION:**

THEMAPSB; THEMAPHVN

Focuses on the integrative approaches of enzyme nanoparticle synthesis and its application on biosensors, biomedicine, and biocatalysis

A Volume in the *Progress in Biochemistry and Biotechnology Series*

KEY FEATURES

- Focuses on integrative approaches of the enzyme nanoparticle synthesis and its applications on biomedicine, biosensors, and biocatalysis
- Encloses the potential challenges and developments of enzyme incorporated nanoparticles
- Discusses the vital activities of nanozymes in enzyme mimicking processes and prudent bio-catalytic efficiency
- Covers the latest methods and procedures involved in enzyme-incorporated nanomaterials

DESCRIPTION

Nano-Enzyme Incorporated Particles: Fundamental Concepts, Synthesis and Applications focuses on integrative approaches of the enzyme nanoparticle synthesis and its applications on biomedicine, biosensors and biocatalysis. The book discusses the vital activities of nanozymes in enzyme mimicking processes and covers the latest methods and procedures involved. Divided into five sections, this book covers the production and characterization of enzyme nanoparticles, the activities, properties, and applications of enzyme nanoparticles, the development of nanocatalysts as analytical tools, and the degradation of nanoparticles. It covers potential investigations regarding aspects of production, characterization, and applications of enzyme incorporated nanoparticles.



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Digital Healthcare in Asia and Gulf Region for Healthy Aging and More Inclusive Societies

Shaping Digital Future

Edited by : **Patricia Ordóñez de Pablos**, PhD., Professor, Faculty of Economics and Business, The University of Oviedo, Spain

ISBN: 9780443236372
PUB DATE: Jun 03, 2024
LIST PRICE: £134.00 / \$165.00 / €160.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 191 x 235

PAGES: c. 294

AUDIENCE: Researchers, scientists, and academics in the field of information technologies, frontier research (epidemiology, immunology, virology and other relevant scientific disciplines) and medicine as well as policymakers. Also Master and PhD students. Research centers, universities, government (ministries of health, digital innovation, economy

BIC CODES: MBF

THEMA CLASSIFICATION: THEMAPSAX

Provides successes and failures in the field of IT and digital health during the pandemic, with a special focus on Asia and the Gulf region

A Volume in the *Information Technologies in Healthcare Industry Series*

KEY FEATURES

- Delivers a collection of relevant case studies and experiences on digital healthcare from Asia and the Gulf Region, with important advances in digital healthcare that are understudied but are very technologically advanced in this area
- Provides recommendations for policymakers in Asia, the Gulf Region, and around the world
- Investigates the interplay of several important research areas (e.g., digital healthcare, 5G, artificial intelligence (AI), Big Data, Blockchain) with an emphasis on healthy aging

DESCRIPTION

Digital Healthcare in Asia and Gulf Region for Healthy Aging and More Inclusive Societies: Shaping Digital Future provides insights to the recent innovations, tools, and techniques in the field of digital healthcare, with special geographic coverage of Asia and the Gulf Region. The social and economic recovery after the pandemic requires urgent solutions for citizens, companies, and economies around the world. From research centers, labs, hospitals and academia, researchers and academics are working collaboratively to explore new views and frameworks to develop solutions for emergent problems.

In 34 Chapters, this book delivers a collection of relevant innovative research on digital healthcare, with four main goals: 1) cover two geographical regions (Asia and the Gulf Region) with important advances in digital healthcare but that are not covered enough in current publications; 2) study cases (success, failures) in the field of IT and digital health during the pandemic, and analyze the lessons from these cases; 3) analyze the latest advances in the field of digital healthcare (especially Artificial Intelligence, Big Data, Blockchain and 5G); and 4) discuss implications for main stakeholders (patients, doctors, IT experts, directors, and policy managers).



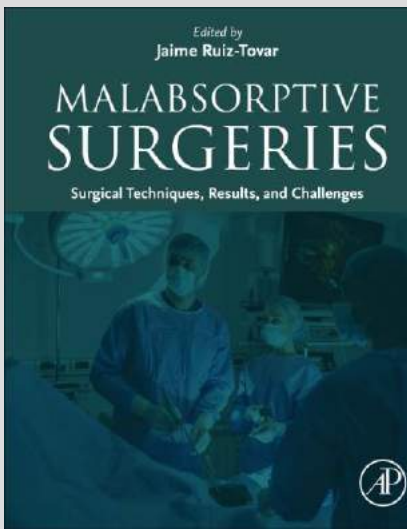
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Malabsorptive Surgeries

Surgical Techniques, Results, and Challenges

Edited by : **Jaime Ruiz Tovar**, Senior Professor, Universidad Alfonso X, Madrid, Spain

ISBN: 9780443216725
PUB DATE: Jun 01, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 279

AUDIENCE: Translational

Researchers in Obesity and Diabetes Mellitus, Bariatric Surgeons, and Endocrinologists, General Practitioners, Cardiologists, and Pulmonologists involved in patient prep for bariatric surgery

BIC CODES: PSA

THEMA CLASSIFICATION:
THEMAPS

Provides step-by-step coverage of the surgical techniques, results, and complications in current malabsorptive surgery procedures

KEY FEATURES

- Introduces new malabsorptive techniques, including OAGB and SADIS, which have improved results and reduced the nutritional sequelae of more classic approaches like biliopancreatic diversion and duodenal switch
- Provides insights into basic and translational research focused on the mechanism of action of malabsorptive procedures that goes beyond the bypassing of intestinal loops, thus affecting the regulation of hormonal signals
- Presents step-by-step procedures with accompanying images to guide performance of specific procedures

DESCRIPTION

Malabsorptive Surgery: Surgical Techniques, Results, and Challenges describes the development of classic and new malabsorptive surgical techniques. Coverage includes the results obtained after the procedures, as well as postoperative complications - including early complications (associated with the difficulty of the operation) and late complications (associated with nutritional sequelae). This book is the perfect reference for basic and translational research focused on the mechanism of action of malabsorptive procedures, that goes beyond the bypassing of intestinal loops, affecting the regulation of hormonal signals. The content is also useful for bariatric surgeons and endocrinologists dealing with the bariatric options and results.

Despite the aims of bariatric surgery focusing on performing procedures associated with low postoperative complications rates (mostly restrictive procedures), there is increasing evidence showing mid- and long-term failure of restrictive and mixed procedures in terms of weight regain and recurrence of comorbidities. This has increased the need for revisional surgeries after failed primary procedures, and consequently, increased the popularity of malabsorptive techniques.



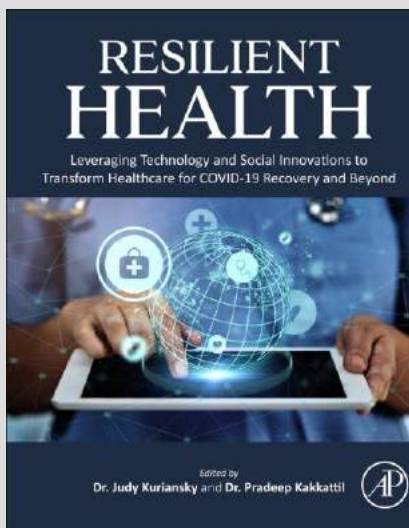
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Resilient Health

Leveraging Technology and Social Innovations to Transform Healthcare for COVID-19 Recovery and Beyond

Edited by : **Judy Kuriansky**, International Clinical Psychologist, Faculty of Columbia University Teachers College, USA and Visiting Professor, Peking Health Sciences Center and **Pradeep Kakkattil**, Director, Office of Innovation, Joint United Nations Programme on HIV/AIDS (UNAIDS)

ISBN: 9780443185298
PUB DATE: Jul 29, 2024
LIST PRICE: £115.00 / \$150.00 / €131.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 1135

AUDIENCE: All stakeholders in health and related field and public and private sectors including programmers, policymakers, practitioners, innovators, government, graduate students, educators and researchers.

BIC CODES: MBF

THEMA CLASSIFICATION: THEMAPSAX

Offers the latest knowledge and real-world examples of health innovations worldwide

KEY FEATURES

- Addresses the “hot” topic today in the ever-emerging landscape of disruptive digital healthcare delivery, covering critical issues and solutions in digital health, big data, and artificial intelligence as well as benefits and challenges, and ethical concerns
- Provides case examples of transformative and radical solutions to urgent health needs, especially in remote low-resource settings as well as in less well-covered regions of Central and South America and MENA (Middle East and North Africa)
- Positions health innovations at the nexus of the global framework of Universal Health Coverage and of the United Nations Sustainable Developing Goals to achieve SDG3 - good health and well-being –at the intersection with climate action, gender equality, quality education, eradication of poverty and hunger, sustainable cities, environmental protection and others.
- Serves as an exceptional resource, reference, teaching tool, and guide for all stakeholders including civil society and NGOs, government, think tanks, investors, academia, researchers and practitioners, product developers and all policymakers and programmers involved in planning and delivering healthcare, including an extensive section of resources in the digital health space in various categories like publications, conferences, and collaboratives.
- Provides examples of, and encourages, multi-stakeholder partnerships essential to re-imagine health systems, delivery and access, and to achieve intended healthcare objectives

DESCRIPTION

Resilient Health: Leveraging Technology and Social Innovations to Transform Healthcare for COVID-19 Recovery and Beyond presents game-changing and disruptive technological innovations and social applications in physical and mental healthcare around the world for the post-COVID age and beyond, addressing the urgent need for care. In this first-of-its kind comprehensive volume, experts and stakeholders from all sectors - government and the public and private sectors - offer models and frameworks for policy, programming, and financing to transform healthcare, address inequities, close the treatment gap, and “build back better,” especially for under-resourced vulnerable communities globally, to “leave no one behind” and advance development globally



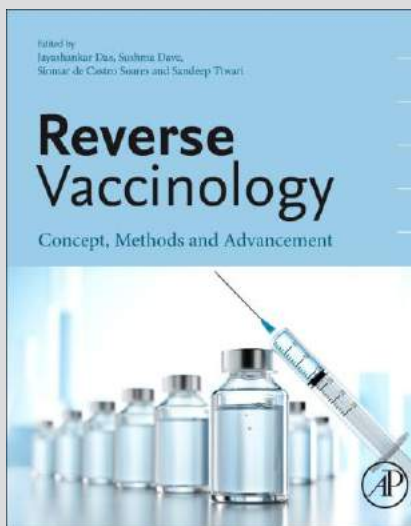
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Reverse Vaccinology

Concept, Methods and Advancement

Edited by : **Jayashankar Das**, PhD, Director of Research, Valnizen Healthcare Pvt Ltd, India; **Sushma Dave**, PhD, Associate Professor, Department of applied sciences, JIET, Jodhpur, Rajasthan, India; **Siomar de Castro Soares**, PhD, Assistant Professor, Natural and Biologic Sciences Institute, Federal University of Triangulo Mineiro, Brazil and **Sandeep Tiwari**, PhD, Post-doctoral Research Fellow, Department of Genetics, Ecology and Evolution, Federal University of Minas Gerais, Brazil

ISBN: 9780443133954
PUB DATE: Jul 17, 2024
LIST PRICE: £138.00 / \$180.00 / €160.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 558

AUDIENCE: Graduate students and researchers in bioinformatics and systems biology, bioinformaticians, Graduate students and researchers in biotechnology

BIC CODES: MBF

THEMA CLASSIFICATION:
THEMAPSAX

Discusses reverse vaccinology as an agile method for vaccine development

KEY FEATURES

- Explains the fundamentals of reverse vaccinology and how it can save time in the development of new vaccines
- Focuses on efforts to develop a vaccine candidate against various pathogens using computational approaches
- Presents databases and web servers for conducting reverse vaccinology
- Describes the screening process of potential vaccine candidates through machine learning

DESCRIPTION

Reverse Vaccinology: Concept, Methods and Advancement presents the development strategy of new vaccines through genome sequencing bioinformatics analysis. Reverse vaccinology promises to revolutionize vaccine development, especially for pathogens to which the classical applications of Pasteur's principles have failed, and it is explained in detail in this book. The book is split into three sections: the first, Concept, brings the basis of reverse vaccinology, vaccine antigen discovery, and subunit vaccine; the second, Tools and Methods, describes immunoinformatic, proteomics for epitope-vaccine design, data bases, network analysis, machine learning, and NGS driven antigen screening technology.

The book's final section, Disease Case Study, discusses real-world examples in the development of new vaccines for diverse diseases. It is a valuable resource for bioinformaticians, researchers, students, and member of the biomedical and medical fields who want to learn more about a new and agile process for the development of new vaccines.



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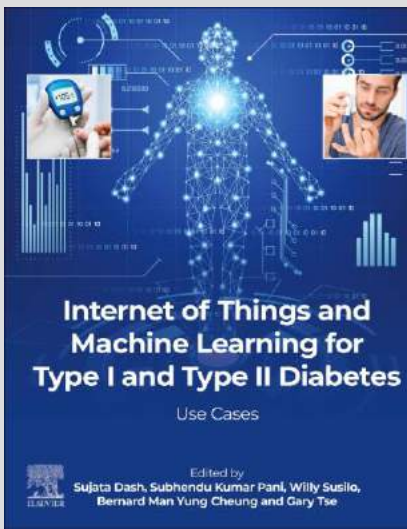
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Internet of Things and Machine Learning for Type I and Type II Diabetes

Use cases

Edited by : **Sujata Dash**, PhD, Department of Computer Application, Maharaja Srirama Chandra BhanjaDeo University (formerly North Orissa University), Baripada, Mayurbhanj, Odisha, India; **Subhendu Kumar Pani**, PhD, Krupajal Engineering College, Prashanti Vihar, Near CIFA, Kausalya Ganga, Bhubaneswar, Khordha, Odisha, India; **Willy Susilo**, Director, Institute of Cybersecurity and Cryptology, Professor and Head of School of Computing and Information Technology, The University of Wollongong, Australia; **Cheung Man Yung Bernard**, Sun Chieh Yeh Heart Foundation Professorship in Cardiovascular Therapeutics



ISBN: 9780323956864
PUB DATE: Jul 15, 2024
LIST PRICE: £126.00 / \$165.00 / €143.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 465

AUDIENCE: Researchers and practitioners working in the biomedical field, diabetes, bioengineering, health informatics, bioelectronics, medical electronics, PhD students in life sciences and computer science

BIC CODES: MJN

THEMA CLASSIFICATION:

THEMAMKJ

Covers machine learning and big data analytics methods used to assist problem-solving and stimulate research

KEY FEATURES

- Integrates many Machine learning techniques in biomedical domain to detect various types of diabetes to utilizing large volumes of available diabetes-related data for extracting knowledge
- It integrates data mining and IoT techniques to monitor diabetes patients using their medical records (HER) and administrative data
- Includes clinical applications to highlight contemporary use of these machine learning algorithms and artificial intelligence-driven models beyond research settings

DESCRIPTION

Internet of Things and Machine Learning for Type I and Type II Diabetes: Use Cases provides a medium of exchange of expertise and addresses the concerns, needs, and problems associated with Type I and Type II diabetes. Expert contributions come from researchers across biomedical, data mining, and deep learning. This is an essential resource for both the AI and Biomedical research community, crossing various sectors for broad coverage of the concepts, themes, and instrumentalities of this important and evolving area. Coverage includes IoT, AI, Deep Learning, Machine Learning and Big Data Analytics for diabetes and health informatics.



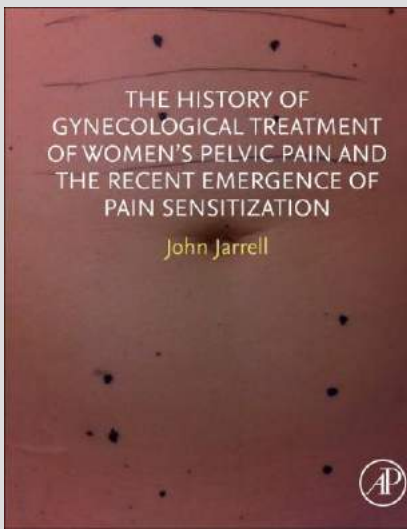
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The History of Gynecological Treatment of Women's Pelvic Pain and the Recent Emergence of Pain Sensitization

John F. Jarrell, MD, Emeritus Professor Obstetrics and Gynecology, University of Calgary, Calgary, Alberta

ISBN: 9780443239946
PUB DATE: Jul 01, 2024
LIST PRICE: £133.99 / \$165.00 / €156.99
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 191 x 235
PAGES: c. 223
AUDIENCE: Researchers and clinicians in the field, healthcare professionals, patients, students, Historians, women with pelvic pain, authors of women's studies, feminist writers and scholars of physician-interactions with slaveholders and enslaved women
BIC CODES: PSA
THEMA CLASSIFICATION: THEMAPS

Helps reader understand the historic and current treatment of women's pelvic pain to better appreciate the implications of central pain sensitization

KEY FEATURES

- Discusses co-morbidities and possible reversal approaches
- Provides information on what to look for with pelvic pain to provide guidance for potential solutions
- Discusses early women gynecologists and early developments in surgical practice

DESCRIPTION

The History of Gynecological Treatment of Women's Pelvic Pain and the Recent Emergence of Pain Sensitization is a historical account on how women have been treated for the problems of pelvic pain. It describes the earliest reports of women suffering from pelvic pain that seem to suggest the presence of something beyond any understanding prior to the late twentieth century. This book is for awareness of the condition and will help readers understand the complex presentations of pelvic pain: the shift from episodic to persistent pain, referred pain, pain from a non-painful stimulus (allodynia), and excessive pain from a painful stimulus (hyperalgesia).

This is a novel reference that provides a detailed chronology of past treatments and how the absence of awareness of pain sensitization led to some disreputable surgical procedures. In addition, it is an historical analysis on the emergence of central pain sensitization as an explanation for the historical challenges of the past to current developments.



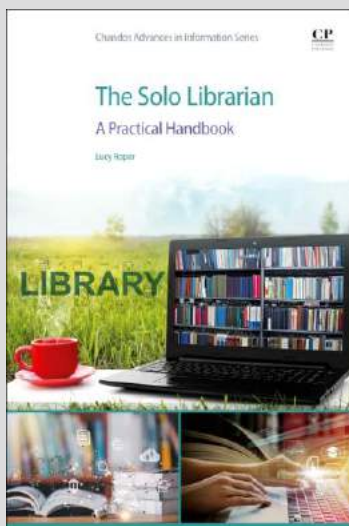
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The Solo Librarian

A Practical Handbook

Lucy Roper, BSc (Hons), PG CHEM, MCLIP, AFHEA. ORCID: 0009-0008-3176-2266, BSc (Hons), PG CHEM, MCLIP, AFHEA. ORCID: 0009-0008-3176-2266

ISBN: 9780443157950
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LIST PRICE: £75.00 / \$94.99 / €88.99
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 391
AUDIENCE: Solo Librarians, Librarians in small teams with limited help, Library Graduates, Subject Librarians, Trainee Librarians, Library Assistants, Library and Information Studies Students
BIC CODES: GL
THEMA CLASSIFICATION: THEMAGLC

Provides a one-stop-shop with accompanying templates for librarians and those working in information, knowledge and related disciplines

KEY FEATURES

- Becoming a solo librarian can be a daunting prospect. This book relays, as a solo librarian practitioner, the lessons the author has learnt, whilst creating and sharing guidance that assists others finding themselves in a similar role and/or a small team with limited help but with a mandate to connect to global trends and progress in the field of librarianship and information science.
- This Internationally applicable and practical handbook, however, provides a logical process of creating library provision and the services involved.

The solo librarian yearly planner and timeline of activities, supporting guidance and templates provided will be downloadable (via the eBook version) and can be adapted and utilised further to help aid the daily activities and processes often faced by library and information service(s) staff that include those working in information, knowledge, libraries and related disciplines in the UK and internationally.

DESCRIPTION

Actively diversifying the content to increase its relevance to an international audience, this practical handbook provides a one-stop-shop with accompanying time-saving templates that can be easily adapted to help aid the daily activities and processes often faced by those working in information, knowledge, libraries and related disciplines.

The Solo Librarian: A Practical Handbook provides an internationally applicable and practical handbook that shows a timeline of key activities that happen throughout, in this example, an academic year. Sections provide examples on Acquisitions, cataloguing, updating library guidance (before academic year start - September), Student and Staff Inductions (September/October), Quarterly Business Review to review updates and library usage (Oct – Dec), Library cover over student/staff holiday period (Dec), Quarterly Business Review (Jan – Mar), Quality standard(s) re-accreditation (April), Research methods/study skills webinars (April), Library cover over student holiday period (April), Quarterly Business Review (April –June), and much more.



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Library Career Management in the Digital Age

A New Tool for Development

Katarina Michnik, Librarian, University of Gothenburg, Olofstorp, Sweden

ISBN: 9780443215285
PUB DATE: Jun 20, 2024
LIST PRICE: £72.00 / \$94.95 / €82.95
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 214

AUDIENCE: Academic library managers/academic library directors/academic library leaders, Early career academic librarians, Educators in higher education within Library and Information Science/library school faculties, Experienced/senior academic librarians, Students and graduate students in Library and Information Science, This book will be useful as course material for courses in Library and Information Science for both undergraduate and master level as well as for further competence development targeting early career and senior academic librarians.

BIC CODES: GL

THEMA CLASSIFICATION:
THEMAGLC

Presents a new model, the Librarian Career Management Tool, that can be used to identify and structure possible opportunities and career development for academic librarians

A Volume in the *Chandos Advances in Information Series* Series

KEY FEATURES

- Helps academic library managers to identify and structure the opportunities and challenges that their employees face in the digital age
- Helpful for early career academic librarians to identify and structure their motivations and what they want to achieve as librarians
- Ideal for educators in higher education within LIS as a resource for use in teaching about the prerequisites for, and characteristics of, career development of academic librarians

DESCRIPTION

Library Career Management in the Digital Age, A New Tool for Development presents a new model, the Librarian Career Management Tool, that can be used to identify and structure possible opportunities and challenges to the career development of academic librarians in the digital age. Because of this heterogeneity in the field, there is a need for a theoretical and practical tool that distils variation down to fundamental principles which people can then work with. The tool discussed in the book collates all possible career paths into a taxonomy of influencing factors and natural relationships between these factors for the digital librarian context.

The advantage of modeling these distinct patterns is to enable informed and far-sighted decisions on the motivations for the next steps in an individual's career. In addition, it enables key trends in digital information management to be better understood.



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Development in Waste Water Treatment Research and Processes

Role of Environmental Microbiology in Industrial Wastewater Research

Maulin P. Shah, Chief Scientist and Head, Industrial Waste Water Research Lab, Division of Applied and Environmental Microbiology Lab at Enviro Technology Ltd., Ankleshwar, Gujarat, India and **Nidhi Shah**, Visiting Assistant Professor in Analytical Chemistry, Indiana University Southeast, USA

ISBN: 9780443136092
PUB DATE: Jul 01, 2024
LIST PRICE: £180.00 / \$230.00 / €200.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 418

AUDIENCE: Researchers in academia and industry, postgraduate students interested in advanced oxidation process and effluent treatment plants, including environmental microbiologists, biotechnologists, microbiologists, environmental and chemical engineers as well as those interested in bioremediation

BIC CODES: TC, TQSW1, TDCB, PSG

THEMA CLASSIFICATION: THEMATDC; THEMAPSG; THEMATQSW

Describes the limitations and challenges, corrective strategies and applications of bioremediation for the effective elimination of toxic pollutants from the environment

KEY FEATURES

- Describes the importance of microorganisms in environmental bioremediation technologies
- Points out the reuse of treated wastewater through emerging technologies
- Pays special attention to the occurrence of novel micro-pollutants

DESCRIPTION

Development in Waste Water Treatment Research and Processes: Role of Environmental Microbiology in Industrial Wastewater Research focuses on environmental bioremediation concepts, providing a comprehensive view of recent trends and emerging technologies in environmental bioremediation, addressing current limitations and challenges pertaining to generally accepted and applied bioremediation strategies, and discussing corrective strategies for the removal of pollutants from the environment.

Describing the broader role of environmental microbiology specifically in the treatment of industrial wastewater research, the book includes sections on the recovery of resources from wastewater that will be of interest to environmental microbiologists, biotechnologists, environmental engineers, chemical engineers, and those working in the bioremediation field.



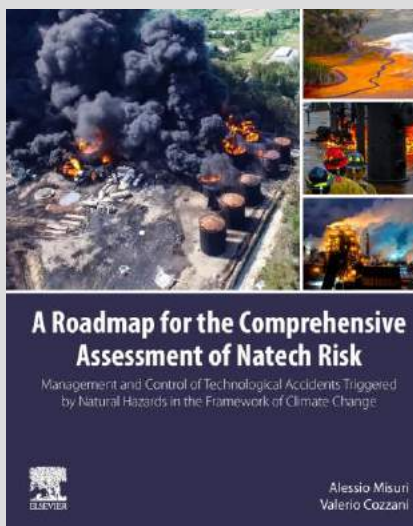
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A Roadmap for the Comprehensive Assessment of Natech Risk

Management and Control of Technological Accidents Triggered by Natural Hazards in the Framework of Climate Change

Alessio Misuri, University of Bologna, Bologna, Italy and Valerio Cozzani, Full Professor, University of Bologna, Bologna, Italy

ISBN: 9780443153907
PUB DATE: Jul 01, 2024
LIST PRICE: £146.00 / \$190.00 / €170.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 279

AUDIENCE: Chemical engineers, process engineers, process safety engineers, biochemical engineers. Academic researchers in the field of loss prevention in the chemical, process and energy industries. Top and line management within industrial sectors handling or storing hazardous substances. Environmental managers, HSE managers, public decision-makers (regional, national and international), experts in Control and Regulatory Authorities (regional and national). Inspectors responsible of emergency planning, experts in research centers on industrial safety and citizen protection. Academics and students in chemical, process, and biochemical engineering. Technical staff in fire brigades, and first responders

BIC CODES: TDCB

THEMA CLASSIFICATION: THEMATDC



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Provides both practical and innovative solutions and emerging conceptual models for Natech accidents assessment

KEY FEATURES

- Provides user-friendly description of methodologies suitable for the application to complex industrial problems
- Includes worked case-studies to explicitly drive the application of the proposed methodologies
- Offers state-of-the-art, available tools to perform the assessment of Natech risk to provide a quick toolbox to be applied to complex industrial problems

DESCRIPTION

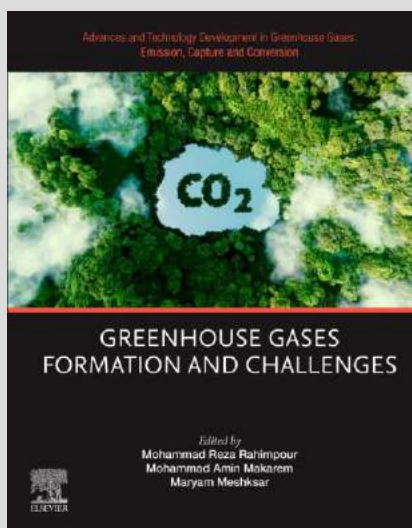
A Roadmap for the Comprehensive Assessment of Natech Risk: Management and Control of Technological Accidents Triggered by Natural Hazards in the Framework of Climate Change covers the latest advancements concerning the quantitative risk assessment and the management of cascading events involving technological accidents caused by natural hazards. The topic is meticulously covered, providing a description of past accidents, case-studies, and quantitative figures that allow for the identification of the most vulnerable plant elements, of the complex features of accident scenarios, and of their rising trend that is possibly related to factors as climate change and growing industrialization.

Methodologies aiming at the assessment of the actual performance of safety barriers and safety systems during or immediately after the impact of a natural event are also presented. Recent tools and data supporting the quantitative assessment of these features in the overall assessment of Natech risk are reported, highlighting the similarities with other typologies of cascading accidents. Several case studies are presented in the book, and each methodology presented is provided with an illustrative case-study providing guidance to its application.

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Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion

Greenhouse Gases Formation and Challenges

Edited by : **Mohammad Reza Rahimpour**, Professor, Department of Chemical Engineering, Shiraz University, Shiraz, Iran; **Mohammad Amin Makarem**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran and **Maryam Meshksar**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran

ISBN: 9780443190667
PUB DATE: Jul 01, 2024
LIST PRICE: £185.00 / \$235.00 / €205.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 418

AUDIENCE: Researchers in academia, students and professors in chemical engineering, oil and gas engineering, and mechanical engineering Refinery and petrochemical engineers, Energy producers and utilities, Power generation plants, Extractive companies, Process design companies, Oil, gas and petrochemical industries

BIC CODES: TDCB, THFP, TH

THEMA CLASSIFICATION: THEMATDC; THEMAKNB; THEMATHFP

Presents measuring methods for the detection of GHGs and connecting GHGs emissions with global warming and climate change

KEY FEATURES

- Introduces greenhouse gases characteristics and properties
- Describes different sources of greenhouse gases formation
- Includes the relationship between greenhouse gases and climate change

DESCRIPTION

Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion, Volume One, Greenhouse Gases Formation Challenges is part of a comprehensive seven-volume set of books that discusses the composition and properties of greenhouse gases. It also introduces different sources of greenhouse gases emission and the relation between greenhouse gases and global warming. The comprehensive and detailed presentation of common technologies as well as novel research related to all aspects of greenhouse gases makes this work an indispensable encyclopedic resource for researchers in academia and industry.

Volume One primarily introduces the definition of greenhouse gases (GHGs), as well as their characteristics and properties. The book presents measuring methods for the detection of GHGs and connects GHGs emissions with global warming and climate change. The book touches on all aspects concerning the classification of GHGs with their types and features and how they are detected, followed by discussions addressing the connection between GHGs and climate change in different sectors.



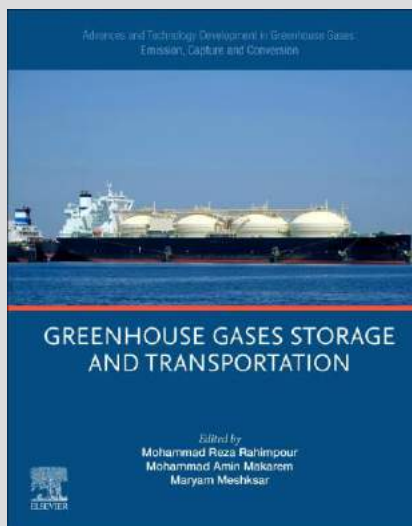
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Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion

Greenhouse Gases Storage and Transportation

Edited by : **Mohammad Reza Rahimpour**, Professor, Department of Chemical Engineering, Shiraz University, Shiraz, Iran; **Mohammad Amin Makarem**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran and **Maryam Meshksar**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran

ISBN: 9780443190674
PUB DATE: Jul 01, 2024
LIST PRICE: £185.00 / \$235.00 / €205.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 614

AUDIENCE: Researchers in academia, students and professors in chemical engineering, oil and gas engineering, and mechanical engineering Refinery and petrochemical engineers, Energy producers and utilities, Power generation plants, Extractive companies, Process design companies, Oil, gas and petrochemical industries

BIC CODES: TDCB, THFP, TH

THEMA CLASSIFICATION: THEMATDC; THEMAKNB; THEMATHFP

Reviews how to govern, plan, implement, and manage maintenance operations in smart city projects and transitions

KEY FEATURES

- Introduces different technologies for carbon storage and transportation
- Describes various methane storage and transportation technologies
- Discusses challenges of greenhouse gases transportation

DESCRIPTION

Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion, Volume Three, Greenhouse Gases Storage and Transportation is part of a comprehensive seven-volume set of books that discusses the composition and properties of greenhouse gases. It also introduces different sources of greenhouse gases emission and the relation between greenhouse gases and global warming. The comprehensive and detailed presentation of common technologies as well as novel research related to all aspects of greenhouse gases makes this work an indispensable encyclopedic resource for researchers in academia and industry.

Volume Three investigates methods of storage and transportation, their current status, novel strategies, and conventional challenges. The book consists of four sections, the first three of which include various strategies employed in the storage and transportation of the major greenhouse gases (GHGs), namely carbon dioxide, methane, and nitrous oxide. Each section addresses recent advances, new concepts, and the economic assessment of storage and transportation facilities. Other sections survey the challenges that storage and transportation of GHGs may face, along with major problems of the pipelines that are employed for the transportation of these materials.



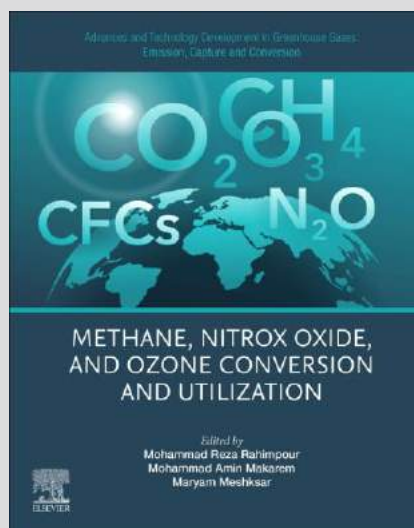
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Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion

Methane, Nitrox Oxide, and Ozone Conversion and Utilization

Edited by : **Mohammad Reza Rahimpour**, Professor, Department of Chemical Engineering, Shiraz University, Shiraz, Iran; **Mohammad Amin Makarem**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran and **Maryam Meshksar**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran

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LIST PRICE: £185.00 / \$235.00 / €205.00

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FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 642

AUDIENCE: Researchers in academia, students and professors in chemical engineering, oil and gas engineering, and mechanical engineering Refinery and petrochemical engineers, Energy producers and utilities; Power generation plants, Extractive companies, Process design companies, Oil, gas and petrochemical industries
BIC CODES: TDCB, THFP, TH
THEMA CLASSIFICATION: THEMATDC; THEMAKNB; THEMATHFP

Presents applications of methane, nitrox oxide, and ozone and reviews operating plants and pilots for methane conversion, economic assessments, cost analysis, and environmental impacts

KEY FEATURES

- Introduces applications and chemicals produced from methane
- Describes nitrous oxide conversion and applications
- Discusses about various applications of ozone

DESCRIPTION

Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion, Volume Six, Methane, Nitrox Oxide, and Ozone Conversion and Utilization is part of a comprehensive seven-volume set of books that discusses the composition and properties of greenhouse gases. It also introduces different sources of greenhouse gases emission and the relation between greenhouse gases and global warming. The comprehensive and detailed presentation of common technologies as well as novel research related to all aspects of greenhouse gases makes this work an indispensable encyclopedic resource for researchers in academia and industry.

Volume Six reviews the applications of methane, nitrox oxide, and ozone. It investigates any valuable product fabricated with the inclusion of methane, nitrox oxide, and ozone. The book also reviews recent advances, the largest operating plants and pilots for methane conversion, the economic assessments and cost analysis, and environmental impacts and challenges that are faced when developing these processes.



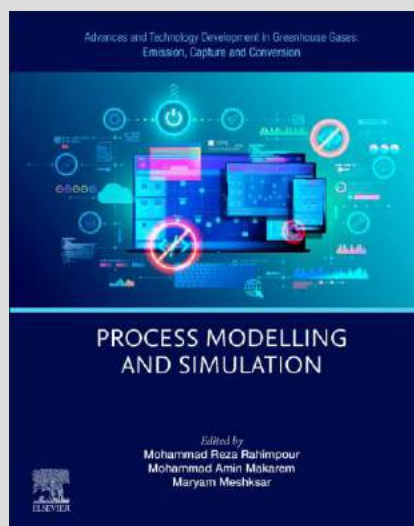
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Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion

Process Modelling and Simulation

Edited by : **Mohammad Reza Rahimpour**, Professor, Department of Chemical Engineering, Shiraz University, Shiraz, Iran; **Mohammad Amin Makarem**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran and **Maryam Meshksar**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran

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DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 558

AUDIENCE: Researchers in academia, students and professors in chemical engineering, oil and gas engineering, and mechanical engineering Refinery and petrochemical engineers, Energy producers and utilities, Power generation plants, Extractive companies, Process design companies, Oil, gas and petrochemical industries

BIC CODES: THFP, TH, TDCB

THEMA CLASSIFICATION: THEMAKNB; THEMATHFP; THEMATDC

Reviews simulation and modeling studies of GHGs emissions essential for carbon capture, storage, and conversion

KEY FEATURES

- Introduces modeling and simulation methods of carbon and methane emission
- Describes modeling and simulation procedures for producing chemicals from carbon as well as methane
- Discusses modeling and simulation of various technologies for carbon capture

DESCRIPTION

Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion, Volume Seven, Process Modelling and Simulation is part of a comprehensive seven-volume set of books that discusses the composition and properties of greenhouse gases. It also introduces different sources of greenhouse gases emission and the relation between greenhouse gases and global warming. The comprehensive and detailed presentation of common technologies as well as novel research related to all aspects of greenhouse gases makes this work an indispensable encyclopedic resource for researchers in academia and industry.

Volume Seven reviews process modelling and simulation, covering modeling studies of GHGs emissions, along with a survey of the details of carbon capture modeling with several well-developed processes such as absorbers, swing technologies, and microstructures. It addresses modeling of geological and ocean storage and reviews simulation studies of the chemical conversion of carbon dioxide to any valuable materials. The book summarizes essential information required in the simulation and modelling of the processes which are beneficial in carbon capture, storage, or conversion.



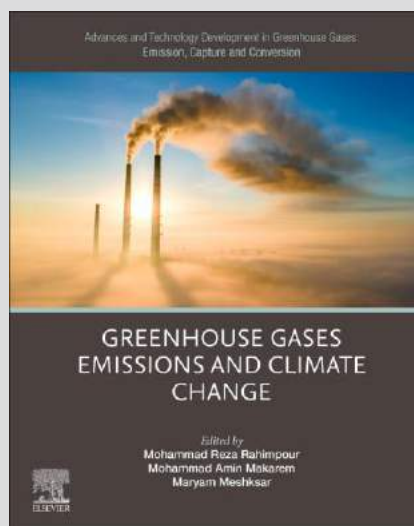
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Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion

Greenhouse Gases Emissions and Climate Change

Edited by : **Mohammad Reza Rahimpour**, Professor, Department of Chemical Engineering, Shiraz University, Shiraz, Iran; **Mohammad Amin Makarem**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran and **Maryam Meshksar**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran

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PAGES: c. 697

AUDIENCE: Researchers in academia, students and professors in chemical engineering, oil and gas engineering, and mechanical engineering Refinery and petrochemical engineers, Energy producers and utilities, Power generation plants, Extractive companies, Process design companies, Oil, gas and petrochemical industries

BIC CODES: TDCB, THFP, TH

THEMA CLASSIFICATION: THEMATDC; THEMAKNB; THEMATHFP

Reviews sources of GHGs and addresses the impact of their release on human health

KEY FEATURES

- Introduces different sources of greenhouse gases emission
- Describes different methods for controlling greenhouse gases emission
- Includes geo-engineering methods for decreasing greenhouse gases emission

DESCRIPTION

Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion, Volume Two, Greenhouse Gases Emissions and Climate Change is part of a comprehensive seven-volume set of books that discusses the composition and properties of greenhouse gases. It also introduces different sources of greenhouse gases emission and the relation between greenhouse gases and global warming. The comprehensive and detailed presentation of common technologies as well as novel research related to all aspects of greenhouse gases makes this work an indispensable encyclopedic resource for researchers in academia and industry.

Volume Two reviews the sources of GHGs emissions and controlling techniques and introduces the sources of greenhouse gases (GHGs), from domestic and industrial to agricultural. The book addresses the impact of their release on human health followed by politics and economics. The first section deals with the assessment of inhibiting technologies, as well as policy tools, employed for GHGs inhibition. The second section is devoted to mineral carbonation as an efficient tool for controlling GHGs emissions. The third section discusses other strategies that help control GHGs.



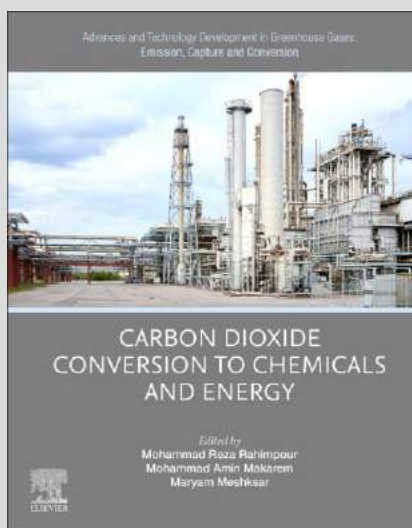
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Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion.

Carbon Dioxide Conversion to Chemicals and Energy

Edited by : **Mohammad Reza Rahimpour**, Professor, Department of Chemical Engineering, Shiraz University, Shiraz, Iran; **Mohammad Amin Makarem**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran and **Maryam Meshksar**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran

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DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 614

AUDIENCE: Researchers in academia, students and professors in chemical engineering, oil and gas engineering, and mechanical engineering Refinery and petrochemical engineers, Energy producers and utilities, Power generation plants, Extractive companies, Process design companies, Oil, gas and petrochemical industries

BIC CODES: TDCB, THFP, TH

THEMA CLASSIFICATION: THEMATDC; THEMAKNB; THEMATHFP

Provides a strategy to control the rise of greenhouse gases (GHGs) in the atmosphere along with their conversion into valuable materials

KEY FEATURES

- Introduces different applications of carbon dioxide
- Includes environmental challenges and economic assessment of carbon capture and utilization
- Describes various chemicals produced from CO₂

DESCRIPTION

Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion, Volume Five, Carbon Dioxide Conversion to Chemicals and Energy is part of a comprehensive seven-volume set of books that discusses the composition and properties of greenhouse gases. It also introduces different sources of greenhouse gases emission and the relation between greenhouse gases and global warming. The comprehensive and detailed presentation of common technologies as well as novel research related to all aspects of greenhouse gases makes this work an indispensable encyclopedic resource for researchers in academia and industry.

Volume Five titled provides a beneficial strategy to control the rise of greenhouse gases (GHGs) in the atmosphere and their conversion into valuable materials such as chemical and energy carriers. The book touches concepts about the conversion of carbon dioxide, which is the main GHG. This two-section volume provides applications of carbon dioxide and the chemical processes employed to fabricate a host of materials. Each section reviews a process in detail and surveys the economic assessments, cost analysis, environmental impacts and challenges, recent advances and new concepts, and the largest operating plants and pilots for carbon conversion.



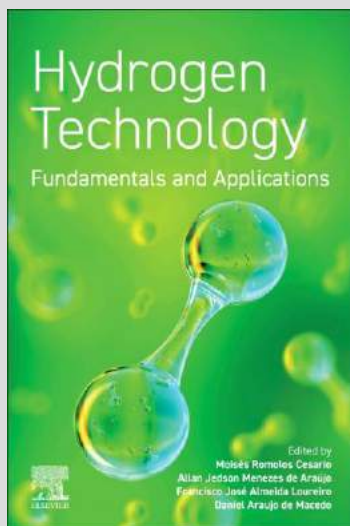
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Hydrogen Technology

Fundamentals and Applications

Edited by : **Moisés Romolos Cesarino**, Department of Materials Engineering, Federal University of Paraíba, Paraíba, Brazil; **Allan Jedson Menezes de Araújo**, Department of Mechanical Engineering, Center of Mechanical Technology and Automation (TEMA), University of Aveiro, Aveiro, Portugal; **Francisco José Almeida Loureiro**, Department of Mechanical Engineering, Center of Mechanical Technology and Automation (TEMA), University of Aveiro, Aveiro, Portugal and **Daniel Araujo de Macedo**, Department of Materials Engineering, Federal University of Paraíba, Paraíba, Brazil

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LIST PRICE: £175.00 / \$225.00 / €200.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 335
AUDIENCE: Students and researchers in chemistry, chemical sciences, physics, and materials science who are interested in the hydrogen economy, technology for clean energy production and valorization of chemicals
BIC CODES: TDCB
THEMA CLASSIFICATION: THEMATDC

Explores the diverse aspects of hydrogen technology, covering materials, electro/catalytic reactions, and industrial processes

KEY FEATURES

- Explains the phenomena that govern electrocatalytic/catalytic reactions
- Covers the study of new materials design and industrial processes
- Includes process improvements for obtaining hydrogen via chemical and biological processes

DESCRIPTION

Hydrogen Technology: Fundamentals and Applications relates theoretical concepts to practical case studies in the field of hydrogen technology with an emphasis on materials and their applications. To implement hydrogen conversion production processes, it is crucial to understand the structural, microstructural, textural, thermal, catalytic, and electrochemical properties of materials. Covering nanomaterials, heterogeneous catalysis, greenhouse gas conversion, reforming reactions for hydrogen production, valorization of hydrogen energy, biomass valorization, the hydrogen economy, and its technical feasibility, this book addresses how bio/hydrogen technology can be used to solve environmental problems, including how to produce, convert, and store energy through electro/catalytic reactions and chemical valorization.

Providing an understanding of the different factors involved, such as the availability of raw material, location, viable process and production scale, and economic criteria, this book will especially be of interest to engineers, scientists, and students in the field of hydrogen technology.



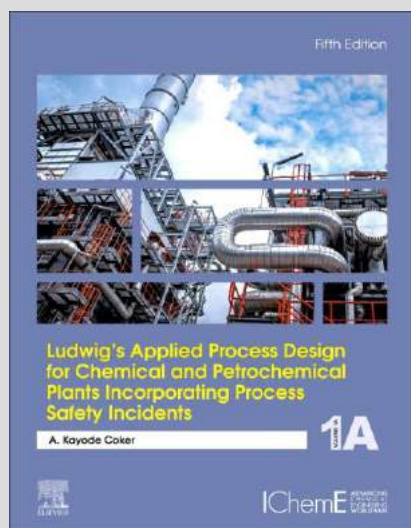
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Ludwig's Applied Process Design for Chemical and Petrochemical Plants Incorporating Process Safety Incidents, 5e

Volume 1A

A. Kayode Coker, Engineering Coordinator, Saudi Aramco Shell Refinery Company, Saudi Arabia

ISBN: 9780323917193

PREVIOUS ISBN: 9780750677660

PUB DATE: Jul 12, 2024

LIST PRICE: £155.00 / \$200.00 /

€175.00

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 1294

AUDIENCE: Chemical Engineers, Engineering Students/graduates, Professionals and Technologists; Process/Chemical Engineering Managers, Senior Process/Chemical Engineers, Scientists and Researchers

BIC CODES: THFP, TH, TDCB

THEMA CLASSIFICATION:

THEMAKNB; THEMATHFP;

THEMATDC

A fully revised and updated volume providing up-to-date information on process safety planning for chemical and petrochemical plants

KEY FEATURES

- Provides improved design manual for methods and proven fundamentals of process design with related data and charts
- Covers a complete range of basic day-to-day petrochemical operation topics. Extensively revised with new materials on Non-Newtonian fluids, homogeneous and heterogeneous flow, and pressure drop, ejectors, phase separation, metallurgy and corrosion and optimization of chemical process/blending
- Presents many examples using Honeywell UniSim Design software, developed and executable computer programs, and Excel spreadsheet programs
- Includes case studies of process safety incidents, guidance for troubleshooting, and checklists
- Includes Software of Conversion Table and 40+ process data sheets in excel format

DESCRIPTION

Ludwig's Applied Process Design for Chemical and Petrochemical Plants Incorporating Process Safety Incidents is ever evolving starting with the first edition some 60 years ago. The volumes in this fifth edition provide improved techniques and fundamental design methodologies to guide the practicing engineer in designing process equipment and applying chemical processes to the properly detailed hardware. As indicative of the new title, process safety incidents are incorporated in many of the chapters, reviewing the root causes, and how these could be mitigated in future. Like its predecessor, this new edition continues to present updated information for achieving optimum operational and process conditions and to avoid problems caused by inadequate sizing and lack of internally detailed hardware. The volumes provide both fundamental theories where applicable and direct application of these theories to applied equations essential in the design effort. This approach in presenting design information is essential for troubleshooting process equipment and in executing system performance analysis. Volume 1A covers (chapters 1 - 6), process planning, flow-sheeting and scheduling, cost estimation and economic, physical properties of liquids and gases, fluid flow, mechanical separations.



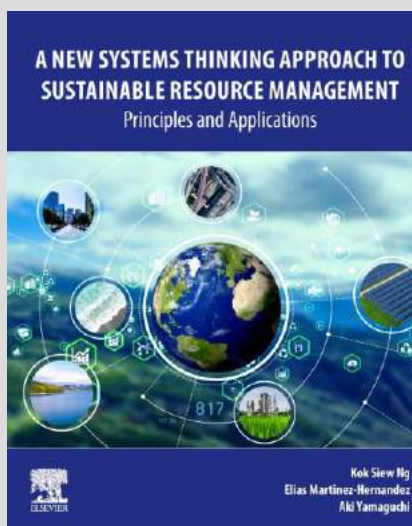
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A New Systems Thinking Approach to Sustainable Resource Management

Principles and Applications

Kok Siew Ng, UKRI/NERC Industrial Innovation (Rutherford) Research Fellow at the Department of Engineering Science, University of Oxford and the Principal Investigator of the NERC fellowship project “A Systems Approach to Synergistic Utilisation of Secondary Organic Streams” (SYNERGORS); **Elias Martinez Hernandez**, Researcher, Energy Efficiency and Biofuels Division, Mexican Institute of Petroleum (IMP), Ciudad de Mexico, Mexico and **Aki Yamaguchi**, Climate Change and Energy Policy Officer, British Embassy, Tokyo, Japan

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FORMAT: Paperback

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PAGES: c. 430

AUDIENCE: Academics, undergraduate and postgraduate (taught and research) students, professional engineers and policy makers particularly in the fields of Chemical, Process and Environmental Engineering

BIC CODES: TC, TDCB

THEMA CLASSIFICATION: THEMATDC

Provides an interdisciplinary systems thinking approach to tackle complex global challenges, specifically focusing on the sustainable management of natural resources

KEY FEATURES

- Introduces the “new systems thinking” approach and explains the core principles of system modeling, mapping, integration, analysis, and sustainability assessment
- Guides readers through methodologies with step-by-step instructions, illustrated with example problems
- Includes practical case studies to equip readers for real-world projects related to sustainable resource management, embracing the new systems thinking approach

DESCRIPTION

A New Systems Thinking Approach to Sustainable Resource Management: Principles and Applications introduces an innovative approach to exploring systems holistically and understanding complex interconnected dynamics effectively among technical systems, natural systems, and human activities to address challenges in resource management. This book covers the fundamental principles of “systems” and “sustainability,” delving into the methodology of “new systems thinking,” which encompasses system modeling, mapping, integration, analysis, and sustainability assessment. The application of this new systems thinking approach is demonstrated through practical case studies, with a specific emphasis on waste management systems, food-energy-water nexus, and biorefinery systems.

This is an excellent reference for academics, undergraduate and postgraduate students, professional engineers, and policymakers across various disciplines including: chemical engineering, process engineering, environmental science, environmental engineering, and environmental management.



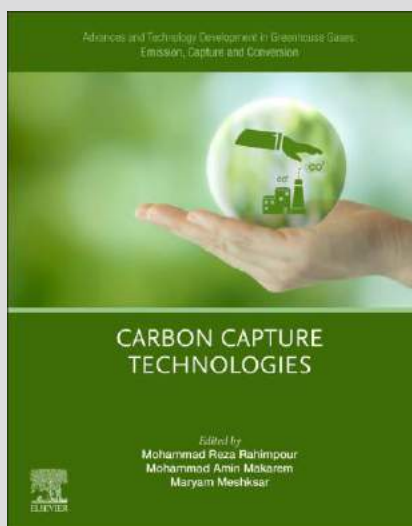
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Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion

Carbon Capture Technologies

Edited by : **Mohammad Reza Rahimpour**, Professor, Department of Chemical Engineering, Shiraz University, Shiraz, Iran; **Mohammad Amin Makarem**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran and **Maryam Meshksar**, Research Associate, Department of Chemical Engineering, Shiraz University, Shiraz, Iran

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FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 893

AUDIENCE: Researchers in academia, students and professors in chemical engineering, oil and gas engineering, and mechanical engineering Refinery and petrochemical engineers, Energy producers and utilities, Power generation plants, Extractive companies, Process design companies, Oil, gas and petrochemical industries

BIC CODES: TDCB, THFP, TH

THEMA CLASSIFICATION: THEMATDC; THEMAKNB; THEMATHFP

Deals with efficient separation technologies for controlling carbon-made greenhouse gases (GHGs) and reviews economic assessments and environmental challenges

KEY FEATURES

- Introduces carbon capture concepts and challenges
- Describes various absorption and adsorption processes for carbon capture
- Includes various membrane technologies for carbon capture

DESCRIPTION

Advances and Technology Development in Greenhouse Gases: Emission, Capture and Conversion, Volume Four, Carbon Capture Technologies is part of a comprehensive seven-volume set of books that discusses the composition and properties of greenhouse gases. It also introduces different sources of greenhouse gases emission and the relation between greenhouse gases and global warming. The comprehensive and detailed presentation of common technologies as well as novel research related to all aspects of greenhouse gases makes this work an indispensable encyclopedic resource for researchers in academia and industry.

Volume Four is devoted to efficient technologies utilized for separation that are the heart of controlling carbon-made greenhouse gases (GHGs). The book starts with a review of carbon capture concepts, with a focus on energy penalties as well as the operating pilots and plants followed by a meticulous investigation of different classes of capture methods. Other sections survey the absorption process including amines, physical absorbents, alkaline solvents, ionic liquids and deep eutectic solvents, nanoparticle-enhanced solvents, as well as a number of novel materials and structures, that are employed to eliminate GHGs utilizing absorption. Finally, the book addresses adsorption-based strategies with a focus on the role of different solid adsorbents, introduces technologies that benefit from membranes, and considers different materials utilized in the fabrication of membranes and state-of-the-art alternatives in carbon capture.



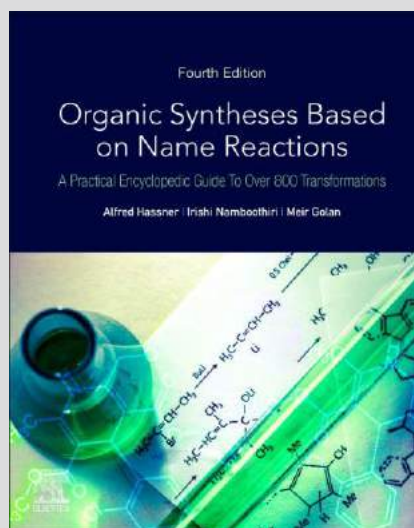
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Organic Syntheses Based on Name Reactions, 4e

A Practical Encyclopedic Guide to Over 800 Transformations

Alfred Hassner, Professor Emeritus, Department of Chemistry, Bar-Ilan University, Israel; **Irishi Namboothiri**, Professor, Department of Chemistry, Indian Institute of Technology, Bombay, India and **Meir Golan**, Department of Chemistry, Bar-Ilan University Faculty of Exact Sciences, Ramat-Gan, Israel

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PAGES: c. 697

AUDIENCE: Researchers in academia, industry and government laboratories as well as advanced undergraduate and graduate students working in organic synthesis, reactions and reagents, organometallic chemistry, and catalysis

BIC CODES: PNN

THEMA CLASSIFICATION: THEMAPPN

Indispensable reference companion for chemistry students and researchers that focuses on organic syntheses based on named reactions

KEY FEATURES

- Covers new examples of known reactions, particularly their asymmetric versions, new reactions involving metal-mediated catalysis and organocatalysis, and multi-component and cascade/domino versions of known reactions
- Provides a handy reference guide that explains 750 established named processes and methods that are trusted and used by organic chemists to synthesize or transform molecules
- Presents key data on each transformation, including background, mechanism and experimental details
- Includes extensive, multiple indexes that allow the reader to search for information and rapidly plan transformations

DESCRIPTION

Organic Syntheses Based on Named Reactions: A Practical Encyclopedic Guide to Over 800 Transformations, Fourth Edition is an indispensable reference companion for chemistry students and researchers. The book provides an overview of name reactions based on reaction types and products formed and presents schemes, procedures and references in a simple, one-page format that offers a brief, representative procedure for each name reaction. The book is illustrated with real synthetic examples from literature, with about 3,400 references to primary literature that direct users to additional information. Extensive indexes (name, reagent, reaction) and a very useful functional group transformation index help the reader fully navigate this extensive collection of important reactions. With its comprehensive coverage, superb organization and quality of presentation, this new edition belongs on the shelf of every organic chemist.



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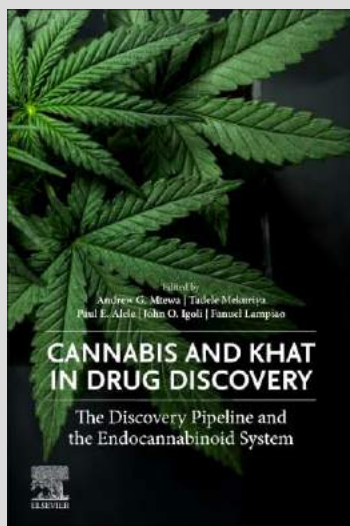
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Cannabis and Khat in Drug Discovery

The Discovery Pipeline and the Endocannabinoid System

Edited by : **Andrew G. Mtewa**, PhD, MSc, B.Ed, Medicinal Chemist, Chemistry Section, Department of Applied Studies, Malawi Institute of Technology, Malawi University of Science and Technology, Malawi; **Tadele Mekuriya**, PhD fellow, MSc, B.Sc, Clinical Pharmacologist, Department of Pharmacy, Ambo University, Ethiopia; **Paul E. Alele**, PhD, MBChB, Physician and Pharmacologist, Department of Pharmacology, Mbarara University of Science and Technology, Uganda; **John O. Igoli**, PhD, Natural Products Research Group, Department of Chemistry, University of Agriculture, Makurdi, Nigeria and **Fanuel Lampiao**, PhD, MSc, Dean of Postgraduate Studies and Research / Professor of Reproductive Physiology



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AUDIENCE: Students, faculty and researchers in drug discovery, chemical control and regulatory agencies, Psychologists, pharmacists, pharmacologists, toxicologists and pharmaceutical industries, Policy makers, medical professionals

BIC CODES: PNN, TCB, MMG

THEMA CLASSIFICATION:

THEMATCB; THEMAMKG;

THEMAPNN

Presents the science behind the use of cannabis and khat in drug discovery, design and development

KEY FEATURES

- Covers the medicinal chemistry, pharmacology and biological chemistry of cannabis, khat, their constituent compounds and metabolites
- Presents both the adverse and the beneficial entities to health and drug discovery
- Includes detailed methods and protocol information to allow easy replication and application

DESCRIPTION

Cannabis and Khat in Drug Discovery: The Discovery Pipeline and the Endocannabinoid System provides comprehensive coverage of two important psychoactive plants: Khat and Cannabis. Initial research has found that compounds and derivatives from Cannabis and Khat are found to have promising properties that can be used for the discovery, design and development of potential drug leads against various diseases. This book extensively discusses the drug discovery and allied sciences of these compounds in the drug discovery pipeline, including basic research and computer aided modeling in ligand-drug interactions and their interactions with the endocannabinoid system. Categorized into sections including, chemical analyses and bioassays, medicinal chemistry, chemical biology and pharmacology, clinical applications, and policy and regulations, this book covers the methods and protocols involved and will be of interest to students, researchers, policymakers and all those involved in drug discovery research.



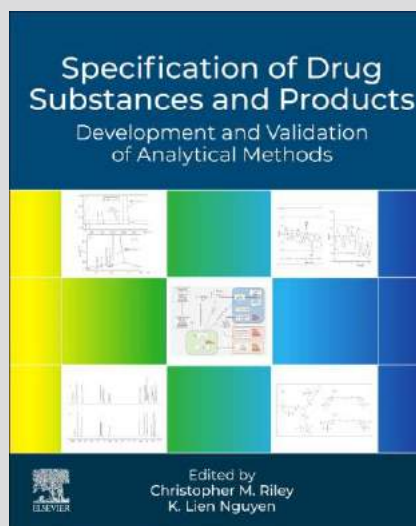
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Specification of Drug Substances and Products, 3e

Development and Validation of Analytical Methods

Edited by : **Christopher M. Riley**, PhD, President of Riley and Rabel Consulting Services, Maryville, MO, USA and **K. Lien Nguyen**, Ph.D, Head of Chemistry, Manufacturing and Control and IRL AB, Sweden

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FORMAT: Paperback

TRIM: 191 x 235

PAGES: c. 1107

AUDIENCE: Scientists, managers, educators, and consultants involved in the development and regulation of pharmaceutical products. The ideal, or typical reader most likely to read and recommend the book, is concerned with the Chemistry, Manufacturing and Controls (CMC) aspects of drug development. This includes analytical chemists, pre-formulation scientists, formulation scientists, process chemists, process engineers, and pharmaceutical microbiologists, as well those involved in project management, regulatory affairs, quality control and quality assurance

BIC CODES: PNF

THEMA CLASSIFICATION:

THEMAPNF

Connects the audience with the latest analytical techniques, applications, and the future directions on Specification Setting for Pharmaceuticals

KEY FEATURES

- Presents critical assessment, potential impact, and application of the recent revisions to ICH guidelines on method validation (Q2), and specification setting (Q6), as well as the latest guideline on Analytical Method Development (Q14)
- Addresses comprehensive treatment of the development and validation of analytical methodologies used in the analysis, control, and specification of a variety of different types of dosage forms, ranging from traditional oral solid dosage to forms to, natural products, vaccines, and gene therapy.
- Presents detailed treatment of latest statistical approaches (including new approaches to the treatment of validation data method, specification setting, and shelf-life prediction)

DESCRIPTION

Specification of Drug Substances and Products: Development and Validation of Analytical Methods, Third Edition contains chapters discussing the unique requirements for the universal critical quality attributes, as well as the specific tests required to characterize and control different types of products, ranging in complexity from small molecules in immediate release oral dosage forms to complex products such as drug-antibody conjugates and mRNA-based products. This substantially expanded revision of the second edition will serve as practical comprehensive reference for scientists, managers, educators, and consultants involved in the development and regulation of pharmaceutical products.



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CHEMISTRY Analytical Chemistry

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Specialized Plant Metabolites as Cosmeceuticals



Edited by
Deepika Kathuria
Ajay Sharma
Jesus Simal Gandara

Specialized Plant Metabolites as Cosmeceuticals

Edited by : **Deepika Kathuria**, Assistant Professor at University Center for Research and Development, Chandigarh University, Gharuan, Punjab, India; **Ajay Sharma**, Assistant Professor Department of Chemistry, University Institute of Sciences, Chandigarh University, India and **Jesus Simal Gandara**, Professor in Nutrition and Food Science, Faculty of Food Science and Technology, University of Vigo, Spain

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TRIM: 6.00w x 9.00h
PAGES: c. 372
AUDIENCE: Researchers and postgraduate students in courses related to Medicinal and Phyto Chemistry, Pharmacology, and Biology
BIC CODES: PNN, MMG, TCB
THEMA CLASSIFICATION: THEMAMKG; THEMAPPNN; THEMAPPST

Sheds light on future perspectives on plant secondary metabolite-based cosmeceuticals

KEY FEATURES

- Highlights comprehensive information on major classes of plant secondary metabolites with potent cosmeceutical applications
- Provides details on the encapsulation of secondary metabolites for the betterment of cosmeceutical products
- Covers toxicity of secondary metabolite based cosmeceuticals

DESCRIPTION

Specialized Plant Metabolites as Cosmeceuticals presents a comprehensive guide to traditional medicinal plants that are used in the field of cosmetics. Chapters cover geographical distribution, extraction of key components from each plant, traditional uses, pharmacognostic characteristics, phytochemistry, pharmacology, toxicology, and future prospects. This book will be a valuable asset for researchers and graduate students of chemistry, botany, biotechnology, microbiology, cosmetology and the pharmaceutical sciences. As medicinal plants are a rich source of a variety of bioactive secondary metabolites, their wide range of pharmacological applications as antibiotics, antifungals, anticancer agents, and antimicrobial and antiviral applications provide new and exciting avenues.

In addition, they have great implications for the food, pharmaceutical, cosmetics and personal care product industries. Secondary metabolites also ecofriendly, cost effective, biocompatible, and cause less side effects as compare to synthetic compounds.



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CHEMISTRY Organic Chemistry

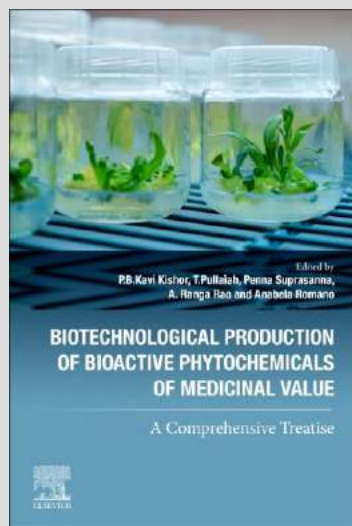
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Biotechnological Production of Bioactive Phytochemicals of Medicinal Value

A Comprehensive Treatise

Edited by : **Anabela Romano**, Professor, Department of Biotechnology, MED–Mediterranean Institute for Agriculture, Environment and Development, Universidade do Algarve, Portugal; **P. B. Kavi Kishor**, Vignan's Foundation for Science, Technology and Research, India; **Penna Suprasanna**, Professor, Homi Bhabha National Institute, Mumbai & Former-Head of the Nuclear Agriculture and Biotechnology Division in the Bhabha Atomic Research Centre, India; **T. Pullaiah**, Department of Botany, Sri Krishnadevaraya University, Anantapur, India and **A. Ranga Rao**, Department of Biotechnology



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PAGES: c. 837

AUDIENCE: Graduate students and researchers working with Medicinal Chemistry, Organic Chemistry and Pharmacology

BIC CODES: TJ, TDCP, PSA, TGM

THEMA CLASSIFICATION:

THEMATJFD; THEMATDCP;

THEMATGMP; THEMATDPF;

THEMAPS

Covers a broad variety of methods for secondary metabolites production (both pharmaceuticals and cosmeceuticals)

KEY FEATURES

- Compiles state-of-the-art material about in vitro production for several bioactive phytochemicals
- Incorporates the most recent developments in the field
- Covers a broad variety of secondary metabolites

DESCRIPTION

Biotechnological Production of Bioactive Phytochemicals of Medicinal Value: A Comprehensive Treatise covers a broad variety of methods for secondary metabolites production (both pharmaceuticals and cosmeceuticals), compiling state-of-the-art material about the current knowledge of in vitro production for a large number of bioactive phytochemicals. Plants are a source of bioactive compounds and specialty chemicals such as ginsenosides; paclitaxel, artemisinin, veregen and nutraceuticals. Biopharmaceuticals are important in human healthcare, and herbal actives are gaining importance all over the world. With natural resources dwindling, in vitro production of secondary compounds on a commercial scale is being more and more required.

Besides providing an alternative technology to bypass difficulties, the plant tissue culture (used in a broad sense to include cell, tissue, and organ culture) offers many advantages. In vitro technology also facilitates novel means of conserving the genetic diversity of the germplasm of medicinal plants through cryopreservation, production of novel compounds through biotransformation, somatic hybridization, and selective gene transfer through recombinant DNA technology for enhancing metabolite production.



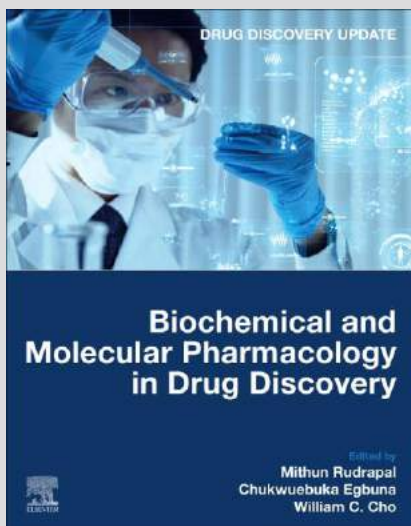
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Biochemical and Molecular Pharmacology in Drug Discovery

Edited by : **William Chi Shing Cho**, Queen Elizabeth Hospital, Hong Kong, China;
Chukwuebuka Egbuna, Chartered Chemist and Academic Researcher, Nigeria and **Mithun Rudrapal**, Rasiklal M. Dhariwal Institute of Pharmaceutical Education and Research, India

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TRIM: 6.00w x 9.00h

PAGES: c. 465

AUDIENCE: Medicinal chemists, pharmaceuticals, biotechnologists, working in both academia and industry, postgraduate students in related fields, Scientists working in Government Research Agencies, industrial scientists

BIC CODES: MMG, KNDP, PSD

THEMA CLASSIFICATION: THEMAMKG; THEMAKND; THEMAPS

Provides comprehensive and in-depth information on biochemical and molecular aspects involved in drug discovery research

A Volume in the *Drug Discovery Update* Series

KEY FEATURES

- Highlights the fundamentals of biochemical and molecular aspects, with reference to drug discovery research
- Depicts modern drug discovery approaches such as reverse pharmacology, drug repositioning, and CADD in the context of current research updates
- Summarizes recent developments in the molecular pharmacology of novel drugs/ therapeutic molecules

DESCRIPTION

Biochemical and Molecular Pharmacology in Drug Discovery comprises fundamental biochemical and molecular aspects of drug discovery and basic understanding of modern drug discovery approaches, along with certain key topics related to molecular pharmacology of drugs and therapeutics. The book explains the phenomena of drug-target interactions, considering different biochemical systems and cellular strategies. With the advent of technologies, current advances, and research trends move toward molecular and/or target-based drug design and discovery. Through this book, readers will gain skills and knowledge with a thorough understanding of the subject of biochemical and molecular pharmacology in a comprehensive and systematic manner.

Molecular pharmacology has gained significant momentum among researchers, scientists, and academicians because of its increasing interest in drug discovery research across the globe. Molecular pharmacology involves a fundamental understanding of drug actions at the molecular level with the help of several tools and techniques of biochemical and molecular biology.



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CHEMISTRY Organic Chemistry

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Chemometrics

Data Treatment and Applications

Edited by : **Fabiano André Narciso Fernandes**, Professor, Department of Chemical Engineering, Federal University of Ceará (UFC), Brazil; **Sueli Rodrigues**, Professor, Department of Food Engineering, Federal University of Ceará (UFC), Brazil and **Elenilson Godoy Alves Filho**, Professor, Department of Food Engineering (DEAL), Federal University of Ceara (UFC), Brazil

ISBN: 9780443214936
PUB DATE: Jun 28, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 437

AUDIENCE: Analytic chemists as practitioners in analytical laboratories and other industries, academics and graduate, masters and postdoc students chiefly working in analytical chemistry who want to improve the practical aspects of their research activities, those working in industrial sectors including chemical engineering, pharmaceuticals, biotechnology, mechanical industry, food engineering and chemistry, and materials science

BIC CODES: MMG, PNN, PNF, PNFS, PHK, TDCT

THEMA CLASSIFICATION: THEMAPPN; THEMAMKG; THEMAPPNF; THEMAPPNFS; THEMAPPHK; THEMATDCT

Presents practical information on the methodology required to apply chemometrics to real-world data obtained by various types of analytical instruments

KEY FEATURES

- Presents topical and important chapters for the most-used analytical instruments
- Focuses on practical issues in the implementation of chemometrics
- Examines advances in the application of chemometrics in several fields
- Includes frank perspectives on what works well for the data of a certain analytical instrument given the multiple choices of mathematical models and protocols that can be applied
- Covered protocols are heavily illustrated with case studies showing their potential use and the advances in chemometrics

DESCRIPTION

Chemometrics: Data Treatment and Applications demonstrates best practices for treating real-world analytical instrument data and how to apply chemometrics to this data. Rather than focusing on the mathematical theory involved in chemometrics, the book is meant for the industrial chemist, academics, and advanced students that want to use chemometrics in practice. Case studies on several applications are presented. Unlike existing literature, this book focuses on best practices, practical realities, and challenges when treating data, rather than on the mathematical theory. It also provides basic information on chemometrics and the best practices used to treat data from different analytical instruments.

The book is written primarily for analytic chemists as practitioners in analytical laboratories and other industries. It will also be useful to academics and graduate, masters and postdoc students chiefly working in analytical chemistry who want to improve the practical aspects of their research activities.



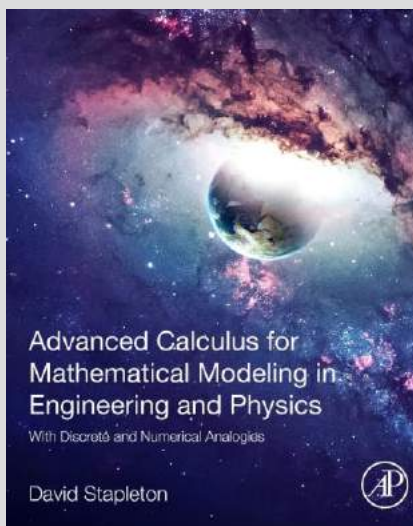
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CHEMISTRY Analytical Chemistry

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Advanced Calculus for Mathematical Modeling in Engineering and Physics

With Discrete and Numerical Analogies

David Stapleton, Professor, Department of Mathematics & Statistics University of Central Oklahoma Edmond, Oklahoma, USA

ISBN: 9780443222894
PUB DATE: Jun 28, 2024
LIST PRICE: £96.95 / \$130.00 / €114.00

DISCOUNT: Textbook

FORMAT: Paperback

TRIM: 191 x 235

PAGES: c. 792

AUDIENCE: Advanced

undergraduate and graduate students, taking courses in Advanced Calculus, Professionals / researchers / academics who require an introduction or refresher to the subject, especially with applications in applied math,

physics, computer science, engineering, chemistry, and biology

BIC CODES: PBW

THEMA CLASSIFICATION: THEMABW

Bridges the gap between advanced calculus theory and applications through its state space/functional analysis approach

KEY FEATURES

- Adopts a state space/functional analysis approach to advanced calculus-based models to provide a better understanding of the development of models and the behaviors of their solutions
- Uniquely includes discrete analogies to calculus-based models, as well as the derivation of many advanced calculus models of physics and engineering— instead of only seeking solutions to the models
- Offers online teaching support for qualified instructors (for selected solutions) and study materials for students (MATLAB/Octave scripts)

DESCRIPTION

Advanced Calculus for Mathematical Modeling in Engineering and Physics: With Discrete and Numerical Analogies introduces the principles and methods of advanced calculus for mathematical modeling through a balance of theory and application using a state space approach with elementary functional analysis. This framework facilitates a deeper understanding of the nature of mathematical models, and of the behavior of their solutions. The work provides a variety of advanced calculus models for mathematical, physical science, and engineering audiences, with discussions on how calculus-based models and their discrete analogies are generated. This valuable textbook offers scientific computations driven by Octave/MATLAB script.



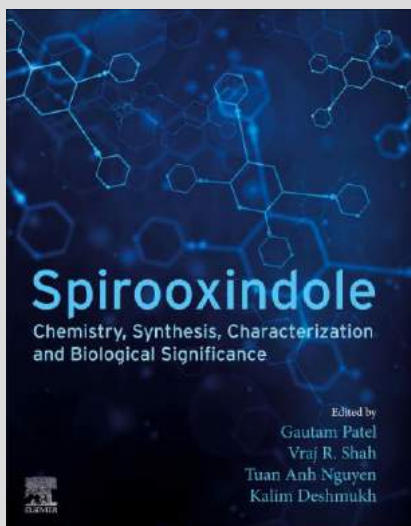
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Spirooxindole

Chemistry, Synthesis, Characterization and Biological Significance

Edited by : **Gautam Patel**, Head and Associate Professor, Parul University, India; **Vraj R. Shah**, Department of Applied Chemistry, School of Science, ITM (SLS) Baroda University, India; **Tuan Anh Nguyen**, PhD, Senior Principal Research Scientist, Institute for Tropical Technology, Vietnam Academy of Science and Technology, Hanoi, Vietnam and **Kalim Deshmukh**, Senior Researcher, New Technologies - Research Centre, University of West Bohemia, Czech Republic

ISBN: 9780443223242
PUB DATE: Jun 28, 2024
LIST PRICE: £165.00 / \$200.00 / €190.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 640

AUDIENCE: Graduate students and researchers working with Medicinal Chemistry, Organic Synthesis, Nanocatalysis etc.

BIC CODES: TGM

THEMA CLASSIFICATION:
THEMATGM

Covers every aspect of spirooxindole derivatives and their medical uses

KEY FEATURES

- Consolidates information on each aspect of this novel compound and its applications in various fields, covering the entire spectrum of up-to-date literature citations, current market, and patents
- Provides a comprehensive, in-depth description of spirooxindole derivatives as well as multipurpose scaffolds
- Highlights green synthesis and nanocatalysis
- Describes in-depth various medicinal applications
- Covers both synthesis and applications

DESCRIPTION

Spirooxindole: Chemistry, Synthesis, Characterization and Biological Significance examines the current state-of-the-art, recent progress, and new challenges associated with the development of spirooxindole derivatives for various medicinal applications. Owing to their exceptional properties, these compounds can be used in various fields, including chemical and pharma industries, and in clinical research. This book has chapters written by experts in several different areas. It serves as a useful reference book for scientists, industrial practitioners, graduate students, and other professionals in the field of heterocyclic chemistry, medicinal chemistry, organic synthesis clinical research and chemical sciences.

The growing interest among the academics and industrial researchers in the field of organic chemistry and medicinal chemistry is the driving force for the presentation of this edited book.



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CHEMISTRY Inorganic Chemistry

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Recent Trends and Perspectives on Electrochemical Sensors for Environmental Monitoring

Edited by : Sibel A. Ozkan, Ankara University, Turkey

ISBN: 9780443133886
PUB DATE: Jun 21, 2024
LIST PRICE: £170.00 / \$220.00 / €195.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 558

AUDIENCE: Scientists and PhD students working in the analytical chemistry field and focusing on the development of electrochemical sensors and biosensors, Private companies producing electrochemical sensors for the detection of different environmentally important analytes

BIC CODES: TGM

THEMA CLASSIFICATION: THEMATGM

Comprehensively explores current trends and progress on electrochemical sensors for environmental monitoring

KEY FEATURES

- Demonstrates how to make a sensitive analysis of environmental pollutants
- Documents state-of-the-art techniques, recent examples, and emphasizes fabrication strategies
- Presents the principles, methods, and equipment needed for various analytes detection and environmental monitoring using electrochemical techniques

DESCRIPTION

Recent Trends and Perspectives on Electrochemical Sensors for Environmental Monitoring presents current trends and progress on electrochemical sensors for environmental monitoring. The book comprehensively discusses various strategies to design electrochemical sensors for the analysis of contaminants of emerging concern in environmental samples and offers a thorough perspective on the most prominent methods, materials, and procedures available in the literature on electrochemical sensors for environmental monitoring.

This book will be a helpful resource for the development of new sensor technologies and advanced onsite applications that can be used in routine analysis.



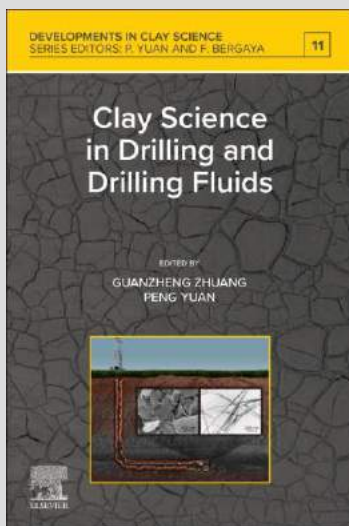
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CHEMISTRY Analytical Chemistry

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Clay Science in Drilling and Drilling Fluids, Vol 11

Edited by : **Guanzheng Zhuang**, Institute of Resources Utilization and Rare Earth Development Guangdong Academy of Sciences China and **Peng Yuan**, CAS Key Laboratory of Mineralogy and Metallogeny, Guangzhou Institute of Geochemistry, Chinese Academy of Sciences, Guangzhou, China

ISBN: 9780443155987
PUB DATE: Jun 21, 2024
LIST PRICE: £134.00 / \$167.99 / €155.99
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 350

AUDIENCE: Undergraduate and graduate students, researchers, engineers and professionals from the fields of drilling engineering, drilling fluids, oil and gas exploitation, industrial use of clay minerals, and clay-based or clay-related materials
BIC CODES: RBGK, PN
THEMA CLASSIFICATION: THEMARN; THEMARBG

Presents the science and technology of clay minerals in drilling and drilling fluids, with the goal of bridging the gap between clay science and petroleum exploitation

A Volume in the *Developments in Clay Science* Series

KEY FEATURES

- Covers the fundamentals of clay minerals, drilling, and drilling operations
- Discusses applications of the research and science to real world problems
- Introduces available commercial clay products and recommends their use for specific situations

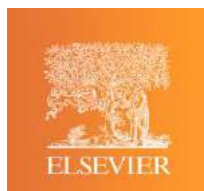
DESCRIPTION

Clay Science in Drilling and Drilling Fluids starts from the fundamentals of clay science and drilling and then comprehensively presents the advances of clay science related to drilling, drilling fluids, and clay products. The topics combine to present the whole picture of fundamental research and industrial applications of clays and clay minerals in drilling operations, which is of general interest to researchers and engineers working in related fields. This book covers the different levels of clay science in drilling and drilling fluids, i.e., from fundamentals to the latest research results, applications, and commercial products.

Oil and gas are the primary sources of energy in human society and the foundation of the petrochemical industry. However, extracting these resources present a number of drilling challenges, including high temperature and high pressure (HTHP), offshore drilling, high angle drilling, and even horizontal drilling, among others. As a result, it is crucial to develop advanced drilling and drilling fluid technologies that speak to these challenges.

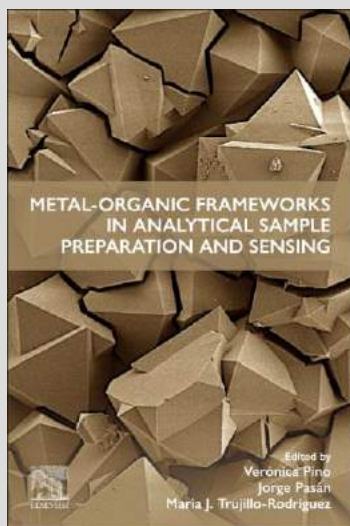


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EARTH & ENVIRONMENT Geochemistry
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Metal-Organic Frameworks in Analytical Sample Preparation and Sensing

Edited by : **Verónica Pino**, Professor, University of La laguna and PI of Laboratory of Materials for Chemical Analysis (MAT4LL), Spain; **Jorge Pasán**, Distinguished Researcher, University of La laguna, Spain and **Maria José Trujillo Rodríguez**, Junior Researcher, University of La laguna and member of Laboratory of Materials for Chemical Analysis (MAT4LL), Spain

ISBN: 9780443189715
PUB DATE: Jun 14, 2024
LIST PRICE: £165.00 / \$200.00 / €190.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 279
AUDIENCE: Academics but also Analytical Scientists and Laboratory Technicians primary related to the food, environmental, and bioanalysis sectors.
BIC CODES: PNF
THEMA CLASSIFICATION: THEMAPNF

Integration of metal-organic frameworks in analytical sample preparation and sensing

KEY FEATURES

- Provides analytical scientists with a unified reference guide for the use of metal-organic frameworks in miniaturized-extraction methods and sensing.
- Covers aspects related to the development, characterization, conditioning and handling of metal-organic frameworks. Issues of scale-up will be covered too.
- Addresses the proper metal-organic framework for a particular analytical miniaturized method.

DESCRIPTION

Metal-organic Frameworks in Analytical Sample Preparation and Sensing presents all the areas of applications of metal-organic frameworks in analytical sample preparation. Metal-organic frameworks are crystalline coordination polymers with robust and stable crystal structures, high synthetic tunability, and interesting properties for their use in analytical applications, including their detailed use as sorbents in miniaturized-extraction procedures and as components in sensors.

This book also provides important information about the synthesis and characterization of these materials, with useful tips written by experts on the subject with respect to their conditioning, handling, and recycling. Their outstanding properties, adsorptive capabilities, and structural diversity are also highlighted. This will help experts in the field to select the proper metal-organic framework for a particular analytical application.



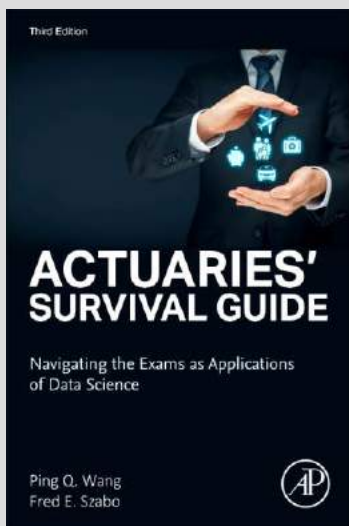
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CHEMISTRY Analytical Chemistry

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Actuaries' Survival Guide, 3e

Navigating the Exams as Applications of Data Science

Ping Wang, St John's University - Tobin College of Business, NY, USA and Fred Szabo, Department of Mathematics, Concordia University, Montreal, Quebec, Canada

ISBN: 9780443154973
PREVIOUS ISBN: 9780123869432
PUB DATE: Jun 11, 2024
LIST PRICE: £45.95 / \$59.95 / €51.95
DISCOUNT: Textbook
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 256
AUDIENCE: Advanced undergraduate and graduate courses, Researchers/Professionals - qualified/certified actuaries in insurance, pensions, health
BIC CODES: PBW, KFFN
THEMA CLASSIFICATION: THEMABPW; THEMAKFFN

Real-world view on preparing for and entering a career in the Actuarial Sciences

KEY FEATURES

- Includes details on the Society of Actuaries' (SOA) and Casualty Actuarial Society (CAS) examinations, as well as sample questions and answers
- Presents an overview of career options and includes profiles of companies and agencies that employ actuaries
- Provides a link between theory and practice and helps readers understand the blend of qualitative and quantitative skills and knowledge required to succeed in actuarial exams
- Offers insights provided by real-life actuaries and actuarial students about the profession

DESCRIPTION

Actuaries' Survival Guide: Navigating the Exams as Applications of Data Science, Third Edition explains what actuaries are, what they do, and where they do it. The book describes exciting combinations of ideas, techniques, and skills involved in their day-to-day work. This edition has been updated to reflect the rise of social networking and the internet, the progress toward a global knowledge-based economy, and the global expansion of the actuarial field that has occurred since the prior edition.



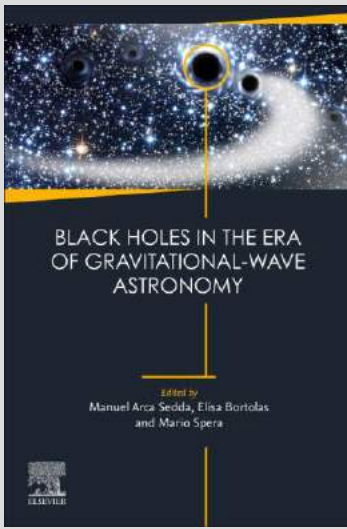
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CHEMISTRY

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Black Holes in the Era of Gravitational-Wave Astronomy

Edited by : **Manuel Arca Sedda**, Assistant Professor at the Gran Sasso Science Institute, Italy.; **Elisa Bortolas**, Postdoctoral Researcher, University of Milano-Bicocca, Italy and **Mario Spera**, Assistant Professor, International School for Advanced Studies - SISSA, Italy

ISBN: 9780323956369
PUB DATE: Jun 03, 2024
LIST PRICE: £135.00 / \$175.00 / €155.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 494
AUDIENCE: Postgraduates, PhD students, researchers, academics and professionals in the field of astrophysics, astronomy, physics, and space engineering
BIC CODES: PG
THEMA CLASSIFICATION: THEMAPG

A comprehensive view on the astrophysics of black holes of all sizes, from their origin to the most recent discoveries and future perspectives

KEY FEATURES

- Focuses on recent advances and future perspectives surrounding black holes, providing researchers with a clear view of cutting-edge research
- Offers readers a multidisciplinary, fresh view on black holes, discussing and reviewing the most recent advancements in theoretical, numerical and observational techniques put in place to detect black holes
- Provides a bridge among different black hole areas, fostering new collaborations among professionals working in different, but intrinsically interconnected fields

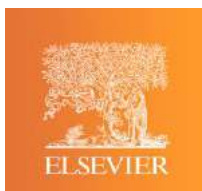
DESCRIPTION

Black Holes in the Era of Gravitational-Wave Astronomy provides a multidisciplinary, up-to-date view of the physics of black holes, along with an exhaustive overview of crucial open questions and recent advancements in the astrophysics of black holes in the wake of incredible advancements made in the last decade. It includes discussions on improvements in theoretical modeling and observational perspectives for black holes of all sizes, along with associated challenges. The book's structure and themes will enable an entwined understanding of black hole physics at all scales, thus avoiding the compartmentalized view that is typical of more specialized manuscripts and reviews.

This book is a complete reference for scientists interested in a multidirectional approach to the study of black holes. It provides substantial discussions about the interplay of different types of black holes and gives professionals a heterogeneous and comprehensive overview of the astrophysics of black holes of all masses.



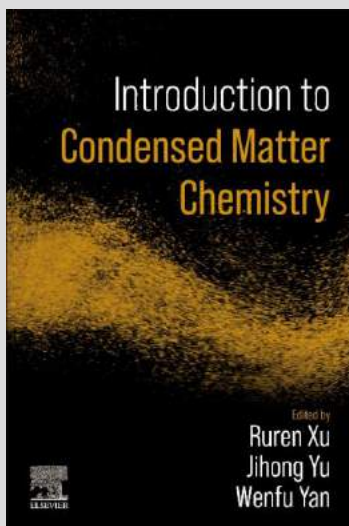
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EARTH & ENVIRONMENT

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Introduction to Condensed Matter Chemistry

Edited by : **Jihong Yu**, Jilin University, China.; **Ruren Xu**, Jilin University, China. and **Wenfu Yan**, Jilin University, China.

ISBN: 9780443161407
PUB DATE: Jun 03, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 372

AUDIENCE: Postgraduate students and researchers working with Condensed Matter Chemistry, inorganic chemists, Material science researchers

BIC CODES: TGM

THEMA CLASSIFICATION: THEMATGM

Offers a general view of chemistry from the perspective of condensed matter chemistry, emphasizing the need to study chemical reactions

KEY FEATURES

- Helps to establish the new field of Condensed Matter Chemistry
- Highlights the molecular engineering of functional condensed matter
- Focuses on both liquid and solid state chemistry

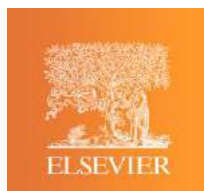
DESCRIPTION

Introduction to Condensed Matter Chemistry offers a general view of chemistry from the perspective of condensed matter chemistry, analyzing and contrasting chemical reactions in a more realistic setting than traditional thinking. Readers will also find discussions on the goals and major scientific questions in condensed matter chemistry and the molecular engineering of functional condensed matter. Processes and products of chemical reactions should not be determined solely by the structure and composition of these basic species but also by the complex and possibly multilevel structured physical and chemical environment, together referred to as their condensed state.

Relevant matters in condensed state should be the main bodies of chemical reactions, which is applicable not only to solids and liquids but also to gas molecules as reactions among gas molecules can take place only in the presence of catalysts in specific condensed states or after their state transition under extreme reaction conditions. This book provides new insights on the liquid state chemistry, definitions, aspects, and interactions, summarizing fundamentals of main chemical reactions from a new perspective.



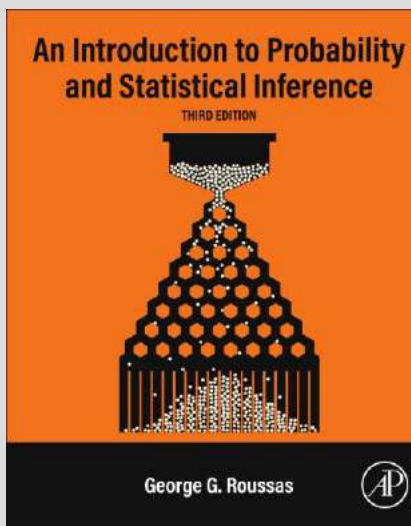
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CHEMISTRY Inorganic Chemistry

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An Introduction to Probability and Statistical Inference, 3e

George G. Roussas, University of California, Davis, USA

ISBN: 9780443187209
PREVIOUS ISBN: 9780128001141
PUB DATE: Jun 01, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT: Textbook

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 646

AUDIENCE: Advanced students taking courses on Probability & Statistical Inference Researchers and academics across math, engineering, physical and life sciences, who require advanced coverage on the subject

BIC CODES: PBT, PBWL

THEMA CLASSIFICATION: THEMABPT; THEMABWL

Valuable resource for advanced students and users to encourage critical thinking and application of key methods

KEY FEATURES

- Offers a relatively rigorous, yet accessible, mathematical discussion of probability theory and statistical inference important to students in a broad variety of disciplines
- Includes relevant proofs and exercises with useful hints to their solutions
- Provides brief answers to even-numbered exercises at the back of the book and detailed solutions to all exercises available to qualified instructors in the Solutions Manual

DESCRIPTION

An Introduction to Probability and Statistical Inference, Third Edition guides the reader through probability models and statistical methods to develop critical-thinking skills. Written by award-winning author George Roussas, this valuable text introduces a thinking process to help users obtain the best solution to a posed question or situation and provides a plethora of examples and exercises to illustrate applying statistical methods to different situations.



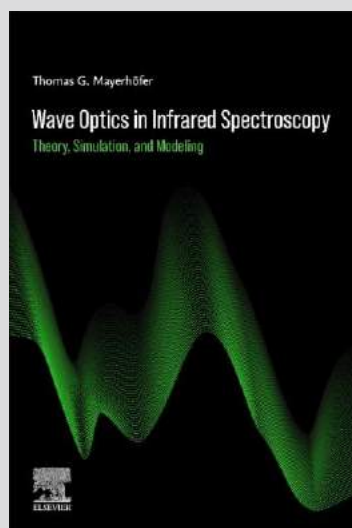
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Wave Optics in Infrared Spectroscopy

Theory, Simulation, and Modeling

Thomas G. Mayerhöfer, Senior Researcher, Leibniz Institute of Photonic Technology, Germany

ISBN: 9780443220319

PUB DATE: Jun 01, 2024

LIST PRICE: £165.00 / \$200.00 / €190.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 432

AUDIENCE: Chemists, physicists, astronomers, and chemical/optical engineers who work in the field of Infrared Spectroscopy. The book is written as a tool to reunite the fragmented field of infrared spectroscopy. Chemistry and physics graduate and postdoc students with an interest in optical spectroscopy; the book is heavily developed and evolved from a lecture series by the author for chemistry, physics, and photonics master students. Analytical/molecular infrared spectroscopists can supplement their knowledge to understand seemingly surprising artefacts in spectra quantitatively and understand how basic theory must be modified to explain results of modern analytical approaches. Physicists with focus on remote sensing on solar and extrasolar surfaces or on understanding exotic properties of matter by infrared spectroscopy learn how to explain their results quantitatively. People with a photonics background learning how concepts used in analytical and molecular infrared spectroscopy relate to higher level theory, i.e., wave optics and dispersion theory, with which they are more familiar with

BIC CODES: TTBL, PNFS, PNR, PH

THEMA CLASSIFICATION: THEMARNFS; THEMATTBL; THEMARNR; THEMAPH



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Provides a comprehensive explanation of the theories of wave optics in infrared spectroscopy, including dispersion theory

KEY FEATURES

- Assists the reader (including those with less physical science backgrounds) in using more of the extensive benefits that infrared spectroscopy can provide by making them better aware and informed about the higher-level theory
- Built on wave optics and dispersion theory versus the Bouguer-Beer-Lambert law of conventional infrared spectroscopy literature
- Explains the limits of lower level of theory
- Provides a thorough introduction to more sophisticated topics, with a smooth transition from lower to higher level theory

DESCRIPTION

Wave Optics in Infrared Spectroscopy starts where conventional books about infrared spectroscopy end. Whereas the latter are based on the Bouguer-Beer-Lambert law, the cornerstones of this book are wave optics and dispersion theory.

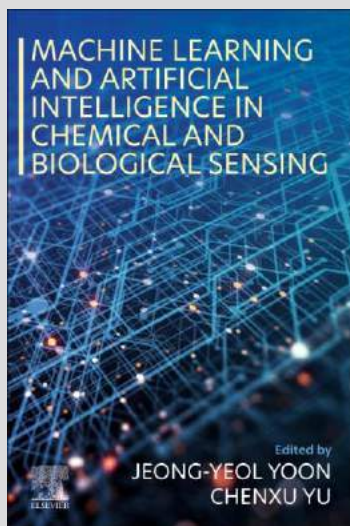
This gap between both levels of theory is bridged to allow a seamless transition from one to the other. Based on these foundations, the reader is able to choose which level of theory is adequate for the particular problem at hand. Advanced topics like 2D correlation analysis, chemometrics and strong coupling are introduced and viewed from a wave optics perspective. Spectral mixing rules are also considered to better understand spectra of heterogeneous samples. Finally, optical anisotropy is examined to allow a better understanding of spectral features due to orientation and orientational averaging. This discussion is based on a 4 x 4 matrix formalism, which is used not only to simulate and analyze complex materials, but also to understand vibrational circular dichroism from a (semi-) classical point of view.

Wave Optics in Infrared Spectroscopy is written as a tool to reunite the fragmented field of infrared spectroscopy. It will appeal to chemists, physicists, and chemical/optical engineers.

CHEMISTRY Physical and Theoretical Chemistry

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Machine Learning and Artificial Intelligence in Chemical and Biological Sensing

Edited by : **Jeong-Yeol Yoon**, Professor, Department of Biomedical Engineering and Department of Biosystems Engineering, The University of Arizona, USA and **Chenxu Yu**, Affiliation: Associate Professor, Department of Agricultural & Biosystems Engineering, Iowa State University, USA

ISBN: 9780443220012
PUB DATE: Jul 01, 2024
LIST PRICE: £165.00 / \$200.00 / €195.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 253

AUDIENCE: Upper undergraduate students, graduate students, research staff, and faculty members at teaching and research universities and colleges who are working on chemical sensing, biosensing, analytical chemistry, analytical biochemistry, biomedical imaging, medical diagnostics, environmental monitoring, and agricultural applications. Research scientists, engineers, and technicians at governmental research laboratories and those in industry working on chemical sensors, biosensors, analytical instruments, and diagnostic devices including research scientists, engineers, and marketing engineers in industry, especially start-up companies

BIC CODES: PNF, TB, TCBS, TCB

THEMA CLASSIFICATION: THEMAMPNF; THEMATJFD; THEMATCB



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Provides ML and AI based methods for various chemical and biological sensing applications

KEY FEATURES

- Presents the first comprehensive reference text on the use of ML and AI for chemical and biological sensing
- Provides a firm grounding in the fundamental theories on ML and AI before covering the practical applications with contributions by various experts in the field
- Includes a wide array of practical applications covered, including: E-nose, Raman, SERS, lens-free imaging, multi/hyperspectral imaging, NIR/optical imaging, receptor-free biosensing, paper microfluidics, single molecule analysis in biomedicine, in situ protein characterization, microbial population dynamics, and all-in-one sensor systems

DESCRIPTION

Machine Learning and Artificial Intelligence in Chemical and Biological Sensing covers the theoretical background and practical applications of various ML/AI methods toward chemical and biological sensing. No comprehensive reference text has been available previously to cover the wide breadth of this topic. The book's editors have written the first three chapters to firmly introduce the reader to fundamental ML theories that can be used for chemical/biosensing. Subsequent chapters then cover the practical applications with contributions by various experts in the field.

Sections show how ML and AI-based techniques can provide solutions for: 1) identifying and quantifying target molecules when specific receptors are unavailable 2) analyzing complex mixtures of target molecules, such as gut microbiome and soil microbiome 3) analyzing high-throughput and high-dimensional data, such as drug screening, molecular interaction, and environmental toxicant analysis, 4) analyzing complex data sets where fingerprinting approach is needed This book is written primarily for upper undergraduate students, graduate students, research staff, and faculty members at teaching and research universities and colleges who are working on chemical sensing, biosensing, analytical chemistry, analytical biochemistry, biomedical imaging, medical diagnostics, environmental monitoring, and agricultural applications.

CHEMISTRY Analytical Chemistry

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Oxazole, Isoxazole, Benzoxazole-Based Drug Discovery

Erum Akbar Hussain, Tenured Associate Professor, Lahore College, Women University, Pakistan; **Ambreen Ghani**, Assistant Professor, Division of Science and Tech, University of Education, Pakistan and **Zubi Sadiq**, Research Associate, Department of Chemistry, Lahore College, Pakistan

ISBN: 9780323853866
PUB DATE: Jul 05, 2024
LIST PRICE: £175.00 / \$225.00 / €200.00

DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 391

AUDIENCE: Researchers in organic chemistry both in academic and industrial settings, postgraduates in chemistry and medicinal chemistry, Researchers in pharmaceutical industries, chemical and pesticide industries

BIC CODES: PNN

THEMA CLASSIFICATION:
THEMAPNN

Offers complete coverage of oxazole and related molecules, both from natural and synthetic origin, with a focus on the reaction mechanisms and medicinal aspects

A Volume in the *Heterocyclic Drug Discovery* Series

KEY FEATURES

- Presents detailed coverage of chemical structures and practical synthetic methods of oxazoles, isoxazoles and benzoxazoles in drug discovery
- Includes green, environmentally-friendly novel synthetic methods and mechanistic insights
- Features biological and computational aspects of the oxazoles family of drugs, including virtual screening and molecular docking

DESCRIPTION

Oxazole, Isoxazole, Benzoxazole Based Drug Discovery offers complete coverage of oxazole and related molecules, both from natural and synthetic origin, with a focus on the reaction mechanisms, and medicinal, pharmacokinetic and computational aspects. New and contemporary methods of synthesis are discussed, with a special focus on green, environment-friendly procedures. Discussion of stereochemical studies, particularly on natural molecules, are included. Computational chemistry has emerged as an integral tool for drug discovery, hence this book explains how the drug candidate is established as suitable for clinical trials with the help of molecular docking and virtual screening modeling.

This book offers a broad range of recent developments and detailed coverage of synthesis and biological activities of the drugs, and is an ideal reference guide to researchers working in organic and medicinal chemistry.



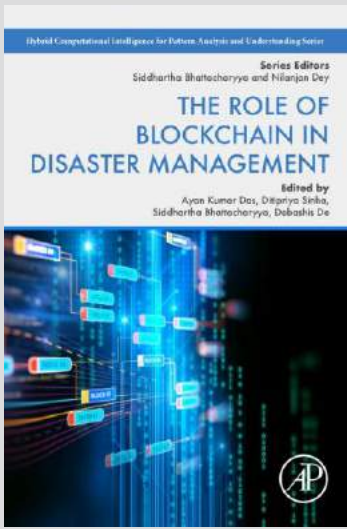
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CHEMISTRY Organic Chemistry

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The Role of Blockchain in Disaster Management

Edited by : **Ayan Kumar Das**, Assistant Professor, Birla Institute of Technology, Mesra, India; **Ditipriya Sinha**, Assistant Professor, National Institute of Technology, Patna, India; **Siddhartha Bhattacharyya**, PhD, VSB Technical University of Ostrava, Czech Republic and **Debashis De**, PhD, Professor, Dept. of Computer Science and Engineering, Maulana Abul Kalam Azad University of Technology, Kolkata, India

ISBN: 9780443134722
PUB DATE: Nov 01, 2024
LIST PRICE: £138.00 / \$180.00 / €160.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 232
AUDIENCE: Researchers, graduate students, and professionals in the fields of computer science, software development, and disaster management
BIC CODES: UYQ, PBD, UY, UMB, UYQE
THEMA CLASSIFICATION: THEMAUMB; THEMABPD; THEMAUYQ; THEMAUYQE; THEMAUY; THEMAUFL; THEMAKJ

Evaluates the latest key concepts, approaches, and applications of existing blockchain-based IoT frameworks for disaster management

A Volume in the *Hybrid Computational Intelligence for Pattern Analysis and Understanding Series*

KEY FEATURES

- Presents the design of blockchain-based frameworks for disaster management and their performance evaluation to help compare proposed frameworks
- Introduces applications of machine learning techniques to make disaster management systems more intelligent and enable more accurate data analysis/prediction
- Addresses data security issues as key examples that can be prevented through the application of blockchain technology

DESCRIPTION

The Role of Blockchain in Disaster Management explores the architecture and implementation of existing blockchain-based IoT frameworks for the detection and prevention of disasters, along with the management of relative supply chains to protect against mismanagement of essential materials. The distributed nature of Blockchain helps to protect data from internal or external attacks, especially in disaster areas or times of crisis when database systems become overloaded and vulnerable to unauthorized access, manipulation, and disruption of critical services. This book can be used as a reference by graduate students, researchers, professors, and professionals in computer science, software design, and disaster management.



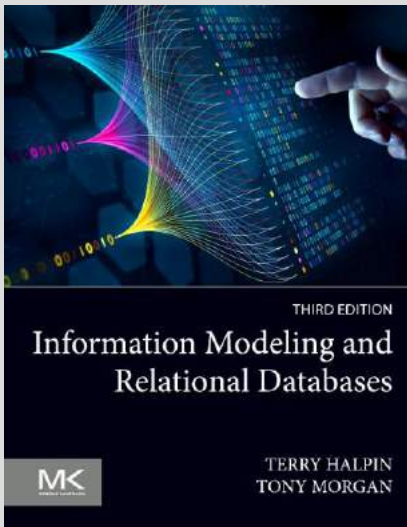
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Information Modeling and Relational Databases, 3e

Terry Halpin, Professor of Computer Science, INTI International University, Malaysia and **Tony Morgan**, Professor in Computer Science, INTI International University, Malaysia

ISBN: 9780443237904

PREVIOUS ISBN: 9780123735683

PUB DATE: Jul 01, 2024

LIST PRICE: £109.00 / \$135.00 / €128.00

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 191 x 235

PAGES: c. 960

AUDIENCE: Computer Science researchers, data science researchers, and software engineers working in academia and industry, including data modelers, database designers, information architects, and practitioners in data management, Graduate students and senior undergraduate students in Computer Science, data science, information systems, and software engineering

BIC CODES: PBD, UY, UB

THEMA CLASSIFICATION:

THEMAUY; THEMABPD;

THEMAUNC

Presents a methodical and thorough explanation of Object-Role Modeling (ORM) and sound database design

"This book is an excellent introduction to both information modeling in ORM and relational databases. The book is very clearly written in a step-by-step manner and contains an abundance of well-chosen examples illuminating practice and theory in information modeling. I strongly recommend this book to anyone interested in conceptual modeling and databases." --**Dr. Herman Balsters, Director of the Faculty of Industrial Engineering, University of Groningen, The Netherlands**

KEY FEATURES

- Presents the most in-depth coverage of object-role modeling, including a thorough update of the book for the latest versions of ORM, ER, UML, OWL, and BPMN modeling.
- Includes clear coverage of relational database concepts as well as the latest developments in SQL, XML, information modeling, data exchange, and schema transformation.
- Case studies and a large number of class-tested exercises are provided for many topics.
- Includes all-new chapters on data file formats and NoSQL databases.

DESCRIPTION

Information Modeling and Relational Databases, Third Edition, provides thorough coverage of information modeling approaches, including object-role modeling (ORM), entity-relationship (ER) modeling, and the unified modeling language (UML). It shows how to map models developed with those approaches to a variety of relational and nonrelational database systems, including document databases, column-oriented databases, graph databases, and deductive databases. Process and state modeling, ontological modeling, and metamodeling are also covered. For this new edition, the coverage of ORM, ER, UML, SQL, OWL, and BPMN has been thoroughly updated to include their latest versions. A significant amount of new material has been added. Various data file formats such as CSV, XML, JSON, YAML, and some other markup languages are now covered, and a more thorough treatment is provided for nonrelational databases, especially NoSQL. One of the major features of the book is its large number of exercises, which have been thoroughly class-tested. This book is intended for anyone with a stake in the accuracy and efficacy of databases such as systems analysts, information modelers, database designers and administrators, and programmers.



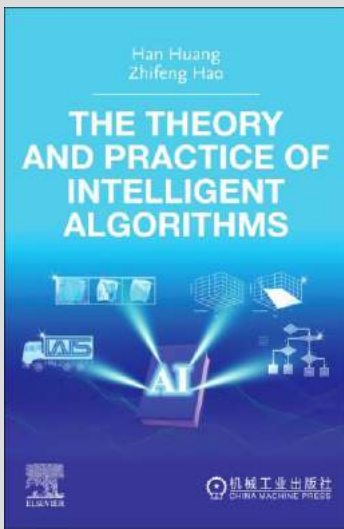
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Intelligent Algorithms

Theory and Practice

Han Huang, Professor & Doctoral supervisor, School of Software Engineering, South China University of Technology, Beijing, China and **Zhifeng Hao**, College of Science, Shantou University, Guangdong, China

ISBN: 9780443217586
PUB DATE: Jun 05, 2024
LIST PRICE: £91.95 / \$120.00 / €104.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 238

AUDIENCE: Those who are interested in research on intelligent algorithms can learn about the computation time analysis of intelligent algorithms using experimental statistics. They can also use this method to conduct computation time analysis of other algorithms. Besides, this book introduces the latest application achievements in multiple fields, including computer vision, logistics scheduling, software testing, and multi-objective optimization. It can help readers understand the research results of the above five research directions and obtain real experimental data as well as practical codes. As a supplementary text for graduate and undergraduate students who majored in courses related to intelligent algorithms

BIC CODES: UYQV, UM, PBD, UY
THEMA CLASSIFICATION:
THEMAUYQV; THEMAUYQP;
THEMAUM; THEMAUY; THEMABPD

Presents the latest achievements of the computation time analysis theory and practical applications of intelligent algorithms

KEY FEATURES

- Integrates the theoretical analysis results of intelligent algorithms, which is convenient for the majority of researchers to deeply understand the theoretical analysis results of intelligent algorithms and further supplement and improve the theoretical research of intelligent algorithms
- Opens up readers' understanding of the theoretical level of intelligent algorithms and spreads the inherent charm of intelligent algorithms
- Integrates the diverse knowledge of society and provides a more comprehensive and scientific knowledge of intelligent algorithm theory

DESCRIPTION

The Theory and Practice of Intelligent Algorithms discusses the latest achievements of the computation time analysis theory and practical applications of intelligent algorithms. In five chapters, the book covers (1) New methods of intelligent algorithm computation time analysis; (2) Application of intelligent algorithms in computer vision; (3) Application of intelligent algorithms in logistics scheduling; (4) Application of intelligent algorithms in software testing; and (5) Application of intelligent algorithm in multi-objective optimization.

The content of each chapter is supported by papers published in top journals. The book's authors introduce the work of each part, which mainly includes a brief introduction (mainly for readers to understand) and academic discussion (rigorous theoretical and experimental support), in a vivid and interesting way through excellent pictures and literary compositions. To help readers learn and make progress together, each part of this book provides relevant literature, code, experimental data, and so on.



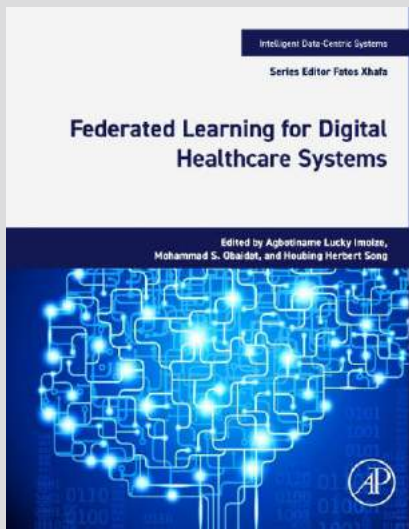
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Federated Learning for Digital Healthcare Systems

Edited by : **Agbotiname Lucky Imoize**, PhD, Department of Electrical and Electronics Engineering, Faculty of Engineering, University of Lagos, Lagos, Nigeria; **Mohammad S Obaidat**, PhD, University of Jordan, Aman, Jordan; **Houbing Herbert Song**, PhD, University of Maryland, Baltimore County (UMBC), Baltimore, USA and **Fatos Xhafa**, PhD, Full Professor of Computer Science, Universitat Politècnica de Catalunya (UPC), Barcelona, Spain

ISBN: 9780443138973

PUB DATE: Jun 10, 2024

LIST PRICE: £138.00 / \$180.00 / €160.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 191 x 235

PAGES: c. 428

AUDIENCE: Graduate students, researchers, and professionals from academia and industry, working in the fields of computer science, federated learning and digital healthcare

BIC CODES: PBD, UMB, UYQ, UYQE

THEMA CLASSIFICATION:

THEMAUMB; THEMABPD;

THEMAUYQ; THEMAUYQE;

THEMAKJ; THEMAUFL

Explores the potential of federated learning in emerging digital healthcare systems

A Volume in the *Intelligent Data-Centric Systems* Series

KEY FEATURES

- Provides insights into real-world scenarios of the design, development, deployment, application, management, and benefits of federated learning in emerging digital healthcare systems
- Highlights the need to design efficient federated learning-based algorithms to tackle the proliferating security and patient privacy issues in digital healthcare systems
- Reviews the latest research, along with practical solutions and applications developed by global experts from academia and industry

DESCRIPTION

Federated Learning for Digital Healthcare Systems critically examines the key factors that contribute to the problem of applying machine learning in healthcare systems and investigates how federated learning can be employed to address the problem. The book discusses, examines, and compares the applications of federated learning solutions in emerging digital healthcare systems, providing a critical look in terms of the required resources, computational complexity, and system performance.

In the first section, chapters examine how to address critical security and privacy concerns and how to revamp existing machine learning models. In subsequent chapters, the book's authors review recent advances to tackle emerging efficient and lightweight algorithms and protocols to reduce computational overheads and communication costs in wireless healthcare systems. Consideration is also given to government and economic regulations as well as legal considerations when federated learning is applied to digital healthcare systems.



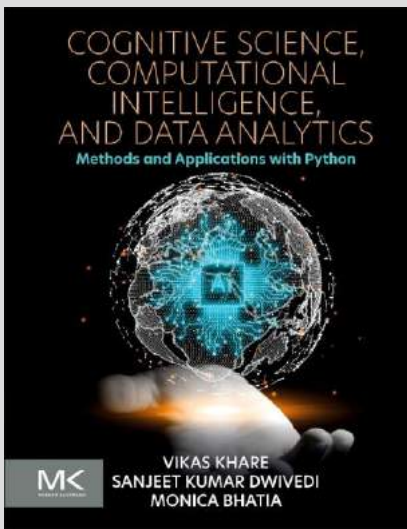
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Cognitive Science, Computational Intelligence, and Data Analytics

Methods and Applications with Python

Vikas Khare, PhD, Associate Professor, School of Technology, Management and Engineering NMIMS, Indore, India, Certified Energy Manager, Bureau of Energy Efficiency India; **Sanjeet Kumar Dwivedi**, Scrum Master and Senior R&D Engineer, Danfoss Power Electronics, Adjunct Professor, Curtin University, Australia and **Monica Bhatia**, MD, Associate Professor, Pediatrics, Columbia University Irving Medical Center, New York, NY

ISBN: 9780443160783
PUB DATE: Jun 03, 2024
LIST PRICE: £91.95 / \$120.00 / €104.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 186

AUDIENCE: Computer Science researchers, data science researchers, and data analysis researchers in academia and industry, Graduate students and senior undergraduate students in Computer Science, data science, and data analysis

BIC CODES: UB

THEMA CLASSIFICATION: THEMAUNC

Presents a methodical and thorough explanation of data analytics in the context of cognitive science and computational intelligence

KEY FEATURES

- Demystifies the theory of data analytics using a step-by-step approach
- Covers the intersection of cognitive science, computational intelligence, and data analytics by providing examples and case studies with applied algorithms, mathematics, and Python programming code
- Introduces foundational data analytics techniques such as CRISP-DM, SEMMA, and Object Detection Models in the context of computational intelligence methods and tools
- Covers key concepts of multivariate and cognitive data analytics such as factor analytics, principal component analytics, linear regression analysis, logistic regression analysis, and value chain applications

DESCRIPTION

Cognitive Science, Computational Intelligence, and Data Analytics: Methods and Applications with Python introduces readers to the foundational concepts of data analysis, cognitive science, and computational intelligence, including AI and Machine Learning. The book's focus is on fundamental ideas, procedures, and computational intelligence tools that can be applied to a wide range of data analysis approaches, with applications that include mathematical programming, evolutionary simulation, machine learning, and logic-based models. It offers readers the fundamental and practical aspects of cognitive science and data analysis, exploring data analytics in terms of description, evolution, and applicability in real-life problems.

The authors cover the history and evolution of cognitive analytics, methodological concerns in philosophy, syntax and semantics, understanding of generative linguistics, theory of memory and processing theory, structured and unstructured data, qualitative and quantitative data, measurement of variables, nominal, ordinals, intervals, and ratio scale data. The content in this book is tailored to the reader's needs in terms of both type and fundamentals, including coverage of multivariate analysis, CRISP methodology and SEMMA methodology. Each chapter provides practical, hands-on learning with real-world applications, including case studies and Python programs related to the key concepts being presented.



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Computational Intelligence Techniques for Sustainable Supply Chain Management

Edited by : **Sanjoy Kumar Paul**, Associate Professor, UTS Business School, University of Technology Sydney, Sydney, Australia and **Sandeep Kautish**, PhD, Professor and Director, Apex Institute of Technology (AIT - CSE), Chandigarh University, Punjab, India

ISBN: 9780443184642
PUB DATE: Jun 03, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 446
AUDIENCE: Academicians and industry researchers and practitioners, supply chain and logistics practitioners, professionals in logistics, transportation, and distribution, production and inventory management Professionals
BIC CODES: TB, UYQ, UFL, UYQE
THEMA CLASSIFICATION: THEMAUYQ; THEMAKJ; THEMAUFL; THEMAKJT; THEMAUYQE

Explores the state-of-the-art in using computational intelligence for solving supply chain sustainability issues and logistic problems

A Volume in the *Uncertainty, Computational Techniques, and Decision Intelligence Series*

KEY FEATURES

- Serves as a reference on computational intelligence-enabled sustainable supply chains for graduate students in computer/data science, industrial engineering, industrial ecology, and business
- Explores key topics in sustainable supply chain informatics, that is, heuristics, metaheuristics, robotics, simulation, machine learning, big data analytics and artificial intelligence
- Provides a foundation for industry leaders and professionals to understand recent and cutting-edge methodologies and technologies in the domain of sustainable supply chain powered by computational intelligence techniques

DESCRIPTION

Computational Intelligence Techniques for Sustainable Supply Chain Management presents state-of-the-art computational intelligence techniques and applications for supply chain sustainability issues and logistic problems, filling the gap between general textbooks on sustainable supply chain management and more specialized literature dealing with methods for computational intelligence techniques. This book focuses on addressing problems in advanced topics in the sustainable supply chain and will appeal to practitioners, managers, researchers, students, and professionals interested in sustainable logistics, procurement, manufacturing, inventory and production management, scheduling, transportation, and supply chain network design.



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Decision Support Systems for Sustainable Computing

Edited by : **Muhammet Deveci**, Department of Industrial Engineering, National Defense University, Istanbul, Turkey

ISBN: 9780443235979
PUB DATE: Jun 03, 2024
LIST PRICE: £146.00 / \$180.00 / €170.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 272
AUDIENCE: Researchers, graduate students, and professionals working in the fields of computational modelling, applied mathematics, and process engineering
BIC CODES: UB, UYM
THEMA CLASSIFICATION: THEMAKJ; THEMAUFL; THEMAUNC; THEMAUNA; THEMAUYZM

Presents advances in decision support systems for digital technology implementations advancing sustainable development

A Volume in the *Cognitive Data Science in Sustainable Computing Series*

KEY FEATURES

- Provides a broad overview of emerging trends and technologies in decision support systems applications
- Investigates recent trends and core concepts in digital technology transformation as applied to the circular economy and sustainable development
- Analyzes the application of decision support systems models across a range of case studies and processes which rely on multi-criteria decision-making and have been designed specifically to improve overall sustainability

DESCRIPTION

Decision Support Systems for Sustainable Computing investigates recent technological advances in decision support systems models designed to solve real world applications. The book provides a broad overview of digital technology transformation as applied to the circular economy, which is seeking to drive improvements in scientific research, communication, logistics, automation, production, and the improved sustainability of these processes and products. The book explores applications of decision support for sustainable development across supply chain management, business intelligence, agriculture, aviation, communications, and finance.



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Making IT Sustainable

Techniques and Applications

Mikhail Gloukhovtsev, Associate Director, Kyndryl, New York, NY, USA

ISBN: 9780443135972

PUB DATE: Jun 01, 2024

LIST PRICE: £134.00 / \$175.00 / €155.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 292

AUDIENCE: Graduate students, researchers, and professionals in the fields of computer engineering, embedded systems, and solutions architecture, IT directors and managers responsible for IT sustainability programs, Graduate students, researchers and professionals in environmental studies, studying IT sustainability, are also potential buyers of the book.

BIC CODES: TJFD1, TVF, RN, UY, UYF

THEMA CLASSIFICATION:

THEMATJFD; THEMATVF;

THEMATQ; THEMATJF; THEMAUY;

THEMAUYF

Presents recent advancements in IT sustainability initiatives involving hardware, software, internet infrastructure, and data center design

KEY FEATURES

- Presents various initiatives to address IT sustainability, looking at approaches for improving energy efficiency in IT such as Adiabatic Reversible Computing, use of direct current, and dematerialization
- Focuses on the design of sustainable IT systems and aims to be solution oriented
- Reviews innovations in software development that contribute to GHG emission reductions such as Rust programming language
- Investigates innovations in data center technologies, green software, adiabatic reversible computing, and cloud computing

DESCRIPTION

Implementing sustainability solutions in Information Technology (IT) or broader – in Information Communications Technology (ICT) - is a challenge but it is essential. The goal of **Making IT Sustainable: Techniques and Applications** is to show how it has been done, strategies, various solutions, tool sets, and best practices. Various IT areas are investigated – from data center technologies and operations to cloud computing, to green software, to cryptocurrency, to the transformative AI role in making IT sustainable, to quantum and adiabatic computing. The adoption of sustainable IT practices reduces the environmental footprint of IT by advocating for the utilization of renewable energy sources, electronic waste reduction, the design of energy-efficient IT devices, innovative cooling technologies, and circular economy.

Sustainable IT is a complex and challenging field. As a result, there are many questions and uncertainties about how to implement sustainable practices across various scenarios. **Making IT Sustainable: Techniques and Applications** asks several insightful questions: How can environmentally sustainable data centers be built? How do we compare the carbon footprint of data centers versus public cloud, and cloud-focused IT sustainability standards? How can quantum computing be made environmentally friendly? How to make cryptocurrency mining sustainable? Are the economic costs of sustainable IT prohibitively higher than society is willing to bear? Transformative role of AI in making IT sustainable is reviewed.



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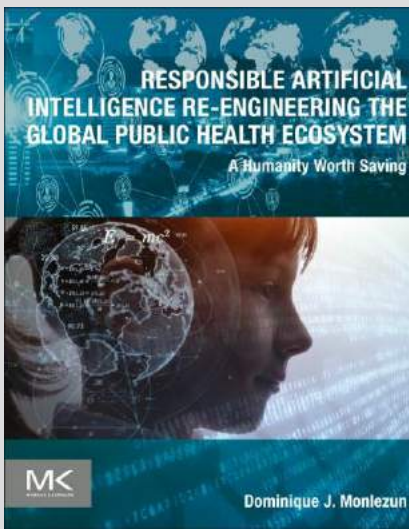
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Responsible Artificial Intelligence Re-engineering the Global Public Health Ecosystem

A Humanity Worth Saving

Dominique J Monlezun, Anderson Cancer Center, Houston, TX, USA

ISBN: 9780443215971
PUB DATE: Jun 01, 2024
LIST PRICE: £115.00 / \$150.00 /
€130.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 191 x 235

PAGES: c. 232

AUDIENCE: Computer Scientists and researchers in Artificial Intelligence and Machine Learning, as well as practitioners in public health, medicine, health policy, public policy, political science, economics, and ethics. As such, academics, researchers, and professionals in a variety of research fields who work with AI, algorithms, and machine learning and their applications to various real-world research and healthcare administration problems will be a target audience. Upper-level undergrad and graduate students in Computer Science, AI, ML, public health, medicine, health policy, public policy, political science, economics, and ethics

BIC CODES: UYQ, UYQE, MBN, VFD

THEMA CLASSIFICATION:

THEMAUYQ; THEMAUYQE;

THEMAVFD; THEMAMBN



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Provides a comprehensive analysis of how AI can revolutionize post-colonial global public health to solve our growing existential crises

KEY FEATURES

- Details the first comprehensive ecosystem analysis of global public health revolutionized by AI.
- Uses concrete examples to explain the dominant players and trends determining health's future, including through data architecture, financing, political economics, demographics, security, and multicultural ethics.
- Provides a successful full-spectrum formula for governments, institutions, companies, and communities to scale equitable health globally while respecting local identities and values.

DESCRIPTION

Responsible Artificial Intelligence Re-engineering the Global Public Health Ecosystem: A Humanity Worth Saving is the first comprehensive book showing how trustworthy AI can revolutionize decolonized global public health. It explains how it works as an ecosystem and how it can be fixed to equitably empower us all to solve the defining crises of our era, from poverty to pandemics, climate to conflicts, debt to divisions. It is written from the first-hand perspective of the world's first triple doctorate trained physician-data scientist and ethicist who has cared for more than 10,000 patients and authored 5 AI textbooks and more than 400 scientific and ethics papers. This essential resource integrates science, political economics, and ethics to unite our unique cultures, belief systems, institutions, and governments. In doing so, it is meant to give humanity a fighting chance against shared existential threats through cooperation and managed strategic competition for integral sustainable development.

Taking seriously diverse voices, perspectives, and insights from the Global North and the Global South, this book uses concrete examples backed up by clear explanations to elucidate the current failures, emerging successes, and societal trends of global public health. It shows how a small number of powerful governments and corporations—amid digitalization, deglobalization, and demographic shifts—dominate global health, and how we can re-engineer a better future for it both societally and technologically.

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Health on the Move 3: the Reviews, Vol 13

Edited by : **Jenny Mindell** and **Stephen Watkins**

ISBN: 9780443221804

PUB DATE: Jun 01, 2024

LIST PRICE: £125.00 / \$200.00 / €143.00

DISCOUNT: Serial

FORMAT: Hardback

TRIM: 6.00w x 9.00h

PAGES: c. 279

AUDIENCE: Policy-makers, practitioners, researchers, and students working in transport planning, public health, or spatial planning in any country. In particular: health professionals interested in transport and climate change, transport professionals interested in climate change and health, anyone interested in transport policy.

BIC CODES: LNKT

THEMA CLASSIFICATION: THEMALNKT

Discover the 3 As and the 7 Cs of transport and health

A Volume in the *Advances in Transport Policy and Planning* Series

KEY FEATURES

- Provides high quality, fully peer-reviewed, literature reviews on topics in Transport and Health
- Includes self-contained chapters for readers with specific interests
- Links transport and public health disciplines by providing up-to-date evidence on a range of topics and potential interventions

DESCRIPTION

Health on the Move 3: the Reviews, Volume 13 covers this important field of interdisciplinary study. As part of the Transport and Health Science Group's process of updating *Health on the Move 2* it has commissioned a number of in-depth reviews of various aspects of the field. This new release includes chapters such as T&H, inequalities, social exclusion, etc., What are the impacts of disability on travel?, What interventions increase active travel?, Impact of active commuting to school on children's health: an overview of systematic reviews, How important is travel mode in determining injury and fatality rates related to travel?, and more.

Other chapters in this new release include What are the impacts of area-wide 20mph [30kph] speed limits?, What policies are effective in reducing congestion?, What are the economic and social impacts of public transport and how do these relate to health?, Health outcomes of public transport: a systematic review, Transport and Loneliness, Costs of transport and mental health and wellbeing, and What contribution does each of the factors affecting gender differences in travel patterns make?



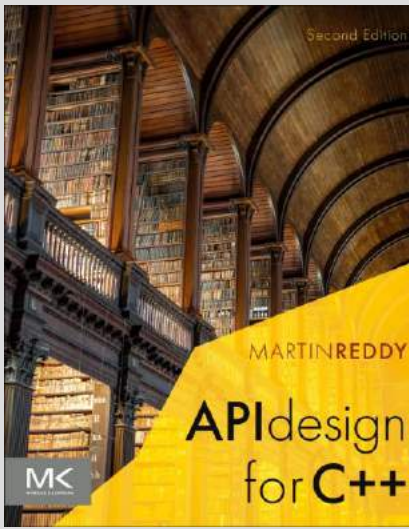
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SERIALS Transport

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API Design for C++, 2e

Martin Reddy, Fellow of the IEEE, a Fellow of the AAIA, and a Distinguished Member of the ACM.

ISBN: 9780443222191
PREVIOUS ISBN: 9780123850034
PUB DATE: Jun 01, 2024
LIST PRICE: £72.95 / \$89.95 / €84.95
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 191 x 235
PAGES: c. 626
AUDIENCE: Computer Science researchers, software engineers, programmers, and software researchers in academia and industry, including software engineers developing C++ code to be used by other developers, whether via APIs, libraries, device drivers, or other reusable components, Graduate students and senior undergraduate students in Computer Science and software engineering.
BIC CODES: PBD, UY, UMX, UMZ, UM
THEMA CLASSIFICATION: THEMAUY; THEMABPD; THEMAUMX; THEMAUM; THEMAUG

Covers practical techniques for C++ API design that produce robust code for the long-term

"Martin Reddy draws from his experience on large scale, collaborative software projects to present patterns and practices that provide real value to individual developers as well as organizations. API Design for C++ explores often overlooked issues, both technical and non-technical, contributing to successful design decisions that product high quality, robust, and long-lived APIs." --**Eric Gregory, Software Architect, Pixar Animation Studios**

KEY FEATURES

- Teaches the strategies of C++ API development, including design, versioning, documentation, testing, scripting, and extensibility
- Includes extensive code examples that illustrate each concept, with fully functional examples and working source code for experimentation available online
- Covers various API styles and patterns, with a focus on practical and efficient designs for large-scale, long-term projects
- Includes updated URLs and ensures all code examples continue to work with modern compilers and supporting tools

DESCRIPTION

API Design for C++, Second Edition provides a comprehensive discussion of Application Programming Interface (API) development, from initial design through implementation, testing, documentation, release, versioning, maintenance, and deprecation. It is the only book that teaches the strategies of C++ API development, including interface design, versioning, scripting, and plug-in extensibility. Drawing from the author's experience on large scale, collaborative software projects, the text offers practical techniques of API design that produce robust code for the long-term. It presents patterns and practices that provide real value to individual developers as well as organizations.



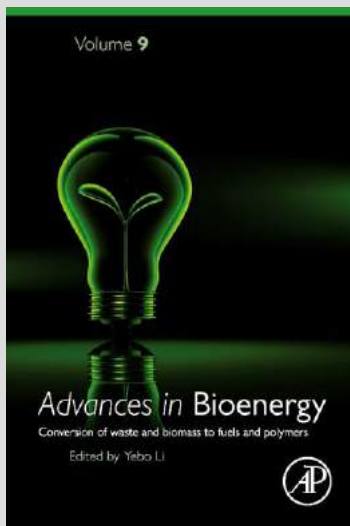
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COMPUTING

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Advances in Bioenergy, Vol 9

Conversion of waste and biomass to fuels and polymers

Yebo Li, professor in the Department of Food, Agricultural and Biological Engineering, The Ohio State University (OSU).

ISBN: 9780443295348
PUB DATE: Jun 01, 2024
LIST PRICE: £135.00 / \$217.00 / €155.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 384
AUDIENCE: Researchers, students, industry and governmental regulators, and policy makers in the field of bioenergy
BIC CODES: THX
THEMA CLASSIFICATION: THEMATHV

Edited by some of the best scientists in the field, this series presents the latest updates in the field of bioenergy

A Volume in the *Advances in Bioenergy* Series

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in *Advances in Bioenergy* series

DESCRIPTION

Advances in Bioenergy: Conversion of waste and biomass to fuels and polymers, Volume Nine highlights new advances in the field with this new volume presenting interesting chapters on a variety of topics, including Rethinking Anaerobic Digestion for Bioenergy and Biopolymers Production: Challenges and Opportunities, Current technologies and applications of CO₂ utilization into bio-products, Synthesis of Polyhydroxyalkanoates (PHA) from renewable resources, Thermochemical processing of algal biomass for biofuel production, Sustainable polycarbonate production from CO₂, Social and Environmental Impact Assessment and Renewable Energy Production in MSW Landfills, Advances in water gas shift reaction for hydrogen production from biomass, and Production and application of lignin-based carbon fibers.



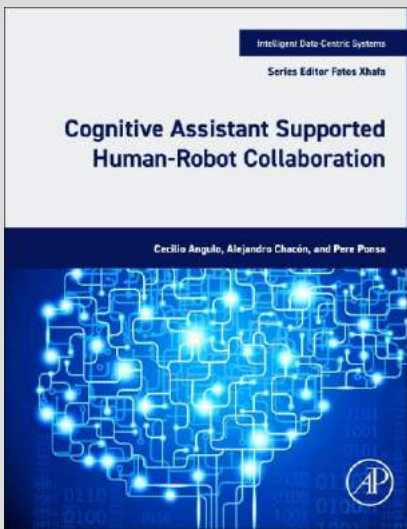
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SERIALS Energy

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Cognitive Assistant Supported Human-Robot Collaboration

Cecilio Angulo, Universitat Politècnica de Catalunya (UPC), Barcelona, Spain; **Alejandro Chacón**, Universidad de las Fuerzas Armadas – ESPE, Quito, Ecuador; **Pere Ponsa**, Barcelona East School of Engineering - EEBE, Barcelona, Spain and **Fatos Xhafa**, PhD, Full Professor of Computer Science, Universitat Politècnica de Catalunya (UPC), Barcelona, Spain

ISBN: 9780443221354
PUB DATE: May 16, 2024
LIST PRICE: £146.00 / \$180.00 / €170.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 191 x 235
PAGES: c. 279
AUDIENCE: Researchers and graduate students working in the field of computer science, specifically focusing on cognitive assistants, IoT, human-robot interaction, collaborative robotics, and data-centric systems
BIC CODES: UYQ, UYQM, UYZ, UYQE
THEMA CLASSIFICATION: THEMAUYQ; THEMAUYZ; THEMAUYQE

Provides a comprehensive resource on the development of cognitive assistants working in human-robot teams in an AIoT domain

A Volume in the *Intelligent Data-Centric Systems Series*

KEY FEATURES

- Introduces fundamental concepts of cognitive assistants and human-robot collaboration
- Investigates the optimization capabilities of human-cyber physical systems
- Discusses planning and implementation of cognitive assistant projects
- Explores concepts and design elements of human collaborative workspaces

DESCRIPTION

Cognitive Assistant Supported Human-Robot Collaboration covers the design and development of cognitive assistants in the smart factory era, its application domains, challenges, and current state-of-the-art in assistance systems with collaborative robotics and IoT technologies, standards, platforms, and solutions. This book also provides a sociotechnical view of collaborative work in human-robot teams, investigating specific methods and techniques to analyze assistance systems. This provides readers with a comprehensive overview of how cognitive assistants function and work in human-robot teams.



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COVER IMAGE
FORTHCOMING

Grassland Degradation, Restoration and Sustainable Management of Global Alpine Area

Edited by : **Zhanhuan Shang**, Professor, College of Ecology, Lanzhou University, China; **Allan Degen**, Emeritus professor, Ben-Gurion University, Beer Sheva, Israel; **Shikui Dong**, Professor, School of Grassland Science, Beijing Forest University, China; **Huakun Zhou**, Professor in the Northwest Institute of Plateau Biology, CAS, Vining, China and **Yushou Ma**, Professor, Grassland Science, Qinghai University, China

ISBN: 9780443218828
PUB DATE: Jul 01, 2024
LIST PRICE: £142.00 / \$175.00 / €170.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 744

AUDIENCE: Academics and university students, and people involved in land and environmental issues, developmental studies, ecology, environmental studies, geography, environmental history, and ecological ethics, Readers can use this book as reference material in teaching and scientific research, as well as a basis for policy making processes, Policy makers, ecological engineers, and people involved in pasture management and livestock industry

BIC CODES: RNC

THEMA CLASSIFICATION: THEMPSAF

Promotes sustainable ecological restoration and how to improve the adaptability of the grassland ecosystem of global alpine area

KEY FEATURES

- Thoroughly presents the processes of grassland degradation from the novel viewpoint of the stripping of matic epipedon
- Features the most recent studies to provide new research evidence for long-term grassland restoration efforts on the global alpine area
- Contains in-depth analysis of the processes, mechanisms, and drivers of grassland degradation.
- Discusses the restoration of degraded grasslands using restoration theory and technologies

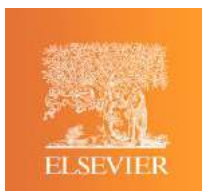
DESCRIPTION

Grassland Degradation, Restoration and Sustainable Management of Global Alpine Area involves the stripping and regeneration of the grassland's matic epipedon. The stripping of the matic epipedon is a unique phenomenon on the global alpine area, which has left many unanswered questions. Is stripping degradation an inherent, inevitable feature of the alpine grassland ecosystem? Is it an avoidable occurrence? Why is ecological restoration of stripped degraded grassland extremely difficult? Does restoration rely on reconstructing the grassland's matic epipedon? Or can it be done in another way? How can sustainable ecological restoration be achieved?

Frontline researchers in global alpine area have used observational evidence from field studies to respond to these questions and to present a comprehensive picture of the problems and drivers of grassland degradation. The climate-environment interaction mechanism of grassland degradation is revealed by the holistic approach in this book. Ecological restoration is discussed through social and economic participation, and past and present restoration actions are analyzed from the perspective of traditional culture and ecological ethics. The future sustainable management of grassland under climate change and social and economic development trend is also covered. This book will alert people to the dangers of degradation and to the difficulties encountered in ecological restoration.



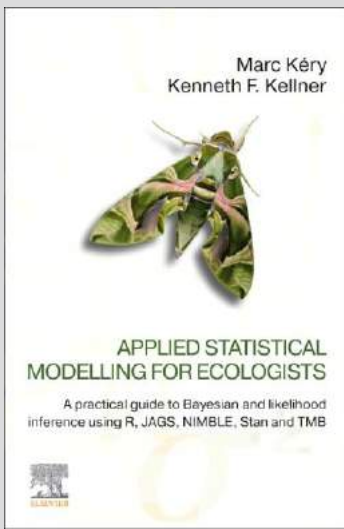
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EARTH & ENVIRONMENT Ecology

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Applied Statistical Modelling for Ecologists

A Practical Guide to Bayesian and Likelihood Inference Using R, JAGS, NIMBLE, Stan and TMB

Marc Kéry, Senior Scientist, Swiss Ornithological Institute, Basel, Switzerland and Kenneth F. Kellner, Assistant Research Professor, Michigan State University, MI, USA

ISBN: 9780443137150
PUB DATE: Jun 28, 2024
LIST PRICE: £68.95 / \$89.95 / €77.95
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 484
AUDIENCE: Environmental science researchers, Ecologists, Biologists, and Wildlife Managers as well as upper-level graduate and graduate ecology, biology, biogeography, conservation biology, fisheries and wildlife management students
BIC CODES: RNC, PBT, RN
THEMA CLASSIFICATION: THEMPSAF; THEMABPT; THEMATQ

Provides applied statistical modeling in almost any subject matter for any scientist needing to learn statistical modeling

KEY FEATURES

- Provides a comprehensive, applied introduction to some of the most exciting, cutting-edge model fitting software packages: JAGS, Nimble, Stan, and TMB
- Covers all the basics of the modern applied statistical modeling that have become a key part of any natural science, including linear, generalized linear, mixed and also hierarchical models
- Provides applied introduction to the two dominant methods of parametric statistical modeling: maximum likelihood and Bayesian inference
- Adopts what could be called a "Rosetta stone approach," wherein understanding of one software, and of its associated language, will be greatly enhanced by seeing the analogous code in one of the other engines

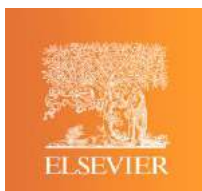
DESCRIPTION

Applied Statistical Modelling for Ecologists: A Practical Guide to Bayesian and Likelihood Inference Using R, JAGS/Nimble, Stan and TMB provides an important guide and comparison of powerful new software packages that are now widely used in research publications, including JAGS, Stan, Nimble, and TMB. It provides a gentle introduction to the most exciting specialist software that is often used to conduct cutting-edge research, along with Bayesian statistics and frequentist statistics with its maximum likelihood estimation method. In addition, this book is simple and accessible, allowing researchers to carry out and understand statistical modeling.

Through examples, the book covers the underlying statistical models widely used by scientists across many disciplines. Thus, this book will be useful for anyone who needs to quickly become proficient in statistical modeling, and in the model-fitting engines covered.



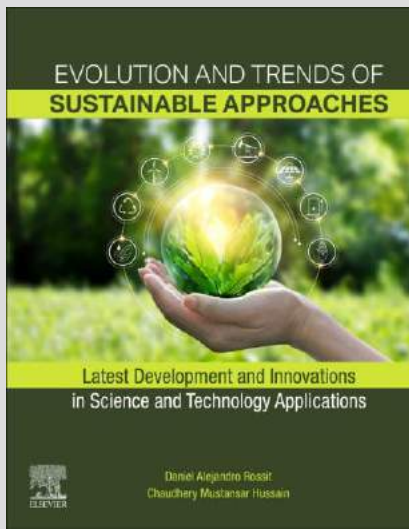
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Evolution and Trends of Sustainable Approaches

Latest Development and Innovations in Science and Technology Applications

Edited by : **Daniel Alejandro Rossit**, Engineering Department, Universidad Nacional del Sur, Argentina. and **Chaudhery Mustansar Hussain**, PhD, New Jersey Institute of Technology, Newark, NJ, USA

ISBN: 9780443216510
PUB DATE: Jun 14, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 191 x 235
PAGES: c. 511
AUDIENCE: Postgraduate and undergraduate students, researchers, professors interested in sustainability science and engineering, Industry practitioners and professionals
BIC CODES: TQ, TVF, RN
THEMA CLASSIFICATION: THEMATQ; THEMATVF

Covers trends of sustainable approaches in engineering and industrial applications surrounding the global sustainability paradigm

KEY FEATURES

- Explores innovative strategies and advanced trends of sustainable approaches, engineering, and industrial applications
- Analyzes sustainability assessments and their role in planning and project processes
- Reviews state-of-the-art sustainable technologies
- Evaluates approaches for organizations to achieve both sustainability assessment and sustainable solutions

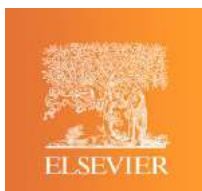
DESCRIPTION

Evolution and Trends of Sustainable Approaches: Latest Development and Innovations in Science and Technology Applications provides different trends and approaches within the sustainability framework to assess their impact and offer possible solutions to problems facing the global sustainability paradigm. This book evaluates sustainability assessment approaches which support different levels of both decision-making and policy processes, thereby improving the management of natural and human systems. This book explores sustainable firm solutions, the upward trend of sustainability, and its variants.

At the same time, different existing approaches are analyzed. These sustainable assessment approaches can be applied to products, services and technologies as well as business models, such as the Product-Service-System (PSS), Circular Economy (CE), Industrial Symbiosis (IS), and Supply Chain (SC). Finally, the book explores Sustainability Indicators (SIs), which are widely used to measure and communicate progress towards sustainable development, along with Life Cycle Sustainability Assessment (LCSA), balancing the three dimensions of sustainability (environmental, social and economic).



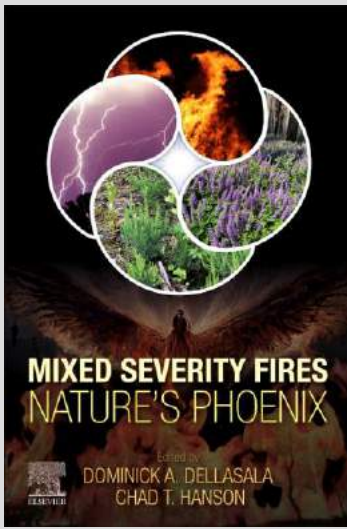
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Mixed Severity Fires, 2e

Nature's Phoenix

Dominick A. DellaSala, Chief Scientist, Wild Heritage, a project of the Earth Island Institute and **Chad Hanson**, Research Ecologist and Director, John Muir Project of Earth Island Institute, Big Bear City, California, USA

ISBN: 9780443137907

PREVIOUS ISBN: 9780128027493

PUB DATE: Jun 01, 2024

LIST PRICE: £95.95 / \$125.00 /

€109.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 430

AUDIENCE: Ecologists,
Environmentalists, Wildfire Ecology
Researchers, Land Managers,
Foresters, Forest Managers,
Environmental Campaigners,
Policymakers, Students

BIC CODES: RNCB, RNKH, RNC, RN

THEMA CLASSIFICATION:

THEMARNK; THEMARNCB;

THEMAPSAF; THEMATQ

Comprehensive reference for wildfire ecology that explores the ecological importance of mixed- and high-severity fires

KEY FEATURES

- Comprehensive and complete reference on wildfire ecology that includes the latest science and citations
- Debunks debates on wildfire management that can be used by conservation groups and decision-makers to shift egregious wildfire policies
- Contains a broad synthesis of the ecology of mixed- and high-severity fires, covering such topics as vegetation, birds, mammals, insects, aquatics, and management actions

DESCRIPTION

Mixed Severity Fires: Nature's Phoenix, Second Edition focuses on wildfire as a keystone ecological process that has shaped plant and animal communities for over 400 million years. The book describes the renewal process that follows wildfires in forests and chaparral ecosystems as nature's phoenix by drawing from examples of wildfire effects. In addition, the book describes management and policies that have contributed to wildfire problems, including climate change and land-use practices incompatible with nature's phoenix and what must happen to get to coexistence with wildfires that are not going away no matter how much we try to suppress or alter fire behavior.



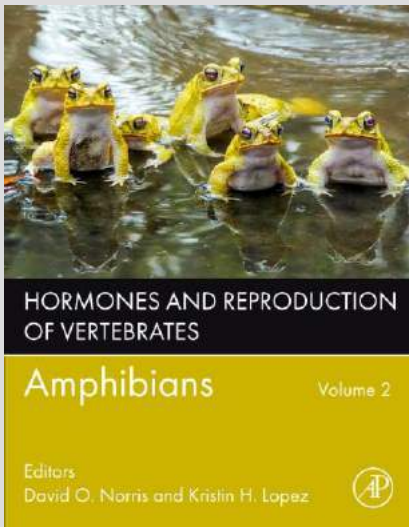
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EARTH & ENVIRONMENT Ecology

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Hormones and Reproduction of Vertebrates, Volume 2, 2e

Amphibians

Edited by : **David O. Norris**, PhD, Professor Emeritus, University of Colorado, USA and **Kristin H. Lopez**, PhD, University of Colorado at Boulder, Colorado, USA

ISBN: 9780443160202

PREVIOUS ISBN: 9780123749314

PUB DATE: Jul 01, 2024

LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 8.50w x 10.875h

PAGES: c. 279

AUDIENCE: Researchers and practitioners focused on vertebrate hormones, reproduction, and use of animals as models in human reproductive research, Advanced undergraduate and graduate students studying animal endocrinology, neuroendocrinology, physiology, and vertebrate reproduction

BIC CODES: TVH, PSD, PSVD, TVHB, PSV

THEMA CLASSIFICATION:

THEMATVH; THEMAPSD;

THEMAPS; THEMAMFC;

THEMAMFG; THEMPSV

Provides a complete, essential, and up-to-date reference for herpetologists studying hormones and reproduction of amphibians

KEY FEATURES

- Covers endocrinology, neuroendocrinology, physiology, behavior, and anatomy of amphibian reproduction
- Includes pituitary, thyroid, adrenal, and gonadal hormones
- Focuses on anuran amphibians, urodeles, and gymnophionids
- Provides new coverage on endocrine disruption in amphibians

DESCRIPTION

Hormones and Reproduction of Vertebrates, Volume Two: Amphibians is the second of five second-edition volumes representing a comprehensive and integrated overview of hormones and reproduction in fishes, amphibians, reptiles, birds, and mammals. The book includes coverage of endocrinology, neuroendocrinology, physiology, behavior, and anatomy of amphibian reproduction. It provides a broad treatment of the roles of pituitary, thyroid, adrenal, and gonadal hormones in all aspects of reproduction, as well as descriptions of major life history events. New to this edition is a concluding assessment of the effect of environmental influences on amphibians.

Initial chapters in this book broadly examine sex determination, reproductive neuroendocrinology, stress, and hormonal regulation as it relates to male and female reproductive structure and function. Subsequent chapters examine hormones and reproduction of specific taxa, including anuran amphibians, urodeles, and gymnophionids. The book concludes with an examination of endocrine disruption of reproduction in amphibians.



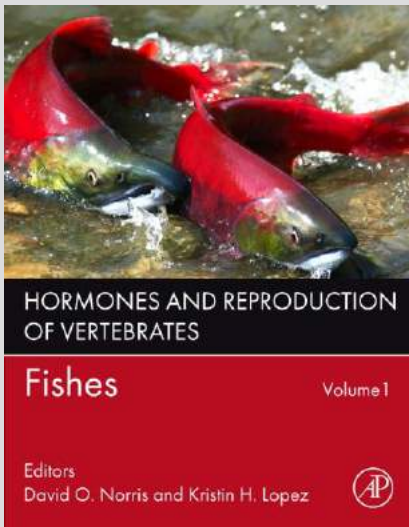
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LIFE SCIENCES Zoology

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Hormones and Reproduction of Vertebrates, Volume 1, 2e

Fishes

Edited by : **David O. Norris**, PhD, Professor Emeritus, University of Colorado, USA and **Kristin H. Lopez**, PhD, University of Colorado at Boulder, Colorado, USA

ISBN: 9780443160097

PREVIOUS ISBN: 9780128101896

PUB DATE: Jul 01, 2024

LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 8.50w x 10.875h

PAGES: c. 279

AUDIENCE: Researchers and practitioners focused on vertebrate hormones, reproduction, and use of animals as models in human reproductive research, Advanced undergraduate and graduate students studying animal endocrinology, neuroendocrinology, physiology, and vertebrate reproduction

BIC CODES: TVH, PSD, PSVD, TVHB, PSV

THEMA CLASSIFICATION:

THEMATVH; THEMAPSD;

THEMAPS; THEMAMFC;

THEMAMFG; THEMAPSV

Provides a complete, essential, and up-to-date reference for ichthyologists studying hormones and reproduction of fishes

KEY FEATURES

- Covers endocrinology, neuroendocrinology, physiology, behavior, and anatomy of fish reproduction
- Includes pituitary, pineal, thyroid, adrenal, and gonadal hormones
- Focuses on teleosts as well as information on agnathan, chondrichthyan, and sarcopterygian fishes
- Provides new coverage on endocrine-disrupting chemicals, microplastics, and climate change

DESCRIPTION

Hormones and Reproduction of Vertebrates, Volume 1: Fishes is the first of five second-edition volumes representing a comprehensive and integrated overview of hormones and reproduction in fishes, amphibians, reptiles, birds, and mammals. The book includes coverage of endocrinology, neuroendocrinology, physiology, behavior, and anatomy of fish reproduction. It provides a broad treatment of the roles of pituitary, thyroid, adrenal, and gonadal hormones in all aspects of reproduction, as well as descriptions of major life history events. New to this edition is a concluding assessment of the effect of environmental influences on fishes.

Initial chapters in this book broadly examine sex determination, reproductive neuroendocrinology, stress, and hormonal regulation as they relate to testicular and ovarian development and function. Subsequent chapters examine hormones and reproduction of specific taxa, especially teleosts, with additional coverage of reproductive cycles of agnathan, chondrichthyan, and sarcopterygian fishes. The book concludes with an examination of the environmental influences on hormones and reproduction of fishes, including endocrine-disrupting chemicals, microplastic particles, and climate change.



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Application of Artificial Intelligence in Hybrid Electric Vehicle Energy Management

Jili Tao, Ph.D. degree from Zhejiang University, Hangzhou, China, in 2007., Institute of Ningbo Technology, Zhejiang University, China; **Ridong Zhang**, Ph.D. degree in control science and engineering from Zhejiang University., Institute of Information and Control, Hangzhou Dianzi University, China and **Longhua Ma**, Ph.D. degree in control science and engineering from Zhejiang University., Zhejiang University, Hangzhou, China

ISBN: 9780443131899
PUB DATE: Jun 07, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 332

AUDIENCE: Students and researchers in energy, electrical, and automotive engineering or interested in energy management or EVs, Professional energy, electrical, and automotive engineers involved in hybrid vehicle control, optimization, and vehicle manufacturing, used as a special textbook for undergraduate and graduate students majoring in vehicle engineering.

BIC CODES: KCN, RN

THEMA CLASSIFICATION: THEMAKCVG; THEMATQ

Present the state-of-the-art in learning-based energy management and modeling strategies for hybrid electric vehicle systems

KEY FEATURES

- Provides a guide to the modeling and simulation methods of hybrid electric vehicle energy systems, including fuel cell systems
- Describes the fundamental concepts and theory behind CNN, MPC, fuzzy control, multi objective optimization, fuzzy Q-learning and DDPG
- Explains how to use energy management methods such as parameter estimation, Q-learning, and pattern recognition, including battery State of Health and State of Charge prediction, and vehicle operating conditions

DESCRIPTION

Application of Artificial Intelligence in Hybrid Electric Vehicle Energy Management presents the state of the art in hybrid electric vehicle system modeling and management. With a focus on learning-based energy management strategies, this book provides detailed methods, mathematical models, and strategies designed to optimize the energy management of the energy supply module of a hybrid vehicle.

This book first addresses the underlying problems in Hybrid Electric Vehicle (HEV) modeling, and then introduces several artificial intelligence-based energy management strategies of HEV systems, including those based on fuzzy control with driving pattern recognition, multiobjective optimization, fuzzy Q-learning and Deep Deterministic Policy Gradient (DDPG) algorithms. To help readers apply these management strategies, this book also introduces State of Charge and State of Health prediction methods and real-time driving pattern recognition. For each application, the detailed experimental process, program code, experimental results, and algorithm performance evaluation are provided.

Application of Artificial Intelligence in Hybrid Electric Vehicle Energy Management is a valuable reference for anyone involved in the modeling and management of hybrid electric vehicles, and will be of interest to graduate students, researchers, and professionals working on HEVs in the fields of energy, electrical, and automotive engineering.



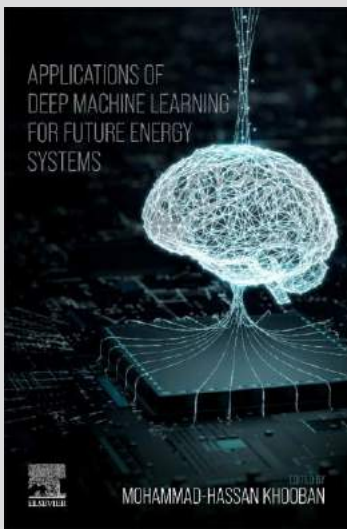
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ENGINEERING Energy

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Applications of Deep Machine Learning in Future Energy Systems

Edited by : **Mohammad-Hassan Khooban**, Department of Engineering - Cyper-Physical Systems, Aarhus University, Aarhus N, Denmark

ISBN: 9780443214325
PUB DATE: Jul 01, 2024
LIST PRICE: £142.00 / \$185.00 / €165.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 232
AUDIENCE: Researchers, research laboratories, practitioners, and Ph.D. students in power systems and electronics
BIC CODES: THRM
THEMA CLASSIFICATION: THEMATHR; THEMATHY

Pushes the limits of machine learning to provide practical innovations for modern energy systems' modeling, management, and control

KEY FEATURES

- Clarifies the current state and future trends of energy system machine learning and the pitfalls facing our transitioning systems
- Provides guidance on 3rd-generation AI tools for meeting the challenges of modeling and control in modern energy systems
- Includes case studies and practical examples of potential applications to inspire and inform researchers and industry developers

DESCRIPTION

Applications of Deep Machine Learning in Future Energy Systems pushes the limits of current Artificial Intelligence techniques to present deep machine learning suitable for the complexity of sustainable energy systems. The first two chapters take the reader through the latest trends in power engineering and system design and operation before laying out current AI approaches and limitations. Later chapters provide in-depth accounts of specific challenges and the use of innovative third-generation machine learning, including neuromorphic computing, to resolve issues from security to power supply.

An essential tool for the management, control, and modelling of future energy systems, this book maps a practical path towards AI capable of supporting sustainable energy.



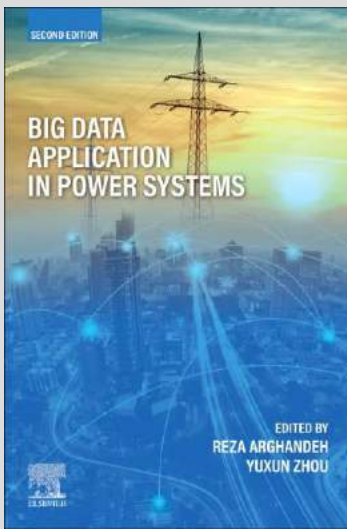
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ENGINEERING Electrical

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Big Data Application in Power Systems, 2e

Edited by : **Reza Arghandeh**, Director of Connectivity, Information and Intelligence Lab, Professor, Data Science and Machine Learning, Western Norway University of Applied Sciences, Norway, Research Professor, Electrical Computer Department, Florida State University, USA and **Yuxun Zhou**, PhD, Department of Electrical Engineering and Computer Sciences, University of California, Berkeley, USA

ISBN: 9780443215247

PREVIOUS ISBN: 9780128119686

PUB DATE: Jul 01, 2024

LIST PRICE: £126.00 / \$165.00 /

€143.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 465

AUDIENCE: Researchers, graduate students, professors, and lecturers in electricity networks and smart grids.

Scientists and engineers, data analysis experts and software developers who are working on electricity networks and advanced technologies for smart grids

BIC CODES: THRM

THEMA CLASSIFICATION:

THEMATHR; THEMATHY

Provides a cutting-edge breakdown of the opportunities and solutions big data analytics presents for power systems

KEY FEATURES

- Provides a total refresh to include the most up-to-date research, developments, and challenges
- Focuses on practical techniques, including rapidly modernizing monitoring systems, measurement data availability, big data handling and machine learning approaches for processing high dimensional, heterogeneous, and spatiotemporal data
- Engages with cross-disciplinary lessons, drawing on the impact of intersectional technology including statistics, computer science, and bioinformatics
- Includes five brand new chapters on hot topics, ranging from uncertainty decision-making to features, selection methods, and the opportunities provided by social network data

DESCRIPTION

Big Data Application in Power Systems, Second Edition presents a thorough update of the previous volume, providing readers with step-by-step guidance in big data analytics utilization for power system diagnostics, operation, and control. Divided into three parts, this book begins by breaking down the big picture for electric utilities before zooming in to examine theoretical problems and solutions in detail. Finally, the third section provides case studies and applications, demonstrating solution troubleshooting and design from a variety of perspectives and for a range of technologies.

Bringing back a team of global experts and drawing on fresh, emerging perspectives, this book provides cutting-edge advice for meeting today's challenges in this rapidly accelerating area of power engineering.

Readers will develop new strategies and techniques for leveraging data towards real-world outcomes.



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COVER IMAGE
FORTHCOMING

Fuel Cells Technology and Electrode Materials for a Sustainable Future

Anuj Kumar, Ramanujan Fellow and Assistant Professor, Dept. of Building Energy Efficiency, CSIR-Central Building Research Institute, Roorkee, Uttarakhand, India and **Ram Gupta**, Associate Professor, Department of Chemistry, Pittsburg State University, Pittsburg, KS, USA

ISBN: 9780443240386
PUB DATE: Jul 01, 2024
LIST PRICE: £160.00 / \$195.00 / €185.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 535

AUDIENCE: Students, researchers, and engineers working in the fields of fuel cells, including material scientists, electrochemical engineers, and chemists who are interested in the development, design, and optimization of fuel cells

BIC CODES: THX

THEMA CLASSIFICATION:
THEMATHV

A comprehensive review of the state-of-the-art in PEM fuel cell technology and the synthesis, characterization, and application of electrode materials for fuel cells

KEY FEATURES

- Summarizes the state-of-the-art progress on fuel cell technology and materials
- Presents synthesis, characterization, and applications of electrode materials for fuel cells
- Explains the fundamentals of electrochemical behavior and how it relates to fuel cells
- Offers novel methods and advanced technologies used in fuel cell technology

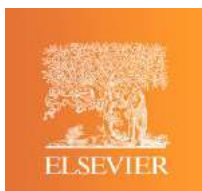
DESCRIPTION

Fuel Cells Technology and Electrode Materials for Sustainable Future presents an up-to-date review of the latest advancements in fuel cell technology and materials, including a comprehensive examination of the synthesis, characterization, and application of electrode materials for fuel cells. With a focus on the fundamentals of electrochemical behavior and their relevance to fuel cells, the book delves into novel techniques and advanced technologies currently being employed in the field.

Presenting a well-defined theoretical approach to the design of new electrocatalysts, the book provides extensive information on the designs and modeling of electrocatalysts and catalyst layers for the PEMCs, the fundamentals of PEMFCs working, catalyst deterioration and diagnosis, and techniques for reducing failure modes. Sustainability and cost considerations are included throughout. In addition, it discusses promising and significant future directions for fuel cells development. Within each chapter, detailed figures, images, and reference data have been included to make the book accessible for new entrants to the topic.



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COVER IMAGE
FORTHCOMING

Handbook on Thermal Hydraulics in Water-Cooled Nuclear Reactors

Volume 1: Foundations and Principles

Edited by : **Francesco D'Auria**, Professor, University of Pisa, Italy; Founder and Head, University's San Piero a Grado Nuclear Research Group and **Yassin A. Hassan**, Professor and Department Head, Texas A&M University, USA

ISBN: 9780323856065

PUB DATE: Jun 28, 2024

LIST PRICE: £170.00 / \$220.00 / €195.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 558

AUDIENCE: Graduate and undergraduate students of nuclear or thermal engineering, researchers in nuclear thermal-hydraulics and reactor technology, engineers working in simulation and modeling of nuclear reactors, engineers and technicians in thermal hydraulics, NPP operators, code developers, safety engineers and investigators, nuclear designers and vendors, Students and researchers in chemical and mechanical engineering
BIC CODES: THK, KNBN, KNXC
THEMA CLASSIFICATION: THEMATHK; THEMAKNB; THEMAKNX

A handbook presenting the procedures and applications of thermal hydraulics in water cooled nuclear reactors

A Volume in the *Woodhead Publishing Series in Energy Series*

KEY FEATURES

- Presents a comprehensive analysis on the connection between nuclear power and thermal hydraulics
- Includes end-of-chapter questions, quizzes and exercises to confirm understanding and provides solutions in an appendix
- Covers applicable nuclear reactor safety considerations and design technology throughout

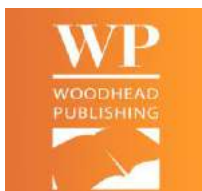
DESCRIPTION

Handbook on Thermal Hydraulics of Water-Cooled Nuclear Reactors, Volume 1, Foundations and Principles includes all new chapters which delve deeper into the topic, adding context and practical examples to help readers apply learnings to their own setting. Topics covered include experimental thermal-hydraulics and instrumentation, numerics, scaling and containment in thermal-hydraulics, as well as a title dedicated to good practices in verification and validation. This book will be a valuable reference for graduate and undergraduate students of nuclear or thermal engineering, as well as researchers in nuclear thermal-hydraulics and reactor technology, engineers working in simulation and modeling of nuclear reactors, and more.

In addition, nuclear operators, code developers and safety engineers will also benefit from the practical guidance provided.



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COVER IMAGE
FORTHCOMING

Handbook on Thermal Hydraulics in Water-Cooled Nuclear Reactors

Volume 3: Procedures and Applications

Edited by : **Francesco D'Auria**, Professor, University of Pisa, Italy; Founder and Head, University's San Piero a Grado Nuclear Research Group and **Yassin A. Hassan**, Professor and Department Head, Texas A&M University, USA

ISBN: 9780323856089

PUB DATE: Jun 28, 2024

LIST PRICE: £170.00 / \$220.00 / €195.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 558

AUDIENCE: Graduate and undergraduate students of nuclear or thermal engineering, researchers in nuclear thermal-hydraulics and reactor technology, engineers working in simulation and modeling of nuclear reactors, engineers and technicians in thermal hydraulics, NPP operators, code developers, safety engineers and investigators, nuclear designers and vendors, Students and researchers in chemical and mechanical engineering
BIC CODES: KNBN, THK
THEMA CLASSIFICATION: THEMAKNB; THEMATHK

A handbook presenting the procedures and applications of thermal hydraulics in water cooled nuclear reactors

A Volume in the *Woodhead Publishing Series in Energy Series*

KEY FEATURES

- Presents a comprehensive analysis on the connection between nuclear power and thermal hydraulics
- Includes end-of-chapter questions, quizzes and exercises to confirm understanding and provides solutions in an appendix
- Covers applicable nuclear reactor safety considerations and design technology throughout

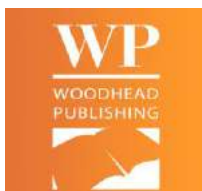
DESCRIPTION

Handbook on Thermal Hydraulics of Water-Cooled Nuclear Reactors, Volume 3, Procedures and Applications includes all new chapters which delve deeper into the topic, adding context and practical examples to help readers apply learnings to their own setting. Topics covered include experimental thermal-hydraulics and instrumentation, numerics, scaling and containment in thermal-hydraulics, as well as a title dedicated to good practices in verification and validation. This book will be a valuable reference for graduate and undergraduate students of nuclear or thermal engineering, as well as researchers in nuclear thermal-hydraulics and reactor technology, engineers working in simulation and modeling of nuclear reactors, and more.

In addition, nuclear operators, code developers and safety engineers will also benefit from the practical guidance provided.



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COVER IMAGE
FORTHCOMING

Handbook on Thermal Hydraulics in Water-Cooled Nuclear Reactors

Volume 2: Modelling

Edited by : **Francesco D'Auria**, Professor, University of Pisa, Italy; Founder and Head, University's San Piero a Grado Nuclear Research Group and **Yassin A. Hassan**, Professor and Department Head, Texas A&M University, USA

ISBN: 9780323856102
PUB DATE: Jun 28, 2024
LIST PRICE: £170.00 / \$220.00 / €195.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 558

AUDIENCE: Graduate and undergraduate students of nuclear or thermal engineering, researchers in nuclear thermal-hydraulics and reactor technology, engineers working in simulation and modeling of nuclear reactors, engineers and technicians in thermal hydraulics, NPP operators, code developers, safety engineers and investigators, nuclear designers and vendors, Students and researchers in chemical and mechanical engineering
BIC CODES: THK, KNXC, KNBN
THEMA CLASSIFICATION: THEMAKNX; THEMATHK; THEMAKNB

A handbook presenting the procedures and applications of thermal hydraulics in water cooled nuclear reactors

A Volume in the *Woodhead Publishing Series in Energy Series*

KEY FEATURES

- Presents a comprehensive analysis on the connection between nuclear power and thermal hydraulics
- Includes end-of-chapter questions, quizzes and exercises to confirm understanding and provides solutions in an appendix
- Covers applicable nuclear reactor safety considerations and design technology throughout

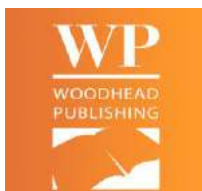
DESCRIPTION

Handbook on Thermal Hydraulics of Water-Cooled Nuclear Reactors, Volume 2, Modelling includes all new chapters which delve deeper into the topic, adding context and practical examples to help readers apply learnings to their own setting. Topics covered include experimental thermal-hydraulics and instrumentation, numerics, scaling and containment in thermal-hydraulics, as well as a title dedicated to good practices in verification and validation. This book will be a valuable reference for graduate and undergraduate students of nuclear or thermal engineering, as well as researchers in nuclear thermal-hydraulics and reactor technology, engineers working in simulation and modeling of nuclear reactors, and more.

In addition, nuclear operators, code developers and safety engineers will also benefit from the practical guidance provided.



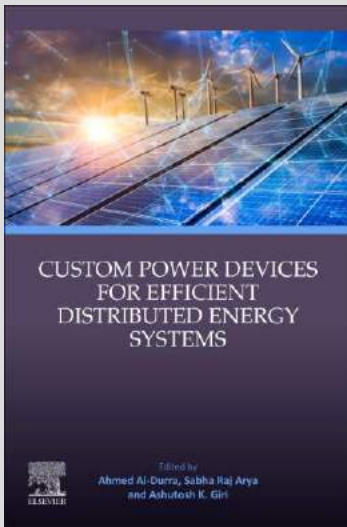
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Custom Power Devices for Efficient Distributed Energy Systems

Edited by : **Ahmed Al-Durra**, Professor, Electrical Engineering and Computer Science Department, Khalifa University, Abu Dhabi; **Sabha Raj Arya**, Associate Professor, Department of Electrical Engineering, Sardar Vallabhbhai National Institute of Technology, India and **Ashutosh K. Giri**, Assistant Professor, Electrical Engineering Department, Government Engineering College, India

ISBN: 9780443214912
PUB DATE: Jun 10, 2024
LIST PRICE: £130.00 / \$170.00 / €148.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 300

AUDIENCE: Academia: Advanced students, researchers, and faculty, with an interest in power generation systems, renewable energy, power systems engineering, and grid integration. Industry: Practicing engineers, R&D professionals, managers, and other industry personnel in the renewable energy sector

BIC CODES: TH, THRM, THX, KNB

THEMA CLASSIFICATION:

THEMATH; THEMATHR;
THEMATHY; THEMATHV;
THEMAKNB

A state-of-the-art, practical guide to custom power devices for efficient distributed energy systems, focusing on renewable energy sources

KEY FEATURES

- Covers established as well as advanced control algorithms for the operation of custom power devices
- Extensively explains circuit design and its testing for solar and wind-based energy conversion systems
- Includes simulation results and mathematical modeling of control algorithms
- Presents applications of converter topologies in solar, wind, hydro, and other power generation systems

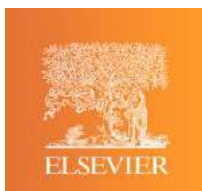
DESCRIPTION

Custom Power Devices for Efficient Distributed Energy Systems presents a range of novel ideas and concepts based on renewable energy-fed power generation and control, offering avenues to efficient utilization and improved power quality and addressing power quality issues such as harmonics compensation, supply current balancing, and neutral current compensation. The book begins by introducing distributed power systems within the global renewable energy context, reviewing different types of renewable energy sources and distributed power generation systems, and detailing custom power device design and modeling.

This is followed by individual chapters, providing in-depth coverage of specific techniques and applications with insights into various topologies, as well as control algorithms, used for power control in a range of distributed energy conversion systems, such as solar, wind, hydro, and other power sources. Finally, power quality issues in renewable energy distributed generation are discussed and addressed in detail. This is a valuable resource for researchers, faculty, and advanced students with an interest in power generation systems, renewable energy, and power systems engineering, as well as practicing engineers, R&D professionals, managers, and other industry personnel in the renewable energy sector.



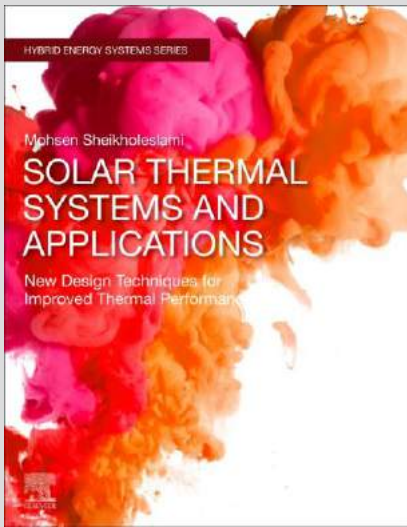
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Solar Thermal Systems and Applications

New Design Techniques for Improved Thermal Performance

Mohsen Sheikholeslami, Babol Noshirvani University of Technology, Babol, Iran

ISBN: 9780443158384
PUB DATE: Jun 03, 2024
LIST PRICE: £178.99 / \$220.00 / €204.99
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 544

AUDIENCE: Academic: Researchers, scientists, and advanced students in solar energy, thermal engineering, hybrid energy systems, renewable energy, mechanical engineering, nanotechnology, and materials science
Industry: Engineers, R&D professionals, and other industry personnel with an interest in solar thermal energy (STE), solar energy, hybrid energy systems, or renewable energy.

BIC CODES: THRM, TH, THX
THEMA CLASSIFICATION: THEMATHR; THEMATHY; THEMATH; THEMATHV



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A detailed guide to the state-of-the-art in solar thermal energy technology, with the latest techniques and applications

A Volume in the *Hybrid Energy Systems Series*

KEY FEATURES

- Introduces solar thermal energy (STE) and details the current state and future opportunities
- Reviews and analyzes the latest advances in solar thermal energy technology, design, methods, and applications
- Covers, in detail, the role of phase change materials and nanomaterials in STE systems

DESCRIPTION

Solar Thermal Systems and Applications: New Design Techniques for Improved Thermal Performance brings together the latest advances for the improved performance, efficiency, and integration of solar thermal energy (STE) technology.

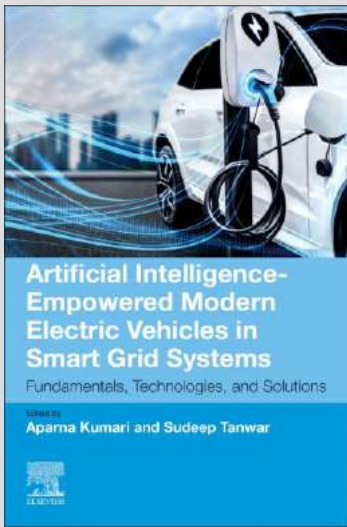
This book begins by introducing solar energy and solar thermal energy as a viable option in terms of green energy for industrial, commercial, and residential applications, as well as its role and potential within hybrid energy systems. This is followed by detailed chapters that focus on key innovations in solar thermal energy systems, covering novel approaches and techniques in areas such as flat plate solar collectors, modified evacuated tube solar collectors, solar parabolic trough collectors, linear Fresnel reflectors, photovoltaic thermal systems (PVT), phase change materials (PCMs), nanotechnology, combined PVT-PCM systems, solar thermal systems and Trombe wall design, solar still units, and solar dish systems. Throughout this book, the coverage is supported by experimental and numerical modeling methods, and techniques are discussed and assessed with a view to improved electrical and thermal efficiency and performance.

Solar Thermal Systems and Applications is a valuable resource for researchers and advanced students in solar energy, thermal engineering, hybrid energy systems, renewable energy, mechanical engineering, nanotechnology, and materials science. This is also of interest to engineers, R&D professionals, scientists, and policy makers with an interest in solar thermal energy in an industrial, residential, or commercial setting.

ENGINEERING Energy

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Artificial Intelligence-Empowered Modern Electric Vehicles in Smart Grid Systems

Fundamentals, Technologies, and Solutions

Edited by : **Aparna Kumari**, Assistant Professor, Dept. of Computer Science and Engineering, Institute of Technology, Nirma University, Ahmedabad, Gujarat, India and **Sudeep Tanwar**, Professor, Computer Science and Engineering Department, Institute of Technology, Nirma University, Ahmedabad, Gujarat, India

ISBN: 9780443238147
PUB DATE: Jun 01, 2024
LIST PRICE: £150.00 / \$185.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 518

AUDIENCE: Professionals, scientists, EV technologists, developers, designers and researchers in EV technologies, security, information technology, with a focus on EV charging, communication between EVs, Congestion management, Renewable energy sources, security, and privacy. Academics in these fields.

BIC CODES: THRM

THEMA CLASSIFICATION:

THEMATHR; THEMATHY

Provides fundamental knowledge and practical strategies in AI opportunities for graduate students, researchers, and engineers in energy system design

KEY FEATURES

- Supports fundamental understanding of artificial intelligence and its opportunities for energy system specialists
- Collects the real-world experiences of global experts
- Enables practical implementation of artificial intelligence strategies that support renewable energy integration across energy systems, markets, and grids

DESCRIPTION

Artificial Intelligence-Empowered Modern Electric Vehicles in Smart Grid Systems: Fundamentals, Technologies, and Solutions is an essential reference for energy researchers, graduate students, and engineers who aim to understand the opportunities offered by artificial intelligence for the integration of electric vehicles into smart grids. The book covers foundational knowledge, including the essentials of artificial intelligence and its applications for electric vehicles in a clear and holistic manner. Next, it breaks down two essential areas of application in more detail: energy management (from to energy harvesting to demand response and complex forecasting), and market strategies (including peer-to-peer, vehicle-to-vehicle, and vehicle-to-everything trading, plus cybersecurity implications).

A final part provides detailed case studies and close consideration of challenges, including code and data sets for replication of techniques. Providing a clear pathway from fundamentals to practical implementation, this book provides multidisciplinary guidance for implementing this cutting-edge technology in the energy systems of the future.



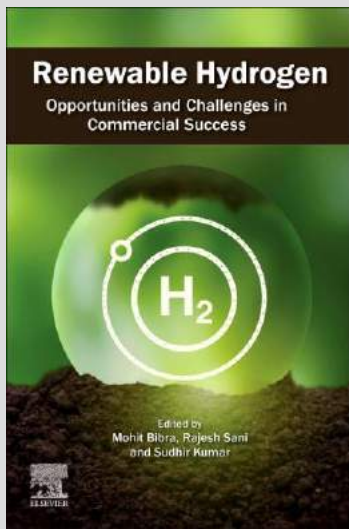
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Renewable Hydrogen

Opportunities and Challenges in Commercial Success

Edited by : **Mohit Bibra**, Senior Manufacturing Engineer, Zymergen Inc.; **Rajesh Sani**, Professor, Department of Chemical and Biological Engineering, South Dakota School of Mines and Technology, Rapid City, South Dakota, USA and **Sudhir Kumar**, Jaypee University of Information Technology, Waknaghat, Solan, Himachal Pradesh, India

ISBN: 9780323953795
PUB DATE: Jul 01, 2024
LIST PRICE: £138.00 / \$180.00 / €160.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 298
AUDIENCE: Students, researchers and engineers interested in hydrogen production, hydrogen storage, renewable energy and biochemistry
BIC CODES: THX
THEMA CLASSIFICATION: THEMATHV

Present applications and case studies in the commercialization of renewable hydrogen production and storage

KEY FEATURES

- Presents a comprehensive review of hydrogen production and scale-up perspective
- Provides a detailed compilation of commercial scale hydrogen storage, along with opportunities and challenges faced during economical production
- Highlights future trends and government policies that will impact the renewable hydrogen production

DESCRIPTION

Renewable Hydrogen: Opportunities and Challenges in Commercial Success presents fundamental principles and the latest research and technological advances in renewable hydrogen commercialization. With commercial scenarios and case studies, the book offers practical guidance for the scale-up of hydrogen production and storage. Beginning with an introduction to alternative energy resources, Part 1 presents a deep dive into the chemical, biochemical and electrochemical processes of hydrogen production. Part 2 discusses hydrogen storage and transportation, with Part 3 reviewing the applications of hydrogen in the automobile, space and chemical industries. Finally, Part 4 considers future perspectives, including challenges and techno economics.

This book is an essential read for those seeking to understand how to successfully apply hydrogen production and storage research to an industrial scale.



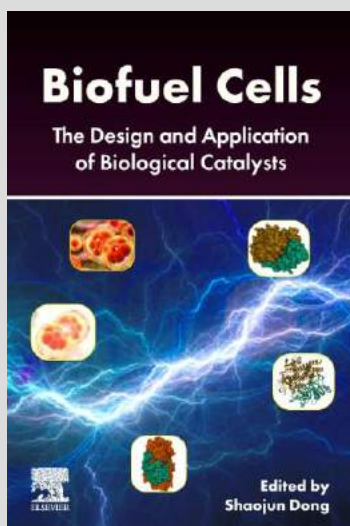
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Biofuel Cells

The Design and Application of Biological Catalysts

Edited by : **Shaojun Dong**, Professor, Changchun Institute of Applied Chemistry (CIAC), Chinese Academy of Sciences (CAS) & University of Science and Technology of China (USTC)

ISBN: 9780443138355
PUB DATE: Jul 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 400

AUDIENCE: Graduate students, researchers and scientists working in the fields of bioenergy, electrochemistry, and fuel cells, Professionals and engineers in R&D working in the fields of bioenergy, electrochemistry, and fuel cells, Graduate students, researchers, and scientists, professionals, and engineers in R&D involved in the manufacturing industry from medical to environmental, that use bio-electrochemical technology.

BIC CODES: KCN, RN

THEMA CLASSIFICATION:

THEMAKCVG; THEMATQ

A comprehensive guide to the design, construction, and operation of biofuel cells and related devices, and their practical applications

KEY FEATURES

- Explains the mechanism of enzymatic and microbial biocatalysts, electron transfer mechanisms, the bioengineering for biocatalyst in BFCs
- Explores the latest developments in biofuel cell technology, including printed biofuel cells, fiber biofuel cells, as well as other manufacture methods
- Reviews the versatile applications of biofuel cells, including as bio-hybrid systems, self-powered biosensors, and flexible bioelectronics

DESCRIPTION

Biofuel Cells: The Design and Application of Biological Catalysts presents a detailed examination of biofuel cells, from their fundamentals and basic principles through to the latest technological, materials, and bioengineering developments. Chapters 1 and 2 provide a detailed review of the fundamentals and basic principles of microbial and biofuel cells, including the electrochemistry, materials and mechanics, and applications. Chapter 3 provides an in-depth examination of catalyst evolution and chapter 4 explains all aspects of electron transfer in enzymatic biofuel cells. Chapter 5 reviews all types of hybrid biofuel cell, including fabrication and design strategies for thermoelectric and triboelectric energy devices.

In chapter 6, advanced manufacture techniques for biofuel cells and bio-devices are explained, including the working principles and methodologies for printing, microfluidics, fiber, microneedle, and others. Finally, chapter 7 explores the diverse applications of biofuel cells and bio-devices, from biosensors and bioelectronics to capacitive biofuel cells. Chapters are supported by computational tools, working manuals for the techniques discussed, and detailed schematics and flowcharts for BCF fabrication.



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COVER IMAGE
FORTHCOMING

Organic Rankine Cycle (ORC) Power Systems, 2e

Technologies and Applications

Edited by : **Ennio Macchi**, Politecnico di Milano, Italy and **Marco Astolfi**, Politecnico di Milano, Italy

ISBN: 9780443328121

PREVIOUS ISBN: 9780081005101

PUB DATE: Jul 01, 2025

LIST PRICE: £235.00 / \$292.99 /
€271.99

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 744

AUDIENCE: Academia: Students, researchers, and faculty with an interest in ORC technology, across energy systems, power engineering, renewable energy, and sustainability. Industry: R&D professionals, engineers, managers, and policy makers looking to understand the development, applications, and implications of ORC technology

BIC CODES: THX, TH, THRM, TGM, THRH

THEMA CLASSIFICATION:

THEMATHV; THEMATH;

THEMATHR; THEMATHY;

THEMATGM

A comprehensive guide to Organic Rankine Cycle (ORC) power systems, covering fundamentals, modelling, optimization, plant components, and applications

A Volume in the *Woodhead Publishing Series in Energy Series*

KEY FEATURES

- Offers thorough coverage of ORC power systems, modelling, optimization, and plant components
- Examines a range of sustainable applications, including geothermal, biomass, solar thermal, waste heat recovery, and more
- Fully revised and expanded to include market information and the latest technological developments

DESCRIPTION

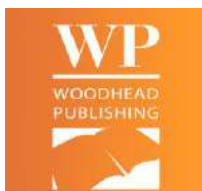
Organic Rankine Cycle (ORC) power systems are increasingly of interest for cost-effective sustainable energy generation, with applications such as cogeneration from biomass, electricity generation from geothermal reservoirs and concentrating solar power installations, waste heat recovery, internal combustion engines and medium- and low-temperature industrial processes. With thousands of ORC power systems already in operation and the market growing at a fast pace, this is an active and engaging area of scientific research and technical development.

Organic Rankine Cycle (ORC) Power Systems: Technologies and Applications, Second Edition, provides a complete overview of ORC technology, including fundamentals, numerical modelling, plant technology, and applications.

The book begins by introducing ORC power systems and their modelling, before a section focusing on ORC plant components, and finally in-depth chapters highlighting specific fields of application.



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ENGINEERING Electrical

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Plant Intelligent Automation and Digital Transformation

Volume II: Control and Monitoring Hardware and Software

Swapan Basu, Founder and Chief Executive, Systems and Controls, Kolkata, India

ISBN: 9780128244579
PUB DATE: Jul 01, 2024
LIST PRICE: £129.00 / \$165.00 / €145.00

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 247

AUDIENCE: Early career engineers dealing with plant automation, networking, system integration and digitization projects in the power, process or manufacturing industries, Plant managers, Researchers in electrical engineering, process engineering and mechanical engineering, instrumentation, and controls

BIC CODES: THRM

THEMA CLASSIFICATION: THEMATHY; THEMATHR

Reviews the key role of management Information systems (MIS), human machine interfaces, and alarm systems in servicing plant automation

KEY FEATURES

- Reviews supervisory control and data acquisitions (SCADA) systems for real-time plant data analysis
- Provides practitioner perspectives on operational implementation, including human machine interface, operator workstation and engineering workstations
- Covers alarm and alarm management systems, including lifecycle considerations
- Fully covers risk analysis and assessment, including safety lifecycle and relevant safety instrumentation

DESCRIPTION

Plant Intelligent Automation and Digital Transformation: Volume II: Control and Monitoring Hardware and Software is an expansive four volume collection that reviews every major aspect of the intelligent automation and digital transformation of power, process and manufacturing plants, including specific control and automation systems pertinent to various power process plants using manufacturing and factory automation systems. The book reviews the key role of management Information systems (MIS), HMI and alarm systems in plant automation in systemic digitalization, covering hardware and software implementations for embedded microcontrollers, FPGA and operator and engineering stations.

Chapters address plant lifecycle considerations, inclusive of plant hazards and risk analysis. Finally, the book discusses industry 4.0 factory automation as a component of digitalization strategies as well as digital transformation of power plants, process plants and manufacturing industries.



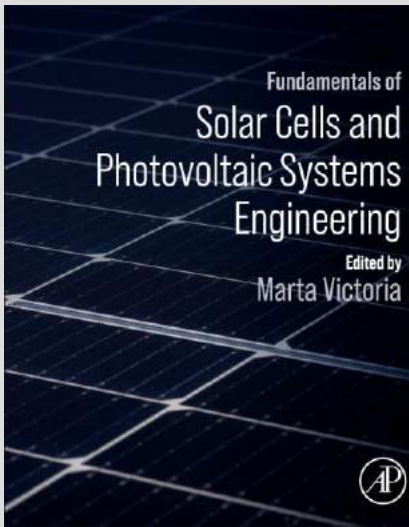
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Fundamentals of Solar Cells and Photovoltaic Systems Engineering

Edited by : **Marta Victoria**, Ph.D., Department of Mechanical and Production Engineering, Aarhus University, Denmark

ISBN: 9780323961059

PUB DATE: Sep 01, 2024

LIST PRICE: £76.95 / \$99.95 / €86.95

DISCOUNT: Textbook

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 372

AUDIENCE: Upper level undergraduate and first year graduate students primarily in mechanical and electrical engineering programs – US enrollment is 2,000 students per year (source: Navstem) with average course enrollment of 25 students

BIC CODES: THR, TGB, THX

THEMA CLASSIFICATION:

THEMATHR; THEMATGB;

THEMATHV

Covers everything you need to know to understand solar photovoltaic technology, from the solar cell to the power plant

KEY FEATURES

- Consists of 15 chapters, including basic theory, along with problems to solve and a solutions manual
- Provides a basic understanding of topics such as semiconductor fundamentals, the pn junction, and the working principle of solar cells for students without previous experience
- Covers the design and operation principles of rooftop installations and large-scale solar power plants
- Presents the IV curve and efficiency attained by solar cells, photovoltaic modules, and systems, how they are impacted by solar radiation and temperature, and how they can be measured

DESCRIPTION

Fundamentals of Solar Cells and Photovoltaic Systems Engineering presents all the major topics relevant to understanding photovoltaic technology, including the working principles of solar cells, modeling and measuring solar radiation, manufacturing processes for solar cells and photovoltaic modules, the design and operation of rooftop installations and large-scale power plants, the economics of such systems, and the role of photovoltaic solar energy in the ongoing energy transition. This book is intended for use as a textbook on photovoltaic solar energy for upper-level undergraduate/graduate engineering students.



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COVER IMAGE
FORTHCOMING

Advances in Marine Biology, Vol 97

Charles Sheppard, The University of Sydney, Australia

ISBN: 9780443297465

PUB DATE: Sep 01, 2024

LIST PRICE: £139.00 / \$173.99 /
€160.99

DISCOUNT: Serial

FORMAT: Hardback

TRIM: 6.00w x 9.00h

PAGES: c. 296

AUDIENCE: Postgraduates and
researchers in marine biology,
fisheries science, ecology, zoology,
oceanography

BIC CODES: PSB, PHVN, PSG, PSD

THEMA CLASSIFICATION:

THEMAPHVN; THEMAPSB;

THEMAPSD; THEMAPSG

Edited by some of the best scientists in the field, this series presents the latest updates in the field of marine biology

A Volume in the *Advances in Marine Biology* Series

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in the *Advances in Marine Biology* series

DESCRIPTION

Advances in Marine Biology, Volume 97, the latest release in this serial that highlights new advances in the field, including comprehensive chapters written by an international board of authors.



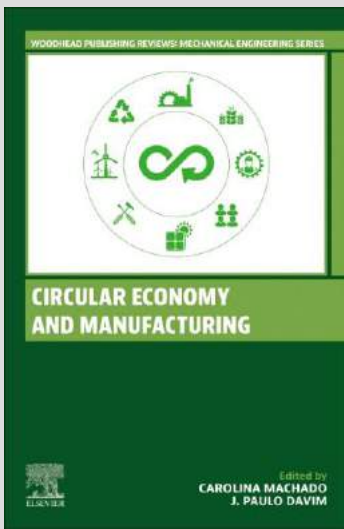
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SERIALS Earth & Environment

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Circular Economy and Manufacturing

Edited by : **Carolina Machado**, Associate Professor, Department of Management, School of Economics and Management, University of Minho, Braga, Portugal and **J. Paulo Davim**, Department of Mechanical Engineering, University of Aveiro, Aveiro, Portugal

ISBN: 9780443140280
PUB DATE: Jul 01, 2024
LIST PRICE: £155.00 / \$193.99 / €179.99
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 279

AUDIENCE: Researchers and students (postgraduate and undergraduate) in the fields of advanced manufacturing, mechanical engineering, industrial engineering, environmental engineering and management, sustainability, business/economics and resource management, clean tech engineering, Mid- and senior-level managers, policy makers, investors, entrepreneurs, business consultants, and all CE practitioners and technicians
BIC CODES: TDP, TQ, KCG, KN, KND, KJT, TH, KJMV5, TVF, TTV, RN
THEMA CLASSIFICATION: THEMATD; THEMATQ; THEMAKCM; THEMAKND; THEMAKN; THEMAKJT; THEMAKJMV5; THEMATVF

Explores the latest developments in circular economy and their impact on manufacturing from an interdisciplinary perspective

A Volume in the *Woodhead Publishing Reviews: Mechanical Engineering Series*

KEY FEATURES

- Helps readers easily identify state-of-the-art advances in the circular economy as applied to the manufacturing industry
- Adopts an interdisciplinary perspective, offering insights into both engineering and management components of the whole circular economy approach
- Includes contributions from an internal group of experts
- Presents methodologies and showcases their application through case studies

DESCRIPTION

Circular Economy and Manufacturing presents a roadmap of optimized, flexible, efficient, effective, and competitive green production strategies for the manufacturing industry and its multiple stakeholders. The volume is meant to be an excellent springboard for further discussion and research into new frameworks of best practices in view of achieving more socially responsible and sustainable organizations in a not-so-distant future.

Circular economy can serve as a key building block for the sustainability targets of manufacturing companies. Although the term itself has long been established, we see that proper implementation of a circular economy model across entire manufacturing value chains is still lacking and remains a challenge for companies. However, there are clearly visible and good examples of circular economy standards which have already been applied and are generating value among multiple layers.



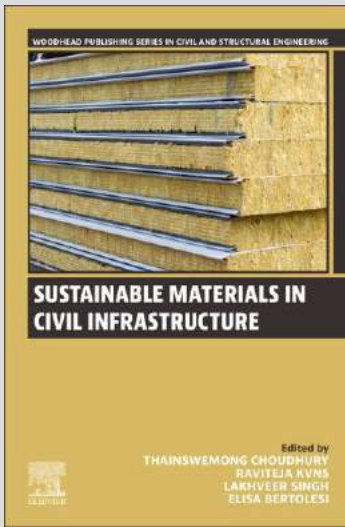
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ENGINEERING Mechanical

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Sustainable Materials in Civil Infrastructure

Edited by : **Thainswemong Choudhury**, Assistant Professor, Department of Civil Engineering, SRM University AP; **Raviteja KVNS**, Assistant Professor, Department of Civil Engineering, SRM University AP; **Lakhveer Singh**, Assistant Professor, Department of Environmental Science, SRM University AP and **Elisa Bertolesi**, Assistant Professor, Department of Civil and Environmental Engineering, Brunel University London

ISBN: 9780443161421
PUB DATE: Jul 01, 2024
LIST PRICE: £180.00 / \$235.00 / €205.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 381

AUDIENCE: Academic and industrial researchers, materials scientists, civil and structural engineers, architects, and construction professionals working in the fields of civil engineering, materials science, chemical engineering, and construction materials. Postgraduate students in above disciplines
BIC CODES: TGM, TN
THEMA CLASSIFICATION: THEMATGM; THEMATN

Provides the latest technological updates on eco-materials and their potential applications in finding solutions for resilient and sustainable infrastructure

A Volume in the *Woodhead Publishing Series in Civil and Structural Engineering Series*

KEY FEATURES

- Includes the latest design methodologies using machine learning and artificial intelligence
- Covers bio-geotechnics, landfill, and waste-to-energy techniques
- Focuses on new trends concerning eco-efficient concrete

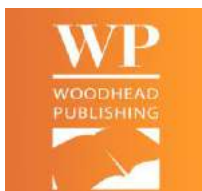
DESCRIPTION

Sustainable Materials in Civil Infrastructure covers the latest breakthroughs in innovative eco-materials and poses solutions for resilient and sustainable infrastructure. The book provides valuable insights into innovative research studies on eco-materials used for construction applications, which will provide researchers with a useful reference guide on recycled steel, low-carbon concrete, bio-concrete, self-healing concrete, and industrial by-products such as fly ash, natural geosynthetic fibers, and shape memory alloys for infrastructure development.

Chapters cover design applications of bio-concrete and the use of eco-materials in landfill liners and masonry. The book clearly identifies the issues that remain as obstacles for the large-scale use of green concrete and bio-concrete and provides practical solutions to overcome them. Users will find this to be a knowledge base for the development of sustainable design methodologies that are widely accepted among various environmental monitoring/controlling bodies throughout the world.



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ENGINEERING Civil

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Mechanical Alloying of Ferrous and Non-Ferrous Alloys

Processing, Properties, and Applications



Edited by
Shashanka Rajendrachari

Mechanical Alloying of Ferrous and Non-Ferrous Alloys

Processing, Properties, and Applications

Edited by : **Shashanka Rajendrachari**, Assistant Professor, Department of Metallurgical and Materials Engineering, Bartin University, Bartin, Turkey

ISBN: 9780443161513
PUB DATE: Jul 01, 2024
LIST PRICE: £200.00 / \$260.00 /
€230.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 350

AUDIENCE: Researchers, upper level engineering students, professional engineers, and powder metallurgy companies

BIC CODES: TDM

THEMA CLASSIFICATION:

THEMATDPM

Provides an in-depth exploration of ferrous and non-ferrous alloys, including various methods of preparation and production, mechanical properties, and applications

KEY FEATURES

- Outlines the different types of mechanical alloying used to prepare powders, their mechanisms, factors affecting the process, and more
- Covers the manufacturing, characteristics, and applications of high entropy alloys, ODS stainless steel, shape memory alloys, magnesium, ceramic-based alloys, and more
- Compares preparation of ferrous and non-ferrous alloys, their microstructures, and properties
- Discusses the advantages and disadvantages of wet and dry milling

DESCRIPTION

Mechanical Alloying of Ferrous and Non-Ferrous Alloys: Processing, Applications, and Properties provides an in-depth exploration of ferrous and non-ferrous alloys, including various methods of preparation and production, their mechanical properties, and applications. The advantages of the mechanical alloying processing approach over other traditional powder metallurgical techniques is explained as are the alloys that are best suited for this technique. Preparation steps, microstructures, properties, and applications for ferrous and non-ferrous alloys are compared, with insights on which alloys are best suited for preparation by alloying.

The advantages and disadvantages of wet and dry milling are outlined. Processing, properties, and applications of high entropy alloys, ODS stainless steel, shape memory alloys, cermets, iron, copper, zinc, tungsten, aluminum, titanium, magnesium, and ceramic-based alloys are also covered, as are different powder preparation techniques and sintering methods.



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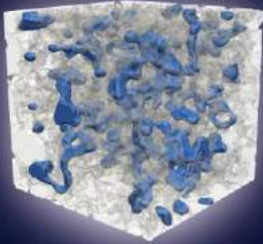


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Interfacial Science for Geosystems Engineers



Kishore K. Mohanty, William R. Rossen,
and Chun Huh

Interfacial Science for Geosystems Engineers

Kishore K. Mohanty, Professor, W.A. (Monty) Moncrief Centennial Endowed Chair, Hildebrand Department of Petroleum & Geosystems Engineering, University of Texas at Austin, Austin, Texas, USA; **William R. Rossen**, Professor Emeritus of Reservoir Engineering, Department of Geoscience and Engineering, Delft University of Technology, Delft, The Netherlands and **Chun Huh**, Research Professor, Hildebrand Department of Petroleum and Geosystems Engineering, University of Texas at Austin, Austin, Texas, USA

ISBN: 9780443215063
PUB DATE: Jul 01, 2024
LIST PRICE: £155.00 / \$200.00 /
€175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 446

AUDIENCE: Graduate students in petroleum engineering, geosciences, energy engineering and related disciplines. As training material for engineers and geoscientists working in subsurface storage of CO₂ and H₂, recovery of hydrocarbons and geothermal energy, conventional and unconventional oil production, and enhanced oil recovery using carbon dioxide injection, Researchers working in CO₂ and H₂ storage

BIC CODES: TH, THX, TGM, THRH, THF

THEMA CLASSIFICATION:

THEMATH; THEMATHV;
THEMATGM; THEMATHF

Links traditional geosystems engineering with technical advances in underground CO₂ sequestration and hydrogen storage

KEY FEATURES

- Describes fundamentals and recent advances in interface and nanoparticle/colloid dispersion science
- Offers critical analysis of the latest research and developments relevant to extracting low-carbon and other energy materials from, and store CO₂ and H₂ in, subsurface formations
- Helps guide geosystems (especially energy) engineers on how to solve the problems they encounter in the rapidly evolving Energy Transition

DESCRIPTION

Interfacial Science for Geosystems Engineers provides geoscientists the connections between the nano-scale physico-chemical interactions between fluids and minerals and the core/field-scale observations to manage energy extraction, water resources and subsurface storage, timely topics central to the energy transition.

Packed with latest research and recent developments, chapter learning objectives, and illustrative diagrams, tables and charts throughout, this specialized volume will help geosystems engineers tackle the above challenges, by systematically going through the basics of surface and interfacial tension, capillarity, surfactants, surface free energy, adsorption, electrokinetics, colloidal stability, equilibrium and stability of thin liquid films, wettability, microemulsions, emulsions and foams, and polymers for subsurface applications.

Useful as a teaching, training or reference text, *Interfacial Science for Geosystems Engineers* prepares today's subsurface scientists and engineers to tackle two pressing problems in the energy transition, by introducing recent developments on how to remove CO₂ from our environment and how to wean ourselves off fossil energy while meeting growing energy demands.



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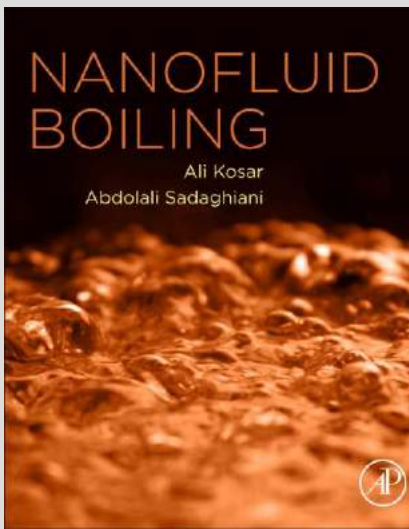
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ENGINEERING Petroleum

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Nanofluid Boiling

Ali Sadaghiani, Assistant Professor, Faculty of Engineering and Natural Sciences, Sabanci University, Istanbul, Turkey; **Arzu Ozbey**; **Mehrdad Karimzadehkhoei**, Research Assistant Professor at Koç University, Faculty of Engineering. and **Ali Koşar**, Professor of Mechatronics, Sabanci University Nanotechnology Research and Application Center, Center of Excellence for Functional Surfaces and Interfaces for Nano Diagnostics, Turkey

ISBN: 9780128169230
PUB DATE: Jun 28, 2024
LIST PRICE: £129.00 / \$165.00 / €145.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 246

AUDIENCE: Thermal fluid and heat transfer engineers working in industries such as refrigeration, power generation, heat exchangers and power electronics cooling looking for new techniques and technologies for performance enhancement, graduate level students and researchers in thermal engineering working on boiling heat transfer and applications of nanofluids

BIC CODES: PHH, RGC

THEMA CLASSIFICATION:

THEMAPHH; THEMARGC

Guides thermal fluid and heat transfer engineers in the research, design and development of systems involving nanofluids

KEY FEATURES

- Reveals insights into the findings and mechanisms of boiling heat transfer in nanofluids, guiding researchers and engineers in their research and design efforts
- Focuses on parametric effects such as nanofluid properties (size, concentration, nanoparticle type), preparation methods on heat transfer and critical heat flux mechanisms, bubble dynamics, flow patterns, and pressure drop
- Presents readers with scaling effects (from macro to microscale) relevant to nanofluid boiling

DESCRIPTION

Nanofluid Boiling presents valuable insights into boiling heat transfer mechanisms, offering state-of-the-art techniques for overcoming obstacles against nanofluid applications. In addition, the book points out emerging industrial applications and guides researchers and engineers in their research and design efforts. In addition, recommendations on future research directions and the design of systems involving nanofluids are presented at the end of each chapter. The book's authors comprehensively cover mechanisms, parametric effects and enhancement techniques in the boiling of nanofluids, providing updated, detailed information about recent developments and findings.



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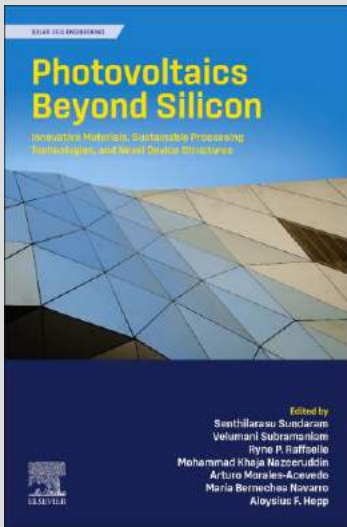
ENGINEERING Mechanical

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Photovoltaics Beyond Silicon

Innovative Materials, Sustainable Processing Technologies, and Novel Device Structures



Edited by : **Senthilarasu Sundaram**, Associate Professor, School of Computing, Engineering and Digital Technologies, Teesside University, Middlesbrough, UK; **Velumani Subramaniam**, Professor, Mexican Government Research Center, CINVESTAV, Mexico City and Visiting Research Fellow, Texas A&M University, College Station, TX, USA; **Ryne P. Raffaele**, Vice President for Research and Associate Provost for Research, Rochester Institute of Technology, Rochester, NY, USA; **Mohammad Khaja Nazeeruddin**, Full Professor of Chemistry, EPFL Valais Wallis, Sion, Switzerland; **Arturo Morales-Acevedo**, Full Professor of Electrical Engineering, CINVESTAV – IPN, Mexico City, Mexico; **María Bernechea Navarro**, Senior Researcher, ARAID Foundation, Instituto de Nanociencia y Materiales de Aragón (INMA), CSIC-Universidad de Zaragoza, Spain and **Aloysius F. Hepp**, Chief Technologist,

ISBN: 9780323901888
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LIST PRICE: £214.99 / \$265.00 / €250.99
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 511
AUDIENCE: Materials Scientists and Engineers in R&D and academia working in the field of energy conversion, materials processing, as well as environmental considerations, Undergraduate and Postgraduate courses related to Material Science applications
BIC CODES: THX, TJ, TGM
THEMA CLASSIFICATION: THEMATGM; THEMATJF; THEMATHV

Addresses the latest innovations in materials, processing and devices to produce electricity via advanced, sustainable photovoltaics technologies

A Volume in the *Solar Cell Engineering Series*

KEY FEATURES

- Presents a comprehensive overview and detailed discussion of solar energy technology options for sustainable energy conversion
- Provides an understanding of the environmental challenges to be overcome and discusses the importance of efficient materials utilization for clean energy
- Looks at how to design materials processing and optimize device fabrication, including metrics such as power-to-weight ratio, effectiveness at EOL compared to BOL, life-cycle analysis

DESCRIPTION

Photovoltaics Beyond Silicon: Innovative Materials, Sustainable Processing Technologies, and Novel Device Structures presents the latest innovations in materials, processing and devices to produce electricity via advanced, sustainable photovoltaics technologies. The book provides an overview of the novel materials and device architectures that have been developed to optimize energy conversion efficiencies and minimize environmental impacts. Advances in technologies for harnessing solar energy are extensively discussed, with topics including materials processing, device fabrication, sustainability of materials and manufacturing, and the current state-of-the-art. Contributions from leading international experts discuss the applications, challenges and future prospects of research in this increasingly vital field, providing a valuable resource for students and researchers working in this area.



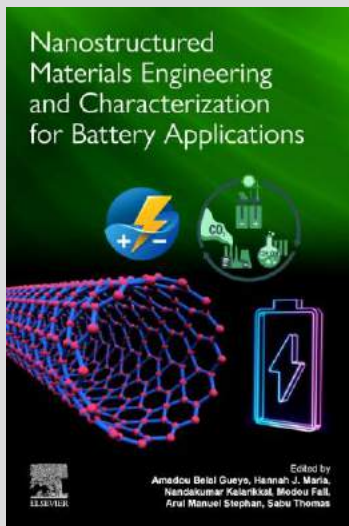
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ENGINEERING Materials

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Nanostructured Materials Engineering and Characterization for Battery Applications

Edited by : **Amadou Belal Gueye**, Research Scholar, School of Chemical Sciences, Mahatma Gandhi University, Kottayam, India; **Hanna J. Maria**, Senior Researcher, International and Inter University Centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, India; **Nandakumar Kalarikkal**, Director, International and Inter University Centre for Nanoscience and Nanotechnology, and Director and Chair, School of Pure and Applied Physics, Mahatma Gandhi University, Kottayam, Kerala, India; **Modou Fall**, Secretary General of the Senegalese Committee for Chemistry, Full Professor in the Department of Chemistry, Sciences and technologies Faculty, Cheikh Anta DIOP University of Dakar, Senegal; **Arul Manuel Stephan**, Senior Principal Scientist of Central Electrochemical Research Institute (CSIR- CECRI), Karaikudi, India

ISBN: 9780323913041
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LIST PRICE: £215.00 / \$275.00 / €240.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 619
AUDIENCE: Materials scientists, engineers in academia and R&D, mechanical and chemical engineers
BIC CODES: TGM
THEMA CLASSIFICATION: THEMATGM

An in-depth study of the current state of energy storage technology

KEY FEATURES

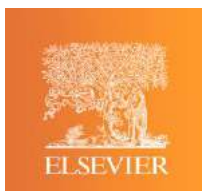
- Presents practical consideration for battery usage such as LCA, recycling and green batteries
- Covers battery characterization techniques including electrochemical methods, microscopy, spectroscopy and X-ray methods
- Explores battery models and computational materials design theories

DESCRIPTION

Nanostructured Materials Engineering and Characterization for Battery Applications is designed to help solve fundamental and applied problems in the field of energy storage. Broken up into four separate sections, the book begins with a discussion of the fundamental electrochemical concepts in the field of energy storage. Other sections look at battery materials engineering such as cathodes, electrolytes, separators and anodes and review various battery characterization methods and their applications. The book concludes with a review of the practical considerations and applications of batteries. This will be a valuable reference source for university professors, researchers, undergraduate and postgraduate students, as well as scientists working primarily in the field of materials science, applied chemistry, applied physics and nanotechnology.



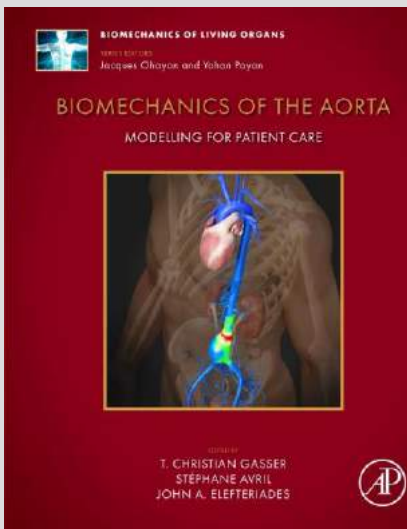
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ENGINEERING Materials

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Biomechanics of the Aorta

Modelling for Patient Care

Edited by : **T. Christian Gasser**, Professor, KTH Solid Mechanics, Stockholm, Sweden;
Stéphane Avril, Full Professor, Institut Mines Telecom affiliated, Mines Saint-Etienne, France;
John A. Elefteriades, MD, William W.L. Glenn Professor of Surgery and Director, Aortic Institute at Yale-New Haven, Yale University School of Medicine, New Haven Connecticut, USA

ISBN: 9780323954846
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LIST PRICE: £165.00 / \$200.00 / €190.00

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 7.50w x 9.25h

PAGES: c. 418

AUDIENCE: Graduate students, post-docs, and professionals in biomedical and biomechanical engineering; as well as biomedical and clinical researchers; all who need to: - understand fundamental properties of the aorta, -conduct experimental procedures, -perform animal experiments, -design and test clinical devices, and -develop biomechanical finite element computations of the aorta

BIC CODES: PSA

THEMA CLASSIFICATION:
THEMAPS

A comprehensive overview of the state-of-the-art in aortic modeling, along with a holistic understanding of the biomechanical problem at hand

A Volume in the *Biomechanics of Living Organs* Series

KEY FEATURES

- Represents a comprehensive means for those involved in the aortic research and the related developments in the industry
- Introduces the most recent imaging technologies to characterize factors, such as aortic geometry, mechanical properties of the aortic tissue, and the local cellular activity in the vessel wall
- Synthesizes advances in vascular biomechanics, medical imaging and computational finite element fluid and solid models to increase understanding of aorta function

DESCRIPTION

Biomechanics of the Aorta: Modelling for Patient Care is a holistic analysis of the aorta towards its biomechanical description. The book addresses topics such as physiology, clinical imaging, tissue and blood flow modeling, along with knowledge that is needed in diagnostics, aortic rupture prediction, assist surgical planning, and more. It encompasses a wide range of topics from the basic sciences (Vascular biology, Continuum mechanics, Image analysis) to clinical applications, as well as describing and presenting computational studies and experimental benches to mimic, understand and propose the best treatment of aortic pathologies.

The book begins with an introduction to the fundamental aspects of the anatomy, biology and physiopathology of the aorta and proceeds to present the main computational fluid dynamic studies and biomechanical and mechanobiological models developed over the last decade. With approaches, methodologies and findings from contributors all over the world, this new volume in the *Biomechanics of Living Organs* series will increase understanding of aortic function as well as improve the design of medical devices and clinical interventions, including surgical procedures.



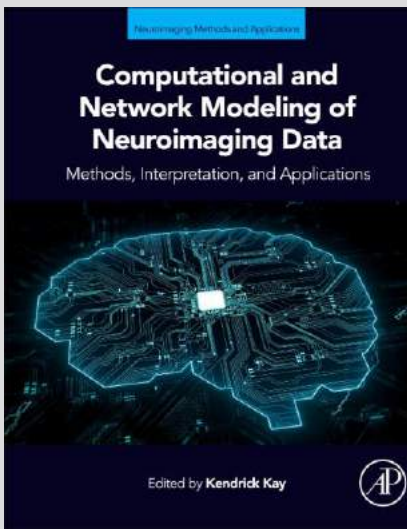
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ENGINEERING Biomedical

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Computational and Network Modeling of Neuroimaging Data

Edited by : **Kendrick Kay**, Assistant Professor , Center for Magnetic Resonance Research, University of Minnesota, Minneapolis, MN, USA

ISBN: 9780443134807

PUB DATE: Jun 28, 2024

LIST PRICE: £95.95 / \$125.00 /

€109.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 256

AUDIENCE: Biomedical engineers, computer scientists, physicists, mathematicians, psychologists, neuroscientists and computational neuroscientists

BIC CODES: MQW, MMP, PD, PSAN, MJN

THEMA CLASSIFICATION:

THEMATCB; THEMAMQW;

THEMAMKS; THEMAMKJ;

THEMAPDM; THEMAPSAN

Gives a foundation for computational and network modeling of neuroimaging data

A Volume in the *Neuroimaging Methods and Applications Series*

KEY FEATURES

- Provides an authoritative and comprehensive overview of major modeling approaches to neuroimaging data
- Written by experts, the book's chapters use a common structure to introduce, motivate, and describe a specific modeling approach used in neuroimaging
- Gives insights into the similarities and differences across different modeling approaches
- Analyses details of outstanding research challenges in the field

DESCRIPTION

Computational and Network Modeling of Neuroimaging Data provides an authoritative and comprehensive overview of the many diverse modeling approaches that have been fruitfully applied to neuroimaging data. As neuroimaging is witnessing a massive increase in the quality and quantity of data being acquired, this book gives an accessible foundation to the field of computational neuroimaging, suitable for graduate students, academic researchers, and industry practitioners who are interested in adopting or applying model-based approaches in neuroimaging.

It is widely recognized that effective interpretation and extraction of information from complex data requires quantitative modeling. However, modeling the brain comes in many diverse forms, with different research communities tackling different brain systems, different spatial and temporal scales, and different aspects of brain structure and function. This book takes a critical step towards synthesizing and integrating across different modeling approaches.



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ENGINEERING Biomedical

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Human Organs-on-a-Chip Technology

Edited by : **P.V. Mohanan**, PhD, Scientist-G and Head, Toxicology Division, Biomedical Technology Wing, Sree Chitra Tirunal Institute for Medical Sciences and Technology (SCTIMST), Govt. of India, India

ISBN: 9780443137822
PUB DATE: Jun 28, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 465
AUDIENCE: Graduate students, researcher, and professionals in biomedical engineering
BIC CODES: MQW
THEMA CLASSIFICATION: THEMATCB; THEMAMQW

Presents advanced research and methodologies in organ-on-a-chip and human organs-on-a-chip technologies

KEY FEATURES

- Explores organs-on-a-chip technology, from the basics, to advanced developments and existing challenges and recent research trends and applications
- Reviews every aspect of microfluidic devices, including biological evaluation and targeted delivery
- Includes the latest information on regulatory updates

DESCRIPTION

Human Organs-on-a-Chip Technology focuses on technology advancement from “organ-on-a-chip”, “multi organs-on-a-chip”, and the newest stage of “human organs-on-a-chip.” Chapters investigate the design, simulation studies, device development, and application of microfluidic systems. In addition, they offer expert perspectives on the development of an alternative test system in the biological evaluation of drugs, cosmetics, chemicals, medical devices, and many others. Lastly, the book addresses issues related to the development of microfluidic devices and alternative test systems in biological and biomedical research.



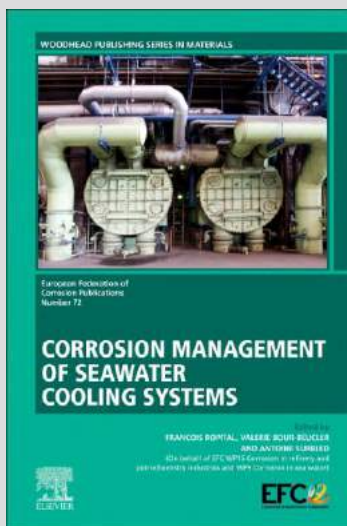
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Corrosion Management of Seawater Cooling Systems, Vol 72

Francois Ropital, IFP Energies nouvelles, Electrochemistry and Materials, Solaize, France;
Valerie Bour Beucler, Senior Industry Technical Consultant, and Associate Professor at the IFP School (ENEP Poly), Chairman of the CEFACOR "corrosion inhibitors" working party. and
Antoine Surbled, AMPP member, French Corrosion Society (CEFACOR) member, Consultant in materials and corrosion sciences and technology,

ISBN: 9780443152351
PUB DATE: Jun 28, 2024
LIST PRICE: £150.00 / \$187.99 / €173.99
DISCOUNT: Reference
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 325

AUDIENCE: Academics, technicians, and engineers who are interested in the corrosion management of sea water cooling systems, Those in industries concerning energy use (gas and oil), geothermic and desalination plant and off-shore marine installations, wind-generators, and sea water heat pumps, Postgraduate students in materials science and engineering studying corrosion management in seawater cooling systems in ship building, offshore and gas platforms

BIC CODES: TGM
THEMA CLASSIFICATION: THEMATGM

Provides guidelines for the corrosion management of seawater heat exchangers

A Volume in the *European Federation of Corrosion (EFC) Series Series*

KEY FEATURES

- Covers key technological developments in corrosion management of seawater cooling systems
- Includes coverage of seawater heat exchangers<
- Provides information on many different forms of corrosion
- Presents tactics for the selection of materials, corrosion protections (inhibitors, coatings, cathodic protection)
- Discusses maintenance, control, monitoring and inspection

DESCRIPTION

Corrosion Management of Seawater Cooling Systems, Volume 71 provides an overview on main seawater heat exchanger systems, different forms of corrosion, biocide treatments, corrosion, scale inhibitors, materials used, coatings and cathodic protection, maintenance, and monitoring and control. The book will be a valuable reference resource for academics, technicians and engineers who are interested in the corrosion management of seawater cooling systems. The evolution of practices in terms of sustainability, materials choice, treatment selection and changes to regulations have demonstrated the need to establish this new guide on recommended best practices that support corrosion management and the development of seawater heat exchangers.

Seawater is considered an attractive resource for utilities in many industries such as power plants, refineries and chemical plants. Seawater cooling systems are used in heat exchangers, in once-through cooling water systems, and for recirculating cooling water systems. The metallurgy and materials used in these facilities need to be compatible with seawater and allow good corrosion control. As seawater composition and suspended solids can cause corrosion, scaling, fouling, microbiological growth and macrofouling problems, this book is a necessary addition to the conversation.



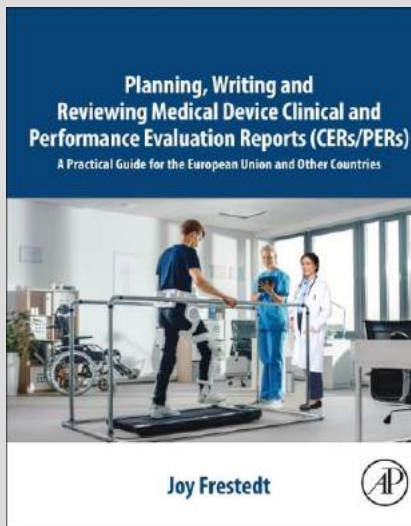
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Planning, Writing and Reviewing Medical Device Clinical and Performance Evaluation Reports (CERs/PERs)

A Practical Guide for the European Union and Other Countries

Joy Frestedt, PhD, President and CEO, Frestedt Incorporated, St. Louis Park, MN, USA

ISBN: 9780443220630
PUB DATE: Jun 28, 2024
LIST PRICE: £121.00 / \$150.00 / €142.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 418

AUDIENCE: Professionals in the clinical engineering and medical device evaluation sector, researchers in clinical engineering, biomedical engineering, and medical device design and development

BIC CODES: MBGR1, MMG, MBF, MQW

THEMA CLASSIFICATION:

THEMAMKG; THEMAMBGR;

THEMAPSAX; THEMATCB;

THEMAMQW

Comprehensive guide to writing clinical evaluation reports of medical devices, in compliance with the new European Union Medical Device Regulations

KEY FEATURES

- Identifies and explains data analysis for clinical evaluation of medical devices
- Teaches readers how to understand and evaluate medical device performance and safety in the context of new regulations
- Provides analysis of new clinical evaluation criteria in the context of medical device design as well as in-hospital deployment and servicing

DESCRIPTION

A Practical Guide to Planning, Writing, and Reviewing Medical Device Clinical Evaluation Reports guides readers through clinical data evaluation of medical devices that is in compliance with the EU MDR requirements and other similar regulatory requirements throughout the world. This book brings together knowledge learned as the author constructed hundreds of CERs and taught thousands of learners on how to conduct clinical data evaluations. This book will support training for clinical engineers, clinical evaluation scientists, and experts reviewing medical device CERs, and will help individual writers, teams and companies to develop stronger, more robust CERs.



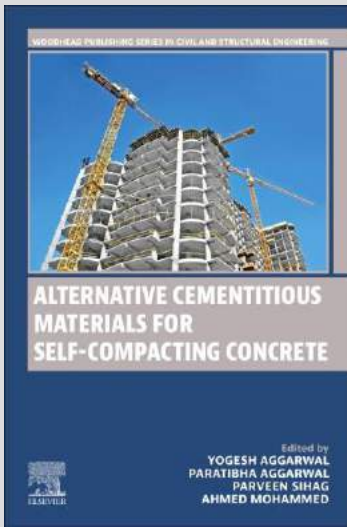
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ENGINEERING Biomedical

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Alternative Cementitious Materials for Self-Compacting Concrete

Edited by : **Yogesh Aggarwal**, Civil Engineering Department, National Institute of Technology, Haryana, India; **Paratibha Aggarwal**, Civil Engineering Department, National Institute of Technology, Haryana, India; **Parveen Sihag**, Civil Engineering Department, Shoolini University, Solan, India and **Ahmed Mohammed**, Civil Engineering Department, University of Sulaimani, Kurdistan, Iraq

ISBN: 9780323951395
PUB DATE: Jun 21, 2024
LIST PRICE: £175.00 / \$230.00 / €200.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 363

AUDIENCE: Materials scientists, civil and structural engineers working in construction materials and self-compacting concrete, cement production industry, environmental scientists, and non-hazard waste industries, Masters and post-doctorate students in construction materials and civil engineering.

BIC CODES: TGM, TN
THEMA CLASSIFICATION: THEMATGM; THEMATN

Provides comprehensive information on the use of waste materials and by-products in self-compacting concrete

A Volume in the *Woodhead Publishing Series in Civil and Structural Engineering Series*

KEY FEATURES

- Includes detailed information on modeling and computational techniques for estimating SCC properties
- Provides comprehensive information on the use of waste materials and by-products in self-compacting concrete
- Covers comprehensive information on the different properties of SCC

DESCRIPTION

Alternative Cementitious Materials for Self-Compacting Concrete provides a detailed review on the various properties of self-compacting concrete (SCC) and how they are affected by the use, of by-products and waste materials in concrete production. The book provides a fair comparison on the application and use of various types of materials in SCC. In addition, it includes the latest data and detailed information on modeling and soft computing techniques for the estimation of various properties of SCC as well as detailed investigations on microstructural characterization.

This book will be a valuable reference resource for materials scientists, and civil and structural engineers working in construction materials and self-compacting concrete, as well as for those working in the cement production and non-hazard waste industries.



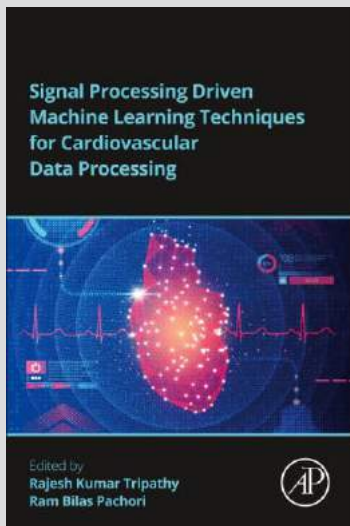
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ENGINEERING Civil

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Signal Processing Driven Machine Learning Techniques for Cardiovascular Data Processing

Edited by : **Rajesh Kumar Tripathy**, Assistant Professor, EEE department, Birla Institute of Technology and Science (BITS) Pilani, Hyderabad, Telangana, India and **Ram Bilas Pachori**, Professor, EE department, Indian Institute of Technology Indore, Madhya Pradesh, India

ISBN: 9780443141416
PUB DATE: Jun 17, 2024
LIST PRICE: £138.00 / \$180.00 / €160.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 372

AUDIENCE: Graduate students and researchers in Biomedical Engineering, Neural Engineering, and Computer Science

BIC CODES: UYQN, MQW, UYQM, UYQ

THEMA CLASSIFICATION:

THEMAUYQN; THEMATCB;

THEMAMQW; THEMAUYQ

Covers advanced applications of machine learning coupled with signal processing techniques for the analysis and classification of various cardiovascular signals

KEY FEATURES

- Provides details regarding the application of various signal processing and machine learning-based methods for cardiovascular signal analysis
- Covers methodologies as well as experimental results and studies
- Helps readers understand the use of different cardiac signals such as ECG, PCG, and PPG for the automated detection of heart ailments and other related biomedical applications

DESCRIPTION

Signal Processing Driven Machine Learning Techniques for Cardiovascular Data Processing features recent advances in machine learning coupled with new signal processing-based methods for cardiovascular data analysis. Topics in this book include machine learning methods such as supervised learning, unsupervised learning, semi-supervised learning, and meta-learning combined with different signal processing techniques such as multivariate data analysis, time-frequency analysis, multiscale analysis, and feature extraction techniques for the detection of cardiovascular diseases, heart valve disorders, hypertension, and activity monitoring using ECG, PPG, and PCG signals.

In addition, this book also includes the applications of digital signal processing (time-frequency analysis, multiscale decomposition, feature extraction, non-linear analysis, and transform domain methods), machine learning and deep learning (convolutional neural network (CNN), recurrent neural network (RNN), transformer and attention-based models, etc.) techniques for the analysis of cardiac signals. The interpretable machine learning and deep learning models combined with signal processing for cardiovascular data analysis are also covered.



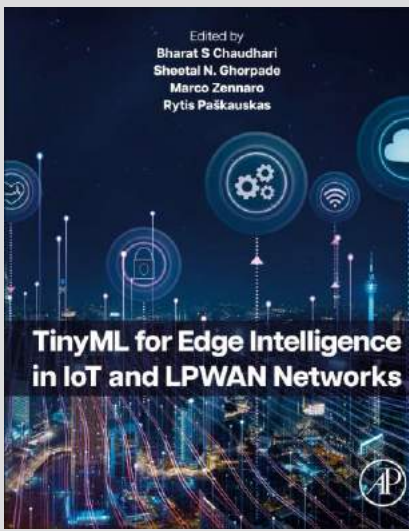
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ENGINEERING Biomedical

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TinyML for Edge Intelligence in IoT and LPWAN Networks

Edited by : Bharat S Chaudhari; Sheetal N Ghorpade; Marco Zennaro and Rytis Paškauskas

ISBN: 9780443222023
PUB DATE: Jun 17, 2024
LIST PRICE: £134.00 / \$165.00 / €160.00

DISCOUNT: Reference
FORMAT: Paperback
TRIM: 191 x 235
PAGES: c. 358
AUDIENCE: Academic researchers and professional system engineers, architects, designers, testers, deployment engineers seeking to design ultra-lower power and time-critical applications.
BIC CODES: UT, TJKW
THEMA CLASSIFICATION: THEMAUT; THEMATJKW; THEMATJKT1

A one-stop resource on TinyML as applied to IOT and LPWANs

KEY FEATURES

- This book provides one-stop solutions for emerging TinyML for IoT and LPWAN applications.
- The principles and methods of TinyML are explained, with a focus on how it can be used for IoT, LPWANs, and 5G applications.
- Applications from the healthcare and industrial sectors are presented.
- Guidance on the design of applications and the selection of appropriate technologies is provided.

DESCRIPTION

TinyML for Edge Intelligence in IoT and LPWAN Networks presents the evolution, developments, and advances in TinyML as applied to the Internet of Things (IoT) and low-power wide area networks (LPWANs). It starts by providing the foundations of IoT/LPWANs, low-power embedded systems and hardware, the role of AI and machine learning in communication networks in general, and cloud/edge intelligence. It then presents the concepts, methods, algorithms, and tools of TinyML. Practical applications of TinyML are given from the healthcare and industrial sectors, providing practical guidance on the design of applications and the selection of appropriate technologies.



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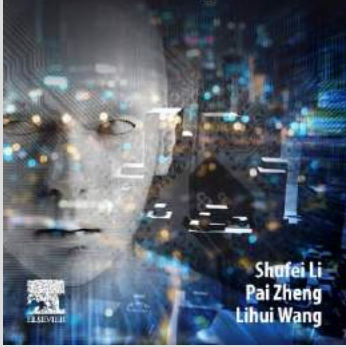


ENGINEERING Communications

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Proactive Human-Robot Collaboration Toward Human-Centric Smart Manufacturing



Proactive Human-Robot Collaboration Toward Human- Centric Smart Manufacturing

Shufei Li, PhD candidate, Dept. of Industrial and Systems Engineering, Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong SAR; **Pai Zheng**, Assistant Professor and Wong Tit Shing Endowed Young Scholar, Dept. of Industrial and Systems Engineering, Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong SAR and **Lihui Wang**, Chair Professor, Dept. of Production Engineering, KTH Royal Institute of Technology, Stockholm, Sweden

ISBN: 9780443139437
PUB DATE: Jun 03, 2024
LIST PRICE: £155.00 / \$200.00 /
€175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 294

AUDIENCE: Post-doc researchers, academics, and graduate students in advanced or highly specialized qualification programs related to smart manufacturing, collaborative robotics, cognitive computing, human-robot interfaces, intelligent automation, artificial intelligence, autonomous systems engineering, and mechanical engineering. The volume can also be leveraged for a 3rd or 4th year undergraduate elective course.

BIC CODES: TDP, TBC, UYQ, UYQV, UYZ, KND, KJT, TJFM1, KN, TJFM, TH

THEMA CLASSIFICATION:

THEMATD; THEMAUYQ;
THEMATBC; THEMAUYQV;
THEMAUYQP; THEMAKJT;
THEMAKN; THEMATJFM;
THEMAUYZ; THEMATJFM1;
THEMAKND

A comprehensive reference guide that will help readers better understand why proactive human-robot collaboration is needed and how it can be applied in real-life smart manufacturing scenarios.

KEY FEATURES

- Offers pioneering information on an industry 5.0 topic that has attracted much research interest in recent years
- Takes advantage of a structured and comprehensive approach to seamlessly combine theory, latest technological developments, and their practical applications
- Includes actionable methods, while conceptualizing future implications for smart manufacturing

DESCRIPTION

Proactive Human-Robot Collaboration Toward Human-Centric Smart Manufacturing is driven by an appreciation of manufacturing scenarios where human and robotic agents can understand each other's actions and conduct mutual-cognitive, predictable, and self-organizing teamwork. Modern factories' smart manufacturing transformation and the evolution of relationships between humans and robots in manufacturing tasks set the scene for a discussion on the technical fundamentals of state-of-the-art proactive human-robot collaboration; these are further elaborated into the three main steps (i.e., mutual-cognitive and empathic coworking; predictable spatio-temporal collaboration; self-organizing multiagent teamwork) to achieve an advanced form of symbiotic HRC with high-level, dynamic-reasoning teamwork skills. The authors then present a deployment roadmap and several case studies, providing step-by-step guidance for real-world application of these ground-breaking methods which crucially contribute to the maturing of human-centric, sustainable, and resilient production systems. The volume proves to be an invaluable resource that supports understanding and learning for users ranging from upper undergraduate/graduate students and academic researchers to engineering professionals in a variety of industry contexts.



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ENGINEERING Mechanical

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Sustainable Concrete Materials and Structures

Edited by : **Ashraf Ashour**, Professor of Structural Engineering, University of Bradford, UK; **Xinyue Wang**, Postdoctoral fellow, School of Civil Engineering at Dalian University of Technology, China and **Baoguo Han**, Professor of Civil Engineering, Dalian University of Technology, China

ISBN: 9780443156724

PUB DATE: Jun 10, 2024

LIST PRICE: £245.00 / \$305.99 /

€282.99

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 418

AUDIENCE: Academic and industrial researchers in civil engineering, material science, chemical engineering, and construction materials

BIC CODES: TGM

THEMA CLASSIFICATION:

THEMATGM

Discusses recent research progress on the technical routes to sustainable concrete materials and structures

A Volume in the *Woodhead Publishing Series in Civil and Structural Engineering Series*

KEY FEATURES

- Provides a comprehensive collection of technical reviews on the latest advancements in sustainable concrete materials and structures
- Presents state-of-the-art research on preparation, production, processing, and implementation techniques for sustainable concrete materials and structures
- Features techno-economic analysis for each technology discussed
- Covers lifecycle assessment, the Circular Economy and end of life of concrete structures
- Includes industry case studies on implementation

DESCRIPTION

Sustainable Concrete Materials and Structures focuses on recent research progress and innovations in this important field of research. All aspects of the technical routes to sustainable concrete and structures are discussed in detail. These include recent findings on sustainable concrete production and structural design and construction. Low-carbon cement, sustainable concrete mix design, durability, and structural applications are discussed in detail. Emphasis is placed on how to bring some of the innovations in concrete technology closer to market. Information on techno-economic analysis, economy of scale, and the supply chain of sustainable concrete is also addressed.

The book will be an essential reference resource for academic and industrial researchers working in civil engineering, material science, chemical engineering, and the development and manufacture of construction materials.



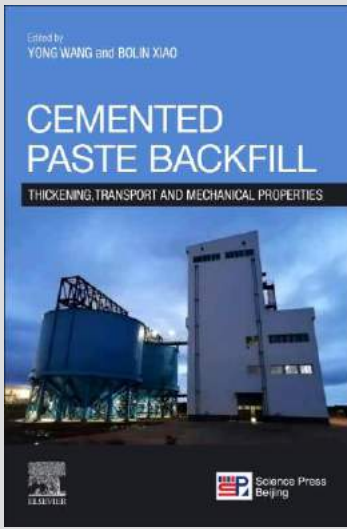
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ENGINEERING Civil

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Cemented Paste Backfill

Thickening, Transport and Mechanical Properties

Yong Wang, Associate Professor of Mining Engineering, University of Science and Technology, Beijing, China and **Bolin Xiao**, Assistant Professor, University of Science and Technology Beijing, Beijing, China and visiting scholar, University of Ottawa, Canada

ISBN: 9780443160547
PUB DATE: Jun 03, 2024
LIST PRICE: £150.00 / \$195.00 / €170.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 340

AUDIENCE: Researchers, engineers, and students in mining engineering, civil engineering, and concrete engineering. Graduate students in mining engineering and other related disciplines

BIC CODES: RBG, KNAT

THEMA CLASSIFICATION:

THEMAKNA; THEMARBG

Comprehensively describes the rheological and rheological and mechanical properties of Cemented Paste Backfill materials used in underground metal mines

KEY FEATURES

- Investigates rheological properties and multiphysics processes in CPB materials around the world
- Looks into systematic studies on pipe transport and mechanical properties of CPB under temperature effects
- Focuses mainly on the effect of temperature on paste transport and mechanical properties under the temperature effect, which provides a theoretical basis for safe and efficient filling operation and associated future research in this field
- Offer in-depth insights into the evolution of the rheological and mechanical properties of CPB under the effect of temperatures

DESCRIPTION

Cemented Paste Backfill: Thickening, Transport and Mechanical Properties covers a wide range of topics, including a new definition of CPB, past participation and flow-induced corrosion of pipeline under the constant temperature condition, multiphysics processes in CPB and the associated consolidation process, the variation of rheological parameters and transport resistance, prediction model for rheological properties, mechanical behavior and properties of CPB and fiber-reinforced CPB, and control technology to reduce the adverse effect of temperature.



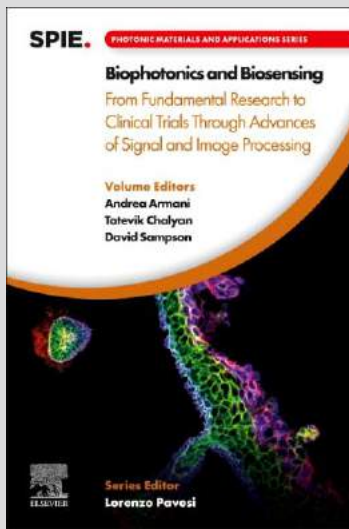
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Biophotonics and Biosensing

From Fundamental Research to Clinical Trials Through Advances of Signal and Image Processing

Edited by : **Andrea Armani**, Department of Chemical Engineering and Materials Science, University of Southern California, Los Angeles, CA, United States; **Tatevik Chalyan**, Postdoctoral Researcher, Vrije Universiteit Brussel and **David Sampson**, Surrey Biophotonics, School of Physics, School of Biosciences and Medicine, University of Surrey, Guildford, Surrey

ISBN: 9780443188404
PUB DATE: Jun 03, 2024
LIST PRICE: £195.00 / \$250.00 / €220.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 502
AUDIENCE: Biomedical Engineers, Photonics Engineers, Materials Scientists
BIC CODES: TRC, TJ, TGM, TTBL, TTB, PHK
THEMA CLASSIFICATION: THEMATRC; THEMATJF; THEMATGM; THEMATTBL; THEMATTB; THEMAUYS; THEMAPHK; THEMATJFD; THEMATCB

Presents advances in biophotonics and biosensing, from research to clinical trials, emphasizing AI and machine learning-enabled signal and image processing

A Volume in the *Photonic Materials and Applications Series* Series

KEY FEATURES

- Introduces key principles of light-biological tissue interactions and biosensing
- Discusses how the most promising optical diagnostic methods can exploit contemporary signal and image processing algorithms and data analytics
- Includes examples of clinical studies with detailed descriptions of their implementation, along with practical guidance

DESCRIPTION

Biophotonics and Biosensing brings together the knowledge of the basic principles of the field of light–biological tissue interaction, detection methods, data processing techniques, and research, diagnostic, and clinical applications. It is suitable for new entrants to the field, while also highlighting the latest developments for experts. This volume includes perspectives by leading experts from the biophotonics and biosensing, biomedical engineering, and data science communities.

The book provides a basic grounding in the key theoretical principles and practical components of biophotonics and biosensing. Working principles of devices used in spectroscopy, microscopy, and optical sensing are presented, along with their application domains. The reader will learn about existing microscopy-based techniques used in biomedical applications for diagnosis and get to know different signal- and image-processing algorithms, including the state of the art in artificial intelligence approaches, as used in biophotonics. Finally, the book describes through concrete examples, including sample preparation and measurement approaches, how the field has developed, thanks to the integration of biophotonics and optical biosensing with advanced signal and image-processing.



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Advances in Artificial Intelligence

Biomedical Engineering Applications in Signals and Imaging

Edited by : **Kunal Pal**, Professor in the Department of Biotechnology and Medical Engineering, National Institute of Technology Rourkela, Odisha, India.; **Bala Chakravarthy Neelapu**, Assistant Professor, Department of Biotechnology and Medical Engineering, National Institute of Technology Rourkela, India and **J. Sivaraman**, Assistant Professor and Principal Investigator of Bio-signals and Medical Instrumentation Laboratory, Department of Biotechnology and Medical Engineering, National Institute of Technology Rourkela, India

ISBN: 9780443190735

PUB DATE: Jun 03, 2024

LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 602

AUDIENCE: Researchers, experts, masters and PhD students in the fields of biomedical engineering, computer science and engineering, electronics engineering. Scientists and researchers working in the field of biosignal processing, biomedical Image Processing, Artificial Intelligence in biomedical applications
BIC CODES: MQW, UYQ
THEMA CLASSIFICATION: THEMATCB; THEMAMQW; THEMAUYQ

Provides recent advancements in applications of AI to various domains in medicine

KEY FEATURES

- Covers the recent advancements of artificial intelligence in healthcare, including case studies on how this technology can be used
- Provides an understanding of the design of experiments to validate the developed algorithms
- Presents an understanding of the versatile application of artificial intelligence in bio-signal and bio-image processing techniques

DESCRIPTION

Artificial intelligence in healthcare has become one of the best assisting techniques for clinicians in proper diagnosis and surgery. In biomedical applications, artificial intelligence algorithms are explored for bio-signals, such as electrocardiogram (ECG/EKG), electrooculogram (EOG), electromyogram (EMG), electroencephalogram (EEG), blood pressure, heart rate, and nerve conduction, and for bio-imaging modalities, such as computed tomography (CT), cone-beam computed tomography (CBCT), and MRI (magnetic resonance imaging). Advancements in artificial intelligence and big data have increased the development of innovative medical devices in healthcare applications. *Advances in Artificial Intelligence: Biomedical Engineering Applications in Signals and Imaging* provides an overview of artificial intelligence in biomedical applications, including both bio-signals and bio-imaging modalities. The chapters contain a mathematical formulation of algorithms and their applications in the biomedical field, including case studies. Biomedical engineers, advanced students, and researchers can use this book to apply their knowledge in artificial intelligence-based processes to biological signals, implement mathematical models and advanced algorithms, and develop AI-based medical devices.



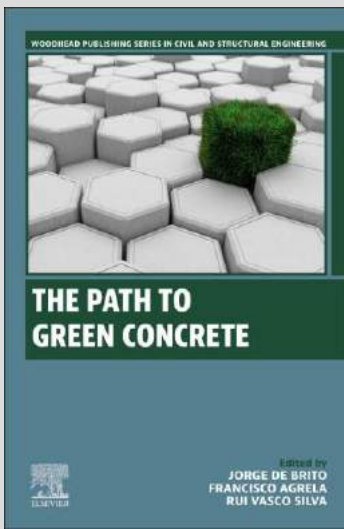
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ENGINEERING Biomedical

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The Path to Green Concrete

Edited by : **Jorge de Brito**, Technical University of Lisbon, Portugal; **Francisco Agrela**, Assistant Professor of Civil Engineering, University of Cordoba, Spain and **Rui Vasco Silva**, Civil Engineering Research and Innovation for Sustainability (CERIS), Instituto Superior Técnico, Universidade de Lisboa, Portugal

ISBN: 9780443191657

PUB DATE: Jun 10, 2024

LIST PRICE: £220.00 / \$290.00 / €250.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 586

AUDIENCE: Academic and industrial researchers working in sustainable construction materials, civil and structural engineers, manufacturers, and other construction professionals, Postgraduate students in materials science and engineering

BIC CODES: TGM, TN

THEMA CLASSIFICATION: THEMATGM; THEMATN

Presents recent research developments on sustainable concrete composites

A Volume in the *Woodhead Publishing Series in Civil and Structural Engineering Series*

KEY FEATURES

- Presents recent developments on eco-efficient cementitious composites
- Places an emphasis on complete replacement of cement, with the use of alkali-activated materials
- Includes novel enhancing techniques, along with 3D printing and characterization methods

DESCRIPTION

The Path to Green Concrete will enlighten the scientific community on recent developments in this field. Within this volume, world-renowned experts summarize recent research findings covering key topics such as: alkali-activated materials using aluminosilicate waste precursors; use of novel cost-effective and eco-efficient supplementary cementitious materials; state of the art characterization techniques and assessment methodologies; advances on the use of biomass ashes, steel slags and waste glass; the role of carbon capture in the production of concrete and mortar; development of eco-efficient composites for specialized applications; recycling of the fine fraction of construction and demolition wastes; and sustainable self-healing concrete.

This book will be a valuable reference resource for academic and industrial researchers, civil and structural engineers, manufacturers, and other construction professionals working in the development of sustainable construction materials.



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ENGINEERING Civil

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Control and Game Theoretic Methods for Cyber-Physical Security

Aris Kanellopoulos, Research Engineer, Georgia Institute of Technology, Atlanta, GA, USA; **Lijing Zhai**, Ph.D. degree with Professor Kyriakos G. Vamvoudakis at the Guggenheim School of Aerospace Engineering, Georgia Institute of Technology, Atlanta, GA, USA.; **Filippos Fotiadis**, The Daniel Guggenheim School of Aerospace Engineering, Georgia Institute of Technology, USA and **Kyriakos Vamvoudakis**, Dutton-Ducoffe Endowed Professor, Georgia Institute of Technology, GA, USA

ISBN: 9780443154089
PUB DATE: Jun 07, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 182
AUDIENCE: Researchers, engineers, and graduate students in the fields of control theory, IoT, cyber-physical systems, and machine learning
BIC CODES: TJFM1, TJFM
THEMA CLASSIFICATION: THEMATJFM1; THEMATJFM

A reference for the cyber-physical security research community, which includes both rich bibliographical notes on the state-of-the-art in the field

A Volume in the *Emerging Methodologies and Applications in Modelling, Identification and Control Series*

KEY FEATURES

- Serves as a bibliography on different aspects of security in cyber-physical systems
- Offers insights into security through innovative approaches, which amalgamate principles from diverse disciplines
- Explores unresolved challenges in the security domain, examining them through the lens of rigorous formulations from control and game theory

DESCRIPTION

Control-Theoretic Methods for Cyber-Physical Security presents novel results on security and defense methodologies applied to cyber-physical systems. This book takes a control and game theory perspective, treating autonomous platforms as dynamic systems. It introduces algorithmic frameworks designed to proactively and reactively safeguard these systems against catastrophic failures. The algorithms showcased encompass a wide spectrum of security techniques, from model-free detection mechanisms to unpredictability-based defense strategies, combining both model-based and data-driven approaches.



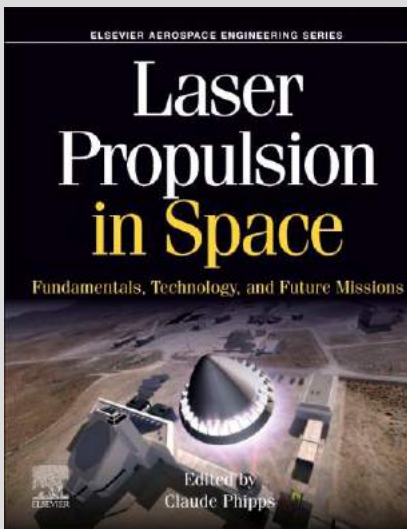
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ENGINEERING Electrical

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Laser Propulsion in Space

Fundamentals, Technology, and Future Missions

Edited by : **Claude Phipps**, Managing Partner, Photonic Associates, LLC, Santa Fe, New Mexico, USA.

ISBN: 9780443159039
PUB DATE: Jun 10, 2024
LIST PRICE: £149.99 / \$185.00 / €172.99
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 260

AUDIENCE: Masters and PhD students as well as post-doc researchers in advanced programs or highly specialized qualification courses related to aerospace engineering, aerospace and aviation technology, aerospace traffic management, space and planetary science, optics and lasers, optical communications engineering, physics, and astronomy.

BIC CODES: TR, TRP, TTB, TJK, TTDS, TTBL, PHJ, TQK, TGMF1, TJ
THEMA CLASSIFICATION: THEMATR; THEMATRP; THEMATTB; THEMATJK; THEMAPHDF; THEMATQK; THEMAPHQ; THEMATGMF; THEMATJF; THEMATTBL

From clearing space debris to sending probes to Proxima Centauri, laser propulsion is the most efficient drive for space travel.

A Volume in the *Aerospace Engineering Series*

KEY FEATURES

- Covers state-of-the-art methods for LOE debris removal that has become a very critical part of commercial and scientific space management
- Includes opinion sections explaining why we as a technical society should care about each chapter's topic and the considerably good outcomes that can be achieved with the high-intensity pulsed laser radiation technique
- Accompanied by a companion website with video clips and other ancillary materials to support understanding

DESCRIPTION

Laser Propulsion in Space: Fundamentals, Technology, and Future Missions takes readers on a comprehensive journey from a theoretical overview of the fundamentals of laser ablation to a review of current projects involving high-power CW fiber lasers and their ongoing and potential applications. Written by experts in the field, the mathematically sound excursus also features graphics depicting the equations' results and case studies with worked-out examples, making this book an invaluable reference source for students, researchers, and professional engineers in a number of complementary fields.

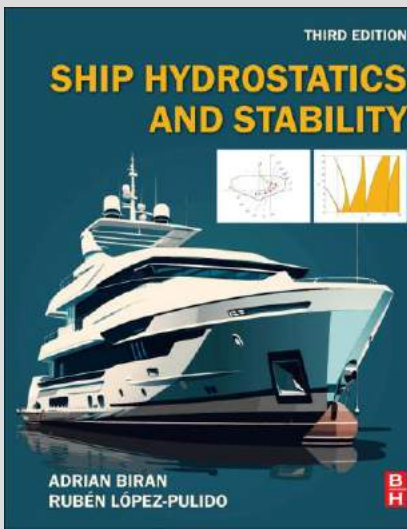


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ENGINEERING Automotive & Aeronautical
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Ship Hydrostatics and Stability, 3e

Adrian Biran, Associate Adjunct Professor, Faculty of Mechanical Engineering, Technion – Israel Institute of Technology, Haifa, Israel and Rubén López-Pulido, Diplomatic Counsellor, Embassy of Spain in Ireland, Ireland

ISBN: 9780443191459
PREVIOUS ISBN: 9780080982878
PUB DATE: Jun 01, 2024
LIST PRICE: £85.00 / \$112.00 / €96.95
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 405
AUDIENCE: Engineering students and researchers with an interest in naval architecture, Ship officers and practicing naval engineers
BIC CODES: TGB
THEMA CLASSIFICATION: THEMATGB

A complete guide to understanding ship hydrostatics in ship design and ship performance

KEY FEATURES

- Includes formulations, methods, and definitions throughout to facilitate understanding at all levels
- Presents rigorous mathematical proofs of the most important theorems
- Provides examples based on the data of real ships that are used throughout the book to explain concepts such as parametric roll theory

DESCRIPTION

Ship Hydrostatics and Stability, Third Edition is a complete guide to understanding ship hydrostatics in ship design and ship performance, taking you from first principles through basic and applied theory to contemporary mathematical techniques for hydrostatic modeling and analysis. Real-life examples of the practical application of hydrostatics are used to explain the theory and calculations using MATLAB and Excel. The new edition of this trusted resource covers new naval architecture regulations such as Second Generation Intact Stability Code (SGISC) and new case studies based on recent capsized and ship stability disasters.

Extensive reference to computational techniques is made throughout and downloadable MATLAB files accompany the book to support the reader's own hydrostatic and stability calculations. The book also includes tables of notations and technical terms and indexes in French, German, Italian, and Spanish.



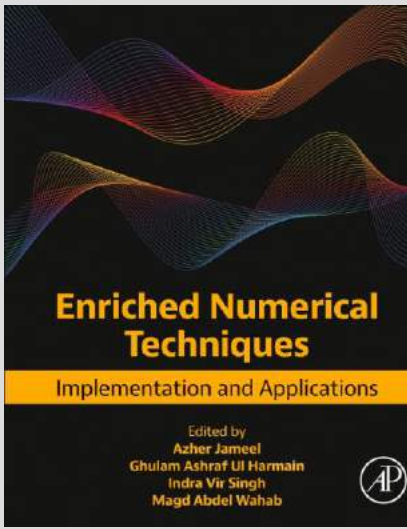
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ENGINEERING Marine

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Enriched Numerical Techniques

Implementation and Applications

Edited by : **Azher Jameel**, Assistant Professor, Department of Mechanical Engineering, National Institute of Technology, Srinagar, India; **Ghulam Ashraf UI Harmain**, Professor, Department of Mechanical Engineering, National Institute of Technology, Srinagar, India; **Indra Vir Singh**, Professor, Department of Mechanical Engineering, Indian institute of Technology, Roorkee, India and **Magd Abdel Wahab**, Professor and Chair, Department of Applied Mechanics, Ghent University, Belgium

ISBN: 9780443153624
PUB DATE: May 10, 2024
LIST PRICE: £180.00 / \$220.00 / €210.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 466

AUDIENCE: Graduate students and researchers interested in computational mechanics

BIC CODES: TGB, UY

THEMA CLASSIFICATION:

THEMATJF; THEMAUY

Explains the emerging applications and recent advances in a wide range of enriched numerical techniques

KEY FEATURES

- Features explanations on how to use enriched numerical techniques to model problems in fracture mechanics, continuum mechanics, fluid flow, and biomechanics
- Explains methods through the use of worked examples throughout
- Provides practical advice on how to tackle programming issues

DESCRIPTION

Enriched Numerical Techniques: Implementation and Applications explores recent advances in enriched numerical techniques, including the extended finite element method, meshfree methods, extended isogeometric analysis and coupled numerical techniques. Techniques for implementation and programming issues are discussed, with other sections discussing applications for enriched numerical techniques in solving a range of engineering problems. The level set methodologies for complex shaped irregularities is presented, as are enriched numerical methodologies for various complex and advanced problems such as Nonlinear Structural Analysis, Fracture and Fatigue in Structures, Elasto-Plastic Crack Growth, Large Deformation Analysis, Frictional Contact Problems, Thermo-Mechanical Problems, Fluid Flow Investigations, Composite Materials and Bio-mechanics.



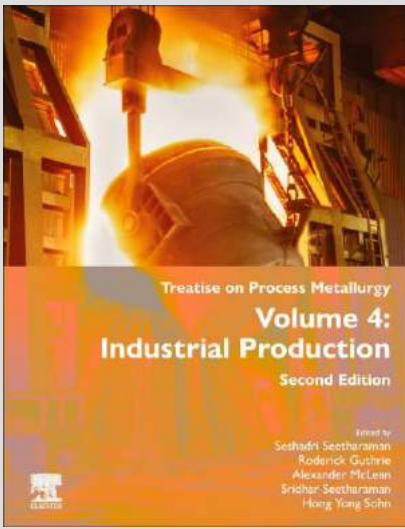
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ENGINEERING Mechanical

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Treatise on Process Metallurgy, 2e

Volume 4: Industrial Plant Design and Process Modeling

Edited by : **Alexander McLean**, Department of Materials Science and Engineering, University of Toronto, Toronto, Ontario, Canada; **Roderick Guthrie**, Department of Mining and Materials Engineering, McGill Metals Processing Centre, Quebec, Canada; **Sridhar Seetharaman**, Fulton Professor of Industrial Decarbonization at Arizona State University, USA; **H. Y. Sohn**, Distinguished Professor, Metallurgical Engineering; Adjunct Professor, Chemical Engineering, University of Utah, USA and **Seshadri Seetharaman**, Professor Emeritus, Royal Institute of Technology, Stockholm, Sweden

ISBN: 9780323854801
PUB DATE: Jul 19, 2024
LIST PRICE: £285.00 / \$350.00 / €335.00

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 863

ILLUSTRATIONS: 450 illustrations (100 in full color)

AUDIENCE: For teaching and research faculty, upper level undergraduate students, graduate students, and post-doctoral research associates in metallurgy and materials science and technology and related areas of study (physics, chemistry and biomedical science) as well as researchers and staff members of government and industrial research laboratories, Particularly useful for more experienced research workers who require an overview of fields comparatively new to them, or with which they wish to renew contact after a gap of some years

BIC CODES: TGM, TDM

THEMA CLASSIFICATION: THEMATGM; THEMATDPM

Provides an in-depth single resource for users who need to know the latest state of research in the area of process metallurgy

KEY FEATURES

- Provides the entire breadth of process metallurgy in a single work
- Includes in-depth knowledge in all key areas of process metallurgy
- Approaches the topic from an interdisciplinary perspective, providing broad range coverage on topics

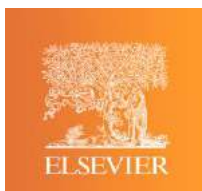
DESCRIPTION

Treatise on Process Metallurgy: Volume Four, Industrial Production provides academics with the fundamentals of the manufacturing of metallic materials, from raw materials into finished parts or products. In these fully updated volumes, coverage is expanded into four volumes, including Process Fundamentals, encompassing process fundamentals, structure and properties of matter; thermodynamic aspects of process metallurgy, and rate phenomena in process metallurgy; Processing Phenomena, encompassing interfacial phenomena in high temperature metallurgy, metallurgical process phenomena, and metallurgical process technology; Metallurgical Processes, encompassing mineral processing, aqueous processing, electrochemical material and energy processes, and iron and steel technology, non-ferrous process principles and production technologies, and more.

The work distills the combined academic experience from the principal editor and the multidisciplinary four-member editorial board.



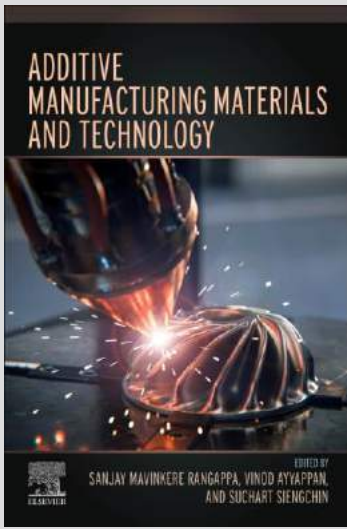
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ENGINEERING Materials

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Additive Manufacturing Materials and Technology

Edited by : **Sanjay Mavinkere Rangappa**, Senior Research Scientist, Natural Composites Research Group Lab, King Mongkut's University of Technology North Bangkok, Thailand; **Vinod Ayyappan**, Research fellow, Department of Materials and Production Engineering (MPE), King Mongkut's University of Technology North Bangkok. The Sirindhorn International Thai – German Graduate School of Engineering (TGGS), North Bangkok, Thailand and **Suchart Siengchin**, President, Department of Materials and Production Engineering (MPE), The Sirindhorn International Thai – German Graduate School of Engineering (TGGS), King Mongkut's University of Technology North Bangkok, Thailand

ISBN: 9780443184628
PUB DATE: Jul 08, 2024
LIST PRICE: £195.00 / \$250.00 / €220.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 558
AUDIENCE: Researchers, engineers, and technologists working in additive manufacturing in a range of applications including medicine, defense, aerospace, civil, and mechanical engineering, Graduate and postgraduate students
BIC CODES: PHH
THEMA CLASSIFICATION: THEMAPHH

Provides a cutting-edge overview of current additive manufacturing materials and technologies, their applications, and what the future holds

A Volume in the *Additive Manufacturing Materials and Technologies Series*

KEY FEATURES

- Presents a comprehensive overview of recent advances in additive manufacturing technology and materials research and development
- Outlines the processing methods, functionalization, mechanics, and applications of additive manufactured materials and technology
- Summarizes lifecycles and performance parameters of 3D printed materials
- Focuses on the types of shape memory materials and smart materials used in 3D printing in industrial applications and their applications

DESCRIPTION

Additive Manufacturing Materials and Technology discusses recent developments and future possibilities in additive manufacturing. The book focuses on advanced technologies and materials, with chapters centered on shape memory materials, alloys and metals, polymers, ceramics, thermosets, biomaterials, and composites. Fiber-reinforced materials are covered as well, as are the lifecycle and performance criteria of 3D printed materials. Other chapters look at the various applications of these materials and processing techniques, covering their use in the aerospace and automotive sectors, construction, bioengineering, and the pharmaceutical industry.

Various additive manufacturing techniques such as electron beam melting, selective laser melting, laser sintered, fused deposition, and more are also studied.



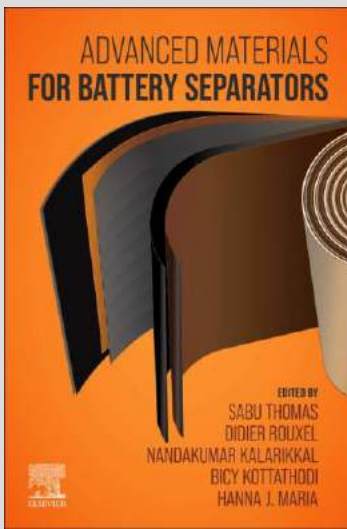
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ENGINEERING Mechanical

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Advanced Materials for Battery Separators

Edited by : **Sabu Thomas**, Full Professor, International and Inter University Centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala, India; **Didier Rouxel**, Professor, Institut Jean Lamour, Université de Lorraine, France; **Bicy Kottathodi**; **Hanna J Maria**, Senior Researcher, International and Interuniversity Centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala, India and **Nandakumar Kalarikkal**, International and Inter University Centre for Nanoscience and Nanotechnology and School of Pure and Applied Physics, Mahatma Gandhi University, Kottayam, Kerala, India

ISBN: 9780128175071
PUB DATE: Jul 01, 2024
LIST PRICE: £180.00 / \$230.00 / €200.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 536
AUDIENCE: Researchers, material scientists, engineers, academics, physicists, chemists, and lecturers working in the fields of energy production and storage
BIC CODES: TGM
THEMA CLASSIFICATION: THEMATGM

Presents the fundamentals of batteries, the experimental techniques used for the characterization of separators, and structural, physical and chemical properties

KEY FEATURES

- Provides a detailed discussion of separators used in battery applications
- Discusses the influence of nanofillers on separator performance and the analytical techniques used for the characterization of separators
- Explores the challenges and new technologies to improve the performance of separators

DESCRIPTION

Advanced Materials for Battery Separators focuses solely on battery separators and their significance, providing the reader with a detailed description of their use in both aqueous and non-aqueous batteries. Topics include separator requirements and classifications, as well as discussions of the different methods for the fabrication of separators, experimental techniques used for the characterization of separators, and their physical and chemical properties. It concludes with a look at the challenges and new technologies developed to improve the performance of separators.

This book is a valuable reference for engineers, research scholars, and for graduates and post graduates primarily in the field of material science, electrochemistry, and polymer chemistry. It can also be useful for engineers and technologists working in both industry and the energy field.



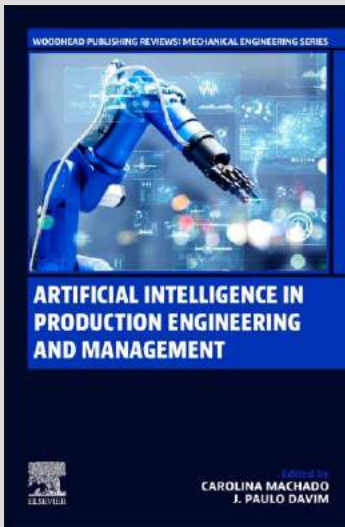
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ENGINEERING Materials

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Artificial Intelligence in Production Engineering and Management

Edited by : **Carolina Machado**, Associate Professor, Department of Management, School of Economics and Management, University of Minho, Braga, Portugal and **J. Paulo Davim**, Department of Mechanical Engineering, University of Aveiro, Aveiro, Portugal

ISBN: 9780128194713
PUB DATE: Jul 01, 2024
LIST PRICE: £154.00 / \$200.00 / €178.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 230
AUDIENCE: Researchers and students (postgraduate and advanced undergraduate) in the fields of production engineering and management, advanced manufacturing, mechanical engineering, industrial engineering.
BIC CODES: TDP
THEMA CLASSIFICATION: THEMATD

A multidisciplinary look at the state- of-the-art applications of AI to manufacturing and production technologies

A Volume in the *Woodhead Publishing Reviews: Mechanical Engineering Series*

KEY FEATURES

- Combines research in AI from the fields of production engineering and management to provide effective solutions to problems with interdisciplinary relevance
- Offers a comprehensive view of the possibilities that artificial intelligence brings to production engineering and management
- Inspires reflection, innovation, and a renewed appreciation for the ability of technology to redefine, improve, and transform the foundations of production engineering and management

DESCRIPTION

Artificial Intelligence in Production Engineering and Management covers, among other topics, living under AI; machine learning and large language models; AI and people management; nudging financial behavior in AI; the European Union narrative on AI; multidimensional transhuman influence; and AI, emotional intelligence, and ethics.

This topical book will be of great value for those working and researching in the production engineering and management fields who are seeking to understand and capitalize on the revolutionary wave that artificial intelligence brings to modern engineering and management.

Artificial intelligence (AI) plays a crucial role in production engineering and management, revolutionizing operation optimization, data analysis, forecasting, and task automation. In production engineering, AI contributes to operational efficiency by identifying patterns, predicting failures, and optimizing supply chains. In management, it offers predictive and prescriptive insights, allowing quick adaptations to changes in market conditions.



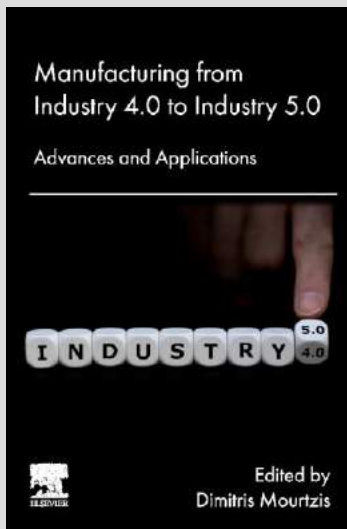
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Manufacturing from Industry 4.0 to Industry 5.0

Advances and Applications

Edited by : **Dimitris Mourtzis**, Laboratory Director and Full Professor, Laboratory for Manufacturing Systems and Automation (LMS), Department of Mechanical Engineering and Aeronautics, University of Patras, Rio Patras, Greece

ISBN: 9780443139246
PUB DATE: Jul 01, 2024
LIST PRICE: £155.00 / \$255.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 279

AUDIENCE: Academics and researchers, postgraduate and undergraduate students in the fields of mechanical and mechatronics engineering, industrial and systems engineering, smart/advanced/computer-integrated manufacturing, design for manufacturing, applied technologies, intelligent automation for manufacturing, service robotics, production management, Manufacturing engineering professionals, technology industry investors and software providers, systems integration consultants, as well as government policy and framework standardization officials in the fields described above

BIC CODES: KND, UYZ, UYQ, KN, TDP, TJFM1, TJFM, TTV, KJMV5, TGB, TH, TBC, KJT

THEMA CLASSIFICATION:

THEMATD; THEMATJFM1;
THEMATJFM; THEMAKJMV5;
THEMAKND; THEMAUYQ; THEMATBC;
THEMAUYZ; THEMAKN; THEMAKJT;
THEMATGB



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A detailed discussion on the current industrial landscape within the framework of industry 4.0 that also addresses existing literature gaps

KEY FEATURES

- Appeals to readers with its systematic and coherent approach that includes fundamental theoretical concepts as well as applied practical knowledge
- Includes state-of-the-art information on disruptive smart manufacturing technologies, real-life case studies of their impact in business scenarios, and gap analysis, creating an evidence-based path to recognize the opportunities and challenges originating from an industry 4.0 to industry 5.0 transition
- Serves as a guide to the next generation of engineers and facilitates making the next manufacturing paradigm a reality

DESCRIPTION

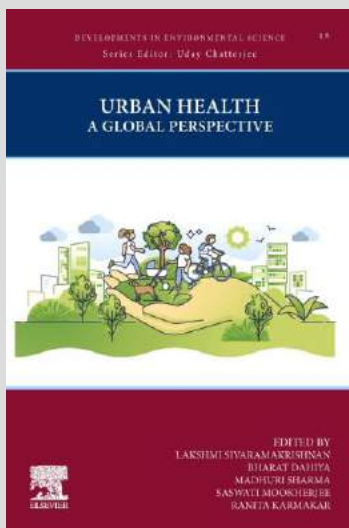
Manufacturing from Industry 4.0 to Industry 5.0: Advances and Applications unfolds three main pillars: (i) it investigates the theoretical background of the current industrial practice within the framework of industry 4.0 by presenting its key definitions and backbone technologies, (ii) discusses the methods and state-of-the-art developments employed in the ongoing digital transformation of companies worldwide to promote more resilient, sustainable, and human-centric smart manufacturing and production networks, (iii) and outlines a strategic plan for the transition from industry 4.0 to industry 5.0.

Authored by an international group of expert scientists, this volume consists of 12 chapters which investigate the most recent research in the field and provide actionable material to benefit audiences in both academia and industry.

ENGINEERING Mechanical

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Urban Health, Vol 15

A Global Perspective

Edited by : **Madhuri Sharma**, Associate Professor, Department of Geography, The University of Tennessee, Tennessee, USA; **Lakshmi Sivaramakrishnan**, Ph.D., Professor, Department of Geography, Jadavpur University, Kolkata, India; **Bharat Dahiya**, Director, Research Center for Sustainable Development and Innovation, School of Global Studies, Thammasat University, Bangkok, Thailand; **Saswati Mookherjee**, Professor, Department of Geography, Lady Brabourne College, West Bengal, Kolkata, India and **Ranita Karmakar**, M. Sc., Senior Research Fellow, Department of Geography, Jadavpur University, Kolkata, West Bengal, India

ISBN: 9780443219481
PUB DATE: Jul 01, 2024
LIST PRICE: £112.00 / \$138.00 / €130.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 330

AUDIENCE: Researchers, scientists, students, and academicians in the fields of environmental science, urban planning, sustainability, geography, ecology, and economy Professionals and policymakers

BIC CODES: RN, RP, RPC, TQK, JFSG, RNC, RND, TVF

THEMA CLASSIFICATION:

THEMATQ; THEMARP; THEMARPC;

THEMATQK; THEMAJBSD;

THEMARND; THEMPSAF;

THEMATVF

Outlines health problems urban areas are likely to face in the coming decades and suggests measures and policies needed to solve them on a global scale

A Volume in the *Developments in Environmental Science Series*

KEY FEATURES

- Provides global case studies on the issues of urban health and air quality
- Emphasizes the importance of health and sustainability from environmental pollution and climate change
- Discusses principles from medical professionals and researchers on health in urban areas

DESCRIPTION

Urban Health: A Global Perspective, Fifteenth Edition outlines the problems, issues, and solutions to health in urban areas on a global scale. The book focuses on several issues which impact the health of cities, such as the environment, pollution, climate change, ecology, social equity, health inequalities, and health problems. In addition, it covers several empirical studies which explain economic, political, and the social issues influencing health in urban areas. Pandemics and sustainable development will also be discussed.



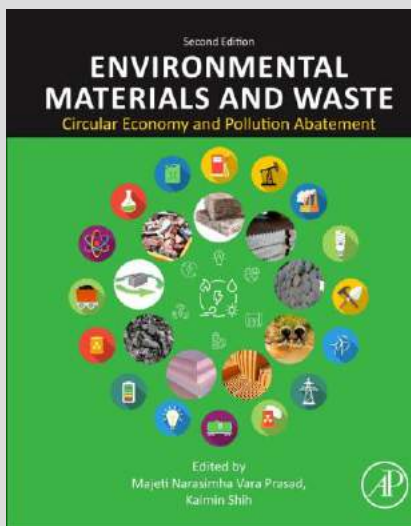
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EARTH & ENVIRONMENT Environmental Science

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Environmental Materials and Waste, 2e

Circular Economy and Pollution Abatement

Edited by : **Majeti Narasimha Vara Prasad**, Professor, School of Life Sciences, University of Hyderabad, Hyderabad, India

ISBN: 9780443220692
PUB DATE: Jul 01, 2024
LIST PRICE: £125.00 / \$155.00 /
€147.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 191 x 235

PAGES: c. 744

AUDIENCE: Environmental Scientists, Material Scientists, Chemists, Mineral Geologists, Entrepreneurs

BIC CODES: RN, TQK, TQ, TQSR

THEMA CLASSIFICATION:

THEMATQ; THEMATQK;

THEMATQSR; THEMARNH

Provides a multidisciplinary audience foundational knowledge on the naturally resulting by-products available in industrial production

KEY FEATURES

- Presents a state-of-the-art guide to environmental sustainability
- Provides an overview of the field, highlighting recent and emerging issues in environmental resource recovery that cover a wide array of by-products for remanufacture potential
- Details a multidisciplinary approach to fully realize the number of by-products which can be remanufactured, providing the foundation needed across disciplines to tackle these global issues

DESCRIPTION

Environmental Materials and Waste: Circular Economy and Pollution Abatement, Second Edition contains the latest information on environmental sustainability as a wide variety of natural resources are increasingly being exploited. The book takes a multidisciplinary approach to fully realize the number of by-products which can be remanufactured, providing the foundation needed across disciplines to tackle this issue. This updated edition includes operational principles of circular economy for sustainable development with reference to environmental waste. Although circular systems are now being implemented, it also emphasizes the importance to properly consider and convert circular economy goals and principles into actions.

Circular economy research is discussed in-depth as it has gained considerable momentum in the scientific literature thus far, and both conceptual debates and the creation of useful implementation strategies are still in their infancy. As a whole, this book covers a wide range of issues that must be covered in order to improve environmental sustainability.



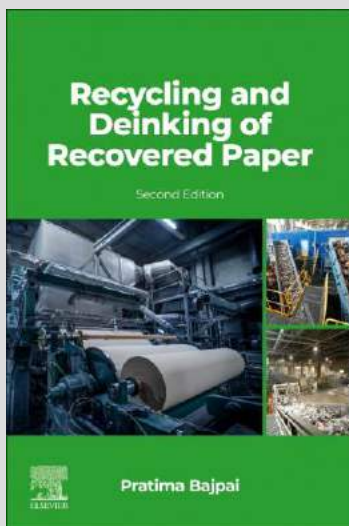
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EARTH & ENVIRONMENT Environmental Management

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Recycling and Deinking of Recovered Paper, 2e

Pratima Bajpai, Consultant-Pulp and Paper, Kanpur, India

ISBN: 9780443238048

PREVIOUS ISBN: 9780124169982

PUB DATE: Jul 01, 2024

LIST PRICE: £117.00 / \$145.00 / €137.00

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 6.00w x 9.00h

PAGES: c. 372

AUDIENCE: Professionals, engineers, managers, researchers, and consultants in pulp and paper organizations along with graduate and undergraduate doctoral students in the field of pulp and paper production, biomass conversion and valorization, and general environmental science

BIC CODES: TQSR, RN

THEMA CLASSIFICATION:

THEMATQSR; THEMARNH;

THEMATQ

Examines the importance of paper recycling in an increasingly environmentally conscious world

KEY FEATURES

- Covers all aspects of recycling technologies in great depth
- Offers up-to-date authoritative information and cites many mills experiences and pertinent research
- Examines the use of biotech methods for deinking, refining, improving drainage, and stickies control
- Includes new case studies on paper recycling

DESCRIPTION

Recycling and Deinking of Recovered Paper, Second Edition covers recent advances in recycling technologies. This second edition examines this new process, which is more eco-friendly than the virgin-papermaking process, and which uses less energy and natural resources, produces less solid waste and fewer atmospheric emissions, and helps to preserve natural resources and landfill space. In addition, the most recent information about the recycling of fibers into various grades of paper and board, the control of stickies, and the effects of recycled fiber on paper machines are also covered.

Recycling technologies have been improved in recent years due to advances in pulping, flotation deinking, and cleaning/screening, resulting in the quality of paper made from secondary fibers remarkably approaching that of virgin paper.



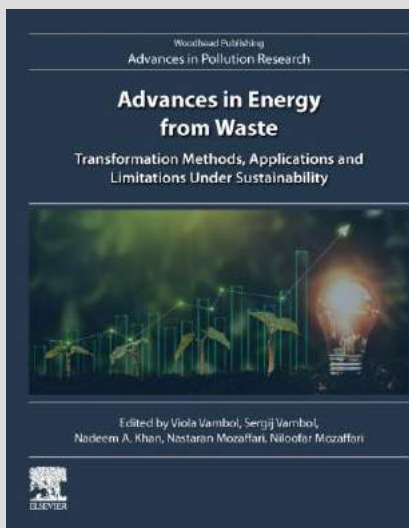
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EARTH & ENVIRONMENT Environmental Science

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Advances in Energy from Waste

Transformation Methods, Applications and Limitations Under Sustainability

Edited by : **Viola Vambol**, University of Life Sciences, Lublin, Poland.; **Sergij Vambol**, National Technical University Kharkiv Polytechnic Institute, Kharkiv, Ukraine; **Nadeem A Khan**, Assistant professor, Department of Civil Engineering, Mewat Engineering College, Nuh, Haryana, India; **Nastaran Mozaffari**, Laval University, Quebec, Canada and **Niloofer Mozaffari**, Laval University, Quebec, Canada

ISBN: 9780443138478
PUB DATE: Jul 01, 2024
LIST PRICE: £250.00 / \$330.00 / €285.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 191 x 235

PAGES: c. 960

AUDIENCE: Environmental scientists, environmental and bioenergy engineers, bioenergy professionals, environmental researchers, biologists, environmental health professionals, undergraduate, graduate and postgraduate students, managers, municipal and environmental engineers, waste treatment engineers and managers, environmentalists, waste scientists, field engineers, Environmental and bioenergy practitioners and economists

BIC CODES: RN, THX, TQSR

THEMA CLASSIFICATION: THEMATQ; THEMATHV; THEMARNH; THEMATQSR

Provides advanced knowledge on how waste and pollutants undergo environmental transformation

A Volume in the *Woodhead Advances in Pollution Research Series*

KEY FEATURES

- Serves as a starting point for further research into waste management and biomass conversion
- Provides an overview of recent developments in the field of waste-to-energy
- Discusses recent advances in biomass-derived green catalysts for various catalytic applications
- Introduces diverse case studies on waste, pollution, sustainability, technologies, health risk, and future prospective

DESCRIPTION

Advances of Energy from Waste: Transformation Methods, Applications and Limitations Under Sustainability provides advanced, systematic information on the environmental transformation of waste and pollutants of various origins into useful products, contributing to the development of the local economy and increasing the sustainability of the energy sector. In addition, remarkable competences in design, performance, efficiency, and implementation of diverse systems utilized for waste energy recovery are evaluated. The book also includes recent advances in biomass-derived green catalysts for various catalytic applications, along with the challenges of controlled synthesis and the impact of morphological, physical, and chemical properties on their adsorption or desorption capability.

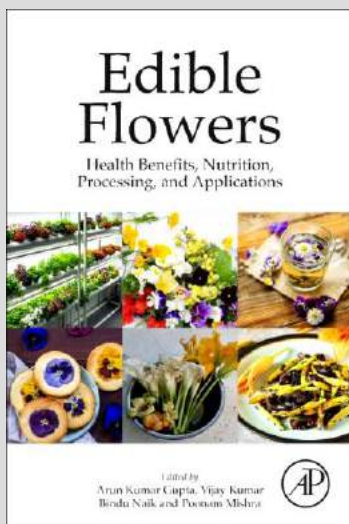


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EARTH & ENVIRONMENT Environmental Science
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Edible Flowers

Health Benefits, Nutrition, Processing, and Applications

Edited by : **Arun Kumar Gupta**, PhD, Assistant Professor, Department of Food Technology, School of Applied and Life Sciences, Uttarakhand University, Dehradun, Uttarakhand, India; **Vijay Kumar**, Assistant Professor, Himalayan School of Biosciences, Swami Rama Himalayan University, Jolly Grant, Dehradun, India; **Bindu Naik**, Assistant Professor, Department of Life Sciences (Food Technology), Graphic Era (Deemed to be University), Bell Road, Clement Town, Dehradun, Uttarakhand, India and **Poonam Mishra**, Department of Food Engineering & Technology, Tezpur University, Assam, India

ISBN: 9780443137693
PUB DATE: Jul 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 394

AUDIENCE: Agriculturists, engineers, scientists, and academics working in the fields of food science, and food technology, The pharmaceutical industry, botanists and food processing businesses.

BIC CODES: TDCT

THEMA CLASSIFICATION: THEMATDCT

Presents the nutritional, phytochemistry, pharmacological properties, preservation techniques and industrial applications of edible flowers

KEY FEATURES

- Covers the nutritional and pharmacological aspects of edible flowers
- Addresses the most popular edible flowers in the world as a source for nutraceuticals
- Presents application in food products and potential health benefits
- Discuss the various preservation techniques to improve the storage stability of edible flowers

DESCRIPTION

Edible Flowers: Health Benefits, Nutrition, Processing, and Applications discusses several edible flowers and their history, bioactive compounds, pharmacological properties, chemistry, and manifold applications. Composed of 20 chapters, the book explores significant edible flowers which have a bioactive and pharmacological attribute apart from preservation aspects. Each of the presented flowers are analyzed by its taxonomy, history, nutritional properties, important bioactive natural compounds, pharmacological potential, use in food processing, and marketability.

Medicinal and edible flowers that are grown in the various countries and are thought to promote health are also the subject of this book, thus ensuring the food security aspect. Written by a team of experts in the field, this book is a good support for researchers and scientists working in the fields of food science, food technology, and nutrition, with a special interest by the study of edible flowers.



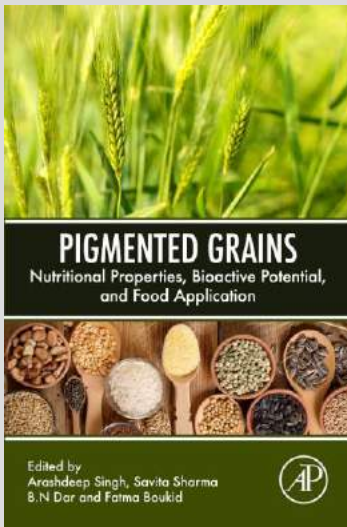
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FOOD SCIENCE, TECHNOLOGY & NUTRITION

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Pigmented Grains

Nutritional Properties, Bioactive Potential, and Food Application

Edited by : **Arashdeep Singh**, Department of Food Science and Technology, Punjab Agricultural University, Punjab, India; **Savita Sharma**, Department of Food Science and Technology, Punjab Agricultural University, Punjab, India; **B.N Dar**, Department of Food Technology, Islamic University of Science and Technology, Jammu and Kashmir, India and **Fatma Boukid**, Ph.D., ClonBio Group Limited, Ireland

ISBN: 9780443159060
PUB DATE: Jul 01, 2024
LIST PRICE: £115.00 / \$150.00 /
€130.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 286

AUDIENCE: Grain Researchers, food formulation specialists, food technologists, and personnel in the food processing industry. Industrial people related to food, nutraceutical, cosmetics, pharmaceuticals, textile and also to the health practitioners, especially dieticians and nutritionist

BIC CODES: TDCT

THEMA CLASSIFICATION:
THEMATDCT

Provides detailed, comprehensive studies about the diversity of pigmented grain and their physio-nutritional properties

KEY FEATURES

- Discusses nutrition, bioactive potential, and opportunities for use in food products
- Presents processing techniques for extraction and enhancing product quality from pigmented grains
- Covers breeding approaches and techniques for producing pigmented grains
- Includes wheat, rice, maize, barley, oats and rye, sorghum, millets, amaranth, quinoa, and buckwheat

DESCRIPTION

Pigmented Grains: Nutritional Properties, Bioactive Potential, and Food Application highlights the potential of pigmented grains crops in the human diet and their health benefits due to presences of the rich source of phytochemicals and pigments. Divided into 13 chapters, the book covers the breeding approaches and techniques for producing pigmented grains, the functionality and nutritional properties of wheat, rice, maize, barley, oats and rye, sorghum, millets, and pseudo cereals such as amaranth, quinoa and buckwheat. Others chapters cover the processing of pigmented grains and the effect on their functionality, utilization of pigmented grains and their by-products This is a comprehensive reference written for teachers, scientists, researchers, students, and all others who have interest in pigmented grains their potential nutritional value, utilization in food processing, value addition, and in combating malnutrition and nutritional security.



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COVER IMAGE
FORTHCOMING

Biscuit, Cookie and Cracker Production, 2e

Process, Production and Packaging Equipment

Iain Davidson, Director, Baker Pacific Ltd., Histon, Cambridge, UK

ISBN: 9780443241024

PREVIOUS ISBN: 9780128155790

PUB DATE: Jul 01, 2024

LIST PRICE: £162.99 / \$200.00 /
€186.99

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 260

AUDIENCE: Senior managers and R&D in industrial biscuit manufacturing, particularly for production, engineering and purchasing departments. Researchers and postgraduate research students in the field of Food engineering, Food Technology, Foodservice and Culinary Technology. Food technologists, bakers, bakery engineers, new bakery staff involved in production, purchasing, maintenance
BIC CODES: TDCT
THEMA CLASSIFICATION: THEMATDCT

Details all biscuit, cookie and cracker equipment, from the delivery of ingredients to the bakery, through all production and final packaged product

KEY FEATURES

- Describes the process and equipment needed for cookie and biscuit making
- Includes protocols for baking, potential issues, and how to resolve them
- Covers ingredients, dough mixing, dough forming, lamination, baking, and packaging
- Explores reducing gas consumption with a heat recovery system
- Provides practical information for applications, including protocols, equipment, and case studies

DESCRIPTION

Biscuit, Cookie and Cracker Production, Second Edition is a practical reference that brings a complete description of the process and equipment necessary for automated food production in the food/biscuit industry. The book describes the existing and emerging technologies in biscuit making and production, making it a valuable asset to R&D personnel and students in food technology and engineering areas. The second edition brings 370 new photos and images for updated equipment. Additional chapters covering energy usage and baking efficiency are also included, along with data on energy usage and energy saving.

Iain Davidson shares his almost 50 years of experience in the biscuit baking industry worldwide with students, researchers or people joining a biscuit making company.



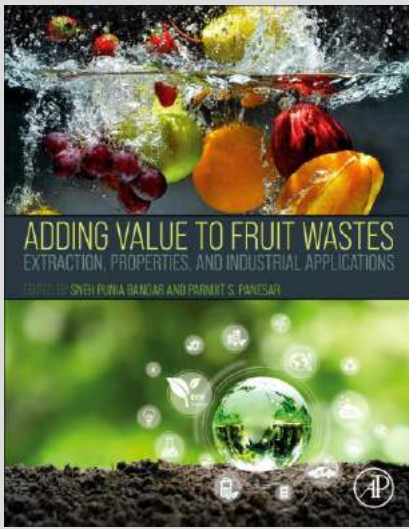
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Adding Value to Fruit Wastes

Extraction, Properties, and Industrial Applications

Edited by : **Sneh Punia Bangar**, Ph.D., Clemson University, South California, USA and **Parmjit S Panesar**, PhD, Department of Food Engineering and Technology, Sant Longowal Institute of Engineering and Technology, Punjab, India

ISBN: 9780443138423
PUB DATE: Jun 28, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 210 x 270

PAGES: c. 461

AUDIENCE: Researchers, scientists, students (Master, Ph.D., and post-doctoral students) in related areas with an interest in developing professional, research, and lecturing activities related to Food Science and Technology and related knowledge presented in this book, Professionals, technicians, staff members, researchers and other professionals who actively work, develop research, promote scientific activities, and are interested in the development of research, teaching, and lecturing in Food Science and Technology

BIC CODES: TDCT

THEMA CLASSIFICATION: THEMATDCT

Explores value-added fruit components and their applications in the real food system

KEY FEATURES

- Covers valorization approaches of fruit waste for starch, protein, fibers, and phenolics
- Includes novel green techniques for the extraction of the functional compounds
- Brings industrial applications of value-added functional compounds

DESCRIPTION

Adding Value to Fruit Wastes: Extraction, Properties, and Industrial Applications provides the latest technologies used in fruit waste to extract, isolate, and characterize functional, active compounds and their diversified pharmacological, food, agricultural, and industrial applications. Divided in three sections, the book explores emerging technologies for the extraction of functional components, discusses value-added components, and works as a guide to its applications. The book also covers fruit wastes for extracting starch to provide more cereal crops available as food, besides supporting the efficient utilization of fruit wastes to bring opportunities for extraction of functional components in a sustainable manner for food applications.

Written by a team of experts in the field, this book provides technicians, researchers, food technology experts, food industry personnel, and academia with value addition to the fruit waste and a lot more opportunities for extraction of functional components in a sustainable manner for food applications.



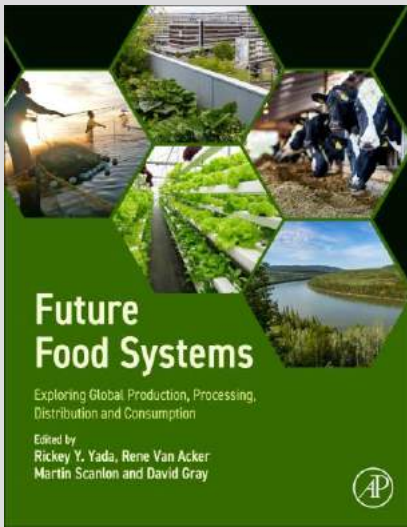
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Future Food Systems

Exploring Global Production, Processing, Distribution and Consumption

Edited by : **Rickey Y. Yada**, Dean, Faculty of Land and Food Systems, University of British Columbia, Vancouver, BC, Canada; **Rene Van Acker**, Dean and Professor Ontario Agricultural College | University of Guelph Canada; **Martin Scanlon**, Dean, Faculty of Agricultural and Food Sciences, University of Manitoba (Fort Garry campus); Department of Food and Human Nutritional Sciences, USA and **David Gray**, Ph.D., University of Niagara Falls, Canada

ISBN: 9780443156908

PUB DATE: Jun 28, 2024

LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 273

AUDIENCE: Academic and industry researchers seeking to identify and optimize food availability and sustainability by understanding the profile of food supply from production to consumer. Those seeking to create effective policy for food distribution

BIC CODES: TVH, KCT, KNAC, LNKF

THEMA CLASSIFICATION: THEMAKNA; THEMAKCM; THEMALNKF; THEMATVH

Provides an overview of the key components of the production, distribution, and consumption of food, along with the future of food for the world

KEY FEATURES

- Written by industry and academic experts for balanced perspective
- Presents foundational information with practical application insights
- Includes chapters on regulatory and policy issues

DESCRIPTION

Future Food Systems: Exploring Global Production, Processing, Distribution and Consumption provides an overview of food systems, from farming through to logistics, processing, retail, service and consumption, with the intention of enabling more efficient development of policy and implementation of food related practices. The book presents the considerations which must be understood to develop effective and efficient policies and practices for any level of food system and along the continuum of those systems, with attention being given to the academic, public and private sector challenges, and opportunities for progress, efficiency, effectiveness, and sustainability.

Presented in parts to highlight key aspects of the subject area, the book explores production practices including increasingly important programs in integrated farming systems, vertical agriculture and urban farming, processes, value adding for commodities, agricultural technology, supply chain innovations and consumer considerations. The book provides foundational insights into the underpinnings of today's food systems, its challenges and its opportunities for the future.



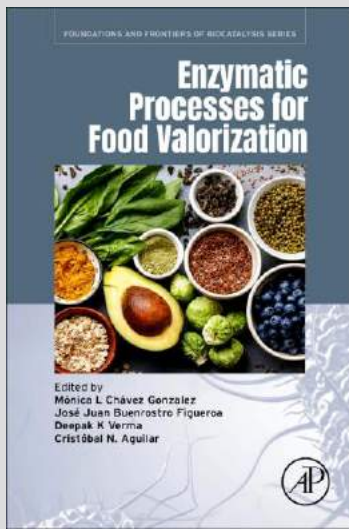
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Enzymatic Processes for Food Valorization

Edited by : **Monica L. Chavez Gonzalez**, Full Professor School of Chemistry, Universidad Autonoma de Coahuila, Mexico; **Jose Juan Buenrostro Figueroa**, Titular Researcher. Research Center in Food and Development, A.C. Delicias, Chihuahua, México; **Cristobal Noe Aguilar**, PhD, Autonomous University of Coahuila and **Deepak K. Verma**, Department of Agricultural and Food Engineering, Indian Institute of Technology, West Bengal, India

ISBN: 9780323959964
PUB DATE: Jun 21, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 342

AUDIENCE: Professionals in the area of enzyme technology applied in the food industry, Technicians and scientists involved in the use of enzymes on food waste for the valorization and/or recovery of compounds of interest in the food and health area

BIC CODES: TDCT

THEMA CLASSIFICATION: THEMATDCT

Gathers the main enzymes used in food processing and technology to improve organoleptic and quality attributes

KEY FEATURES

- Brings updated content on trends in enzymatic processes for food valorization
- Presents the main enzymes used in food processing and technology to improve organoleptic and quality attributes
- Includes the application of enzymes for the valorization of by-products generated during food processing for an eventual recovery of bioactive
- Explores how food by-products can be used as fermentation substrates for the production of enzymes of industrial interest

DESCRIPTION

Enzymatic Processes for Food Valorization describes the most recent research in the field of catalysis for food valorization, revealing the impact of the implementation of enzymatic catalysis in the different stages that make up the production processes. Sections review advances in food processing using enzymes, explore the use of enzymes on by-products for the release of compounds of interest, and show recent trends in biocatalysis and its application in the food industry.

Written by a team of international experts, this is an invaluable guide for professionals in the area of enzyme technology applied in the food industry, as well as technicians and scientists involved in the use of enzymes on food waste for the valorization and/or recovery of compounds.



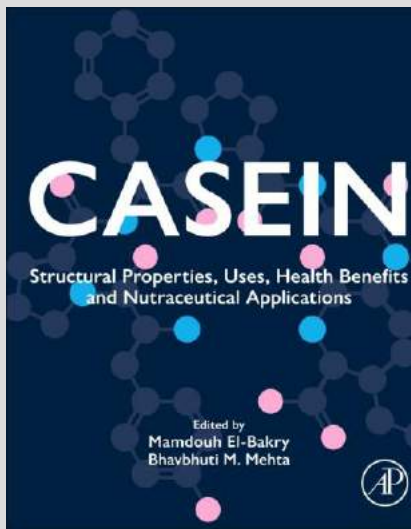
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Casein

Structural Properties, Uses, Health Benefits and Nutraceutical Applications

Edited by : **Mamdouh El-Bakry**, Ph.D, Regulatory Affairs Technologist, Food Supplements & Natural Cosmetics, Cartagena, Spain and **Bhavbhuti M. Mehta**, Associate Professor and Head, Dairy Chemistry Department, Sheth M.C. College of Dairy Science at Kamdhenu University, Anand, Gujarat, India

ISBN: 9780443158360
PUB DATE: Jun 21, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 441
AUDIENCE: Food scientists, dairy researchers, pharmaceutical scientists, students and researchers studying related fields
BIC CODES: TDCT
THEMA CLASSIFICATION: THEMATDCT

Explores casein, its types, properties, and application in the food and pharmaceutical industries

KEY FEATURES

- Provides comprehensive coverage of casein, the main milk protein that has many applications and uses
- Includes suggested reading for further information
- Addresses a wide-range of related topics, including non-food applications of casein

DESCRIPTION

Casein: Structural Properties, Uses, Health Benefits and Nutraceutical Applications investigates casein properties, uses, and applications in food and non-food products, in addition to exploring its health benefits and uses in manufacturing, such as in cheese products, along with an in-depth discussion on the future scope, challenges, and market trends of this protein.

Casein: Structural Properties, Uses, Health Benefits and Nutraceutical Applications is an excellent reference for food scientists, dairy researchers, pharmaceutical scientists, students and researchers studying related fields.



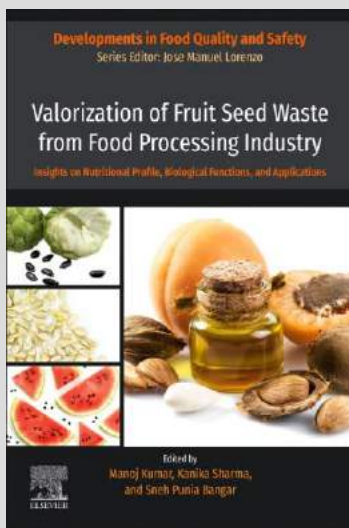
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Valorization of Fruit Seed Waste from Food Processing Industry

Insights on Nutritional Profile, Biological Functions, and Applications

Edited by : **Manoj Kumar**, Scientist in the Chemical and Biochemical Processing Division at ICAR—Central Institute for Research on Cotton Technology India; **Kanika Sharma**, Scientist in the Chemical and Biochemical Processing Division at ICAR—Central Institute for Research on Cotton Technology India and **Sneh Punia Bangar**, Ph.D., Clemson University, South California, USA

ISBN: 9780443155352
PUB DATE: Jun 14, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 330

AUDIENCE: Researchers, academics and other professionals actively working, developing research, promoting scientific activities and interested in the development of research, teaching, and lecturing in Food Science and Technology that include the fields of Food Quality and Safety (but not limited to), Microbiology, Chemistry, Physics, Biology, and Engineering. The secondary market is composed of undergraduate, master, PhD and post-doctoral students as well as professionals, technicians, staff members and researchers in related areas with interest in develop professional, research, and lecturing activities related to Food Science and Technology and related knowledge presented in this Book

BIC CODES: MMFM, TDCT

THEMA CLASSIFICATION: THEMAMKFM; THEMATDCT



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Provides comprehensive information about the biological activities, phytochemical profile, and industrial applications of fruit seed waste

A Volume in the *Developments in Food Quality and Safety Series*

KEY FEATURES

- Covers the fundamentals and latest developments in valorization methods for different fruit seed waste
- Provides a comprehensive view of the recovery of valuable ingredients from fruit seed waste
- Thoroughly explores extraction methods for obtaining bioactive components, characterization methods, and phytochemical profile of the seed

DESCRIPTION

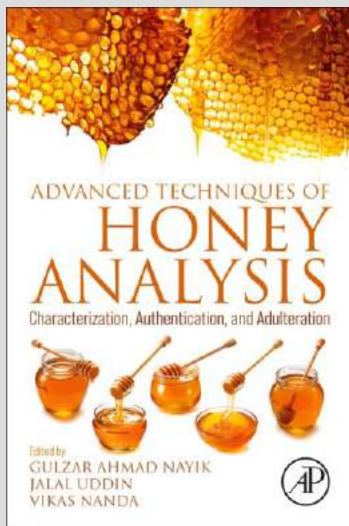
Valorization of Fruit Seed Waste from Food Processing Industry: Insights on Nutritional Profile, Biological Functions, and Applications, Volume Five in the *Developments in Food Quality and Safety series*, provides comprehensive information regarding different aspects of fruit seed waste which can be of great help to students, research scholars, professors, and food industries for both theoretical and practical work. The book covers the composition of different types of fruit seed waste, including their biological and functional characteristics, applications, and extraction/valorization methods for the production of value-added products.

This series is the most up-to-date resource covering trend topics such as Advances in the analysis of toxic compounds and control of food poisoning; Food fraud, traceability and authenticity; Revalorization of agrifood industry; Natural antimicrobial compounds and application to improve the preservation of food; Non-thermal processing technologies in the food industry; Nanotechnology in food production; and Intelligent packaging and sensors for food applications.

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Advanced Techniques of Honey Analysis

Characterization, Authentication, and Adulteration

Edited by : **Gulzar Ahmad Nayik**, M.Sc, PhD, NET, Department of Food Science and Technology, Government Degree College Shopian, Jammu and Kashmir, India; **Jalal Uddin**, PhD, Department of Pharmaceutical Chemistry, Pharmacy College, King Khalid University, Saudi Arabia and **Vikas Nanda**, PhD, Department of Food Engineering and Technology, Sant Longowal Institute of Engineering and Technology, Punjab, India

ISBN: 9780443131752
PUB DATE: Jun 01, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 381

AUDIENCE: Food scientists and those working in honey industries and related fields

BIC CODES: VFM, TDCT

THEMA CLASSIFICATION:
THEMAVFM; THEMATDCT;
THEMAMBH3

Presents a variety of methodologies for honey analysis, including infrared spectroscopy, nuclear magnetic resonance, and more

KEY FEATURES

- Contains comprehensive information on novel honey analytical techniques
- Discusses the characterization of determination of honey adulteration by various novel methods
- Sheds light on Nuclear magnetic resonance (NMR) spectroscopy in honey analysis
- Includes applications, literature reviews, recent developments, and methods

DESCRIPTION

Advanced Techniques of Honey Analysis: Characterization, Authentication, and Adulteration presents an overview of honey, including its classification, composition, safety, present status, quality issues, and prospects before delving into honey adulteration and presenting various methodologies for honey analysis. Broken into fourteen chapters, this book explores the physiochemical, bioactive compound, aroma, microbial, thermal, and rheological analysis and properties of honey. It also considers infrared spectroscopy, nuclear magnetic resonance, and Raman spectroscopy methods. High-performance liquid chromatography, gas chromatography and GC-MS methods are also highlighted.

Written for food scientists and those working in honey industries and related fields, this book will be a welcomed resource for all who wish to play a role in mitigating honey fraud.



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COLORIMETRIC SENSORS

Techniques to Measure Food Safety and Quality



Edited by
Haroon Elrasheid Tahir
Zou Xiaobo
Muhammad Arslan
Shi Jiyong



Colorimetric Sensors

Techniques to Measure Food Safety and Quality

Edited by : **Haroon Elrasheid Tahir**, PhD, Jiangsu University, China; **Zou Xiaobo**, School of Food and Biological Engineering, Jiangsu University, Zhenjiang, Jiangsu, China; **Muhammad Arslan**, Jiangsu University, China and **Shi Jiyong**, Jiangsu University, China

ISBN: 9780443132186
PUB DATE: Jun 01, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 314

AUDIENCE: Food Scientists, food chemists, sensory scientists, and others interested in colorimetric sensors

BIC CODES: TDCT

THEMA CLASSIFICATION:

THEMATDCT

Presents the basics of food contaminants alongside the application of colorimetric sensor measurement methodologies

KEY FEATURES

- Serves as a valuable source for researchers interested in the fundamental, basic, and modern applications of colorimetric sensors/intelligent food packaging
- Presents colorimetric sensors for use as rapid and cost-effective analytical tools to measure food safety and quality
- Covers colorimetric sensors/intelligent food packaging fabricated from natural, and synthetic dyes, and nanotechnology-based biomolecules for the assessment of food safety and quality
- Demonstrates methods for evaluating the authenticity and odorants crucial to consumer acceptance of food products
- Considers future industrial application, commercialization, regulatory aspects of colorimetric sensors/ indicators, and global trends for monitoring food freshness

DESCRIPTION

Colorimetric Sensors: Techniques to Measure Food Safety and Quality explores the latest advancements in colorimetric sensors/indicators and their applications. It consolidates state-of-the-art developments and current approaches in the fabrication of colorimetric sensors/indicators for cutting-edge applications. This book documents the principles of colorimetric sensors, sensor fabrication and characterization, sensitivity and detection limits of colorimetric sensors based on natural pigments, synthetic dyes, and nanotechnologies, as well as safety, quality controls, and regulatory aspects, followed by an assessment of their safety and quality. In addition, global trends in the application of colorimetric sensors in monitoring food freshness, challenges, marketing, and potential future development applications are addressed in detail. How the applications of colorimetric sensors/indicators in the analysis of cereal and cereal-based products, meat and meat products, liquid and semiliquid foods, food authentication, food toxicants, and pathogens, among others, is also discussed. This book can be used as a textbook for graduate students, a reference book for medical biologists, nanobiotechnologists, nanoengineers, agricultural scientists, and general biologists, and an inspiration for industrialists and policymakers studying smart nanomaterials. Graduate students and food scientists of all levels will also benefit.



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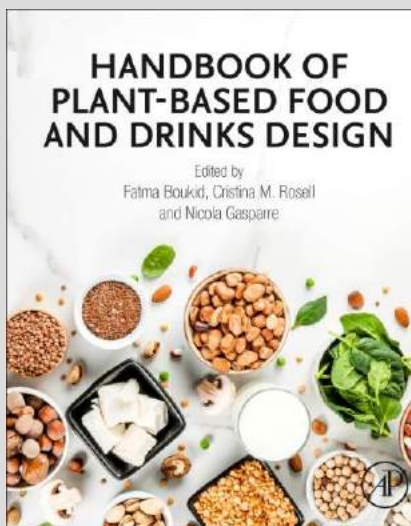
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Handbook of Plant-Based Food and Drinks Design

Edited by : **Fatma Boukid**, Ph.D., ClonBio Group Limited, Ireland; **Cristina M. Rosell**, Full Professor and Head, Department of Food and Human Nutritional Sciences, University of Manitoba, Canada and **Nicola Gasparre**, Post-Doctoral Fellow, Department of Food and Human Nutritional Sciences, University of Manitoba, Canada

ISBN: 9780443160172
PUB DATE: Jun 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 536

AUDIENCE: Food industry, academia, policy makers working on all aspects of food science and technology related to plant-based foods such food designers, process experts such process engineers and designers, safety and quality management experts, regulation and legislation Food personnel, students and researchers working with plant-based ingredients/ foods from different aspect such as formulation, ingredient characterization, safety, social impact, climate change, market landscaping, life cycle assessment

BIC CODES: TDCT

THEMA CLASSIFICATION:
THEMATDCT

Discusses conventional and emerging technologies for plant-based ingredient improvement

KEY FEATURES

- Brings a critical overview about the health-beneficial compounds of plant-based sources
- Offers guidelines on how to formulate plant-based food or a food alternative
- Discusses the transition towards more plant-based diets on nutrition, economy climate change, health, and sustainability

DESCRIPTION

Handbook of Plant-Based Food and Drinks Design discusses conventional and emerging technologies for plant-based ingredient improvement (yield, nutritional composition and functional properties) while considering food safety, sustainability, and social impact to explore current and potential markets through research and innovation. Divided in 7 sections, the book covers Plant sources for functional ingredients, Processing plant-based sources, Plant-based food design to replace/mimic animal food, Innovation in plant-based food, The promise of parity, Safety and regulations of plant-based foods, Social, environmental, and economic impact, and more.

Written by a team of experts in the field, this book can be a good support for researchers and scientists working with plant-based food, drinks, and market trends.



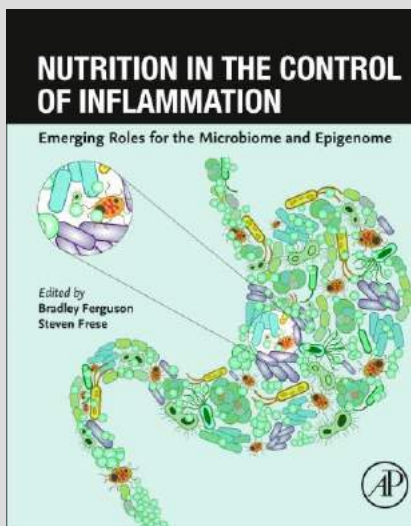
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Nutrition in the Control of Inflammation

Emerging Roles for the Microbiome and Epigenome

Edited by : **Bradley S. Ferguson**, Assistant Professor of Nutrition, University of Nevada, Reno, NV, USA and **Steven Frese**, Assistant Professor, University of Nevada, USA

ISBN: 9780443189791
PUB DATE: Nov 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 449

AUDIENCE: Nutrition researchers, nutritionists, and postgraduate students, as well as others working in, studying, and researching related fields

BIC CODES: TV

THEMA CLASSIFICATION:
THEMATV

Explores how diet changes the microbiome, epigenome, and microbiome-epigenome axis to regulate health, disease and developmental processes

KEY FEATURES

- Discusses the latest topics in the microbiome and nutritional epigenome surrounding the regulation of aging, development, metabolic disease, and heart disease
- Summarizes our current understanding of nutritional intervention in epigenetic reprogramming and microbial changes in the treatment and prevention of disease
- Examines ongoing discussions of socioeconomic status as well as sex, race, and ethnicity in the control of the divergence in microbial and epigenetic differences that contribute to health and disease disparities

DESCRIPTION

Nutrition in the Control of Inflammation: Emerging Roles for the Microbiome and Epigenome offers a comprehensive overview on how our diet promotes or attenuates inflammation to regulate inflammatory diseases. Broken into five sections, this book presents an introduction to the microbiome and epigenome in nutrition, subsequently covering diet, lifestyle, and the microbiome in the development of inflammatory diseases, nutrition and the epigenome in metabolic and cardiovascular diseases, diet, epigenetics, and microbiome. The book also addresses health-disparities in diet, epigenetics and gut microbes.

This reference will be of interest to nutrition researchers, nutritionists, and postgraduate students, as well as others working in, studying, and researching related fields.



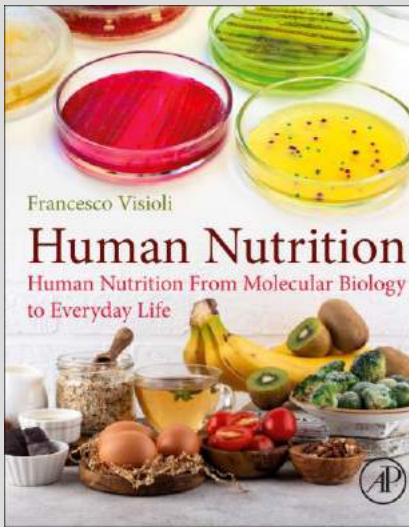
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FOOD SCIENCE, TECHNOLOGY & NUTRITION

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Human Nutrition

From Molecular Biology to Everyday Life

Francesco Visioli, Professor of Human Nutrition, Department of Molecular Medicine, University of Padova, Italy

ISBN: 9780128240052
PUB DATE: Jul 01, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 206

AUDIENCE: Nutritionists, dieticians, pharmacists, public health professionals, and others working in related fields, as well as students studying the same

BIC CODES: TDCT, VFM

THEMA CLASSIFICATION: THEMATDCT; THEMAMBH3; THEMAVFM

Presents an integrated approach to human nutrition, assessing the importance of diet on health, microbiota, nutrigenetics and nutrigenomics

KEY FEATURES

- Addresses the effect of the three macro-nutrients and micro-nutrients of health
- Discusses microbiota and human dietary needs
- Presents tools to understand evidence-based nutrition

DESCRIPTION

Human Nutrition: From Molecular Biology to Everyday Life presents an integrated approach on how nutrients and non-nutrients affect cellular biochemistry, and how, in turn, they shape human physiology. Over the course of 8 chapters, and covering topics ranging from the importance of diet on health to nutrigenetics and nutrigenomics, this book debunks myths and provides readers with the knowledge they need to critically interpret and navigate nutrition information. Intended for nutritionists, dieticians, pharmacists, public health professionals, and others working in related fields, this book provides a comprehensive source on advances in human nutrition.



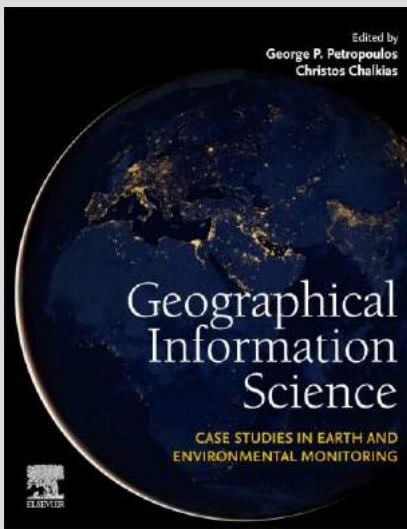
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Geographical Information Science

Case Studies in Earth and Environmental Monitoring

Edited by : **George P. Petropoulos**, Assistant Professor of Geoinformatics, Department of Geography, Harokopio University of Athens, Greece and **Christos Chalkias**, Professor of Applied Geography and GIS, Harokopio University of Athens, Greece

ISBN: 9780443136054
PUB DATE: Jun 07, 2024
LIST PRICE: £123.00 / \$160.00 / €139.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 191 x 235

PAGES: c. 570

AUDIENCE: Scientists, researchers and academics in the fields of geospatial science & technology, remote sensing, and environmental science

BIC CODES: RGW

THEMA CLASSIFICATION: THEMARGW

Provides a series of case studies demonstrating the use of a wide spectrum of geoinformation technologies in selected environmental applications

KEY FEATURES

- Focuses on global, templated case studies of GIS applications to environmental monitoring
- Includes methodologies allowing readers to recreate techniques and models and workflows that can be used in their own work
- Covers a plethora of topics in applied geosciences, providing environmental and geographical applications of practical interest

DESCRIPTION

Geographical Information Science: Case Studies in Earth and Environmental Monitoring provides detailed remote sensing and GIS methods and algorithms and technology comparisons, focusing on a wide range of environmental applications. The geoinformation technologies are demonstrated through templated case studies detailing real world use of the techniques and clarifying methods, tools, and practical solutions to environmental mapping and monitoring. The book utilizes remote sensing and geospatial data from the most recently launched satellites and applies the latest geospatial data approaches and analysis software tools (both commercial and open source).

This book is a comprehensive reference for researchers, academics and technicians in the fields of geospatial science & technology, remote sensing, and environmental science; or those processing and analyzing geospatial data for monitoring and modelling.



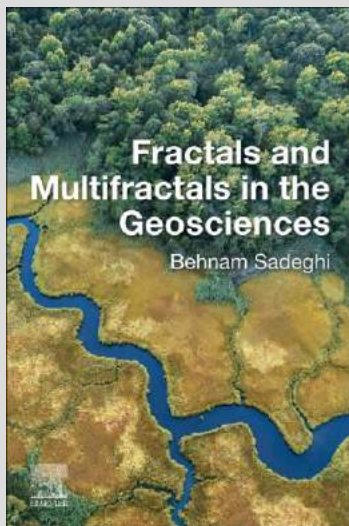
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Fractals and Multifractals in the Geosciences

Behnam Sadeghi, CSIRO Mineral Resources, Australian Resources Research Centre (ARRC), Kensington, Australia and Earth and Sustainability Science Research Centre, School of Biological, Earth and Environmental Sciences, University of New South Wales, Australia

ISBN: 9780323908979
PUB DATE: Jun 03, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 286

AUDIENCE: Mathematical geoscientists, geostatisticians, exploration geochemists, urban and environmental geochemists, applied geochemists, computational geoscientists, data analysts, and GIS professionals, mining engineers, petroleum engineers, exploration geophysicists, mining and petroleum industry decision-makers and stakeholders

BIC CODES: RBG, PB, RBGK, PN

THEMA CLASSIFICATION: THEMAPPB; THEMARBG; THEMAPPN

Extensively reviews fractal and multifractal models in geoscience exploration and the uncertainties linked to geochemical anomalies

KEY FEATURES

- Provides a comprehensive overview of the use of fractal and multifractal modeling methods, with a detailed assessment of uncertainty quantification in samples and classified models
- Specifically includes novel multifractal models, as well as uncertainty quantification and decision-making methods for use in geosciences and especially geochemistry
- Includes case studies showing the application of the fractal and multifractal methods detailed in the book

DESCRIPTION

Fractals and Multifractals in the Geosciences details the application of a wide range of multifractal methods, including many novel ones developed by the author, along with the assessment of uncertainty in sample classification and stability of spatial patterns. This book also provides criteria for selection of the most effective combination of data pre-processing and multifractal modeling to extract desired features or signals in the data. The book specifically aims to introduce, apply, and test novel multifractal models that account directly for changes in relationships between variables, as well as the effects of distance between samples and the source of anomalous metal contents in geoscience samples. Linked to this will be assessment of the effects of different pre-processing of data prior to application of the models and quantification/model uncertainty in geochemical anomaly maps, associated with sample classification and spatial interpolation. Gaussian simulations such as Sequential Gaussian Simulation and Monte Carlo Simulation will be applied to the new multifractal models developed and a suite of existing models, including (simulated) concentration-area, spectrum-area, singularity and other models.

Fractals and Multifractals in the Geosciences will be invaluable for mathematical geoscientists, geostatisticians, exploration, applied, urban and environmental geochemists, computational geoscientists, data scientists, and GIS professionals who need to better understand fractal geometry, along with its theory and applications in geochemical anomaly classification to generate maps that are helpful for decision-making for follow-up sampling and explorations.



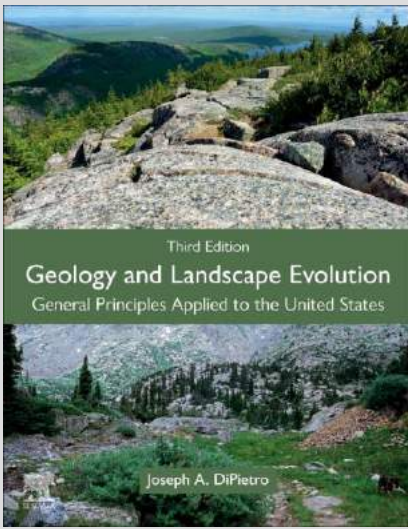
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Geology and Landscape Evolution, 3e

General Principles Applied to the United States

Joseph A. DiPietro, University of Southern Indiana, Evansville, USA

ISBN: 9780443158964

PREVIOUS ISBN: 9780128111918

PUB DATE: Jun 01, 2024

LIST PRICE: £123.00 / \$160.00 /

€139.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 8.50w x 10.875h

PAGES: c. 660

AUDIENCE: Students and researchers in geology, geography, tectonics, and environmental science

BIC CODES: RBGD, RBG

THEMA CLASSIFICATION:

THEMARBG

The updated edition explores general concepts on how landscape evolves, applying those concepts to the geology and landscape of the United States

KEY FEATURES

- Presents the complexities of physical geography, geology, geomorphology and climatology of the United States through an interdisciplinary, highly accessible approach
- Offers hundreds of figures, maps and photographs that capture the systematic interaction of land, rock, rivers, glaciers, global wind patterns and climate, including Google Earth images
- Provides a thorough assessment of the logic, rationale, and tools required to understand how to interpret landscape and the geological history of the Earth
- Features exercises that conclude each chapter, aiding in the retention of key concepts
- Includes 3 new sections and 8 additional chapters, as well as major updates to chapters throughout

DESCRIPTION

Geology and Landscape Evolution: General Principles Applied to the United States, Third Edition is an accessible text that balances interdisciplinary theory and applications within the physical geography, geology, geomorphology and climatology of the United States. The vast diversity of terrain and landscape across the United States makes this an ideal tool for geoscientists worldwide who research the country's geological and landscape evolution. The book provides an explanation of how landscape forms and how it evolves. This edition is fully updated with 3 additional sections: Geologic and Tectonic Processes and Provinces; Surface Processes and Provinces; and Compressional Mountain Systems.

Rather than limiting the coverage specifically to tectonics or to the origin and evolution of rocks with little regard for the actual landscape beyond general desert, river, and glacial features, this book concentrates specifically on the origin of the landscape itself, with specific and exhaustive references and examples from across the United States. The book goes on to apply those concepts to specific examples throughout the United States, making it a valuable resource for understanding theoretical geological concepts through a practical lens.



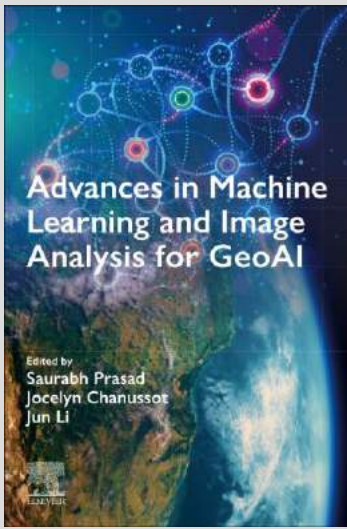
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Advances in Machine Learning and Image Analysis for GeoAI

Edited by : **Saurabh Prasad**, Associate Professor, Department of Electrical and Computer Engineering, University of Houston, USA; **Jocelyn Chanussot**, Grenoble Institute of Technology, France and **Jun Li**, Sun Yat-sen University, China

ISBN: 9780443190773
PUB DATE: Apr 30, 2024
LIST PRICE: £126.00 / \$165.00 / €143.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 352

AUDIENCE: Graduate students, researchers and practitioners in the area of signal and image processing, geospatial image analysis, and remote sensing

BIC CODES: RB, UFL

THEMA CLASSIFICATION:

THEMAKJT; THEMAUFL; THEMARB

A comprehensive overview of the latest techniques and technologies for image analysis and machine learning for geospatial imaging=

KEY FEATURES

- Covers the latest machine learning and signal processing techniques that can effectively leverage multimodal geospatial imagery at scale
- Chapters cover a variety of algorithmic frameworks pertaining to GeoAI, including superresolution, self-supervised learning, data fusion, explainable AI, among others
- Presents cutting-edge deep learning architectures optimized for a wide array of geospatial imagery

DESCRIPTION

Advances in Machine Learning and Image Analysis for GeoAI presents recent advances in applications and algorithms that are at the intersection of Geospatial imaging and Artificial Intelligence (GeoAI). The book covers algorithmic advances in geospatial image analysis, sensor fusion across modalities, few-shot open-set recognition, explainable AI for Earth Observations, self-supervised learning, image superresolution, Visual Question Answering, and spectral unmixing, among other topics.

This book offers a comprehensive resource for graduate students, researchers, and practitioners in the area of geospatial image analysis. It provides detailed descriptions of the latest techniques, best practices, and insights essential for implementing deep learning strategies in GeoAI research and applications.



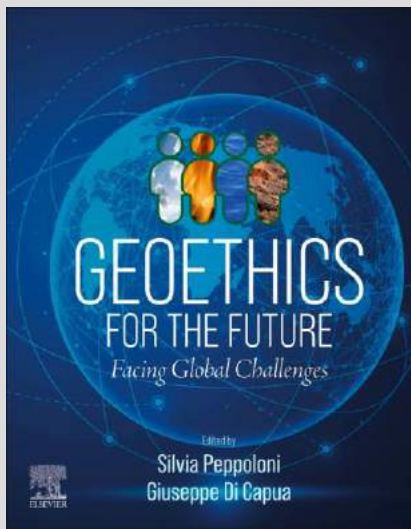
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Geoethics for the Future

Facing Global Challenges

Edited by : **Silvia Peppoloni**, Istituto Nazionale di Geofisica e Vulcanologia (INGV), Rome, Italy
International Association for Promoting Geoethics (IAPG), Italy and **Giuseppe Di Capua**, Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy

ISBN: 9780443156540
PUB DATE: Jul 01, 2024
LIST PRICE: £117.99 / \$145.00 / €135.99

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 325

AUDIENCE: Researchers, professionals, academics, graduate students, and undergraduates in geosciences and especially geoethics

BIC CODES: KCN

THEMA CLASSIFICATION:

THEMAKCVG; THEMATQ

An up-to-date and comprehensive reference on geoethics across the geosciences

KEY FEATURES

- Covers upcoming and current key topics, and emphasizes the urgency to find reference frameworks and effective solutions to the issues associated with them.
- Includes multifaceted analyses on relevant topics, by leveraging the cross-cutting contributions of experts to address urgent, global, and complex issues related to human-Earth system interaction.
- Provides an indispensable basis for discussion to guide scientists in considering their own responsibilities and to highlight the societal relevance of the geosciences.
- Discusses philosophical, ethical, social, political, economic, legal, and theological aspects of geoscience, technological applications, and anthropogenic impacts on physical environment through the lens of geoethics, in time of profound planetary changes.
- Bridges the geosciences, social sciences, and humanities, aiming to address the socio-ecological crisis from multiple perspectives and with greater effectiveness.

DESCRIPTION

Geoethics for the Future: Facing Global Challenges offers a set of points of view on highly topical issues in geosciences and beyond, including societal relevance of geosciences, georesources, sustainable development, geoeducation, georisks, data, as well as philosophical, legal, political, scientific considerations about anthropogenic global changes and the Anthropocene, enabling readers to acquire multifaceted knowledge on topics of global relevance in the 21st Century. This book explores topics vital to our historical moment and the future of human societies, through the analyzes by scholars with different disciplinary backgrounds, emphasizing the need for new cultural and scientific frameworks to address global issues. It aims to foster multidisciplinary and transdisciplinary approaches for problem-solving, by integrating diverse knowledge and visions to effectively tackle urgent global challenges.

Serving as a significant milestone in geoethics, this book provides academics, researchers and students with insights into the ethical and societal dimensions of various challenges arising from human impact on the Earth system.



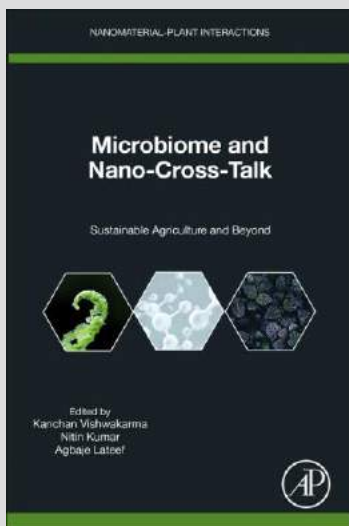
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Microbiome and Nano-Cross-Talk

Sustainable Agriculture and Beyond

Edited by : **Kanchan Vishwakarma**, MTech and PhD (MNNIT Allahabad), 1. Research Scientist Amity Institute of Microbial Technology, Amity University Uttar Pradesh, Noida, India 2. Department of Forest Ecology and Management, Umeå Plant Science Centre (UPSC), Swedish University of Agricultural Sciences (SLU), Umeå, Sweden; **Nitin Kumar**, MTech and PhD (MNNIT Allahabad) and **Agbaje Lateef**, Mtech and PhD (Ladoke Akintola University of Technology, Ogbomoso)

ISBN: 9780443188220
PUB DATE: Aug 15, 2024
LIST PRICE: £155.00 / \$200.00 /
€175.00

DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 418
AUDIENCE: Researchers and
Advanced students of plant
physiology, agriculture, botany,
molecular biology, nanotechnology
and biotechnology, Agronomists and
Crop Scientists
BIC CODES: PSTD, PSB, TVS,
PSTL, PSAF, PST, PSTS
THEMA CLASSIFICATION:
THEMAPSB; THEMAPST;
THEMATVS; THEMPSAF

Bridges the knowledge gap between the applications of nanotechnology and microbiology in plant science

KEY FEATURES

- Presents a logistic approach to nanotechnology and microbiology in the plant sciences
- Explores multiple nanomaterials and their interactions for improved plant health and yield
- Enables the reader to devise strategies for engineering stress-tolerant plants and increased plant productivity

DESCRIPTION

Microbiome Nano-Cross-Talk: Sustainable Agriculture and Beyond presents a comprehensive overview of the functional aspects of multiphasic microbial and nanotechnological interactions within and between plants and their ecosystem. Recognizing that beneficial microbes are involved in plant growth promotion, this book highlights their mechanism and regulation to enhance plant's yield and development even under stressed conditions. The merging of nanotechnology with microbiology is an essential aspect of this book. Various nanomaterials, their synthesis approaches as well as applications in agriculture have been studied extensively in past years.

With a focus on focus the morphological, anatomical, biochemical, molecular and gene expression levels of plant growth promotion, the book is the first of its kind to enable scientists to unravel the different pathways and signaling cascades involved in response to this interaction and to understanding how nanomaterials regulate the plant-microbe associations. It critically examines the role of beneficial microbes in conjunction with nanoparticles in plants and the mechanisms adopted by the plants at the biochemical and molecular levels to enhance plant growth and mitigate various stresses.



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Zinc in Plants

Current Knowledge and Recent Advances



Durgesh Kumar Tripathi
Vijay Pratap Singh
Sangeeta Pandey
Shivesh Sharma
D. K. Chauhan



Zinc in Plants

Current Knowledge and Recent Advances

Edited by : **Durgesh Kumar Tripathi**, D. Phil., Amity University Uttar Pradesh; **Vijay Pratap Singh**, Assistant Professor, Department of Botany, Chaudhary Mahadeo Prasad College, Allahabad, UP, India; **Sangeeta Pandey**, Assistant Professor, Amity Institute of Organic Agriculture, Amity University Uttar Pradesh, Noida, India.; **Shivesh Sharma**, Professor, Department of Biotechnology, Motilal Nehru National Institute of Technology, Allahabad, UP, India and **Devendra Kumar Chauhan**, Professor and Head of Department of Botany at the University of Allahabad, India

ISBN: 9780323913140
PUB DATE: Aug 16, 2024
LIST PRICE: £165.00 / \$210.00 / €185.00

DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 372
AUDIENCE: Scientists and researchers interested in plant physiology, biochemistry, agriculture and ecology
BIC CODES: PSTD, PSB
THEMA CLASSIFICATION: THEMPSB; THEMPSB

A complete compilation of the different roles zinc plays in the plant lifecycle

KEY FEATURES

- Provides an overview on the origin, chemistry and behavior of zinc in soil
- Discusses zinc deficiency and toxicity along with causes and remediation
- Presents the latest advances in zinc signaling, regulation and genotypic variation

DESCRIPTION

Zinc in Plants: Current Knowledge and Recent Advances addresses zinc hunger, the transport of zinc in the soil-plant interphase, zinc and abiotic stress in plants, and zinc and plant disease. Written by experts in the field, this title is an essential resource to all scientists and students interested in plant physiology, biochemistry and agriculture. During their life, plants encounter various challenges, including their normal development under changing environmental conditions. Zinc (Zn) is an essential component of thousands of proteins in plants, although it is toxic in excess, and is essential for many processes throughout the plant lifecycle.



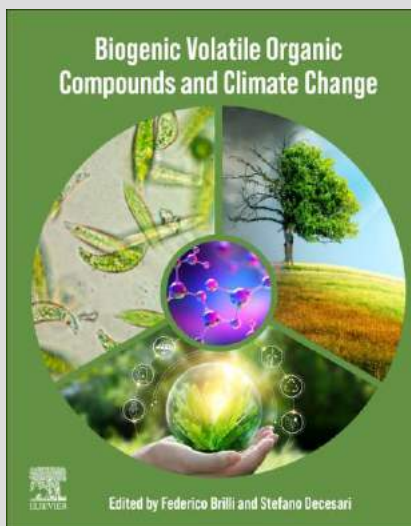
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Biogenic Volatile Organic Compounds and Climate Change

Edited by : **Federico Brilli**, Eco-physiologist, Institute for Sustainable Plant Protection, National Research Council, Turin, Italy and **Stefano Decesari**, Senior Researcher, Institute of Atmospheric Sciences and Climate (ISAC), National Research Council, Italy

ISBN: 9780128210765
PUB DATE: Jun 28, 2024
LIST PRICE: £118.00 / \$150.00 / €132.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 234

AUDIENCE: Atmospheric Scientists, Chemists, Plant Ecophysiology, Biologists, Climate Modelers, Agricultural Scientists, Biogeoscientists, Atmospheric Chemists. Research communities in sustainability, agriculture, biosphere/atmosphere interactions, VOCs

BIC CODES: RNPG, PHVJ, RN, PSTD, PSB

THEMA CLASSIFICATION: THEMARNPG; THEMARBP; THEMATQ; THEMPSB; THEMPSB

A single resource on the impact climate change and biogenic volatile organic compounds have on each other

KEY FEATURES

- Explains how volatile organic compound (VOC) production and emission in plants can ameliorate the consequences of climate change induced abiotic and biotic stresses
- Comprehensively addresses the complex interactions between global warming, atmospheric composition and plant ecology beyond carbon sequestration
- Reviews the use of biogenic VOC in sustainability

DESCRIPTION

Biogenic Volatile Organic Compounds and Climate Change highlights the relationship between climate change and biogenic VOC and the impact they have on each other. Topics include the synthesis and emission of VOC in plants, how they respond to environmental stresses, how sustainable agricultural practices plants can be used to directly impact climate change beyond carbon sequestration, a review of biogenic VOCs as air pollutants, and the impact of biogenic VOC on clouds. This groundbreaking work is essential for anyone in climate change, global warming and cooling, atmospheric chemistry, clouds, fate and transport of chemicals in the atmosphere, air pollution, sustainability or agriculture.



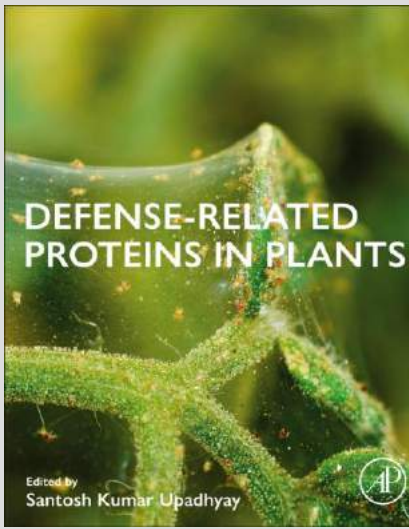
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EARTH & ENVIRONMENT Atmosphere/climate

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Defense-Related Proteins in Plants

Edited by : **Santosh Kumar Upadhyay**, Assistant Professor, Department of Botany, Panjab University, Chandigarh, India

ISBN: 9780443132360
PUB DATE: Jun 28, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 490

AUDIENCE: Researchers and academics, advanced level students in plant and agricultural sciences, Agricultural-related industry

BIC CODES: PST, PSAK, TVS, PSTL

THEMA CLASSIFICATION:

THEMAPST; THEMPSAK;

THEMATVS

A logical and practical resource that summarizes the major classes of plant-defense proteins

KEY FEATURES

- Presents comprehensive information on 'Defense-related proteins in plants' for the reader to get all the information on a single platform
- Highlights practical application of defense-related proteins in crops
- Includes identification, characterization, mechanism of action, and applications in crop improvement programs of plant-defense proteins

DESCRIPTION

Defense-related Proteins in Plants presents detailed information on these important mechanisms in plants, including their identification, characterization, mechanism of action, and application in crop improvement programs in a single, cohesive, and comprehensive volume. The foundational information included enables understanding of these proteins and their application in crop improvement programs. The book is a complete guide about defense-related proteins in plants for various categories of readers that will inspire future research into the unexplored areas of molecular aspects of these proteins to understand their role and action mechanism in plants and living organisms as a whole.

Defense-related proteins have drawn the attention of various plant and agricultural scientists and industries because they provide generalized direct stress tolerance in crop plants. These proteins including lectins, chitinases, thaumatin, and osmotin, among others, have been used for the development of transgenic plants to provide protection against various abiotic and biotic stresses. While there is a breadth of research and application information available, it has not, until now, been compiled into a single volume for ease of comparison and translational work.



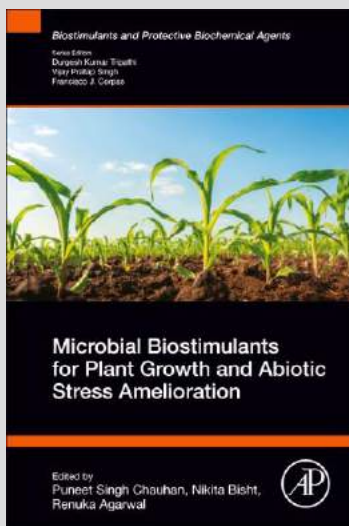
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Microbial Biostimulants for Plant Growth and Abiotic Stress Amelioration

Edited by : **Puneet Singh Chauhan**, Principal Scientist and Head, CSIR-National Botanical Research Institute, India; **Nikita Bisht**, Microbial Technologies Division, CSIR-National Botanical Research Institute, Lucknow, India and **Renuka Agarwal**, Microbial Technologies Division, CSIR-National Botanical Research Institute, India.

ISBN: 9780443133183
PUB DATE: Jun 28, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 465
AUDIENCE: Researchers and academics in the areas of plant science and agronomy/crop science
BIC CODES: TVK, PST, PSD
THEMA CLASSIFICATION: THEMATVK; THEMAPSD; THEMAPST

Helps readers understand the potential benefits of biostimulants in addressing abiotic stress conditions

A Volume in the *Biostimulants and Protective Biochemical Agents Series*

KEY FEATURES

- Presents the potential for more environmentally sustainable interventions against abiotic stresses
- Highlights the variety of applications for which biostimulants are proving effective
- Includes coverage of commercialization and role in addressing Sustainability Development Goals

DESCRIPTION

Microbial Biostimulants for Plant Growth and Abiotic Stress Amelioration, the latest release in the *Biostimulants and Protective Biochemical Agents* series, provides readers with insights into the major role of biostimulants in plant growth and development while under abiotic stress. The term biostimulants is broadly used to reference a group of diverse substances and microorganisms that stimulate life or that promote favorable plant responses. They stimulate natural processes to enhance/benefit nutrient uptake, nutrient efficiency, tolerance to abiotic stress, and crop quality.

Many biostimulants improve nutrition and they do so regardless of their own nutrient contents. Further, recently microbe-based biostimulants have emerged as important plant protectors under a range of adverse conditions.



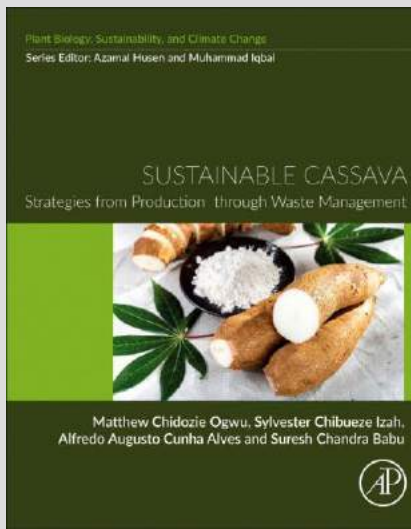
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Sustainable Cassava

Strategies from Production through Waste Management

Matthew Chidozie Ogwu, Goodnight Family Department of Sustainable Development, Appalachian State University, Living Learning Center, Bodenheimer Drive, Boone, North Carolina, USA; **Sylvester Chibueze Izah**, Department of Microbiology, Bayelsa Medical University, Imgbi Road, Yenagoa, Bayelsa State, Nigeria; **Alfredo Augusto Cunha Alves**, Embrapa Mandioca e Fruticultura, Rua Embrapa Caixa Postal, Cruz das Almas, Bahia, Brasil and **Suresh Babu**, Head, Capacity Strengthening, Development Strategy and Governance Division, International Food Policy Research Institute (IFPRI) & Extraordinary Professor University of Pretoria, South Africa

ISBN: 9780443217470
PUB DATE: Jun 21, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 324

AUDIENCE: Academics and researchers in cassava genetic resources, cassava production, processing, trade, consumption and sustainable processing waste management strategies

BIC CODES: TV, RN, RNFF, TDCT, KNAC, TVK, TVQ

THEMA CLASSIFICATION:
THEMATQ; THEMATV;
THEMATDCT; THEMAJW;
THEMAKNA; THEMATVK;
THEMATVQ

Includes close knowledge and information gaps about the diversity, distribution, and consumption of Cassava

A Volume in the *Plant Biology, sustainability and climate change Series*

KEY FEATURES

- Presents best practices and ideas from around the world, including technological advances for Cassava production and use
- Focuses on sustainability throughout the lifecycle
- Provides insights translatable to other tuber crops for further enhanced sustainable food security

DESCRIPTION

Sustainable Cassava: Strategies from Production through Waste Management presents viable approaches to promote sustainability in this globally important crop, enabling future generations to benefit. Presented in three parts, the first addresses cassava diversity and distribution, sustainable production and cultivation practices, and root processing innovations of the crop. Cassava trade policies and economic value chains, food safety and use of cassava, and agro-industrial cassava products are addressed in the second part. The third part focuses on bioeconomy aspects, cassava waste quality assessment, toxicology, sanitary practices, environmental risk assessment as well as sustainable management strategies for cassava waste using biotechnological and industrial advances.

Addressing the need for a unified and standardized approach for the trade, management, and utilization of cassava genetic resources, finished products, and cassava processing wastes, the book also explores policy and governance structure for addressing environmental and economic issues emanating from their use.



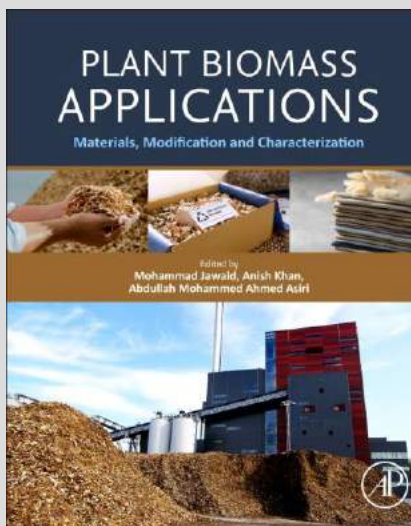
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LIFE SCIENCES Botany

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Plant Biomass Applications

Materials, Modification and Characterization

Edited by : **Mohammad Jawaid**, Department of Chemical and Petroleum Engineering, College of Engineering, United Arab Emirates University, Al Ain, United Arab Emirates; **Anish Khan**, Center of Excellence for Advanced Materials Research, King Abdulaziz University, Jeddah 21589, Saudi Arabia and **Abdullah Mohammed Ahmed Asiri**, Center of Excellence for Advanced Materials Research, Department of Chemistry, King Abdulaziz University, Jeddah, Saudi Arabi

ISBN: 9780443154652
PUB DATE: Jun 03, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 460

AUDIENCE: Research scholars from agriculture, plant science, agriculture engineers, developers of engineering materials, those developing specific applications, Those considering the environmental impact of the manufacture and use of these materials

BIC CODES: KNAC, TVK, PST

THEMA CLASSIFICATION:

THEMATVK; THEMAKNA;

THEMAPST

Explores the unique properties of plant biomass in the fields of biomedical, food, packaging, electronics, automotive, sensors, and textiles

KEY FEATURES

- Presents basic concepts, methods, technical concepts, literature review, and detailed application in particular fields for plant biomass materials
- Focuses on the processing techniques for different biomass
- Describes, in detail, processing methods, value-added products, and their applications in various fields like agriculture and food industry, energy, catalysis, and bio-medicinal applications

DESCRIPTION

Plant Biomass Application: Materials, Modification and Characterization focuses on the unique properties associated with plant biomass, from their biodegradable, non toxic, and safe for handling characteristics to their potential in developing sustainable, climate protecting products. The book covers all aspects of plant biomass materials opportunities, with a focus on the value-added product generated from plant biomass such as polymers, composites, transportation fuels, chemical intermediates/bulk chemicals, or sources of heat and generated power. The conversion of plant biomass into materials product such as plastics, fabrics, and carpets and specialty chemicals presents exciting possibilities for replacing traditionally used fossil fuels. Sections in this new release provide in-depth discussion on the materials derived from plant biomass and their current and potential future applications. Leading researchers from industries, academics, government, and private research institutions across the globe provided insights, making it an important reference for researchers and academics seeking to maximize plant biomass potential.



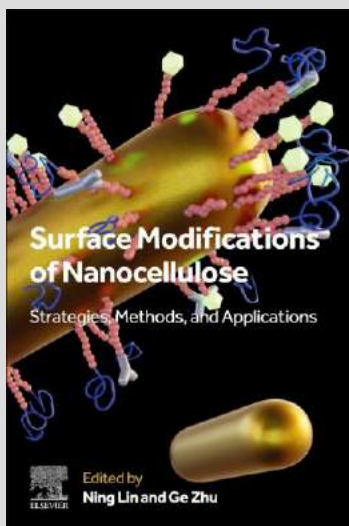
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Surface Modifications of Nanocellulose

Strategies, Methods, and Applications

Edited by : **Ning Lin**, Associate Professor, Wuhan University of Technology, China and **Ge Zhu**, Lecturer, Wuhan University of Technology, China

ISBN: 9780443161261
PUB DATE: Jun 03, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 468

AUDIENCE: Colleagues, graduate students and researchers who are engaged in biopolymer research, as well as scientists and engineers who are committed to the development of highly-valued functional polymer and nanomaterials and green chemistry, Professional/practitioner who are engaged in biopolymer research

BIC CODES: KCN, RN

THEMA CLASSIFICATION: THEMAKCVG; THEMATQ

Thoroughly examines nanocellulose modifications and applications

KEY FEATURES

- Systemically summarizes the strategy and protocols of surface modifications on nanocellulose
- Includes a database for the modified species as a reference book for surface modification on nanocellulose
- Illustrates the relationship between modification and applications of nanocellulose
- Provides inspiration for the development of potential functional modification in this field

DESCRIPTION

Surface Modifications of Nanocellulose: Strategies, Methods, and Applications establishes the basic framework of nanocellulose. This book systemically summarizes the strategy and protocols of surface modifications on nanocellulose and comprehensively analyzes the relationship between surface modifications and their functional applications. It provides a one-stop reference for researchers engaged in biopolymer research with a commitment to the development of highly-valued functional polymers, nanomaterials, and green chemistry.



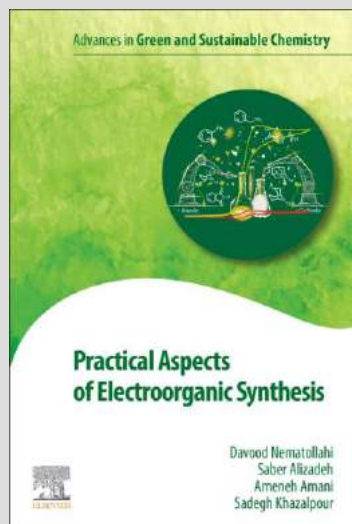
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CHEMISTRY

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Practical Aspects of Electroorganic Synthesis

Davood Nematollahi, Professor of Analytical Chemistry, Department of Analytical Chemistry, Faculty of Chemistry and Petroleum Sciences, Bu-Ali Sina University, Hamedan, Iran; **Saber Alizadeh**, Post.Doc of Analytical Chemistry, Bu-Ali Sina University, Iran; **Ameneh Amani**, Assistant Professor of Analytical Chemistry, Nahavand Higher Education Complex, Bu-Ali Sina University, Hamedan, Iran and **Sadegh Khazalpour**, Associate prof. of Analytical Chemistry, Department of Analytical Chemistry, Faculty of Chemistry and Petroleum Sciences, Bu-Ali Sina University, Hamedan, Iran

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LIST PRICE: £155.00 / \$200.00 / €175.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 338

AUDIENCE: Researchers, academics, undergraduates and scientists within the fields of Analytical Chemistry, Molecular Electrochemistry, Electrosynthesis, Electro-Organic Synthesis, Surface Electrochemistry, Modified Electrode, Green Chemistry and Material science, scientists and researchers within the fields of Laboratory synthesis of Organic-Inorganic Compounds, Industrial synthesis of Organic-Inorganic compounds, Pharmaceutical Industry, Paint Industry, Absorbent and membrane Industry, Fabrication of Energy, Battery, Supercapacitor and Fuel Cell materials. This book can be used for a course as the "Novel and Practical Topics in the Electrochemistry" for Post Graduate Degree and Ph.D students in University

BIC CODES: KCN, RN
THEMA CLASSIFICATION: THEMAKCVG; THEMATQ



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Provides solid insights into experimental approaches and covers novel synthesis techniques

A Volume in the *Advances in Green and Sustainable Chemistry Series*

KEY FEATURES

- Discusses complete and up-to-date practical concepts of electrosynthesis methods
- Provides sound insights into the experimental approaches of electrosynthesis, covering new and novel synthesis techniques
- Breaks down the fundamentals aspects of electrolysis into three digestible and logical sections

DESCRIPTION

Practical Aspects of Electroorganic Synthesis presents an educational insight into the practical aspects of electrosynthesis methods by providing a variety of examples and techniques. With the advancement of chemical science and its undeniable role in life, there is a growing need for the employment of green and eco-friendly methods and environmentally acceptable processes to minimize the negative consequences of chemical technologies. These needs and concepts are referred to as "green chemistry" and "sustainable technology". Electrosynthesis techniques are an example of one of the notable achievements of the interdisciplinary co-operation that assists in minimizing these consequences.

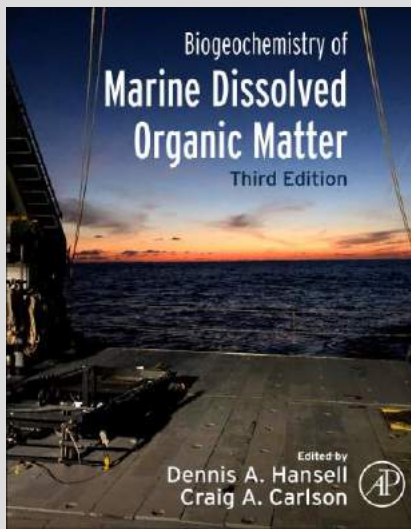
This book comprises three fundamental sections: direct, indirect, and paired electrolysis. As a result, this logically separates the key information needed to conduct electrochemistry into digestible and rational parts. Direct electrolysis discusses anodic oxidation, cathodic reduction, mechanistic studies (cyclic voltammetry), and how to set up electrochemical experiments. Indirect electrolysis proceeds to explore catalysts and additives in more depth to take on modern electrochemical methods. Finally, this book explores the burgeoning new field of paired electrolysis, in which the ultimate green-synthesis applications are possible, with no wasted electrons and very few by-products.

Practical Aspects of Electroorganic Synthesis offers researchers a modern and authoritative resource that brings complete and up-to-date practical concepts of electrosynthesis methods and guides the audience on how to carry out a large number of experimental techniques.

CHEMISTRY

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Biogeochemistry of Marine Dissolved Organic Matter, 3e

Edited by : **Dennis A. Hansell**, Ph.D., Department of Ocean Sciences, Rosenstiel School of Marine, Atmospheric and Earth Science, University of Miami and **Craig A. Carlson**, University of California, Santa Barbara, USA

ISBN: 9780443138584
PREVIOUS ISBN: 9780124059405
PUB DATE: Jul 01, 2024
LIST PRICE: £138.00 / \$180.00 / €160.00
DISCOUNT: Reference
FORMAT: Hardback
TRIM: 191 x 235
PAGES: c. 744
AUDIENCE: Marine scientists and upper-level undergraduate/graduate students, Professional researchers, experts working in organizations
BIC CODES: KCN, RN
THEMA CLASSIFICATION: THEMAKCVG; THEMATQ

An essential, well-rounded guide authored by the most prestigious leaders in the field of biogeochemistry

KEY FEATURES

- Features up-to-date knowledge on DOM, including 9 new chapters
- Presents the only published work to synthesize recent research on dissolved organic carbon in the South China, a region receiving a great deal of attention in recent decades
- Offers contributions by world-class research leaders

DESCRIPTION

Biogeochemistry of Marine Dissolved Organic Matter, Third Edition is the most up-to-date revision of this fundamental reference on the biogeochemistry of marine dissolved organic matter. Since its original publication in June 2002, the science, questions, and priorities have advanced, and the editors of this essential guide have added nine new chapters, including one on the South China Sea. This indispensable manual edited by the most distinguished experts in the field is addressed to graduate students, marine scientists, and all professionals interested in advancing their knowledge of the field.



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Water Matters

Achieving the Sustainable Development Goals

Edited by : **Abhijit Mukherjee**, Associate Professor, Department of Geology and Geophysics, and Research Coordinator, School of Environmental Science and Engineering, Indian Institute of Technology Kharagpur (IIT Kharagpur), India

ISBN: 9780443155376
PUB DATE: Jul 01, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 307

AUDIENCE: Academics, researchers and graduate students in Hydrology, Hydrogeology, Water Management, and Public Health Engineering

BIC CODES: TQSW

THEMA CLASSIFICATION:
THEMATQSW

Encapsulates the role of water in achieving sustainable development, from drinking water security to water-borne diseases and energy security

KEY FEATURES

- Provides interdisciplinary content that bridges knowledge from water availability to sustainability through reviews of current technologies for clean water and water security
- Includes global and regional reviews and case studies, building a bridge between broad reviews of water related issues by domain experts as well as detailed case studies
- Identifies pathways for transforming water knowledge to achieve sustainable development goals to policy and governance of water, food, energy security, and sustainability

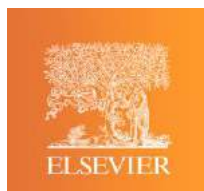
DESCRIPTION

Water Matters: Achieving the Sustainable Development Goals presents a compilation of water scenarios and their relationship to multiple facets of life as water forms a nexus with food security and energy resources, thereby forming one of the fundamental pillars of sustainable development. The thematic topics focus on studies of achieving individual sustainable development goals, primarily on safe and sustainable drinking water availability, the role of water in sanitation, transboundary water, and water in the ecosystem. Each chapter presents a case study to enable a holistic review of the topic and provide insight for further research.

The book integrates the knowledge on global-scale water reviews to local-scale case-studies and is ideal for hydrologists, hydrogeologists, and water managers in environmental and Earth sciences.



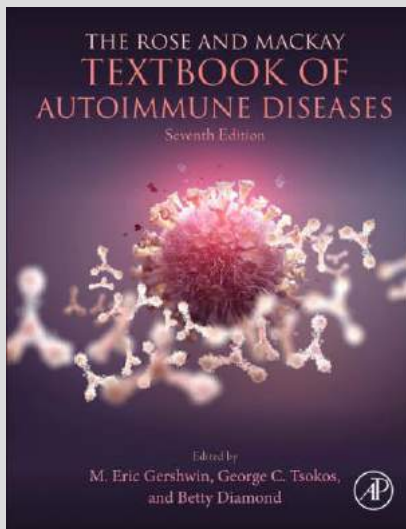
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EARTH & ENVIRONMENT Ocean/Hydrology

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The Rose and Mackay Textbook of Autoimmune Diseases, 7e

Edited by : **M. Eric Gershwin**, Distinguished Professor of Medicine, The Jack and Donald Chia Professor of Medicine and Chief, Division of Rheumatology, Allergy and Clinical Immunology, University of California at Davis, USA; **George C. Tsokos**, MD, Professor of Medicine at Harvard Medical School and Chief of Rheumatology and Clinical Immunology at Beth Israel Deaconess Medical Center and **Betty Diamond**, MD, Institute of Molecular Medicine, Feinstein Institutes for Medical Research, New York, NY, USA

ISBN: 9780443239465

PREVIOUS ISBN: 9780128121023

PUB DATE: Jul 01, 2024

LIST PRICE: £303.99 / \$375.00 /

€354.99

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 1116

AUDIENCE: Researchers, scientists, clinicians, clinical investigators, pathologists, medical students, and graduate students in the biomedical sciences in immunology, rheumatology, genetics, cell biology and molecular biology, Academic institutions especially those researchers active in immunology/oncology/infectious disease and those teaching immunology for graduate and post-graduate degrees, Basic and clinical scientists working in immunology, rheumatology and autoimmune diseases

BIC CODES: MJCM

THEMA CLASSIFICATION:
THEMAMJCM

Fully revised, updated, definitive reference on all autoimmune diseases

KEY FEATURES

- Provides new research on autoimmune diseases, their diagnosis, prevention, and therapy
- Covers a complete range of all common, rare and new autoimmune diseases, including cancer and COVID
- Extensively revised with 75% new material based on autoimmunity, developments in the different diagnosis and therapies for these autoimmune diseases, and a completely updated description of the different diseases
- Supplemented with a website that hosts a Podcast per chapter

DESCRIPTION

The Rose-Mackay Textbook of Autoimmune Diseases, Seventh Edition is a comprehensive reference that emphasizes the "3 P's" of 21st Century medicine: precision, prediction, and prevention. Topics cover the modern systems approach to biology that involves large amounts of personalized, ongoing physiologic data ("omics") coupled with advanced methods of analysis, new tests of genetic engineering, such as CRISPR, auto inflammatory diseases, autoimmune responses to tumor immunotherapy, and information on normal immune response and disorders. Each of the major autoimmune disorders is discussed by researchers and clinical investigators experienced in dealing with patients.

This new edition continues its success with 75% of the content revised, updated, or completely new. This edition is a valuable resource to clinicians involved in the diagnosis and treatment of autoimmune disease, as well as to scientists who want to follow developments in the field.



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LIFE SCIENCES Immunology

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COVER IMAGE
FORTHCOMING

Molecular Pathway Analysis Using High-Throughput OMICS Molecular Data

Edited by : **Anton Buzdin**, Sechenov First Moscow Medical University, Moscow Institute of Physics and Technology, and Shemyakin-Ovchinnikov Institute of Bioorganic Chemistry, Moscow, Russian Federation, Oncobox, Moscow, Russian Federation and Omicsway Corp., Walnut, California, USA

ISBN: 9780443155680
PUB DATE: Jun 01, 2025
LIST PRICE: £126.00 / \$165.00 / €143.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 279

AUDIENCE: Intended target audience is investigators (molecular biologists, geneticists, bioinformatics, data analysts), developers (biotechnologists, industrial researchers, biotech software developers), clinicians (pathologists, physiologists, oncologists), and graduate students in medicine, biochemistry, biotechnology, molecular biology, cell biology, and related fields Chemists, mathematicians, IT developers
BIC CODES: PSD
THEMA CLASSIFICATION: THEM APSD

Provides theoretical insights, links to available resources and their descriptions, and protocols related to multiple possibilities and options of the molecular pathway analysis

KEY FEATURES

- Provides theoretical insights, links to available resources and their descriptions, and protocols related to multiple possibilities and options of the molecular pathway analysis
- Elucidates unique instruments (i) for the quantitative pathway analysis using metabolomic data, and (ii) for algorithmic hypothesis-free reconstruction and functional annotation of the molecular pathways that have a strong potential to revolutionize the field
- Includes intuitive practical guidelines on the analysis of genomic, epigenetic, transcriptomic, proteomic, and metabolomic data at the molecular pathway level for non-bioinformaticians
- Provides state-of-the art in the field of Big molecular data analysis for research, medicine, biotechnology, pharmaceuticals, and next-generation molecular diagnostics

DESCRIPTION

The field molecular pathway analysis evolves rapidly, and many progressive methods have recently been discovered. *Molecular Pathway Analysis Using High-Throughput OMICS Data* contains the largest collections of molecular pathways. For the first time, guidelines on how to do genomic, epigenetic, transcriptomic, proteomic, and metabolomic data analysis in real-world research practice are given. *Molecular Pathway Analysis Using High-Throughput OMICS Molecular Data* also focuses on the pathway analysis applications for solving tasks in biotechnology, pharmaceuticals, and molecular diagnostics. It demonstrates how pathway analysis can be applied for the research and treatment of chronic and acute diseases, for next-generation molecular diagnostics, for drug design and preclinical testing; relevant real-world examples, molecular tests, and web resources will be reviewed in-depth. The book shows a tendency of erasing the borders between chemistry, physics, informatics, mathematics, biology, and medicine by means of novel research approaches and instruments, providing a truly multidisciplinary approach.



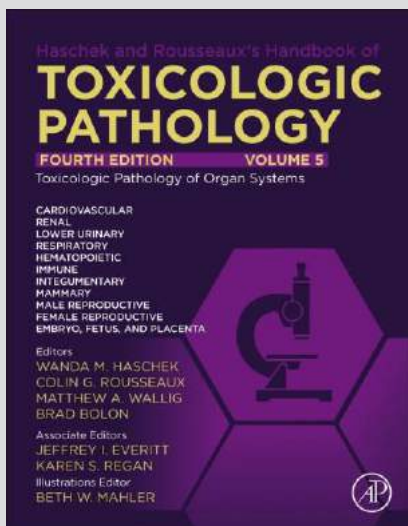
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Haschek and Rousseaux's Handbook of Toxicologic Pathology Volume 5: Toxicologic Pathology of Organ Systems, 4e

Edited by : **Wanda M Haschek**, BVSc, PhD, DACVP, FIATP, Professor Emerita, Dept of Veterinary Pathobiology, College of Veterinary Medicine, University of Illinois at Urbana-Champaign, Urbana, Illinois, USA; **Colin G. Rousseaux**, BVSc [Hons], PhD, DABT, FRCPath, FIATP, FATS, Adjunct Professor, Department of Pathology and Laboratory Medicine, University of Ottawa Principal, Colin Rousseaux and Associates, Canada; **Matthew A. Wallig**, DVM, PhD, DACVP, Professor Emeritus, Department of Veterinary Pathobiology, College of Veterinary Medicine University of Illinois at Urbana-Champaign, Urbana, Illinois, USA

ISBN: 9780128210451
PUB DATE: Dec 01, 2024
LIST PRICE: £195.00 / \$250.00 / €220.00

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 744

AUDIENCE: Scientists, including pathologists, toxicologists and graduate students, in academia, industry and government. Potential settings include biopharmaceutical, medical device, and chemical companies, contract and basic research organizations, veterinary diagnostic laboratories and medical forensic laboratories, regulatory agencies and universities

BIC CODES: MMTG, MZ

THEMA CLASSIFICATION:

THEMAMKGT; THEMAMZ

The single most definitive reference on toxicologic pathology for scientists and researchers in industry, academia, and government

KEY FEATURES

- Includes completely revised chapters on systems toxicologic pathology
- Offers high-quality and trusted content in a multi-contributed work written by leading international authorities in all areas of toxicologic pathology
- Features hundreds of full-color images in both the print and electronic versions of the book to highlight difficult concepts with clear illustrations

DESCRIPTION

Haschek and Rousseaux's Handbook of Toxicologic Pathology, Fourth Edition, Volume Five: Toxicologic Pathology of Organ Systems is a key reference on the integration of structure and functional changes in tissues associated with the response to pharmaceuticals, chemicals, and biologics. This book continues coverage of Organ-Specific Toxicologic Pathology and major organ systems not covered in Volume Four, and has been completely revised, making it an essential part of the most authoritative reference on toxicologic pathology for pathologists, toxicologists, research scientists, and regulators studying and making decisions on drugs, biologics, medical devices, and other chemicals, including agrochemicals and environmental contaminants.



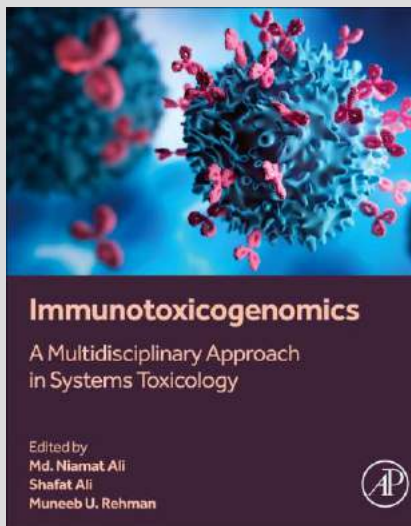
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LIFE SCIENCES Toxicology

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Immunotoxicogenomics

A Multidisciplinary Approach in Systems Toxicology

Edited by : **Naimat Ali**, Director and Faculty Member, Centre of Research for Development, University of Kashmir, Srinagar, Jammu and Kashmir, India; **Shafat Ali**, Cytogenetics and Molecular Biology Laboratory, Centre of Research for Development, University of Kashmir, Jammu and Kashmir, India and **Muneeb U Rehman**, College of Pharmacy, King Saud University, Riyadh, Saudi Arabia

ISBN: 9780443185021
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LIST PRICE: £134.00 / \$175.00 / €155.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 372

AUDIENCE: Researchers, scientists, and academics in toxicology, immunology, and genomics, immunogeneticists, toxicologists, pharmacogeneticists, immunologists

BIC CODES: MMTG, MFN, MJCM

THEMA CLASSIFICATION:
THEMAMKGT; THEMAMFN;
THEMAMJCM

Multidisciplinary reference on immunotoxicogenomics that offers coverage of the major mechanisms and effects of toxic substances on the immune system

KEY FEATURES

- Offers background and progress information for clinical applications and potential immunotoxicogenomics prospects
- Covers the major mechanisms currently known by which toxic substances affect the immune system and gene expression
- Provides a multidisciplinary approach to immunotoxicology, with updated content on fundamentals, the latest breakthroughs, clinical applications, and future perspectives

DESCRIPTION

Immunotoxicogenomics: A Multidisciplinary Approach in Systems Toxicology covers the major mechanisms and effects of toxic substances on the immune system, and on the regulation of gene expression. This includes the aims, opportunities, clinical applications, recent developments, and emerging and future trends. The book begins with a discussion of the systemic approach to toxicants, but also looks at current genomic tools used to assess immunotoxicity and systems biology methods used in immuno-toxicogenomics. Other topics include genomic expression profiling, gene expression as a tool to understand and predict immunotoxicity, immunotoxicogenomics as a screening tool, and the assessment and analysis of Immunotoxicogenomics data.

This book provides a collaborative, multidisciplinary approach for researchers in the fields of toxicology, genetics, immunology, and others engaged in the study on the effects of toxic substances on immune responses.



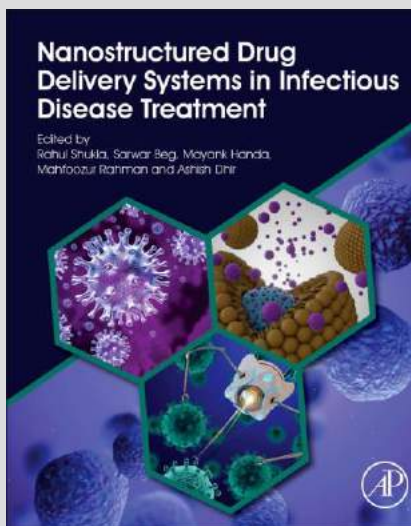
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LIFE SCIENCES Toxicology

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Nanostructured Drug Delivery Systems in Infectious Disease Treatment

Edited by : **Sarwar Beg**, PhD, Assistant Professor, Department of Pharmaceutics, School of Pharmaceutical Education and Research, Jamia Hamdard University, New Delhi, India; **Rahul Shukla**, PhD, Assistant Professor, Department of Pharmaceutics, National Institute of Pharmaceutical Education and Research, Raebareli, Uttar Pradesh, India; **Mayank Handa**, M.Pharm, National Institute of Pharmaceutical Education and Research-Raebareli, Lucknow, India; **Mahfoozur Rahman**, PhD, Assistant Professor, Department of Pharmaceutical Sciences, Sam Higginbottom University of Agriculture, Technology and Sciences, Allahabad, India and **Ashish Dhir**, PhD, Associate Principal Scientist- Drug Discovery, USA

ISBN: 9780443133374
PUB DATE: Jul 25, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00

DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 325
AUDIENCE: Focusing on the application of different nanotechnology-based drug delivery systems, this book will be a valuable resource for graduates, clinical researchers, industrial and anyone working to tackle the challenges of delivering drugs in a more targeted and efficient manner for nations to counter the menace of infectious diseases

BIC CODES: TCB, PSG, MJCJ, MJCL2

THEMA CLASSIFICATION:
THEMATCB; THEMAPSG;
THEMAMJCJ; THEMAMJCL2

Valuable resource that explores a wide range of treatment for infectious diseases using the latest advancements in nanomedical technologies

KEY FEATURES

- Focuses on the application of different nanotechnology-based drug delivery systems
- Offers information on how to design and develop the nanotechnology-based drug delivery systems and devices for the treatment of infectious disorders
- Explores challenges and regulatory concerns of nanomedicine in infectious disorders

DESCRIPTION

Nanostructured Drug Delivery Systems in Infectious Disease Treatment explores a broad range of promising approaches for the treatment of infectious diseases using the latest advancements in nanomedical technologies. The book opens with an introduction about infectious diseases and global burdens. There is also specific discussion and assessment of the global impact of viruses with an emphasis on COVID-19, Zika, and Ebola. Subsequent chapters provide detailed information about various novel nanotherapeutic strategies used for delivering drugs for the treatment of various types of viral, bacterial, and fungal disorders. This will be a valuable resource for graduates, researchers, industry professionals, and anyone working to tackle the challenges of delivering drugs in a more targeted and efficient manner for the treatment of infectious diseases.



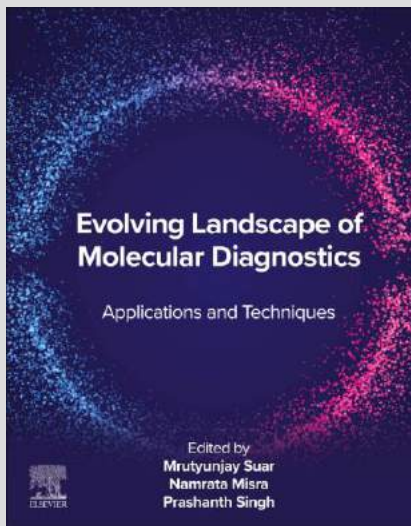
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LIFE SCIENCES Microbiology

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Evolving Landscape of Molecular Diagnostics

Applications and Techniques

Edited by : **Mrutyunjay Suar**, Director General R&D and KIIT University CEO, KIIT-Technology Business Incubator, Bhubaneswar, India; **Prashanth Singh**, CEO, Bhubaneswar City Knowledge Innovation Cluster KIIT University, Bhubaneswar, India; **Namrata Misra**, Assistant Professor, KIIT School of Biotechnology and Head, Bio-innovations, KIIT Technology Business Incubator, KIIT Deemed to Be University, Bhubaneswar, India

ISBN: 9780323993166
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LIST PRICE: £135.00 / \$175.00 / €155.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 279

AUDIENCE: Researchers and scientists working in clinical microbiology and diagnostic industries, infectious biology and other applied life sciences, Students

BIC CODES: PSG, MJA

THEMA CLASSIFICATION: THEMAMJA; THEMAPSG

Explores challenges, opportunities and future research directions of technologies in diagnostics

KEY FEATURES

- Provides a wide range of diagnostics tools and technologies in the field of infectious biology
- Presents discussions on emerging technologies for early disease diagnosis and novel diagnostics techniques for detection of COVID, Urea Breath Tests for Detection of Helicobacter pylori, Loop-Mediated Isothermal Amplification as Point-of-Care Diagnosis, Molecular imaging, Lab-on-a-chip Technologies, and several others
- Analyzes literature reviews, underpinning methodologies, and opportunities and limitations
- Includes case studies and examples that highlight applications using the underpinning techniques

DESCRIPTION

Evolving Landscape of Molecular Diagnostics: Applications and Techniques presents cutting-edge reviews on current and emerging technologies in the diagnosis of microbial infections. The book discusses the fundamentals of Molecular Diagnostics for bacteria, fungi, viruses and a variety of state-of-the-art diagnostics tools and techniques for obtaining qualitative and quantitative results. It includes topics such as Next generation sequencing and application of "OMICS" for early disease diagnosis. Sections cover the entire spectrum of emerging diagnostic tools and techniques, as well as the principles, pros and cons of each method and applications for diagnosis of infectious disease in plants, humans and veterinary. This is a resource for both researchers and students working in clinical microbiology, infectious biology, applied life sciences and scientists working in the clinical diagnostic industry.



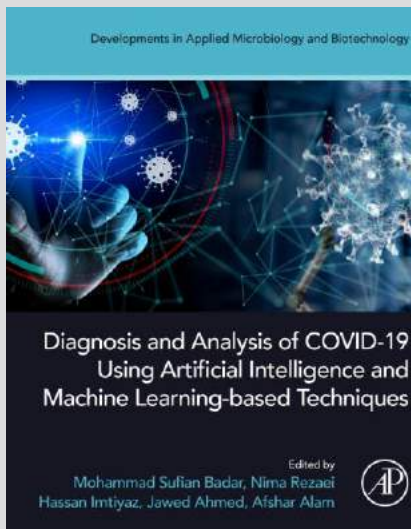
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Diagnosis and Analysis of COVID-19 using Artificial Intelligence and Machine Learning-Based Techniques

Edited by : **Mohammad Sufian Badar**, Senior Teaching Faculty, Department of Bioengineering, University of California, Riverside, CA, USA; **Nima Rezaei**, Professor, Department of Immunology, School of Medicine; Head, Research Center for Immunodeficiencies, Children's Medical Center, Tehran University of Medical Sciences; Founding President, Network of Immunity in Infection, Malignancy and Autoimmunity (NIIMA), Universal Scientific Education and Research Network (USERN), Tehran, Iran; **Hassan Imtiyaz**, Assistant Professor, Premier Central University, Jamia Millia Islamia (JMI), New Delhi, India

ISBN: 9780323953740
PUB DATE: Jul 01, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 302
AUDIENCE: Researchers, scientists, graduate students in virology, infectious diseases, artificial intelligence and machine learning, government agencies, health workers, NGOs, public health professionals, graduates, academicians, and researchers in related fields
BIC CODES: PSGL
THEMA CLASSIFICATION: THEMAPSG

Multidisciplinary resource that highlights the application of artificial intelligence and machine learning-based technologies in the fight against COVID-19

A Volume in the *Developments in Applied Microbiology and Biotechnology* Series

KEY FEATURES

- Describes the molecular basis of pathogenesis, epidemiology, transmission mechanism, diagnostic approaches, and the mutational landscape of SARS-CoV-2
- Provides insights into post COVID-19 symptoms and consequences
- Demonstrates how machine learning, AI, and IoT is used to diagnose and fight COVID-19 infection
- Examines the use of Blockchain technology/IoT and interpretation and validation of data obtained from artificial intelligence

DESCRIPTION

Diagnosis and Analysis of COVID-19 using Artificial Intelligence and Machine Learning-Based Techniques offers new insights and demonstrates how machine learning (ML), artificial intelligence (AI), and (Internet of Things (IoT) can be used to diagnose and fight COVID-19 infection. Sections also discuss the challenges we face in using these technologies. Chapters cover pathogenesis, transmission, diagnosis, and treatment strategies for COVID-19, Artificial Intelligence and Machine Learning, and Blockchain /IoT Blockchain technology, examining how AI can be applied as a tool for detection and containment of the spread of COVID-19, and on the socioeconomic and educational post-pandemic impacts of the disease.

This is a multidisciplinary resource for those engaged in researching COVID-19 and how emerging technologies are being used as tools for detection, transmission and treatment strategies.



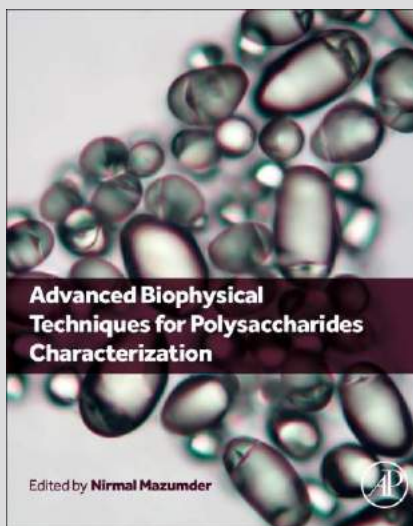
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Advanced Biophysical Techniques for Polysaccharides Characterization

Edited by : **Nirmal Mazumder**, Assistant Professor, Department of Biophysics, Manipal School of Life Sciences, Manipal Academy of Higher Education, Manipal, Karnataka, India

ISBN: 9780443140426
PUB DATE: Jul 01, 2024
LIST PRICE: £126.00 / \$165.00 / €143.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 191 x 235

PAGES: c. 316

AUDIENCE: Researchers in the field of biophysics, molecular biology, biochemistry, pharmaceuticals, food science and related areas, Students in biophysics, molecular biology, biochemistry, food science and related areas

BIC CODES: PSD

THEMA CLASSIFICATION:
THEMAPSD

Explores biophysical techniques available for analyzing a range of polysaccharides

KEY FEATURES

- Covers a range of biophysical techniques for polysaccharide analysis, including NMR, Dynamic Nuclear Polarization, mass spectrometry approaches, X ray diffraction, light scattering, and TEM techniques
- Investigates an array of polysaccharides such as glycogen, xanthan, hyaluronan, and more
- Includes an introduction to the sources, types, and benefits of polysaccharide
- Considers applications of polysaccharides in various industries, including biomedicine, pharmaceuticals, and the food industry

DESCRIPTION

Advanced Biophysical Techniques for Polysaccharides Characterization offers detailed insights into the cutting-edge techniques available for the identification, quantification, characterization, and structural analysis of polysaccharides. A wide range of techniques are covered, including scanning electron microscopy (SEM), atomic force microscopy (AFM), optical microscopy, non-linear optical microscopy and spectroscopic techniques like Fourier transform Infrared (FTIR), X ray diffraction, light scattering, and nuclear magnetic resonance (NMR). Various polysaccharides are investigated, along with their applications across a range of industries. Each chapter offers a detailed description of the techniques before delving into case studies covering the latest advances.

This book provides a one-stop solution to the latest advanced microscopic and spectroscopic techniques for investigating a range of important polysaccharides and is an ideal reference for researchers in the field of biophysics, molecular biology, biochemistry, pharmaceuticals, food chemistry and related areas.



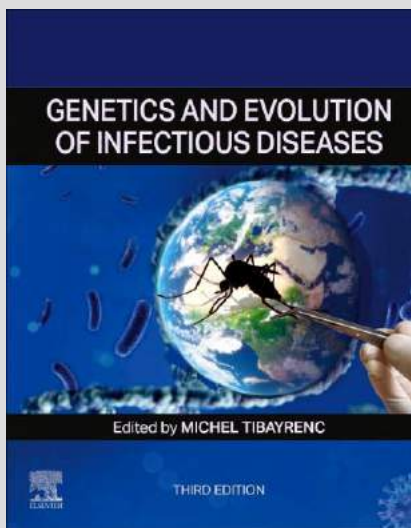
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Genetics and Evolution of Infectious Diseases, 3e

Edited by : **Michel Tibayrenc**, PhD, Infectious Diseases and Vectors, Ecology, Genetics, Evolution and Control, IRD Center, Montpellier, France

ISBN: 9780443288180
PREVIOUS ISBN: 9780127999425
PUB DATE: Jul 01, 2024
LIST PRICE: £170.99 / \$210.00 / €199.99

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 7.50w x 9.25h

PAGES: c. 670

AUDIENCE: Researchers in infectious diseases, epidemiology, genetics and evolutionary biology and health professionals, Advance undergraduate, graduate and Postgraduate students in medicine, veterinary medicine, and biology; public health researchers and professionals

BIC CODES: MJCL2, MJCJ, PSG

THEMA CLASSIFICATION: THEMAPSG; THEMAMJCL2; THEMAMJJCJ

Covers the main features and applications in the study of infectious diseases to illustrate modern technologies and evolutionary approaches

KEY FEATURES

- Takes an integrated approach to infectious diseases
- Provides the latest developments in the field of infectious diseases
- Focuses on the contribution of evolutionary and genomic studies for the study and control of transmissible diseases
- Includes updated and revised contributions from leading authorities, along with six new chapters

DESCRIPTION

Genetics and Evolution of Infectious Diseases, Third Edition discusses the evolving field of infectious diseases and their continued impact on the health of populations, especially in resource-limited areas of the world where they must confront the dual burden of death and disability due to infectious and chronic illnesses. Although substantial gains have been made in public health interventions for the treatment, prevention, and control of infectious diseases, in recent decades the world has witnessed the emergence of the human immunodeficiency virus (HIV) and the COVID-19 pandemic, increasing antimicrobial resistance, and the emergence of many new bacterial, fungal, parasitic, and viral pathogens.

Fully updated and revised, this new edition presents the consequences of such diseases, the evolution of infectious diseases, the genetics of host-pathogen relationship, and the control and prevention strategies that are, or can be, developed. This book offers valuable information to biomedical researchers, clinicians, public health practitioners, decisions-makers, and students and postgraduates studying infectious diseases, microbiology, medicine, and public health that is relevant to the control and prevention of neglected and emerging worldwide diseases.



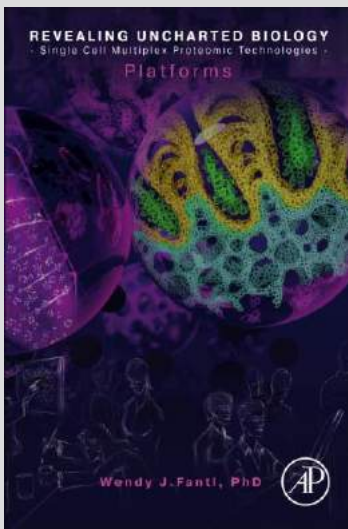
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Revealing Uncharted Biology with Single Cell Multiplex Proteomic Technologies

Platforms

Edited by : **Wendy Fantl**, Assistant Professor, Department of Urology and by-courtesy appointment in Obstetrics and Gynecology, Stanford University, CA, USA

ISBN: 9780128222096
PUB DATE: Jun 28, 2024
LIST PRICE: \$175.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 279
AUDIENCE: PhD students, young researchers and junior faculty members in biomedical sciences, Pharmaceutical Sciences Researchers
BIC CODES: PSF
THEMA CLASSIFICATION: THEMPSF

A complete guide on currently available Multiplex Single Cell Proteomics research techniques

KEY FEATURES

- Covers the most relevant Multiplex techniques applied to Proteomics
- Provides insights into using the right tool for the biological question of interest
- Discusses applications of techniques in several settings
- Presents an overview on the use of combined techniques

DESCRIPTION

Revealing Uncharted Biology with Single Intact Cells: Currently Available Platforms enables researchers in bioscience to visualize cellular phenomena at an unprecedented scale and rate. The book's editors provide an overview of each of the most current techniques, both individually and when used in conjunction. Sections cover CyTof, Multicolor fluorescence cytometry, CODEX multiplexed imaging, MIBI, Imaging Mass Cytometry, Multi resolution cell orientation, Confocal microscopy, QPI and Fluorescence microscopy, CyTOF and SCRNA Seq, CyTOP and scATAC Seq, and CyTOF and ATAC See, and the application of the techniques to biological questions, including chapters on cellular diversity and generating hypothesis through data analysis.

The final part is dedicated to further the reader's understanding of complex biological systems by identifying new clinical tools and drug development. This book is the ideal reference for researchers who want to understand the variety of multiplex visualization techniques available for bioscientists and how to make better decisions on how to apply them to the biological question of interest.



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Revealing Uncharted Biology with Single Cell Multiplex Proteomic Technologies

Applications

Edited by : **Wendy Fantl**, Assistant Professor, Department of Urology and by-courtesy appointment in Obstetrics and Gynecology Stanford University, CA, USA

ISBN: 9780128222133
PUB DATE: Jun 28, 2024
LIST PRICE: £80.99 / \$150.00 / €92.99

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 279

AUDIENCE: PhD students, young researchers and junior faculty members in biomedical sciences, Immunology and Cancer Researchers

BIC CODES: PSF

THEMA CLASSIFICATION:
THEMAPSF

Presents practical advice on designing your experiments with Multiplexed Single-Cell analytical techniques

KEY FEATURES

- Provides insights into the path to success of key research articles based on Multiplex Single-Cell analysis techniques results
- Contains detailed method information
- Discusses strengths and limitations of techniques applied to each research domain covered
- Includes discussions on the failures encountered along the research path and how to avoid them

DESCRIPTION

Revealing Uncharted Biology with Single Intact Cells: Case Studies explores the path to research success, key projects, the role of techniques, the selection process, other alternatives considered, what other paths have led to dead ends, detailed protocols followed, and how the analysis of generated data allowed researchers to visualize uncharted biology. Focusing on the research journey that led to the publication of each article, the book's editors interviewed the researchers on the use of the Multiplex Single Cell technique and how it helped hone in on the biological quest. These methods can be expanded to a wide variety of research objectives.

In conclusion to each chapter, the authors critically review their process and provide suggestions of improvement or alternate techniques that could be employed. This book is the ideal reference for researchers new to the world of single-cell multiplex techniques. The discussion on failures encountered along the research path provides insights on how to avoid repeating the same errors.



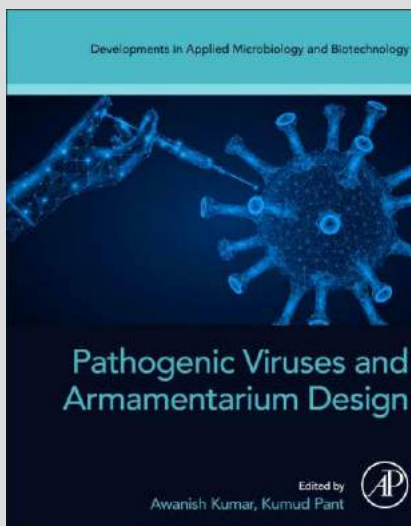
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Pathogenic Viruses and Armamentarium Design

Edited by : **Awanish Kumar**, Ph.D, Associate Professor, Department of Biotechnology, National Institute of Technology Raipur, India and **Kumud Pant**, Department of Biotechnology, Graphic Era University, Uttarakhand, India

ISBN: 9780443152412
PUB DATE: Jun 28, 2024
LIST PRICE: £115.00 / \$150.00 / €131.00

DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 209

AUDIENCE: Researchers and investigators working in pathogenic human viruses. Researchers in applied microbiology, molecular biology, biotechnology, biochemistry, pharmaceutical industry, Medicinal Chemistry, Drug Discovery etc. Basic and applied scientists of different disciplines (microbiologist, molecular biologists, medicinal chemists,) specialists in different sub-disciplines of phytomedicines, and students in postgraduate and PhD programs, The incorporation of software and tools will help both experienced and new bioinformaticians and students

BIC CODES: PSGL

THEMA CLASSIFICATION: THEMAPSG

Provides information on pathogenic viruses and armamentarium design, including standards and novel technologies applied to the molecular diagnosis of viral infections

A Volume in the *Developments in Applied Microbiology and Biotechnology Series*

KEY FEATURES

- Provides an overview of human pathogenic viruses, viral entry and disease progression, and strategic approaches to combating existing and evolving viruses
- Explores available techniques for clinical diagnostics, virology, and viral immune diagnostics
- Comprehensively discusses antiviral drugs, their targets, mechanism of action, design, and development challenges

DESCRIPTION

Pathogenic Viruses and Armamentarium Design covers the latest developments in viral target elucidation and viral control using wet and dry lab strategies. The control and combat strategies and their implementation compiled in this book are invaluable in aiding the understanding of viral disease progression and for designing new strategies against existing and evolving viruses.

This important resource is a comprehensive compilation of antiviral approaches designed and devised using computational and other laboratory techniques. This book is a useful reference for scientists, researchers, industry professionals, advanced students, and postgraduates in virology, biotechnology, infection biology, biochemistry, and pharmaceutical sciences who engaged in the study of pathogenic virus and the development of prophylactics and therapeutics against viral infection.



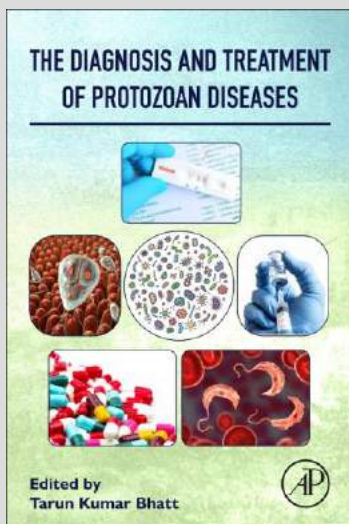
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The Diagnosis and Treatment of Protozoan Diseases

Edited by : **Tarun Kumar Bhatt**, Assistant Professor, Department of Biotechnology, Central University of Rajasthan, India

ISBN: 9780443191619
PUB DATE: Jun 14, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 372

AUDIENCE: Professional researchers in the field, and graduate students, working in the area of protozoan parasites and drug development to combat the diseases, Medical professionals involved in protozoan parasite diseases

BIC CODES: MJCM, MMG

THEMA CLASSIFICATION: THEMAMKG; THEMAMJCM

Presents comprehensive coverage of protozoan diseases and their lifecycle, diagnostics, and treatment

KEY FEATURES

- Presents comprehensive coverage on all aspects of major protozoan diseases
- Includes updates on their lifecycle, diagnostics, and treatment
- Covers future research that may help eradicate these diseases

DESCRIPTION

The Diagnosis and Treatment of Protozoan Diseases discusses major protozoan diseases such as Malaria, Leishmaniasis, etc., including other clinically minor protozoan diseases. This book provides all essential information to professional researchers and medical personnel about the disease, causative organism, and their lifecycle, diagnostics, and treatments, including drugs and vaccine, resistance, and key points of future research. Infectious diseases are accountable for millions of deaths every year throughout the globe. Among them, significant contributors are protozoan parasites.

Despite the many research group working on the various protozoan diseases, there are still major gaps to fill. The authors of this book have critically reviewed all the aspects of major protozoan diseases, their diagnostics, and treatments, including resistance.



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Bioactive Microbial Metabolites

Scope and Challenges

Edited by : **Vaibhav Mishra**, Department of Neurology, University of Missouri, MO, USA; **Jitendra Mishra**, Project Coordinator, Science Technology and Innovation Hub Project, Catalyzed and Supported by DST-SEED Babasaheb Bhimrao Ambedkar University (a Central University), Lucknow, Uttar Pradesh, India and **Naveen Kumar Arora**, FISEB, Professor and Dean, School of Earth and Environmental Sciences, Babasaheb Bhimrao Ambedkar University (a Central University), Lucknow, Uttar Pradesh, India

ISBN: 9780443185687
PUB DATE: Jun 01, 2024
LIST PRICE: £135.00 / \$175.00 / €155.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 325
AUDIENCE: Research students, academicians, and scientists in environmental microbiology and biotechnology, Industry personnel related to microbiology/ biotechnology
BIC CODES: PSGD
THEMA CLASSIFICATION: THEMPSG

Provides understanding of metabolic pathways for bioactive metabolite production which plays an important role in modern healthcare

A Volume in the *Developments in Applied Microbiology and Biotechnology Series*

KEY FEATURES

- Focuses on the identification and structure elucidation of novel microbial metabolites
- Uncovers extended functions of microbial metabolites
- Provides understanding of metabolic pathways for bioactive metabolites production by using several illustrations, figures and tables so that the readers can easily grasp key concepts

DESCRIPTION

Bioactive Microbial Metabolites: Scope and Challenges not only focuses on the identification, separation and purification of bioactive metabolites, the book also provides an understanding of the metabolic pathways for bioactive metabolites production that play an important role in modern healthcare as frontline treatments for many diseases. This is a valuable reference for research students, academicians and scientists in environmental microbiology and biotechnology, and for industry personnel related to microbiology/ biotechnology. The science discussed herein plays an important role in expanding the market of antibiotics, food and agriculture but also offers eco-friendly, safer and profitable solutions to respective industries.



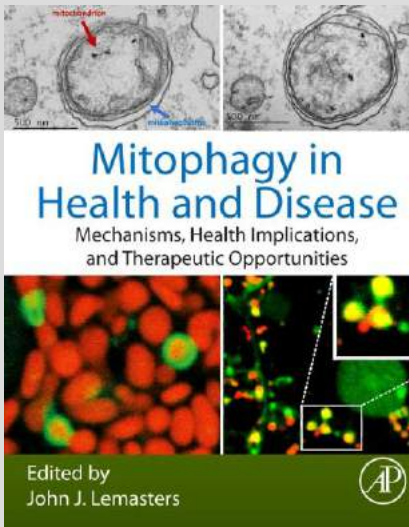
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Mitophagy in Health and Disease

Mechanisms, Health Implications, and Therapeutic Opportunities

Edited by : **John J. Lemasters**, MD, PhD, Professor and GlaxoSmithKline Distinguished Endowed Chair, Director, Cell & Molecular Imaging Core, Departments of Drug Discovery and Biomedical Sciences and Biochemistry and Molecular Biology, Medical University of South Carolina, USA

ISBN: 9780443152603
PUB DATE: Oct 01, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 325
AUDIENCE: Graduate students and researchers in cell and molecular biology at the PhD level, Established researchers in other areas, seeking a deeper understanding of mitophagy will also find this book helpful in becoming proficient in the area, Research physicians in medical fields involved with mitochondrial issues, including pneumologists, cardiologists, neurologists and others
BIC CODES: PSF
THEMA CLASSIFICATION: THEMPSF

A complete reference on mitophagy edited by the preeminent pioneer on the subject

KEY FEATURES

- Covers biologic machinery and mechanisms involved with mitophagy
- Explores changes in mitophagy across the human lifespan
- Points out directions in targeting mitophagy with therapeutic interventions

DESCRIPTION

Mitophagy in Health and Disease: Mechanisms, Health Implications, and Therapeutic Opportunities is a complete reference to this key cellular process involved in homeostasis. The book addresses the machinery and mechanisms of mitophagy, including an overview of mito-biogenesis and dynamics and specific types of mitophagy. Other sections cover mitophagy across the human lifespan, from development to aging, discussing the interplay between inflammation and several conditions. The final part covers therapeutic opportunities presented by targeting mitophagy, including inducers and inhibitors, targeting strategies, and studies specific to cardioprotection and neurodegenerative diseases prevention.

This is the ideal reference for cellular and molecular biologists needing a consistent and thorough overview of the subject, as well as research physicians in areas where mitochondria play a key role.



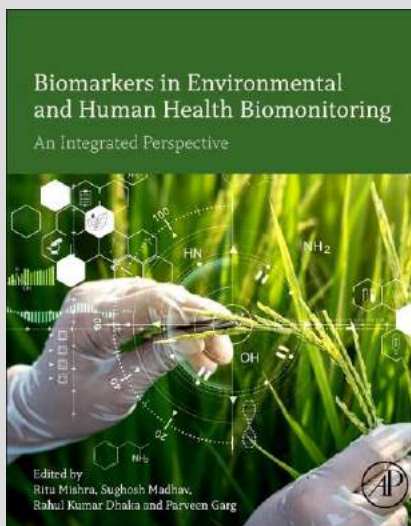
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Biomarkers in Environmental and Human Health Biomonitoring

An Integrated Perspective

Edited by : **Ritu Mishra**, Assistant Professor at Department of Botany, University of Allahabad, Prayagraj, India; **Sughosh Madhav**, Postdoctoral Fellow, Department of Civil Engineering, Jamia Millia Islamia, New Delhi, India; **Rahul Kumar Dhaka**, Assistant Professor, Chaudhary Charan Singh Haryana Agricultural University (CCS HAU), Department of Chemistry, College of Basic Sciences & Humanities, Hisar, Haryana, India and **Parveen Garg**, Principal and Professor, Swami Shradhanand College, University of Delhi, New Delhi, India

ISBN: 9780443138607
PUB DATE: Jun 05, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00

DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 396
AUDIENCE: Researchers in environmental toxicology and environmental science studying the biomonitoring of living organisms for the analysis and detection of accumulated toxicity levels in an ecosystem, its potential impact on environmental and human health
BIC CODES: MMTG
THEMA CLASSIFICATION: THEMAMKGT

Interdisciplinary reference that provides a holistic view of the biomonitoring of environmental degradation and associated human health concerns

KEY FEATURES

- Covers the fundamentals, types, significance, and limitations of biomarkers
- Examines various types of plants, animals, and secondary metabolites in identifying and monitoring toxicity in different ecosystems and potential impacts on health
- Reviews biomarker-based and bioinformatic tools in the detection and monitoring of environmental pollution and associated human health

DESCRIPTION

Biomarkers in Environmental and Human Health Biomonitoring: An Integrated Perspective provides a holistic view of the biomonitoring of environmental degradation, accumulated toxicity, and associated human health concerns. The book incorporates theoretical and practical aspects of the biomonitoring of environmental pollution and the health surveillance of ecological communities using samples from living organisms which are analyzed for contaminants and toxin levels. In the first half, the book provides a general overview of the different types of biomarkers, their significance as bioindicators for contaminants and detection of toxicity, as well as how they can be utilized in the restoration of degraded ecosystems.

The second half of the book discusses molecular biomarkers and how they are used as diagnostic and prognostic tools for pollution monitoring. It also reviews analytical tools used to validate the biomarkers in the detection and monitoring of pollution and disease. Finally, the book delves into how novel approaches like genetic ecotoxicology; Big Data, and artificial intelligence calculates the potential consequences of environmental pollution on the ecosystems and on human health.



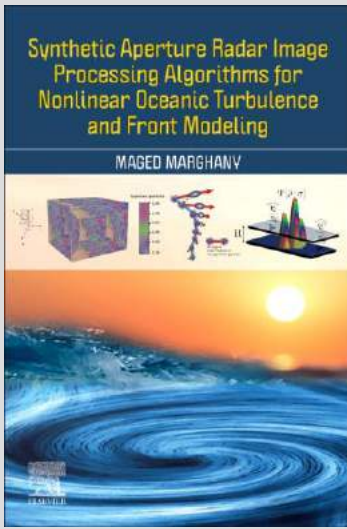
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LIFE SCIENCES Toxicology

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Synthetic Aperture Radar Image Processing Algorithms for Nonlinear Oceanic Turbulence and Front Modeling

Maged Marghany, Professor, Department of Informatics, Faculty of Mathematics and Natural Sciences, Universitas Syiah Kuala Darussalam, Banda Aceh, Indonesia

ISBN: 9780443191558
PUB DATE: Aug 01, 2024
LIST PRICE: £141.99 / \$175.00 / €163.99

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 232

AUDIENCE: Researchers and academics in dynamic oceanography and modelling, remote sensing and aquatic science Geographers, Geophysicists, Environmental Engineers

BIC CODES: RBKC

THEMA CLASSIFICATION: THEMARBKC

Comprehensively details the potential of synthetic aperture radar in imaging ocean surface dynamical features

KEY FEATURES

- Details the potential of synthetic aperture radar in imaging ocean surface dynamical features
- Includes detailed algorithms and methods, allowing readers to develop their own computer algorithms
- Covers the latest applications of quantum image processing

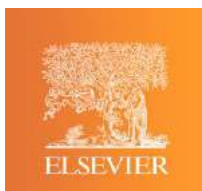
DESCRIPTION

Synthetic Aperture Radar Image Processing Algorithms for Nonlinear Oceanic Turbulence and Front Modelling is both a research and practice-based reference that bridges the gap between the remote sensing field and the dynamic oceanography exploration field. In this perspective, the book explicates how to apply techniques in synthetic aperture radar and quantum interferometry synthetic aperture radar (QInSAR) for oceanic turbulence and front simulation and modeling. It includes detailed algorithms to enable readers to better understand and implement practices covered in their own work and apply QInSAR to their own research.

This multidisciplinary reference is useful for researchers and academics in dynamic oceanography and modeling, remote sensing and aquatic science, as well as geographers, geophysicists, and environmental engineers.

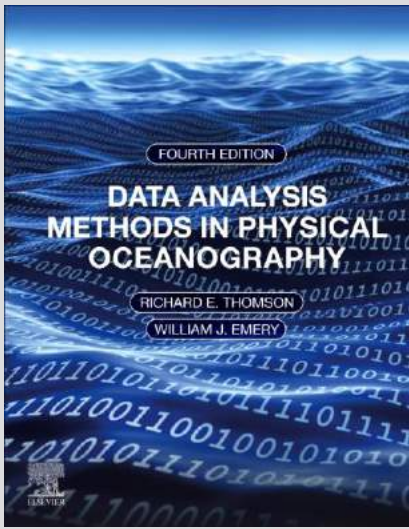


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Data Analysis Methods in Physical Oceanography, 4e

Fourth and Revised Edition

Richard E. Thomson, Senior Research Scientist and Head of the Ocean Dynamics and Processes Section, Institute of Ocean Sciences, Sidney, British Columbia, Canada and **William J. Emery**, Professor, Aerospace Engineering Sciences, University of Colorado, Boulder, USA

ISBN: 9780323917230
PUB DATE: Jul 01, 2024
LIST PRICE: £49.95 / \$60.00 / €51.95
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 744
AUDIENCE: Oceanographers, atmospheric scientists, meteorologists, climatologists, and upper-undergraduate and graduate students studying statistical methods in oceanography, meteorology, and climatology, Engineers
BIC CODES: TQD, RN, RNC, RBKC, PSVT7
THEMA CLASSIFICATION: THEMADPM; THEMATQ; THEMPSAF; THEMARBKC

Comprehensive, practical source of information on data analysis methods available to the physical oceanographer

KEY FEATURES

- Includes content co-authored by scientists from academia and industry, both of whom have more than 30 years of experience in oceanographic research and field work
- Provides boxed worked examples that address typical data analysis problems, including examples with computer code (e.g., python code, MATLAB code)
- Presents brief summaries at the end of the more difficult sections to help readers looking for foundational information

DESCRIPTION

Data Analysis Methods in Physical Oceanography: Fourth Edition provides a practical reference to established and modern data analysis techniques in earth and ocean sciences. In five sections, the book addresses data acquisition and recording, data processing and presentation, statistical methods and error handling, analysis of spatial data fields, and time series analysis methods. The updated edition includes new information on autonomous platforms and new analysis tools such as “deep learning” and convolutional neural networks. A section on extreme value statistics has been added, and the section on wavelet analysis has been expanded.

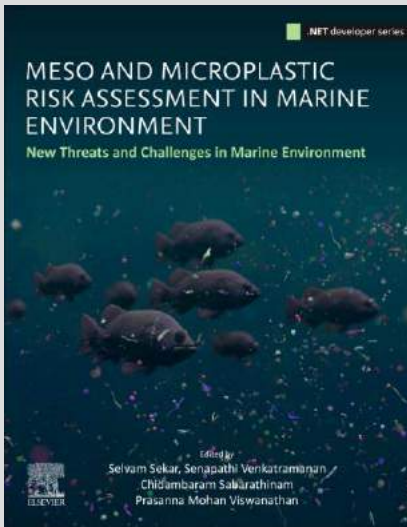
This book brings together relevant techniques and references recent papers where these techniques have been trialed. In addition, it presents valuable examples using physical oceanography data. For students, the sections on data acquisition are useful for a compilation of all the measurement methods.



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EARTH & ENVIRONMENT Ocean Science
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Meso- and Microplastic Risk Assessment in Marine Environments

New Threats and Challenges

Edited by : **Selvam Sekar**, PG and Research Department of Geology, V.O.Chidambaram College, Tuticorin, Tamil Nadu, India; **Senapathi Venkatramanan**, Research Faculty, Department for Management of Science and Technology Development, Faculty of Applied Science, Ton DucThang University, Ho Chi Minh City, Vietnam; **Chidambaram Sabarathinam**, Research Scientist, Water Research Center, Kuwait Institute for Scientific Research, Safat, Kuwait

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PAGES: c. 372
AUDIENCE: Aquatic Ecologists, Environmentalists, Geologists, Geochemists, Hydrogeologists, Sedimentologists, Biologists and Zoologists
BIC CODES: RNKH, RNC
THEMA CLASSIFICATION: THEMAWNW; THEMPSAF; THEMARNK

A comprehensive overview of the current trends, techniques and methods for management of microplastic contamination in sediments, water, seafood and marine systems

A Volume in the *.NET Developers Series Series*

KEY FEATURES

- Includes a range of topics from meso- to microplastics, including weathering and fragmentation processes of microplastics
- Presents data from source to sink, such as the occurrence and distribution of microplastics in freshwater bodies, coastal zones and the open ocean
- Presents the impacts of microplastics on marine life as well as microplastics as vectors of biological and chemical contaminants
- Provides important analysis on the solutions and next steps

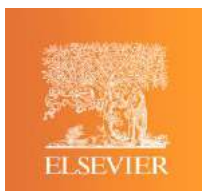
DESCRIPTION

Meso and Microplastic Risk Assessment in Marine Environment: New Threat and Challenges in Marine Environment presents an interdisciplinary approach, offering key techniques and management of microplastic contamination in the disciplines of environmental science, fisheries, oceanography, geology, chemistry, biology and ocean science. Sections cover an overview of microplastic in the marine environment, deal with the origin, occurrences, distribution and various methodologies (for dealing with microplastics) available for microplastics, address the global case study of microplastic separation using recent techniques, and discuss the impact of microplastics on human health and the surrounding environment.

This book is an important step in the field of microplastic pollution mitigation in environmental science as it offers a thorough accounting of the effects of pollutants on the environment, marine organisms, and the public health implications, as such it is relevant for aquatic ecologists, oceanographers, toxicologists, and marine biologists.



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COVER IMAGE
FORTHCOMING

TRP Channels as Therapeutic Targets, 2e

From Basic Science to Clinical Use

Edited by : **Arpad Szallasi**, PhD, Associate Professor position at the 1st Department of Pathology and Experimental Cancer Research, Semmelweis University, Budapest, Hungary

ISBN: 9780443186530
PREVIOUS ISBN: 9780124200241
PUB DATE: Aug 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00
DISCOUNT: Reference
FORMAT: Hardback
TRIM: 7.50w x 9.25h
PAGES: c. 511
AUDIENCE: Research and development scientists in the pharmaceutical industry. Clinicians interested in new drugs in the pipeline
BIC CODES: MMG, MFCC
THEMA CLASSIFICATION: THEMAMF; THEMAMKG

A comprehensive, multidisciplinary reference on TRP channels targeting and drug development

KEY FEATURES

- Presents the perspectives of several life science research specialties on the topic
- Provides a comprehensive picture of the TRP field, from TRP channel dysfunction through TRP drug discovery and development to clinical trials and everyday medical practice
- Represents an updated and complete reference

DESCRIPTION

TRP Channels as Therapeutic Targets: From Basic Science to Clinical Use, Second Edition is a comprehensive reference on the roles of TRP Channels in health and disease states. Chapters are completely updated, with new topics on TRP channels biology, the crystalline structure of TRP channels, targeting TRP channels for pain relief, the relationship with migraine, emerging pain targets, a comprehensive view of the role of TRP channels in respiratory diseases and COVID complications, anxiety relief, renal disease, arthritis, and therapeutic opportunities for thermal regulation. This is a great reference for broad segments of the scientific and medical community. Researchers working on TRP channel drug discovery will benefit from the overview of applications to conditions in specific organ systems. Clinicians interested in new drugs in the pipeline will also find this book helpful for biologic principles of action.



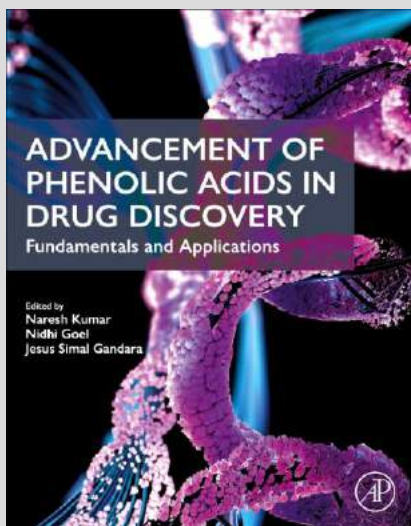
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Advancement of Phenolic Acids in Drug Discovery

Fundamentals and Applications

Edited by : **Naresh Kumar**, Assistant professor at the Department of Biochemistry, Deshbandhu College, University of Delhi, Kalkaji, New Delhi, India.; **Nidhi Goel**, Assistant Professor, Department of Chemistry, Institute of Science, Banaras Hindu University, Uttar Pradesh, India and **Jesus Simal Gandara**, Professor in Nutrition and Food Science, Faculty of Food Science and Technology, University of Vigo, Spain

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FORMAT: Paperback

TRIM: 8.50w x 10.875h

PAGES: c. 595

AUDIENCE: Graduate students, and researchers working on natural products and their applications in the biomedical and pharmaceutical fields

BIC CODES: MMG, MFCC

THEMA CLASSIFICATION:

THEMAMKG; THEMAMF

A comprehensive reference on the pharmacology and extraction of natural phenolic acids for drug design and development

KEY FEATURES

- Highlights fundamental concepts with advanced exploration of phenolic acids
- Provides in-depth coverage on the design and development of novel drugs from natural phenolic acids
- Reviews the changing role of phenolic acids

DESCRIPTION

Advancement of Phenolic Acids in Drug Discovery: Fundamental and Applications offers comprehensive coverage of the ADMET profiles of phenolic acids, their extraction method and prospects for drug design and development. Chapters overview phenolic acids and their characterization, discuss the role of phenolic acids in plant systems, present sources and detailed extraction methods of phenolic acids, and cover phenolic acid mechanisms of action as it relates to several key diseases and health conditions, including their role as antioxidant agents, anti-inflammatory and analgesic drugs, anti-microbial drugs, anti-viral drugs, anti-cancer drugs, diabetes and metabolic dysfunctions, neurological disorders, cardiovascular diseases. The book's final chapters cover nanoscience aspects of phenolic acids, biomedical applications, and concludes with challenges and opportunities presented by phenolic acids. This is the ideal reference for researchers in the fields of drug development, both in academia and corporate settings. Researchers of related areas like food science and medicinal chemistry will also benefit from this in-depth profiling of therapeutical properties of phenolic acids.



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Quality Assurance Management

A Comprehensive Overview of Real-world Applications for High Risk Specialties

Gayathri De Lanerolle, Evette Sebastien Roberts, Athar Haroon, and Ashish Shetty



Quality Assurance Management

A Comprehensive Overview of Real-World Applications for High Risk Specialties

Gayathri De Lanerolle, Digital Evidence Based Medicine Lab; **Evette Sebastien Roberts**, Audit, Compliance and Infection Prevention and Control Lead, Partnership of East London Co-operatives, London, UK; **Athar Haroon**, Consultant Radiologist, Barts Health NHS Trust, London, UK and **Ashish Shetty**, Consultant in Pain Medicine, University College London Hospitals and Associate Professor, University College London, UK

ISBN: 9780128227329
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FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 251

AUDIENCE: Research and clinical staff working in clinical research with a focus on QA manager, Trial managers and Research Operational staff working within healthcare, academia and industry

BIC CODES: MBGR1, MMG

THEMA CLASSIFICATION: THEMAMKG; THEMAMBGR

Provides a toolkit to develop quality management systems in line with the necessary and rapidly changing compliance and regulatory frameworks

KEY FEATURES

- Uses practice-based evidence for developing and delivering quality assurance and management systems
- Includes case studies associated with 'failures' and 'lessons learned'
- Discusses clinical trials in academic, clinical and industry settings
- Demonstrates how to build resilience into systems that could evolve to promote best practices, even with limited resources
- Compares and contrasts different QA/QC practices

DESCRIPTION

Quality Assurance Management: A Comprehensive Overview of Real-World Applications for High Risk Specialties demonstrates how to best design and implement standard operating procedures (SOPs) to ensure protocol and regulation adherence. The book showcases similarities and differences between healthcare and academic quality assurance systems, resulting in counter-productivity and performance issues, in addition to regulatory inspection preparedness. It uses the processes and standards of the UK to demonstrate how to combine QA and research building into 'building blocks' that share a common pathway for effective project design, analysis and unbiased interpretation of collated data. This book fills a gap, providing original research in QA that especially focuses on specialist areas. It will be of use to research and clinical staff working in clinical research within healthcare, academia and industry.



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Essentials of Translational Pediatric Drug Development

From Past Needs to Future Opportunities

Edited by : **Elke Gasthuys**, Postdoctoral researcher, Ghent University, Belgium; **Karel Allegaert**, Pediatrician-neonatologist and Clinical Pharmacologist, Professor, KU Leuven, Belgium; Senior clinical consultant, Erasmus MC Rotterdam, The Netherlands; **Lien Dossche**, Full-time Academic Staff Member, Ghent University, Belgium and **Mark Turner**, Professor of Neonatology and Research Delivery, University of Liverpool, UK

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DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 623

AUDIENCE: Translational researchers and clinicians active in the field of pediatric drug development, Pediatricians, pharmacists, general practitioners, health care professionals involved in childcare and pediatric development, clinical trial personnel, patient/parent advocacy groups, institutional review boards, regulatory authorities, and pharmaceutical industry

BIC CODES: MBGR1, MMG, KNDP, MBNS

THEMA CLASSIFICATION:

THEMAMKG; THEMAMBGR;

THEMAKND; THEMAMBNS

An indispensable guide on the key principles of pediatric drug development

KEY FEATURES

- Covers both theoretical and practical aspects of translational pediatric drug development
- Approaches the topic from different stakeholder perspectives (academics, industry, regulators, clinicians and patient/parent advocacy groups)
- Offers best practices and future perspectives for the improvement of translational pediatric drug development

DESCRIPTION

Essentials of Translational Pediatric Drug Development: From Past Needs to Future Opportunities provides integrated and up-to-date insights relevant for both translational researchers and clinicians active in the field of pediatric drug development. The book covers all key aspects from different stakeholder perspectives, providing a literature overview and careful reflection on state-of-the-art approaches. It will be an ideal guide for researchers in the field who are designing and performing high quality, innovative pediatric-adapted drug development by helping them define needs/challenges and possible solutions that advance and harmonize pediatric drug development.

Despite the broad consensus that children merit the same quality of drug treatment as any other age group, children remain frequently neglected during drug research and development. Even with the adoption of multiple legislations addressing this problem, the lack of efficacy and safety data of marketed as well as newly developed drugs still remain in the pediatric population.



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Therapeutic
Monoclonal Antibodies:
From Lot Release to Stability Testing



HARLEEN KAUR, PhD



Therapeutic Monoclonal Antibodies - From Lot Release to Stability Testing

Harleen Kaur, Biologics Division, Aurobindo Pharma Ltd., Hyderabad, India

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€131.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 186

AUDIENCE: Researchers in the
pharmaceutical sciences as well as
industrial pharmaceutical scientists,

Researchers on biosimilars,
Microbiologists, biochemists

BIC CODES: TCB, MMG

THEMA CLASSIFICATION:

THEMAMF; THEMAMKG;

THEMATCB

Comprehensive coverage of Lot release testing and stability testing of monoclonal antibodies

KEY FEATURES

- Discusses, in detail, the Lot release methods for both drug substance and drug product, along with their importance in process sample analysis
- Gives specific attention to general characteristics tests, such as pH determination, osmolality, sub-visible particle count, appearance and visible tests, and regulatory/pharmacopeial guidelines
- Includes different kinds of stability testing (real time, accelerated and stressed) and their importance and determinations on product shelf life
- Presents regulatory guidelines on ICH Q2R1, ICHQ6B and ICHQ5C, which are discussed along with analytical method validation, monoclonal antibodies physicochemical characterization and stability testing
- Provides different characterization methods and validation and development case studies of monoclonal antibodies, including biosimilars and innovators

DESCRIPTION

Therapeutic Monoclonal Antibodies: From Lot Release to Stability Testing is a highly topical resource on a subject of interest for scientists and researchers working on monoclonal antibodies' characterization, release testing, stability testing and similarity assessments of monoclonal antibodies in the biopharmaceutical industry. Monoclonal antibodies (mAbs) are large, extremely complex and dynamic biomolecules, so it can be challenging to develop well-characterized therapeutic antibodies that meet regulatory expectations that are also in-line with commercialized standards for different drug markets.

Lot release testing and understanding the stability of the mAb over a period of time, and in different environmental conditions, is an indispensable aspect of mAb physicochemical characterization. This book covers the process, including extensive analysis that starts with quantifying the purity attribute to glycan profiling and identifying the mAb primary structure. The book has a primary purpose of focusing on both Lot release testing and stability testing of monoclonal antibodies (subjects not covered in any great detail in other books).



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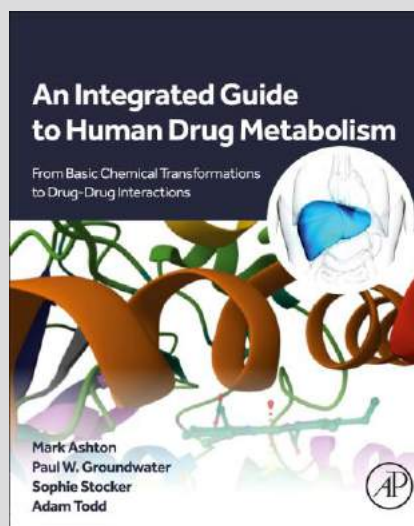
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An Integrated Guide to Human Drug Metabolism

From Basic Chemical Transformations to Drug-Drug Interactions



Mark Ashton, PhD, FRSC, FHEA, Lecturer in Medicinal Chemistry School of Pharmacy The Faculty of Medical Sciences, Newcastle University, UK; **Paul W. Groundwater**, PhD, CChem, FRSC, Professor of Medicinal Chemistry The University of Sydney School of Pharmacy Faculty of Medicine and Health, The University of Sydney, Australia; **Sophie Stocker**, PhD, BSc, Senior Lecturer The University of Sydney School of Pharmacy Faculty of Medicine and Health, The University of Sydney Sydney, Australia and **Adam Todd**, PhD, FRPharmS, SFHEA, Reader in Pharmaceutical Public Health School of Pharmacy The Faculty of Medical Sciences Newcastle University, Newcastle upon Tyne, UK

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PAGES: c. 262

AUDIENCE: Advanced students studying pharmacy and pharmacology and pharmacists, clinicians and pharmaceutical researchers in practice, academia or industry needing a reference for interdisciplinary research

BIC CODES: MMG

THEMA CLASSIFICATION: THEMAMKG

Explores human drug metabolism, from basic science to clinical relevance

KEY FEATURES

- Covers each of the human metabolic processes, employing examples drawn from known metabolic transformations of drugs used clinically
- Provides an integrated approach, linking together the science and practice strands of human drug metabolism
- Contains questions and answers to assess learning of material and real-life case studies

DESCRIPTION

An Integrated Guide to Human Drug Metabolism: From Basic Chemical Transformations to Drug-Drug Interactions uses the chemistry of each of the metabolic transformations to underpin the discussion of drug interactions with foods, herbal medicines, and other drugs. Each of the human metabolic processes are covered, employing examples drawn from known metabolic transformations of drugs used clinically. The clinical relevance of metabolism is discussed, focusing on appropriate prescribing (age-related dosage adjustments, routes of administration, and personalized medicines). Appropriate for use in the classroom or for self-study, this book is for students and researchers needing a reference for interdisciplinary research in drug interactions.

Metabolism is at the center of personalized medicine, as it is a governing factor in the response of the patient to a drug. For example, does the patient express the genes, and so enzymes, which are responsible for the metabolism of a drug? Do they express the genes responsible for the bioactivation of a prodrug into its active form? Examples of clinically used agents for which metabolic phenotyping is essential will be used to highlight the increasing necessity for understanding the genetic profile of individual patients. This book includes questions and answers to gauge learning of each chapter, real-life case studies, and the basic science as a basis for the discussion of clinical aspects.



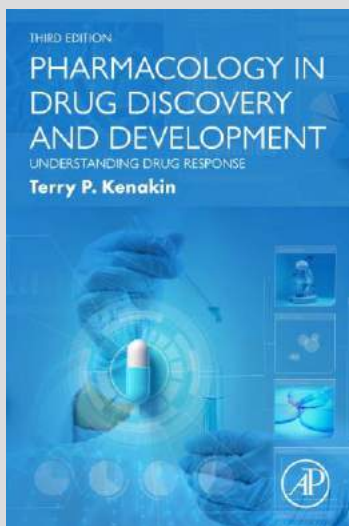
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Pharmacology in Drug Discovery and Development, 3e

Understanding Drug Response

Terry P. Kenakin, PhD, Professor, Pharmacology, University of North Carolina, USA

ISBN: 9780443141249

PREVIOUS ISBN: 9780128037522

PUB DATE: Jun 03, 2024

LIST PRICE: £76.95 / \$99.95 / €86.95

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 191 x 235

PAGES: c. 430

AUDIENCE: Scientists coming new

into the drug discovery area,

Appropriate to undergraduate students

in Pharmaceutical Science courses

and health professions in general, Lab

technicians and corporate based

researchers coming in new to drug

discovery

BIC CODES: MMG

THEMA CLASSIFICATION:

THEMAMKG

An introductory resource that illustrates how pharmacology can be used to discover and develop new drugs.

KEY FEATURES

- Fully updated, including two new chapters on the science of finding drug molecules
- Introduces the discipline to a scientist new to the area
- Demonstrates the value of pharmacology in the drug discovery process
- Presents a wide variety of techniques in simple terms
- Includes interactive exercises in the companion website

DESCRIPTION

Pharmacology in Drug Discovery and Development: Understanding Drug Response, Third Edition is an introductory resource that illustrates how pharmacology can be used to furnish the tools necessary to analyze different drug behavior and trace this behavior to its root cause or molecular mechanism of action. Chapters logically build upon one another to show how to characterize the pharmacology of any given molecule and allow for more informed predictions of drug effects in all biological systems. New chapters are dedicated to the interdisciplinary drug discovery environment in both industry and academia, and special techniques involved in new drug screening and lead optimization.

The updates to the Third Edition include a new section converting “descriptive” data into “predictive” data through comparison to mathematical models, expansion on enzymes, drug metabolites and drug–drug interactions, and two new chapters. The newly developed companion website hosts further educational resources to complement the book. As in previous editions, this new edition includes numerous valuable chapter summaries, detailed references, practical examples, and case studies throughout.



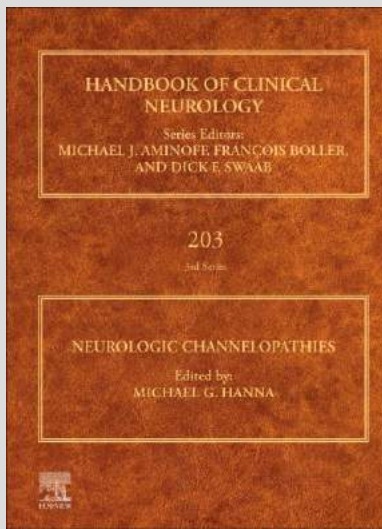
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Neurologic Channelopathies, Vol 203

Michael G. Hanna, Director, UCL Institute of Neurology, University of College London, London, UK; Professor in Clinical Neurology, National Hospital for Neurology and Neurosurgery, Queen Square, London, UK; Consultant Neurologist, National Hospital for Neurology and Neurosurgery, Queen Square, London, UK and Director, Medical Research Council (MRC) Centre for Neuromuscular Disease, London, UK

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PAGES: c. 237
AUDIENCE: Clinical neurologists
BIC CODES: MJN, MBGR, PSAN, MJG
THEMA CLASSIFICATION: THEMAMKJ; THEMAMBGR; THEMAPSAN; THEMAMFGM; THEMAMJG

Discusses the mechanism ion channels play in the CNS and PNS, with clinical presentation, assessment, and treatment for genetic and immunological channelopathies

A Volume in the *Handbook of Clinical Neurology* Series

KEY FEATURES

- Identifies importance of ion channels to CNS & PNS function
- Considers the classification, genetics, and physiology of ion channels
- Presents all major immunological and genetic channelopathies
- Provides clinical presentation, diagnosis, and treatment of channelopathies

DESCRIPTION

Neurological Channelopathies, Volume 203 begin with an introductory overview highlighting common mechanistic themes that cut across different CNS and PNS presentations, but that also have potential for common treatment approaches, considering classification, genetics, and fundamental physiology of ion channels. Subsequent chapters present a detailed consideration of all genetic and immunological channelopathies. Each chapter considers Pathophysiological underpinnings - genetic or immunological; Clinical presentations; Diagnostic approach; and Treatment and management.

In the last 15 years, a combination of detailed clinical, genetic, molecular electrophysiological, and immunological research has combined to result in a deep understanding of a subgroup of neurological diseases spanning the central and peripheral nervous system and which have become known collectively as the Neurological Channelopathies. Although it was originally considered that significant ion channel dysfunction would not be compatible with life, we now know this is often not the case, although severe disease can often be the result. Given these major advances, it is now the right time to combine this knowledge into a single HCN volume dedicated to the topics at hand.



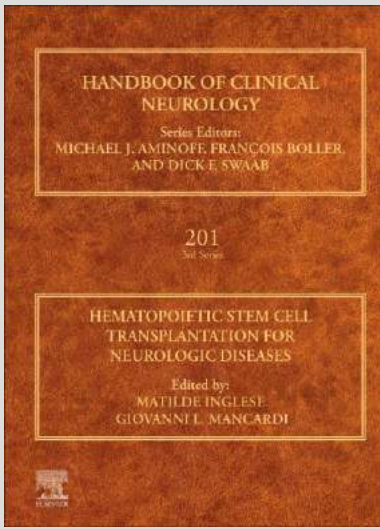
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Hematopoietic Stem Cell Transplantation for Neurologic Diseases, Vol 202

Matilde Inglese, DINOEMI, University of Genoa, Italy; IRCCS Ospedale Policlinico San Martino, Genoa, Italy and **Giovanni L. Mancardi**, Università di Genova, DINOEMI, Genova, Italy

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FORMAT: Hardback
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PAGES: c. 237
AUDIENCE: Clinical/translational Neuroscientists
BIC CODES: MJN, MBGR, PSAN, MJG
THEMA CLASSIFICATION: THEMAMKJ; THEMAMBGR; THEMAMFGM; THEMAPSAN; THEMAMJG

Summary of research on HSCT in the treatment of neurological disease and toward better understanding CNS autoimmunity

A Volume in the *Handbook of Clinical Neurology* Series

KEY FEATURES

- Reviews immunological mechanisms of HSCT and CNS autoimmunity
- Identifies neurological diseases showing treatment efficacy with HSCT
- Includes MS, myasthenia gravis, neuromyelitis optica, and more
- Covers early and late side effects of HSCT

DESCRIPTION

Hematopoietic Stem Cell Transplantation for Neurological Diseases (HSCT), Volume 201 provides the latest information on what has been evaluated as a possible therapeutic tool in severe autoimmune diseases for the last 20 years. In the neurological field, HSCT has been widely investigated for the treatment of multiple sclerosis and evidence is accumulating about its potential use in neuromyelitis optica, stiff person syndrome, myasthenia gravis, and many immune neuropathies. Besides their strong clinical relevance, studies on HSCT in neurological diseases have contributed to new insights on the pathological mechanisms underlying CNS autoimmunity, hence this volume summarizes that research.



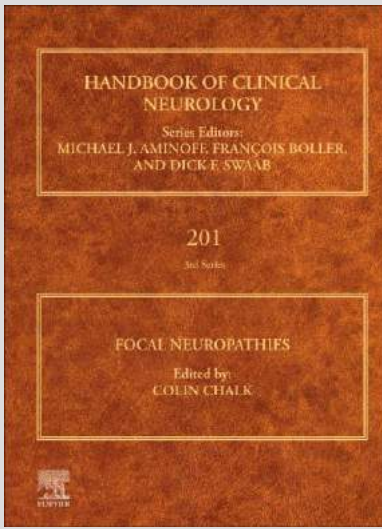
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Focal Neuropathies, Vol 201

Colin Chalk, Montréal General Hospital, Department of Neurology & Neurosurgery, McGill University, Montreal, QC, Canada

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FORMAT: Hardback
TRIM: 192 x 262mm
PAGES: c. 296
AUDIENCE: Clinical neurologists
BIC CODES: MJG, PSAN, MJN, MBGR
THEMA CLASSIFICATION: THEMAMKJ; THEMAMBGR; THEMAMFGM; THEMAMJG; THEMAPSAN

Summarizes anatomy, etiology, and new treatments for focal neuropathies

A Volume in the *Handbook of Clinical Neurology* Series

KEY FEATURES

- Summarizes new research on treatment for focal neuropathies
- Differentiates and advises on controversial diagnoses
- Includes neuropathies by location as well as syndrome or type of neuropathy
- Covers biology, diagnosis, imaging, etiology, and treatment

DESCRIPTION

Facial Neuropathies, Volume 202 summarizes research and treatment on focal neuropathies to update clinicians on nerve biology and new diagnostic techniques to guide investigation and treatment of mononeuropathies. The book explores research broadly applicable to all types of mononeuropathies as well as individual mononeuropathy syndromes. Chapters on individual mononeuropathies include anatomy, causes, controversial diagnoses, and current or potential future treatments.



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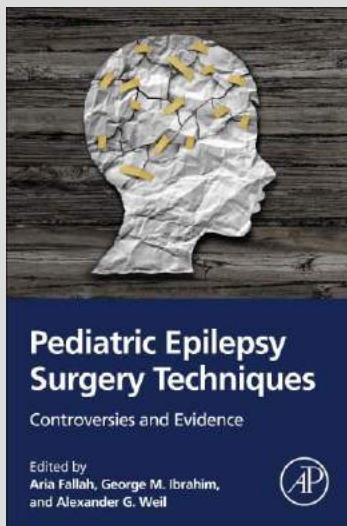
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Pediatric Epilepsy Surgery Techniques

Controversies and Evidence

Edited by : **Aria Fallah**, paediatric neurosurgeon at UCLA Mattel Children's Hospital. He is the Director of Pediatric Neurosurgery at UCLA Mattel Children's Hospital and an Assistant Professor of Neurosurgery, and Pediatrics at the David Geffen School of Medicine at UCLA as well as an Assistant Professor in Health Policy & Management in the UCLA Fielding School of Public Health.; **George M. Ibrahim**, Paediatric Neurosurgeon, The Hospital for Sick Children (SickKids); Assistant Professor in Biomedical Engineering, Institute of Medical Sciences; Department of Surgery, University of Toronto, Canada; **Alexander G. Weil**, Paediatric Neurosurgeon, Sainte-Justine University Hospital and Assistant Professor, Department of Surgery and Neuroscience, University of Montreal, Canada



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PAGES: c. 279
AUDIENCE: Neurosurgeons, epileptologists, neurologists, neuropsychologists, neurophysiologists, neuroscientists
BIC CODES: MJN, MJW
THEMA CLASSIFICATION: THEMAMKJ; THEMAMKD

A comprehensive reference on surgical techniques in drug-resistant pediatric epilepsy

KEY FEATURES

- Discusses state-of-the-art technology in the surgical treatment of pediatric drug-resistant epilepsy
- Provides an up-to-date overview of current controversies, competing approaches, and their relative evidence, indications, advantages, and disadvantages for pediatric epilepsy surgery
- Outlines evidence-based recommendations to guide decision-making in pediatric epilepsy surgery

DESCRIPTION

Pediatric Epilepsy Surgery Techniques: Controversies and Evidence offers clinicians a roadmap for navigating the complex decision-making process involved in selecting surgical interventions for children with drug-resistant epilepsy. Over the last decade, the landscape of pediatric epilepsy surgery has undergone substantial transformation, marked by the introduction of several emerging technologies that are now supported by an expanding body of evidence, yet leading to a wide range of treatment practices. This book addresses several decision-making dichotomies in pediatric epilepsy surgery, both in terms of established and novel surgical modalities and techniques. The book explores long-standing debated topics, such as the relative benefits of disconnective compared to resective strategies, the utility of surgical adjuncts like intra-operative electrocorticography, as well as rationales for different surgical approaches, namely selective amygdalo-hippocampectomy versus anteromesial temporal lobectomy. Further, it addresses dichotomies between traditional approaches and contemporary modalities, such as microsurgical resection versus laser interstitial thermal therapy. Chapters also offer comparisons of modern technologies, such as different neuromodulation strategies, including vagus nerve stimulation, deep brain stimulation, and responsive neurostimulation.

This book provides readers with the relevant scientific literature and expert commentary to inform evidence-based approaches to surgical care in pediatric drug-resistant epilepsy.



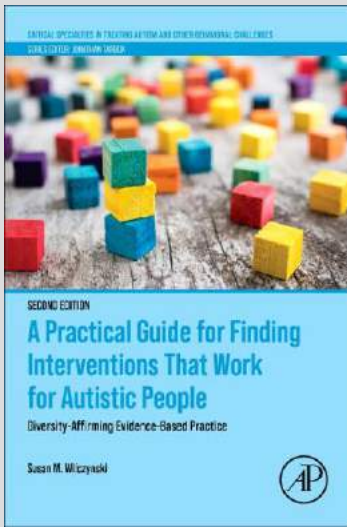
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A Practical Guide for Finding Interventions That Work for Autistic People, 2e

Diversity-Affirming Evidence-Based Practice

Susan M. Wilczynski, Ball State University, Teachers College, Muncie, IN, USA

ISBN: 9780443156328
PREVIOUS ISBN: 9780128094808
PUB DATE: Aug 05, 2024
LIST PRICE: £60.95 / \$79.95 / €69.95
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 256
AUDIENCE: Clinical psychologists, Psychiatrists, Board Certified Behavior Analysts (BCBAs), and other professionals who work directly with children with ASD
BIC CODES: MMJT, JMC, JM
THEMA CLASSIFICATION: THEMAJBSP1; THEMAJMC; THEMAJM

Provides a logical, culturally sensitive, and values-based resource for helping practitioners make informed decisions for autistic patients

A Volume in the *Critical Specialties in Treating Autism and other Behavioral Challenges* Series

KEY FEATURES

- Presents a detailed description of the diversity-affirming evidence-based practice decision-making model
- Offers a framework that helps practitioners integrate the best available evidence with client values and context
- Demonstrates how to culturally adapt interventions and center decision-making on the client
- Guides practitioners through the process of assessing intervention outcomes that fit with client values and contextual variables
- Provides numerous concrete examples involving Autistic people holding many intersecting identities

DESCRIPTION

A Practical Guide for Finding Interventions that Work for Autistic People: Diversity Affirming Evidence-Based Practice, second edition, provides a socially valid, culturally sensitive, and person-centered resource to aid practitioners in guiding the selection of effective interventions. By providing multiple illustrative examples, practitioners will learn to use their professional judgment to integrate the best available evidence with client values and context. The second edition includes new chapters on diversity affirmation and cultural adaptations of interventions, quality of life, self-determination, guided decision-making, and ethics as foundational skills for identifying effective, socially valid interventions that are delivered with compassion and assent/consent.



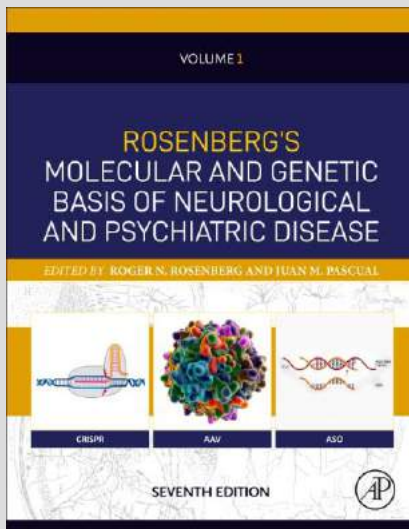
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Rosenberg's Molecular and Genetic Basis of Neurological and Psychiatric Disease, Seventh Edition, Vol 1, 7e

Volume 1

Edited by : **Roger N. Rosenberg**, Abe (Brunky), Morris and William Zale Distinguished Chair in Neurology, Professor of Neurology and Neurotherapeutics, Founding Director, Alzheimer's Disease Center Head, Section on Memory and Behavioral Neurology, University of Texas Southwestern Medical Center, Dallas, Texas, USA;

ISBN: 9780443190414
PREVIOUS ISBN: 9780128139554
PUB DATE: Jul 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 939

AUDIENCE: Practitioners including neurologists, psychiatrists and genetic counselors, trainee physicians and laboratory researchers interested in neurogenetics and molecular neuroscience

BIC CODES: PSAN, MJN, PSAK, MBGR

THEMA CLASSIFICATION: THEMAPSAN

A complete introduction and reference on the neurogenetic concepts and tools of neurological diseases

KEY FEATURES

- Both volumes combined provide a comprehensive coverage on the neurogenetic foundation of neurological and psychiatric disease
- This volume provides a detailed introduction on both the clinical and basic research implications of molecular and genetics surrounding the brain
- Includes new chapters on genomics of human neurological disorders, CRISPR and genome engineering

DESCRIPTION

Rosenberg's Molecular and Genetic Basis of Neurologic and Psychiatric Disease, Seventh Edition, provides a comprehensive introduction and reference to the foundations and key practical aspects relevant to neurologic and psychiatric disease. This volume has been thoroughly revised and includes newly commissioned chapters on ethics, genetic counselling and genet therapy for the central nervous system disorders. A favorite of over four generations of students, clinicians and scholars, this new edition retains and expands the informative, concise and critical tone of the previous edition. This is an essential reference for general medical practitioners, neurologists, psychiatrists, geneticists, and related professionals, and for the neuroscience and neurology research community at large.



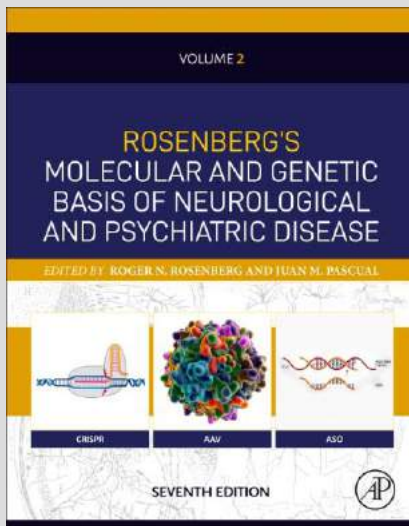
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LIFE SCIENCES Neuroscience

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Rosenberg's Molecular and Genetic Basis of Neurological and Psychiatric Disease, Seventh Edition, Vol 2, 7e

Volume 2

Edited by : **Roger N. Rosenberg**, Abe (Brunky), Morris and William Zale Distinguished Chair in Neurology, Professor of Neurology and Neurotherapeutics, Founding Director, Alzheimer's Disease Center Head, Section on Memory and Behavioral Neurology, University of Texas Southwestern Medical Center, Dallas, Texas, USA

ISBN: 9780443191763
PUB DATE: Jul 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 772

AUDIENCE: Practitioners including neurologists, psychiatrists and genetic counselors, trainee physicians and laboratory researchers interested in neurogenetics and molecular neuroscience

BIC CODES: MBGR, MJN

THEMA CLASSIFICATION: THEMAMKJ; THEMAMBGR

A complete introduction and reference on specific neurogenetics of neurological and psychiatric disease

KEY FEATURES

- Both volumes combined provide a comprehensive coverage on the neurogenetic foundation of neurological and psychiatric disease
- This volume presents detailed coverage of disease mechanisms, and management for degenerative disorders, movement disorders, and muscle and neuromuscular junction disorders.
- Includes new chapters on the pharmacogenomics of Alzheimer's Disease and Epilepsy and the most recent updates in molecular genetics, focusing on pain genetics and muscular dystrophy

DESCRIPTION

Rosenberg's Molecular and Genetic Basis of Neurologic and Psychiatric Disease, Seventh Edition provides a comprehensive introduction and reference to the foundations and practical aspects relevant to the majority of neurologic and psychiatric disease. This updated volume focuses on degenerative disorders, movement disorders, neuro-oncology, neurocutaneous disorders, epilepsy, white matter diseases, neuropathies and neuronopathies, muscle and neuromuscular junction disorders, stroke, psychiatric disease, and a neurologic gene map. This volume includes new chapters on Von Hippel-Lindau disease, antisocial and violent behavior and Autism. A favorite of over four generations of students, clinicians and scholars, this new edition retains and expands on the informative, concise and critical tone of the previous edition. This is an essential reference for general medical practitioners, neurologists, psychiatrists, geneticists, related professionals, and for the neuroscience and neurology research community at large.



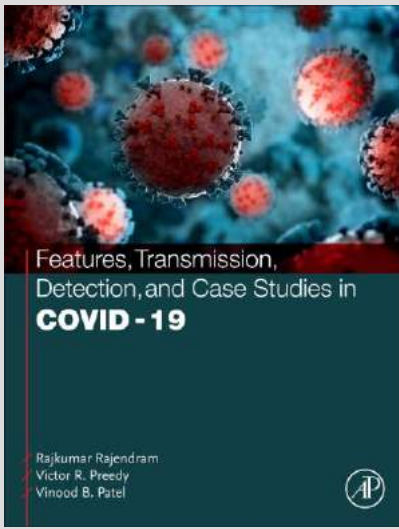
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Features, Transmission, Detection, and Case Studies in COVID-19

Edited by : **Rajkumar Rajendram**, AKC, BSc, MBBS, MRCP, EDIC, FRCP Edin, FRCP Lon, Consultant in Internal Medicine, King Abdulaziz Medical City, National Guard Health Affairs, Riyadh, Saudi Arabia; **Victor R Preedy**, BSc, PhD, DSc, FRSB, FRSPH, FRCPath, FRSC, Professor, Department of Clinical Biochemistry, King's College Hospital, London, UK; Emeritus Professor, Faculty of Life Sciences and Medicine, King's College London, UK Visiting Professor, University of Hull, UK and **Vinood Patel**, PhD, Professor, University Westminster, UK

ISBN: 9780323956468
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LIST PRICE: £195.00 / \$250.00 / €220.00
DISCOUNT: Reference
FORMAT: Hardback
TRIM: 8.50w x 10.875h
PAGES: c. 668
AUDIENCE: Neuroscientists, neurologists, clinicians, health scientists, public health workers, doctors, and research scientists
BIC CODES: PSGL, PSD, MBNS
THEMA CLASSIFICATION: THEMAPSG; THEMAMBNS; THEMAPSD

A comprehensive reference on neurological problems associated with COVID-19 infection

KEY FEATURES

- Discusses COVID-19 biology, including pathogenesis and transmission
- Describes systemic issues caused by COVID-19, including cardiovascular effects and loss of taste and smell
- Outlines detection methods, biomarkers associated with severity, and disease outcomes
- Features individual chapter introductions, summaries, and case studies to provide comprehensive descriptions of COVID-19 symptoms and effects
- Contains chapters with key facts, dictionary of terms, summary points, applications to other areas pertinent to each chapter, and policies and procedures

DESCRIPTION

Features, Transmission, Detection, and Case Studies in COVID-19 examines the effects of the virus on the body, as well as its transmission and clinical profile. This volume begins with an introduction to the virus and its pathogenesis, transmission, and avoidance, followed by sections on pulmonary and cardiovascular effects, obesity, diabetes, the liver, detection issues, and biomarkers. Vaccines and treatment are also discussed. Specific case studies covered include hypoxia, acute kidney injury, pneumonia, and neurological effects. This volume is relevant for all clinicians and scientists working to ensure the best outcomes for patients with COVID-19.



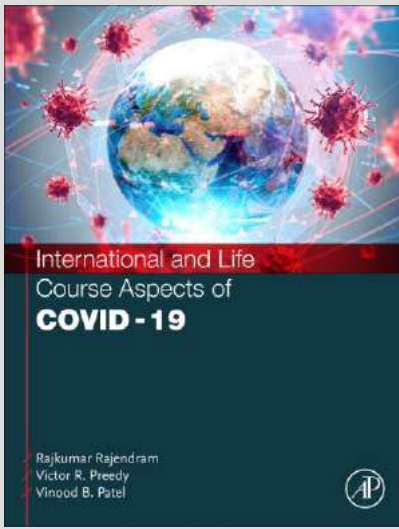
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International and Life Course Aspects of COVID-19

Edited by : **Rajkumar Rajendram**, AKC, BSc, MBBS, MRCP, EDIC, FRCP Edin, FRCP Lon, Consultant in Internal Medicine, King Abdulaziz Medical City, National Guard Health Affairs, Riyadh, Saudi Arabia; **Victor R Preedy**, BSc, PhD, DSc, FRSB, FRSPH, FRCPath, FRSC, Professor, Department of Clinical Biochemistry, King's College Hospital, London, UK; Emeritus Professor, Faculty of Life Sciences and Medicine, King's College London, UK Visiting Professor, University of Hull, UK and **Vinood Patel**, BSc, PhD, FRSC, Reader, Clinical Biochemistry, University of Westminster, London, UK

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LIST PRICE: £195.00 / \$250.00 / €220.00
DISCOUNT: Reference
FORMAT: Hardback
TRIM: 8.50w x 10.875h
PAGES: c. 730
AUDIENCE: Neuroscientists, neurologists, clinicians, health scientists, public health workers, doctors, and research scientists
BIC CODES: PSGL, PSD, MBNS
THEMA CLASSIFICATION: THEMAPSG; THEMAMBNS; THEMAPSD

A comprehensive reference on COVID-19 in different populations

KEY FEATURES

- Examines COVID-19 symptoms and concerns according to age
- Discusses outcomes related to global populations and differences observed in symptomatology and care
- Focuses on the brain, with a look at developmental changes in pregnancy, newborns, childhood, and adolescence
- Describes mental health impacts in the older populations
- Features individual chapter introductions and summaries to provide a comprehensive introduction
- Contains chapters with key facts, dictionary of terms, summary points, applications to other areas pertinent to each chapter, and policies and procedures

DESCRIPTION

International and Life Course Aspects of COVID-19 describes the nuances and international variations of COVID-19 in different populations and age groups. This volume details those differences in chapters examining the effects of the virus at different life stages, including newborns, children, adolescents, and older populations. Consideration of the age-specific effects of COVID-19 on the brain are a major focus unique to this resource. International observations and global outcomes are also described. This volume is relevant for all clinicians working to ensure the best outcomes for patients with COVID-19 worldwide.



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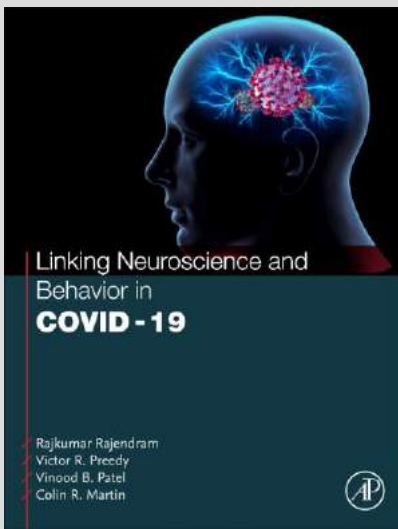


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Linking Neuroscience and Behavior in COVID-19



Edited by : **Rajkumar Rajendram**, AKC, BSc, MBBS, MRCP, EDIC, FRCP Edin, FRCP Lon, Consultant in Internal Medicine, King Abdulaziz Medical City, National Guard Health Affairs, Riyadh, Saudi Arabia; **Victor R Preedy**, BSc, PhD, DSc, FRSB, FRSPH, FRCPath, FRSC, Professor, Department of Clinical Biochemistry, King's College Hospital, London, UK; Emeritus Professor, Faculty of Life Sciences and Medicine, King's College London, UK Visiting Professor, University of Hull, UK; **Vinood Patel**, BSc, PhD, FRSC, Reader, Clinical Biochemistry, University of Westminster, London, UK and **Colin R Martin**, RN, BSc, MSc, PhD, MBA, YCAP, FHEA, C.Psychol, AFBPsS, C.Sci, Professor of Clinical Psychobiology and Applied Psychoneuroimmunology and Clinical Director: Institute for Health and Wellbeing University of Suffolk, Ipswich, UK

ISBN: 9780323956505
PUB DATE: Jun 28, 2024
LIST PRICE: £195.00 / \$250.00 / €220.00
DISCOUNT: Reference
FORMAT: Hardback
TRIM: 8.50w x 10.875h
PAGES: c. 602
AUDIENCE: Neuroscientists, neurologists, clinicians, health scientists, public health workers, doctors, and research scientists.
BIC CODES: PSGL, MBNS, PSD
THEMA CLASSIFICATION: THEMAPSG; THEMAMBNS; THEMAPSD

A comprehensive reference on the effects COVID-19 and the pandemic have had on behavior

KEY FEATURES

- Discusses the impact of the COVID-19 pandemic and the virus itself on behavior and psychology
- Examines comorbidities including Parkinson's disease, neuroinflammation, and autism spectrum disorders
- Outlines the management and care for coexisting conditions including brain tumors, multiple sclerosis, and ischemic stroke
- Features chapters on the severe damage to the nervous system which may be caused by SARS-CoV-2 infection including myelitis
- Contains chapters with key facts, dictionary of terms, summary points, applications to other areas pertinent to each chapter, and policies and procedures

DESCRIPTION

Linking Neuroscience and Behavior in COVID-19 examines the effect of both the virus and the pandemic on behavior and mental health. Chapters look at the burden of the COVID-19 pandemic on those with pre-existing conditions, including Parkinson's disease and multiple sclerosis. The ongoing consequences of the pandemic on the mental health of the broad populace are discussed. As well as the neurological effects of the virus itself, chapters discuss psychological concerns including depression and anxiety. Finally, the chapters also include aspects relevant to managing care and the treatment of conditions. A broad range of conditions preceding, caused by, or emerging for the first time during the pandemic are also detailed.



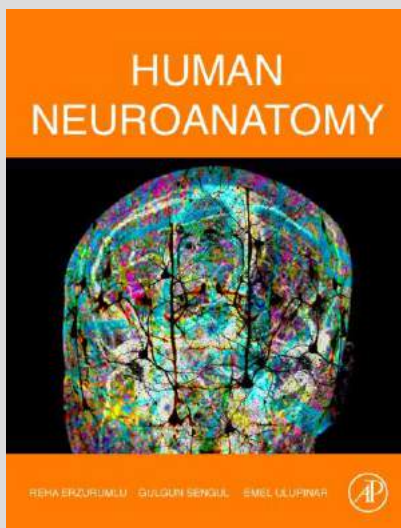
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Human Neuroanatomy

Reha Erzurumlu; Gulgun Sengul, Professor of Anatomy, Ege University School of Medicine, Turkey and Emel Ulupinar

ISBN: 9780323997256
PUB DATE: Jun 28, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT: Reference
FORMAT: Hardback
TRIM: 8.50w x 10.875h
PAGES: c. 279
AUDIENCE: Neuroscientists, neurosurgeons, neurologists, neuroradiologists, neuroscience researchers, neuroscience graduate students, medical students in programs with comprehensive CNS and PNS neuroanatomy curriculums

BIC CODES: MFG, PSAN, MMF, TVH, PSV

THEMA CLASSIFICATION: THEMAPSAN; THEMAMKJ; THEMAMKF; THEMATVH; THEMAPSV

A heavily-illustrated, practical reference on neuroanatomy

KEY FEATURES

- Presents the neuroanatomy of both the central and peripheral nervous systems
- Features a high number of illustrations in the form of photographs, illustrations, and MRI
- Includes a human brain atlas
- Contains boxes of clinical information and tables of topic summaries within each chapter

DESCRIPTION

Human Neuroanatomy is a unique resource that presents the neuroanatomy of the central and peripheral nervous systems. This atlas-style reference features human brain sections with radiological correlations and original illustrations accompanying macroscopic and microscopic photographs. Chapters include a large number of illustrations in the form of photographs, illustrations, and MR imaging, including a human brain atlas. Boxes within each chapter contain clinical information, with tables of topic summaries. Presented along with clinical approaches and analyses, this is a reference for all neuroscientists, neurosurgeons, neurologists, medical students, and all students of neuroscience.



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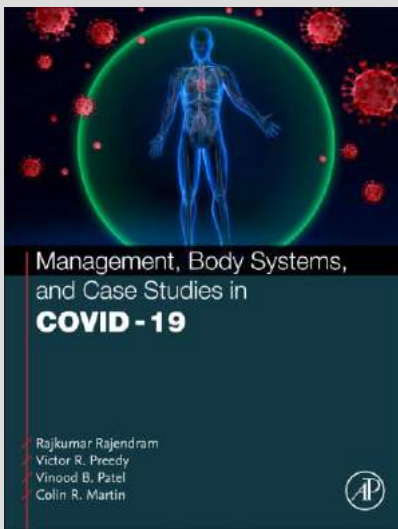


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Management, Body Systems, and Case Studies in COVID-19



Edited by : **Rajkumar Rajendram**, AKC, BSc, MBBS, MRCP, EDIC, FRCP Edin, FRCP Lon, Consultant in Internal Medicine, King Abdulaziz Medical City, National Guard Health Affairs, Riyadh, Saudi Arabia; **Victor R Preedy**, BSc, PhD, DSc, FRSB, FRSPH, FRCPath, FRSC, Professor, Department of Clinical Biochemistry, King's College Hospital, London, UK; Emeritus Professor, Faculty of Life Sciences and Medicine, King's College London, UK Visiting Professor, University of Hull, UK; **Vinood Patel**, BSc, PhD, FRSC, Reader, Clinical Biochemistry, University of Westminster, London, UK and **Colin R Martin**, RN, BSc, MSc, PhD, MBA, YCAP, FHEA, C.Psychol, AFBPsS, C.Sci, Professor of Clinical Psychobiology and Applied Psychoneuroimmunology and Clinical Director: Institute for Health and Wellbeing University of Suffolk, Ipswich, UK

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LIST PRICE: £195.00 / \$250.00 / €220.00

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 592

AUDIENCE: Neuroscientists, neurologists, clinicians, health scientists, public health workers, doctors, and research scientists. Also relevant for clinicians working with haematological, hepatobiliary, gastrointestinal, and cardiovascular systems.

BIC CODES: PSGL, PSD, MBNS

THEMA CLASSIFICATION: THEMAMBNS; THEMAPSD; THEMAPSG

A comprehensive reference on managing the COVID-19 virus in the brain and body

KEY FEATURES

- Discusses the management of multisystem symptomatology, including the effects of COVID-19 on the neurological, respiratory, hematological, hepatobiliary, gastrointestinal, and cardiovascular systems
- Includes select guidelines for clinics providing care for COVID-19 patients
- Features individual chapter introductions, and a section on case studies to provide a comprehensive primer for each topic
- Contains chapters with key facts, dictionary of terms, summary points, applications to other areas pertinent to each chapter, and policies and procedures

DESCRIPTION

Management, Body Systems, and Case Studies in COVID-19 describes the assessment and treatment of patients infected with the novel coronavirus that causes the varied symptoms of COVID-19. Detailing this multisystem disease and the organs and tissues affected, this volume features chapters on several body systems. Conditions affecting the respiratory, hematological, hepatobiliary, renal, gastrointestinal, nervous, musculoskeletal, and cardiovascular systems are addressed. The fundamental role of telemedicine during the pandemic is also discussed. This volume is relevant for all clinicians and scientists working to ensure the best outcomes for patients with COVID-19.



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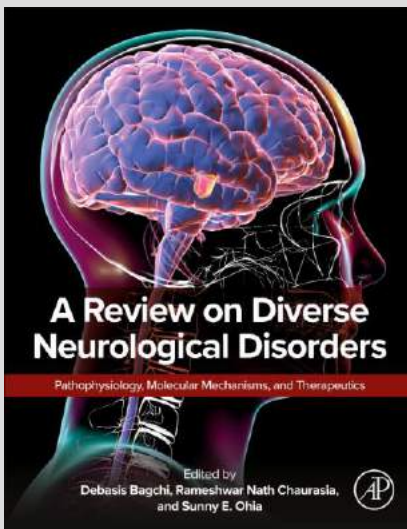
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A Review on Diverse Neurological Disorders

Pathophysiology, Molecular Mechanisms, and Therapeutics

Edited by : **Rameshwar Nath Chaurasia**, Department of Neurology, Institute of Medical Sciences, Banaras Hindu University, Varanasi, India; **Sunny Ohia**, Professor, College of Pharmacy and Health Sciences, Texas Southern University, Houston, TX, USA; **Debasis Bagchi**, PhD, Professor, Department of Pharmacological and Pharmaceutical Sciences, College of Pharmacy, University of Houston, USA; Chief Scientific Officer, Cepham Research Center, Piscataway, New Jersey and Adjunct Faculty, Texas Southern University, Houston, Texas, USA



ISBN: 9780323957359
PUB DATE: Jun 14, 2024
LIST PRICE: £195.00 / \$250.00 / €220.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 8.50w x 10.875h

PAGES: c. 558

AUDIENCE: Neurologists, Psychiatrists, and Psychologists from both academic and private settings health professionals, nurses and general practitioners, public health officials

BIC CODES: PSAN, MMG, MBGR, MMF, MMP, MJN

THEMA CLASSIFICATION: THEMAPSAN; THEMAMKF; THEMAMKJ; THEMAMKS; THEMAMBGR

A comprehensive review of pathophysiology, molecular mechanisms, and therapeutics for neurological disorders

KEY FEATURES

- Epidemiology of neurological disorders and pathogenesis.
- Explores neuroinflammation, ligand-receptors binding, and neurodegeneration.
- Discusses aging and associated disorders in the onset of neurological disorders.
- Neuropharmacology and the protective role of bioactive compounds in neuroprotection.

DESCRIPTION

A Review of Diverse Neurological Disorders: Pathophysiology, Molecular Mechanisms, and Therapeutics offers an unparalleled compilation of the current understanding of neurodegenerative disorders. This book investigates the origins of mental disorders, encompassing bacterial and fungal invasions, viral assaults, and genetic predispositions, providing readers with a thorough grasp of the neurological landscape. Each chapter dissects the intricacies of these incapacitating conditions, ranging from the pathogenesis of central nervous system tuberculosis to the involvement of endocannabinoids in rabies infection. Topics such as neuroinflammation, axonal pathology, and the intricate relationship between diet, gut microbiomes, and cognitive decline are also explored. This book conducts an extensive examination of neurodegeneration, incorporating discussions on the role of probiotics and natural bioactive compounds in preventing ailments such as Parkinson's, Alzheimer's, and amyotrophic lateral sclerosis (ALS). With meticulous analyses of vitamins, micronutrients, antioxidants, and nutraceuticals, this work offers a roadmap for promoting neuroprotection. A Review of Diverse Neurological Disorders serves as a resource that not only reviews the current understanding but also lays the groundwork for future treatments and innovations.



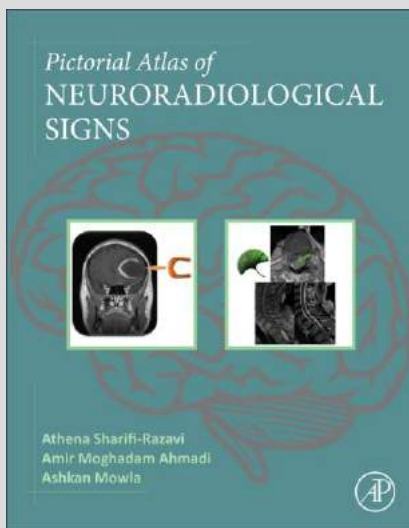
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Pictorial Atlas of Neuroradiological Signs

Athena Sharifi-Razavi, Neurology Department Bou-Ali Sina Hospital, Pasdaran Blvd Sari, Iran; **Amir Moghadam Ahmadi**, Thomas Jefferson University, Neurological Research Laboratory, Jefferson Hospital for Neuroscience, Philadelphia, PA, USA and **Ashkan Mowla**, Clinical Assistant Professor of Neurological Surgery, University of Southern California, Health Sciences Campus, South California, Los Angeles, USA

ISBN: 9780443235283
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LIST PRICE: £165.00 / \$200.00 / €190.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 8.50w x 11.00h

PAGES: c. 246

AUDIENCE: Neurologists, those with an interest in neuroradiology, Medical students, Radiologists, Neurology, radiology, and neurosurgery residents (especially for board exam preparation)

BIC CODES: MJN

THEMA CLASSIFICATION: THEMAMKJ

Examines various brain scans and identifies underlying causes for such anomalies

KEY FEATURES

- Facilitates learning and acts as a guide to those who need to reference various results in neuroimaging and radiology
- Contains concise information about each sign – such as underlying conditions associated with the sign, diseases, other things to look out for, etc.
- Provides a single reference point for students and practitioners which is not seen in other resources currently available on the market

DESCRIPTION

Pictorial Atlas of Neuroradiological Signs examines various brain scans in order to create a useful guide for clinicians and students. Using images of diseases and other conditions, this atlas is designed to identify various signs as well as explain what the underlying reason for the presentation of such anomalies on brain scans and images. This book will be most useful to clinicians in neurology and students who are studying neuroradiology. Those with an interest in various branches of neuroscience or radiology might also find this book a useful tool.



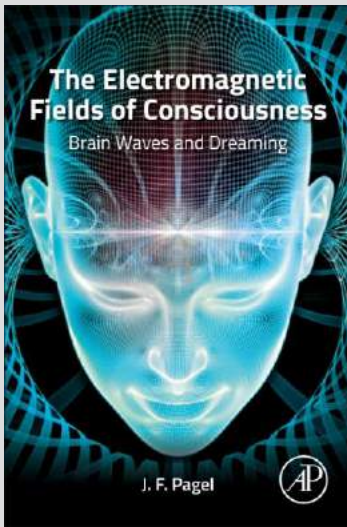
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The Electromagnetic Fields of Consciousness

Brain Waves and Dreaming

James F Pagel, Associate Clinical Professor, University of Colorado School of Medicine, USA

ISBN: 9780323997386
PUB DATE: Jun 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 372

AUDIENCE: Graduate students in biological and biomedical sciences, infotechnology, and electrophysiology, neuroscientists, clinicians, biomedical scientists, post-doctoral fellows, researchers

BIC CODES: PSAN, JMR

THEMA CLASSIFICATION:

THEMAJMM; THEMAJMR

An innovative reference on the neurology of consciousness as it pertains to electrical fields

KEY FEATURES

- Addresses our current understandings of the origin and potential functions of bioelectricity
- Integrates electrophysiology into current theories of neuroconsciousness, presenting within an historic research and clinical context
- Explores the origin, nature, bioenergetics, and potential genetic effects of synchronous physiologic electrical fields and their use as markers for life and death
- Addresses the definition and assessment of consciousness in human and non-human systems and reviews electrophysiological markers of wake and sleep consciousness states
- Discusses electrophysiologic drug and disease correlates as well as modern forms of electrical therapy

DESCRIPTION

The Electrical Fields of Consciousness: Brain Waves and Dreaming examines neuro-electrophysiology from its origins in the electrical fields of primitive organisms to its roles in the electrophysiologically defined states of human consciousness. This volume presents and cogently organizes the wide spectrum of information available as to how and why bioelectrical fields are used to define and function in supporting both life and consciousness. Integrating electrophysiology in a comprehensible manner into neuroanatomical, electromagnetic, and global platform theories of neuroconsciousness, this book brings together the wide spectrum of available data-based evidence regarding the physiology and functions of bioelectric fields and their relationship to consciousness.

Chapters examine the origin and potential function of bioelectrical fields and EEG associations with conscious states, as well as the relationship between electrical fields and consciousness. Incorporating the basic science, clinical correlates, and functional potential of CNS bioelectrical fields, this book is a must-read for all working in the field of CNS electrophysiology or neuroconsciousness.



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Thematic Approaches to COVID-19

Edited by : **Rajkumar Rajendram**, AKC, BSc, MBBS, MRCP, EDIC, FRCP Edin, FRCP Lon, Consultant in Internal Medicine, King Abdulaziz Medical City, National Guard Health Affairs, Riyadh, Saudi Arabia; **Victor R Preedy**, BSc, PhD, DSc, FRSB, FRSPH, FRCPath, FRSC, Professor, Department of Clinical Biochemistry, King's College Hospital, London, UK; Emeritus Professor, Faculty of Life Sciences and Medicine, King's College London, UK Visiting Professor, University of Hull, UK; **Vinood Patel**, PhD, Professor, University Westminster, UK and **Colin R Martin**, RN, BSc, MSc, PhD, MBA, YCAP, FHEA, C.Psychol, AFBPsS, C.Sci, Professor of Clinical Psychobiology and Applied Psychoneuroimmunology and Clinical Director: Institute for Health and Wellbeing University of Suffolk, Ipswich, UK



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FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 558

AUDIENCE: Neuroscientists, neurologists, clinicians, health scientists, public health workers, doctors, and research scientists. Also relevant for clinicians working with haematological, hepatobiliary, gastrointestinal, and cardiovascular systems

BIC CODES: PSD, PSGL, MBNS

THEMA CLASSIFICATION: THEMAMBNS; THEMAMPSD; THEMAMPSG

Features, Transmission, Detection, and Case Studies in COVID-19

A comprehensive reference on neurological problems associated with COVID-19 infection

Linking Neuroscience and Behavior in COVID-19

A comprehensive reference on the effects COVID-19 and the pandemic have had on behaviour

International and Life Course Aspects of COVID-19

A comprehensive reference on COVID-19 in different populations

Management, Body Systems, and Case Studies in COVID-19

A comprehensive reference on managing the COVID-19 virus in the brain and body

KEY FEATURES

Features, Transmission, Detection, and Case Studies in COVID-19

- Discusses COVID-19 biology, including pathogenesis and transmission
- Describes systemic issues caused by COVID-19, including cardiovascular effects and loss of taste and smell
- Outlines detection methods, biomarkers associated with severity, and disease outcomes
- Features individual chapter introductions, summaries, and case studies to provide comprehensive descriptions of COVID-19 symptoms and effects
- Contains chapters with key facts, dictionary of terms, summary points, applications to other areas pertinent to each chapter, and policies and procedures

DESCRIPTION

Features, Transmission, Detection, and Case Studies in COVID-19 examines the effects of the virus on the body, as well as its transmission and clinical profile. This volume begins with an introduction to the virus and its pathogenesis, transmission, and avoidance, followed by sections on pulmonary and cardiovascular effects, obesity, diabetes, the liver, detection issues, and biomarkers. Vaccines and treatment are also discussed. Specific case studies covered include hypoxia, acute kidney injury, pneumonia, and neurological effects. This volume is relevant for all clinicians and scientists working to ensure the best outcomes for patients with COVID-19.



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LIFE SCIENCES Neuroscience

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COVER IMAGE
FORTHCOMING

Mechanics in Development and Disease, Vol 160

Edited by : **Celeste M. Nelson**, Princeton University, Princeton, NJ, USA and **Lance Davidson**, University of Pittsburgh, Pittsburgh, PA, USA

ISBN: 9780128240328
PUB DATE: Jul 01, 2024
LIST PRICE: £128.00 / \$210.00 / €150.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 338
AUDIENCE: International Research Community, Industry Professionals, Academic Institutions
BIC CODES: PST
THEMA CLASSIFICATION: THEMAPPST

Edited by one of the best scientists in the field, this series presents the latest updates in the field of developmental biology

A Volume in the *Current Topics in Developmental Biology* Series

KEY FEATURES

- Provides the latest information on cancer research
- Offers outstanding and original reviews on a range of cancer research topics
- Serves as an indispensable reference for researchers and students alike

DESCRIPTION

Mechanics in Development and Disease, Volume 160 in the *Current Topics in Developmental Biology* series, highlights new advances in the field, with this new volume presenting interesting chapters on a variety of timely topics, including Gut developmental mechanics, Long bone developmental mechanics, Cranial plate fusion developmental mechanics, Mechanobiology and vasculogenesis, Morphogenesis and mechanics of the developing inner ear, Morphogenesis and mechanics of body wall closure in mammals, Salivary bud developmental mechanics, Lateral plate mesoderm developmental mechanics, Biomechanics of human embryo implantation, gastrulation, and organ formation, Mechanics of lung development across species, Mechanics early development in vertebrates.



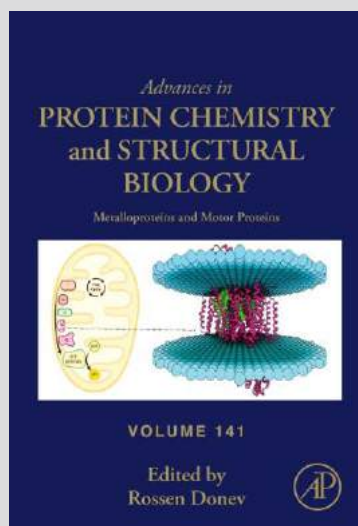
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SERIALS Biochemistry, Genetics & Molecular Biology

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Metalloproteins and Motor Proteins, Vol 141

Rossen Donev, Head of Research, MicroPharm Limited, UK

ISBN: 9780443193446
PUB DATE: Jul 01, 2024
LIST PRICE: £119.00 / \$171.00 / €122.00

DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 476

AUDIENCE: Protein chemists, molecular cell biologists, immunologists, structural biologists, computational biochemists, medical doctors, pharmacologists and other researchers working in the field of metalloproteins and motor proteins, drug design and drug resistance.

Articles published here would also be of a considerable benefit to medical, biology and pharmacology students specializing in this field

BIC CODES: PSB, PHVN, PSD, PNN

THEMA CLASSIFICATION: THEMPSB; THEMAPPN; THEMAPHVN; THEMPSD

A great amalgamation of methods for studying structure and function of metalloproteins and motor proteins and their implication in drug design and drug resistance

A Volume in the *Advances in Protein Chemistry and Structural Biology Series*

KEY FEATURES

- Integrates experimental and computational methods for studying structure and function of metalloproteins and motor proteins and their implication in drug design
- Presents timely chapters written by well-renowned authorities in their field
- Contains a high number of high quality illustrations, figures, and tables and targets a very wide audience of specialists, researchers, and students

DESCRIPTION

Metalloproteins and Motor Proteins, Volume 141 focuses on recent advances in studying metalloproteins and motor proteins, along with their roles in different pathologies and drug-resistance. Chapters include Transcriptomic Analysis Reveals Zinc-Mediated Virulence and Pathogenicity in Multidrug-Resistant *Acinetobacter baumannii*, The Mechanistic Insights into Different Aspects of Promiscuity in Metalloenzymes, Role of Metal ion in ion channel Mechanisms, A model of microtubule depolymerization by kinesin-8 motor proteins, Metalloproteins and metalloproteomics in health and disease, Decoding Genetic and Pathophysiological Mechanisms in Amyotrophic Lateral Sclerosis and Primary Lateral Sclerosis: A Comparative Study of Differentially Expressed Genes and Implicated Pathways in Motor Neuron Disorders, and much more.

Additional chapters cover Exploring the effect of disease causing mutations in metal binding sites of human ARSA in Metachromatic Leukodystrophy, Role of transmembrane proteins in regulating metalloproteins and motor proteins in human cancer, Role of transmembrane proteins in metalloproteins and motor proteins in human neurogenesis, Role of transmembrane proteins in metalloproteins and motor proteins in human aging, Vesicle transport of metalloproteinases, Motor proteins and spermatogenesis, and much more.



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COVER IMAGE
FORTHCOMING

The Neurophysiology of Silence (C): Creativity, Aesthetic Experience and Time, Vol 287

Edited by : **Tal Dotan Ben-Soussan**, Research Institute for Neuroscience, Education and Didactics (RINED), Assisi, Italy; **Joseph Glicksohn**, Multidisciplinary Brain Research Center, Bar-Ilan University, Israel and **Narayanan Srinivasan**, Department of Cognitive Science, Indian Institute of Technology Kanpur, Kanpur, India

ISBN: 9780443238758
PUB DATE: Jul 01, 2024
LIST PRICE: £199.95 / \$288.00 /
€206.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 350
AUDIENCE: Undergraduates,
graduates, academics, and
researchers in the field of neurology
and brain research
BIC CODES: JMM, PSAN
THEMA CLASSIFICATION:
THEMAPSAN; THEMAJMM

Edited by some of the best scientists in the field, this series presents the latest updates in the field

A Volume in the *Progress in Brain Research* Series

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in Progress in Brain Research serials
- Updated release includes the latest information on Neurophysiology of Silence: Consciousness and Self Awareness

DESCRIPTION

Neurophysiology of Silence: Consciousness and Self Awareness, Volume 284 in the *Progress in Brain Research* series, highlights new advances in the field, with this new volume presenting interesting chapters written by an international board of authors.



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COVER IMAGE
FORTHCOMING

African Plant-Based Products as a Source of Potent Drugs to Overcome Cancers and their Chemoresistance, Vol 111

Part 1. Cancer Chemoresistance, Screening Methods, and the Updated cut-off Points for the Classification of Natural Cytotoxic Products

Edited by : **Jean-Pierre Jacquot**, Universite Henri Poincare, Membre de L'Institut Universitaire de France, Nancy University, France

ISBN: 9780443293382
PUB DATE: Jul 01, 2024
LIST PRICE: £148.00 / \$214.00 / €153.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 654
AUDIENCE: Research scientists, Students, Herbalists, Pharmaceutical industries, General public, University libraries
BIC CODES: PSA
THEMA CLASSIFICATION: THEMAPS

A unique tool for reporting and classifying the cytotoxic activity of natural products from plant sources with reference to the flora of Africa

A Volume in the *Advances in Botanical Research Series*

KEY FEATURES

- Provides the first of its type reference to focus on the potential of African plants as an alternative medicine to tackle cancers and their recalcitrant phenotypes
- Analyzes the recorded data to propose a rational basis for the classification of naturally occurring cytotoxic agents
- Clearly identifies and discusses plants and phytochemicals that could be useful in the development of new cytotoxic drugs to overcome cancer and cancer drug resistance

DESCRIPTION

African Plant-Based Products as a Source of Potent Drugs to Overcome Cancers and their Chemoresistance: Part One: Cancer Chemoresistance, Screening, Methods, and the Updated cut-off Points for the Classification of Natural Cytotoxic Products, Volume 111 offers an overview of the potential of African medicinal plants as a source of anticancer agents to overcome with an emphasis on cancer drug resistance. Based on the collected data, the book also offers a rational classification basis for the cytotoxic activity of natural products. The general knowledge of state-of-the-art of cancer drug resistance globally and the screening methods for cytotoxic agents are described.

This book clearly identifies the best African medicinal plants that could be useful for the development of efficient herbal drugs, as well as the best phytochemicals that could be explored as potential pharmaceuticals to efficiently tackle cancers and their refractory phenotypes. The book appears a unique tool for Scientists for anticancer drug discovery from the exceptional flora of Africa.



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Advances in Applied Microbiology, Vol 127

Geoffrey M. Gadd, Professor, University of Dundee, Scotland, UK and **Sima Sariaslani**, DuPont Central Research and Development, Wilmington, DE, USA

ISBN: 9780443295560
PUB DATE: Jul 01, 2024
LIST PRICE: £98.50 / \$142.00 / €102.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 248
AUDIENCE: All those who deal with today's microbiology in the Medical and Biotechnological arena
BIC CODES: TCB, PSGL, PSF
THEMA CLASSIFICATION: THEMATCB; THEMPSF

Provides timely reviews of topics in microbiology, presenting an invaluable inference

A Volume in the *Advances in Applied Microbiology* Series

KEY FEATURES

- Contains contributions from leading authorities in the field
- Informs and updates on the latest developments in the field of microbiology
- Includes discussions on the role of specific molecules in pathogen life stages, interactions, and much more

DESCRIPTION

Advances in Applied Microbiology, Volume 127 continues the comprehensive reach of this widely read and authoritative review source in microbiology where users will find invaluable references and information on a variety of areas relating to the topics of microbiology.



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SERIALS Immunology & Microbiology
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COVER IMAGE
FORTHCOMING

Annual Reports on NMR Spectroscopy, Vol 111

William S. Price, Nanoscale Organisation and Dynamics Group, School of Science, Western Sydney University, NSW, Australia

ISBN: 9780443295782

PUB DATE: Jul 01, 2024

LIST PRICE: £177.00 / \$256.00 / €183.00

DISCOUNT: Serial

FORMAT: Hardback

TRIM: 6.00w x 9.00h

PAGES: c. 288

AUDIENCE: Organic, inorganic, analytical and physical chemists, biochemists, structural biologists, physicists and all those studying and using NMR spectroscopy

BIC CODES: PNF, PN, PNR, PNFS

THEMA CLASSIFICATION:

THEMAPDN; THEMAPNF;

THEMAPN; THEMAPNR;

THEMAPNFS

Established annual report that provides a thorough accounting of progress in nuclear magnetic resonance (NMR) spectroscopy and its many applications

A Volume in the *Annual Reports on NMR Spectroscopy Series*

KEY FEATURES

- Serves as the premier resource for learning new techniques and applications in NMR spectroscopy
- Provides a key reference for chemists and physicists using NMR spectroscopy to study the structure and dynamics of molecules
- Covers all aspects of molecular science, including MRI (Magnetic Resonance Imaging)

DESCRIPTION

Annual Reports on NMR Spectroscopy, Volume 111 presents the latest release in a series that has established itself as a premier resource for both specialists and non-specialists interested in new techniques and applications pertaining to NMR spectroscopy. Chapters in this new release include Electrophoretic NMR, Traceability and uncertainty in NMR measurements, Quantitative NMR Spectroscopy, Advances in Non-Uniform Sampling NMR, NMR spectroscopy of natural and synthetic fibers, Characterization of transition alkane complexes, and Recent applications of low field NMR to membrane science.



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COVER IMAGE
FORTHCOMING

Current Status of Prostate Cancer: Diagnosis, Biomarkers and Therapies, Vol 161

Edited by : **Paul B. Fisher**, Department of Human and Molecular Genetics, VCU Institute of Molecular Medicine, VCU Massey Cancer Center, Virginia Commonwealth University, School of Medicine, Virginia, USA; **O. John Semmes**, Eastern Virginia Medical School, Norfolk, VA, USA; **Julius O. Nyalwidhe**, Department of Microbiology and Molecular Cell Biology and the Leroy T. Canoles Jr Cancer Research Center at the Eastern Virginia Medical School, Norfolk, VA , USA and **Swadesh K. Das**, Department of Human and Molecular Genetics, VCU, USA

ISBN: 9780443296284
PUB DATE: Jul 01, 2024
LIST PRICE: £119.00 / \$171.00 / €122.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 290
AUDIENCE: Academic Researchers and Clinical Oncologists.
BIC CODES: PSF, PSAK, MJCM
THEMA CLASSIFICATION: THEMPSF; THEMPSG; THEMPSAK; THEMAMJCM

Provides invaluable information on the fast-moving field of cancer research that includes outstanding original reviews on a variety of topics

A Volume in the *Advances in Cancer Research* Series

KEY FEATURES

- Provides the latest information on cancer research
- Offers outstanding and original reviews on a range of cancer research topics
- Serves as an indispensable reference for researchers and students alike

DESCRIPTION

Current Status of Prostate Cancer: Diagnosis, Biomarkers and Therapies, Volume 161 in the *Advances in Cancer Research* series, covers timely topics such as The Prostate Cancer Tissue N-glycome as a Source of Biomarkers, a Progression from Normal to Metastatic Disease, Multiplexed Targeted Proteomics for Prostate Cancer Biomarker Verification, MRI for the Detection of Clinically Significant Prostate Cancer: Update and Future Directions, Genetic and epigenetic factors for prostate cancer progression, Epigenetic regulation of androgen dependent and independent prostate cancer, Molecular Landscape of Prostate Cancer Bone Metastasis, Future of radioligand Therapy in PC, and more.

Additional chapters of note include Advancements in Computer Vision and Pathology: Unraveling the Potential of Artificial Intelligence for Precision Diagnosis and Beyond and Extracellular Vesicles in Prostate Cancer.



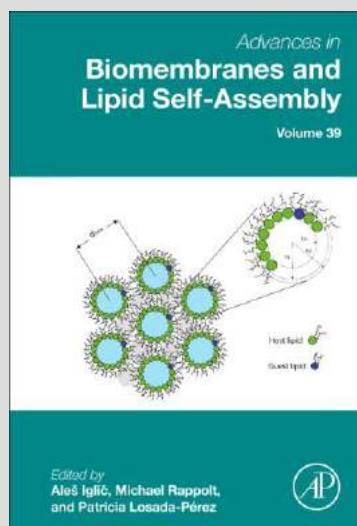
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Advances in Biomembranes and Lipid Self-Assembly, Vol 39

Aleš Iglič, Full Professor and Head of Laboratory of Biophysics, Faculty of Electrical Engineering, University of Ljubljana, Slovenia; **Michael Rappolt**, Professor of Lipid Biophysics, University of Leeds, UK and **Patricia Losada Pérez**, Professor, University of Cologne, Germany

ISBN: 9780443296345
PUB DATE: Jul 01, 2024
LIST PRICE: £157.00 / \$227.00 / €163.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 296
AUDIENCE: Everyone interested in the strategy and practice of the preclinical phases of the creation of new medicines. Those wishing to understand the drivers of drug design or expand their knowledge of therapeutic target classes.
BIC CODES: PSF, PSBH
THEMA CLASSIFICATION: THEMPSB; THEMPSF

Edited by some of the best scientists in chemistry, this series presents the latest updates in biomembranes and lipid self assembly.

A Volume in the *Advances in Biomembranes and Lipid Self-Assembly Series*

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in *Advances in Biomembranes and Lipid Self-Assembly* series
- Updated release includes the latest information on the Interaction of inorganic debris particles with cells, Interactions between biomembrane embedded nanoparticles mediated by lipid bilayer, and more

DESCRIPTION

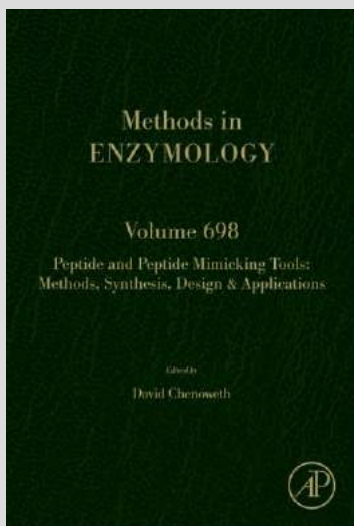
Advances in Biomembranes and Lipid Self-Assembly, Volume 39 highlights new advances in the field, with this new volume presenting interesting chapters written by an international board of authors.



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Peptide and Peptide Mimicking Tools: Methods, Synthesis, Design & Applications, Vol 698

Edited by : David M. Chenoweth, University of Pennsylvania, PA, USA

ISBN: 9780443218149
PUB DATE: Jun 15, 2024
LIST PRICE: £138.00 / \$199.00 / €142.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 378
AUDIENCE: Academic, government and industrial sectors
BIC CODES: PSB, PSD
THEMA CLASSIFICATION: THEMPSB; THEMPSD

Edited by one of the best scientists in the field, this series presents the latest updates in the field of enzymology

A Volume in the *Methods in Enzymology* Series

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in *Methods in Enzymology*
- Updated release includes the latest information on Peptide Chemical Tools for Modulating Biology

DESCRIPTION

Peptide Chemical Tools for Modulating Biology, Volume 698 in the esteemed *Methods in Enzymology* series, highlights new advances in the field, with this new volume presenting interesting topics on Peptide tools that target telomere maintenance, Molecular Design of Peptide Therapeutics, Sulfonyl peptide tools for modulating biology, Peptide tools for targeting the Crk/CrkL-p130Cas axis, Quorum sensing peptide tools, In vivo stability and BBB penetration of peptide tools, and Oligo-benzamide-based peptide mimicking tools for modulating biology.



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Advances in
Food and Nutrition
Research

Vitamin D and Health

Volume
109

Volume Editor
Michael Eskin



Vitamin D and health, Vol 109

Edited by : **Michael N.A. Eskin**, Ph.D., Professor, Food and Human Nutritional Sciences,
University of Manitoba, Winnipeg, Canada

ISBN: 9780443160721
PUB DATE: Jun 01, 2024
LIST PRICE: £126.00 / \$182.00 /
€130.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 314
AUDIENCE: Nutritionists, Food
Scientists, medical researchers, and
those working in health-related
industries
BIC CODES: TDCT
THEMA CLASSIFICATION:
THEMATDCT

Cover Vitamin D, traditionally associated with bone health, and its wide array of health benefits to the human body

A Volume in the *Advances in Food and Nutrition Research Series*

KEY FEATURES

- Provides the latest information on the possible mechanisms of action by the active metabolite of vitamin D, 1,25(OH) in immune cells
- Covers the beneficial roles of vitamin D in bone health, cardiovascular disease, diabetes, cancers, and celiac disease
- Discusses vitamin D's ability to reduce the risk of severity and death from viral diseases such as influenza, COVID-19, and the respiratory syncytial virus (RSV)

DESCRIPTION

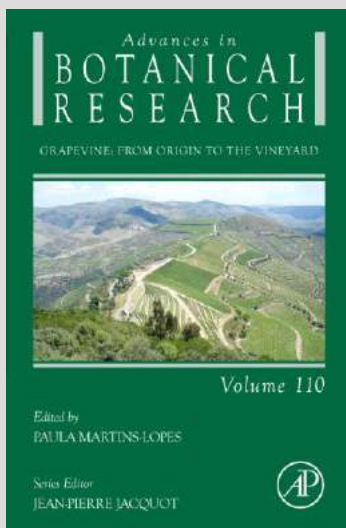
Vitamin D and Health, Volume 109 reviews the versatility of vitamin D in enhancing the immune system and its potential role in combating many chronic diseases. While vitamin D's role in enhancing bone health is well established, recent studies demonstrated the safety and efficacy of peri-operative vitamin D supplementation in cardiac patients and its impact on post-operative outcomes. Chapters in this new release include discussions on Vitamin D and Immune Function, Vitamin D and Bone Health, Vitamin D and Cardiovascular Disease, Vitamin D and Cancer, Vitamin D and Diabetes, Vitamin D and Neurological Diseases, Vitamin D and Celiac Disease, and much more.



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Grapevine, Vol 110

From Origin to the Vineyard

Edited by : **Paula Filomena Martins Lopes**, DNA & RNA Sensing Lab, University of Trás-os-Montes and Alto Douro, School of Life Sciences and Environment, Genetics and Biotechnology Department, Complexo Laboratorial, 5000-801 Vila Real, Portugal University of Lisbon, Faculty of Sciences, BiolSI – Biosystems & Integrative Sciences Institute, Campo Grande, 1749-016 Lisbon, Portugal

ISBN: 9780443221743
PUB DATE: May 14, 2024
LIST PRICE: £148.00 / \$214.00 / €153.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 342
AUDIENCE: Researchers, academics, professionals in viticulture and agricultural management, breeders and, government and policymakers.
BIC CODES: PSA
THEMA CLASSIFICATION: THEMAPS

Edited by one of the best scientists in the field, this series presents the latest updates in the field of botanical research

A Volume in the *Advances in Botanical Research* Series

KEY FEATURES

- Presents the latest release in the *Advances in Botanical Research* series
- Focuses on viticulture and the science of winemaking
- Includes important chapters on grapevine origin and diversity, along with management strategies for reducing pesticide use against diseases, and more

DESCRIPTION

Advances in Botanical Research: From Origin to the Vineyard, Volume 110 highlights new advances in the field, with this new volume presenting interesting chapters on topics such as Grapevine origin and diversity, Climate change implications on the geography of viticulture, Canopy and soil management strategies insights into overcome abiotic stresses in grapevine, Grapevine defense mechanisms when challenged by pathogenic fungi and oomycetes, Management strategies for reducing pesticide use against diseases caused by fungi and oomycetes in grapevine, The Role of Plant Breeding in grapevine production, and New biotechnological tools for grapevine improvement.



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New Approach for Drug Repurposing Part A, Vol 205

Edited by : **Vijai Singh**, Ph.D., Department of Biosciences, School of Science, Indrashil University, Rajpur, Mehsana, India

ISBN: 9780443223389
PUB DATE: Jun 01, 2024
LIST PRICE: £119.00 / \$171.00 / €122.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 388
AUDIENCE: students, researchers, clinicians, entrepreneurs, and stakeholders
BIC CODES: PSD, PSB
THEMA CLASSIFICATION: THEMPSB; THEMPSD

Drug repurposing is one of the roadway to accelerating drug discovery and development for treating disease and thus to providing better quality of life.

A Volume in the *Progress in Molecular Biology and Translational Science* Series

KEY FEATURES

- To offer drug repurposing, novel methods, mechanism of action, lab on chip for drug repurposing,
- To offer computational biology, system biology, artificial intelligence and machine learning for drug repurposing,
- To offer high throughput drug screening, clinical trial of repurposed drug, repurposed biologics, and regulatory consideration

DESCRIPTION

New approach for drug repurposing represents drug discovery and development which is a tedious process that requires 10-15 years of time, investments up to \$1-2 billion, and have high risk of failure to enter into market for clinical applications. As the drugs has to pass through number of developmental phase, the likelihood for a drug to be approved from phase I clinical trial to United States of Food and Drug Administration (USFDA) approval is less than 10%. More than 90% of drugs failed in due to toxicity, efficacy and clinical trials. Drug repurposing is one of the roadway to accelerating drug discovery and development for treating disease and thus to providing better quality of life.

This volume covers an overview of drug repurposing, novel methods, mechanism of action, lab on chip for drug repurposing, computational biology, system biology, artificial intelligence and machine learning for drug repurposing, target identification, target mining, high throughput drug screening, clinical trial of repurposed drug, repurposed biologics, and regulatory consideration and intellectual property right of repurposed drug. This volume highlights a number of aspects of the drug repurposing that can help the basic understanding of students, researchers, clinicians, entrepreneurs, and stakeholders to perform their research with great interest.

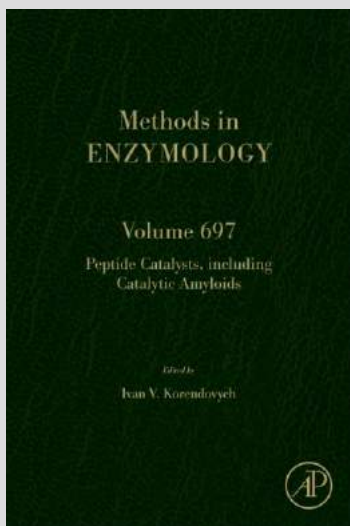


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Peptide Catalysts, including Catalytic Amyloids, Vol 697

Edited by : Ivan Korendovych

ISBN: 9780443236679
PUB DATE: Jun 01, 2024
LIST PRICE: £138.00 / \$199.00 / €142.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 526
AUDIENCE: Academic, government and industrial sectors
BIC CODES: PSD, PSB
THEMA CLASSIFICATION: THEMPSB; THEMPSD

Edited by one of the best scientists in the field, this series presents the latest updates in the field of enzymology

A Volume in the *Methods in Enzymology* Series

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in *Methods in Enzymology* series
- Updated release includes the latest information on Peptide Catalysts, including Catalytic Amyloids

DESCRIPTION

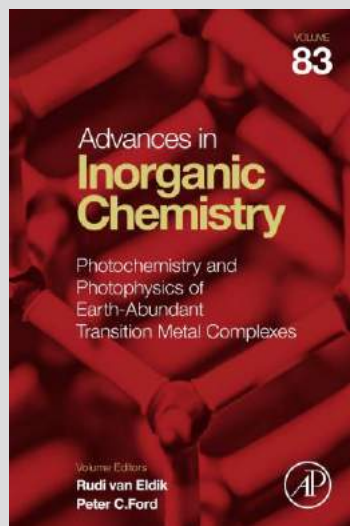
Peptide Catalysts, including Catalytic Amyloids, Volume 697 in this esteemed series, highlights new advances in the field, with this new volume presenting interesting topics on Screening of oxidative behaviors in catalytic amyloid assemblies, Catalytic amyloids derived for natural proteins, AFM-IR studies of catalytic amyloids, MD structural studies of catalytic amyloids, Characterization of crystalline, amyloid-like amino acid assemblies, Computational modeling of supramolecular peptide assemblies, and Assembly and activity of short prion-inspired peptides.



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SERIALS Methods in Enzymology
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Photochemistry and Photophysics of Earth-Abundant Transition Metal Complexes, Vol 83

Edited by : **Rudi van Eldik**, University of Erlangen-Nurnberg, Germany; Professor of Inorganic Chemistry, Jagiellonian University in Krakow, Poland and **Peter C. Ford**, Department of Chemistry and Biochemistry, University of California Santa Barbara, CA, USA

ISBN: 9780443237461
PUB DATE: Jun 01, 2024
LIST PRICE: £190.00 / \$274.00 / €196.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 314
AUDIENCE: Chemists interested in classical inorganic chemistry, computational chemists interested in the application of their methods to various kinds of applied inorganic chemistry
BIC CODES: PN, PNK, PNR, TGM, PNN
THEMA CLASSIFICATION: THEMARN; THEMARNK; THEMARNP; THEMARNR

Edited by some of the best scientists in the field, this series presents the latest updates in the field of inorganic chemistry

A Volume in the *Advances in Inorganic Chemistry Series*

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in *Advances in Inorganic Chemistry* series
- Updated release includes the latest information on *Photochemistry and Photophysics of Earth-Abundant Transition Metal Complexes*

DESCRIPTION

Photochemistry and Photophysics of Earth-Abundant Transition Metal Complexes, Volume 83 in the *Advances in Inorganic Chemistry* series, highlights new advances in the field, with this new volume presenting interesting chapters on topics such as Radioluminescence of Copper(I) Clusters, Photophysics and Photochemistry of Chromium(III) Complexes (Molecular Rubies), Chromic behaviors of luminescent copper(I) complexes, Long-lived photoluminescence in group 4 metal complexes enabled by ligand-to-metal charge transfer, Photoactive MOFs for CO₂ Activation utilizing Earth Abundant Metals, and more.

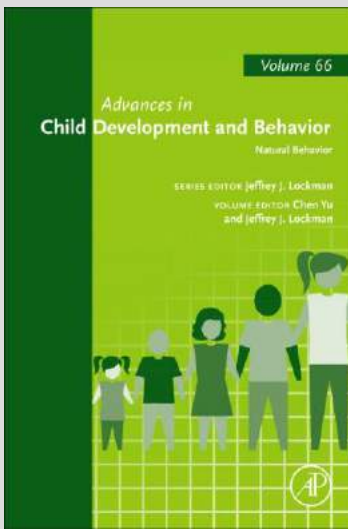
Other sections cover Earth Abundant Metal Complexes for Optoelectronic Applications, Photoactive metal to ligand charge transfer excited states in 3d6 and 3d8 complexes, Ligand-to-metal charge-transfer excited states in d0 transition-metal complexes: Investigations into the photochemistry and photophysics of emissive titanocenes, Ultrafast dynamics in photoactive copper complexes from optical and Xray methods, and Photophysical properties of Ni(II) complexes and some copper(I) and zinc(II) complexes.



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SERIALS Chemistry & Chemical Engineering
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Natural Behavior, Vol 66

Edited by : **Jeffrey J. Lockman**, Department of Human Development and Family Sciences, University of Texas, Austin, TX, USA; **Jeffrey J. Lockman**, Department of Human Development and Family Sciences, University of Texas, Austin, TX, USA and **Chen Yu**

ISBN: 9780443294167
PUB DATE: Jun 01, 2024
LIST PRICE: £78.99 / \$114.00 / €81.95
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 280
AUDIENCE: Developmental scientists, child development researchers, graduate students in developmental science or child development/psychology, social policy professionals, education researchers, early childhood professionals
BIC CODES: JMC, JM
THEMA CLASSIFICATION: THEMAJMC; THEMAJM

Understanding development from the lens of the natural contexts within which children actually develop

A Volume in the *Advances in Child Development and Behavior Series*

KEY FEATURES

- Latest research on understanding development based on children's natural behavior, rather than behavior based on short-term visits in laboratory settings
- New methods for studying and analyzing children's natural behavior across short and extended time scales
- Cross-cutting research across different domains (e.g., language, cognition, interpersonal coordination), linked by a focus on natural behavior

DESCRIPTION

Natural Behavior, Volume 66 highlights new advances in the field, with this new volume presenting interesting chapters written by an international board of authors.

There is a long history of studying natural behavior in science. In 1872, Charles Darwin documented his observations on the development of his children in words, which was published in an article titled "A Biographical Sketch of an Infant." Traditionally, observational studies like this had been viewed as insightful but also criticized as not objective and quantitative. More recently, building on advanced computation, the contemporary approaches to studying natural behavior in the real world delivered quantitative results. New sensing and wearable technologies allow researchers to collect high-density data in everyday contexts. With technological advances, we can scale up and obtain quantitative results from real-world data. This volume contains a collection of papers on studying natural behavior of child development. Those papers aim at understanding and predicting behavior and cognition as it occurs within complex real-world situations. Compared with findings from laboratories, the results derived from natural behavior are remarkably reliable, which provides an answer to the reproducibility crisis in science. Moreover, the findings based on natural behavior can be directly applied to the real world, especially in the health and education domains.



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SERIALS Psychology

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Advances in Insect Physiology, Vol 66

Russell Jurenka, Professor, Department of Entomology, Iowa State University, USA

ISBN: 9780443294303
PUB DATE: Jun 01, 2024
LIST PRICE: £115.00 / \$166.00 / €119.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 300
AUDIENCE: Researchers and students of Entomology, insect pathology, microbial pathogenesis, insect biochemistry, insect physiology, and molecular biology
BIC CODES: PSVT7, PSVT
THEMA CLASSIFICATION: THEMATGB; THEMATJF; THEMAUYS; THEMAPSVA; THEMAPS; THEMAMFC; THEMAMFG

Edited by one of the best scientists in the field, this series presents the latest updates in the field of insect physiology

A Volume in the *Advances in Insect Physiology* Series

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in the *Advances in Insect Physiology* series
- Updated release includes the latest information on cockroach biology, female insect reproduction, and more

DESCRIPTION

Advances in Insect Physiology, Volume 66 in the series, highlights new advances in the field, with this new volume presenting interesting chapters on topics including Cockroach Biology, Apocrine Secretion from Salivary Glands, and Female Insect Reproduction.



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SERIALS Agricultural & Biological Sciences
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Advances in Motivation Science, Vol 11

Andrew J. Elliot, Professor of Psychology, University of Rochester, NY, USA

ISBN: 9780443294389

PUB DATE: Jun 01, 2024

LIST PRICE: £98.50 / \$142.00 / €102.00

DISCOUNT: Serial

FORMAT: Hardback

TRIM: 6.00w x 9.00h

PAGES: c. 300

AUDIENCE: Researchers, instructors, and students (graduate and advanced undergraduate) in the myriad disciplines in which motivational issues are relevant

BIC CODES: JML, JM, JMH

THEMA CLASSIFICATION:

THEMAJML; THEMAJM; THEMAJMH

Influential work on motivation science and research, bringing together experts with cutting-edge theoretical and empirical contributions in psychology

A Volume in the *Advances in Motivation Science* Series

KEY FEATURES

- Presents new research in the field of motivation science and research
- Provides a timely overview of important research programs conducted by the most respected scholars in psychology
- Gives special attention to directions for future research

DESCRIPTION

Advances in Motivation Science, Volume Eleven, the latest release in the Motivation Science series, contains interesting articles that cover topics such as An Ecology of Meaning: An Integrative Framework for Understanding Human Motivations, Beer AMS Quest for Self Knowledge, Boundary conditions of the rational model Finding the limits of rationality, Growth goals: A review of the construct Predictors, Consequences, and Intervention, Pragmatic Propection Theory, Research, and Practice, and The Quest for Self-Knowledge What Do We Want to Know (and not Know) About Ourselves.



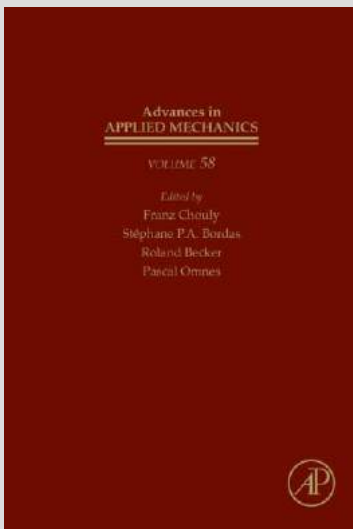
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SERIALS Psychology

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Error Control, Adaptive Discretizations, and Applications, Part 1, Vol 58

Edited by : **Franz Chouly**; **Stéphane P.A. Bordas**, Research Unit in Eng Science, University of Luxembourg, Luxembourg; **Roland becker** and **Omnes Pascal**

ISBN: 9780443294488
PUB DATE: Jun 01, 2024
LIST PRICE: £150.00 / \$217.00 / €155.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 290
AUDIENCE: PhD students, experienced researchers, post-doctoral researchers, R&D specialists in industry
BIC CODES: PH
THEMA CLASSIFICATION: THEMAPH

Provides results on the mechanics of multi-scale deformable media, with applications to health and digital twinning

A Volume in the *Advances in Applied Mechanics* Series

KEY FEATURES

- Covers multi-scale modeling
- Includes updates on data-driven modeling
- Presents the latest information on large deformations of multi-scale materials

DESCRIPTION

Error Control, Adaptive Discretizations, and Applications, Volume 58, Part One highlights new advances in the field, with this new volume presenting interesting chapters written by an international board of authors. Chapters in this release cover hp adaptive Discontinuous Galerkin strategies driven by a posteriori error estimation with application to aeronautical flow problems, An anisotropic mesh adaptation method based on gradient recovery and optimal shape elements, and Model reduction techniques for parametrized nonlinear partial differential equations.



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COVER IMAGE
FORTHCOMING

Advances in Parasitology, Vol 124

David Rollinson, Merit Research Scientist, The Natural History Museum, London, UK and
Russell Stothard, Chair in Medical Parasitology, Liverpool School of Tropical Medicine, UK

ISBN: 9780443295140

PUB DATE: May 16, 2024

LIST PRICE: £160.00 / \$231.00 /
€165.00

DISCOUNT: Serial

FORMAT: Hardback

TRIM: 6.00w x 9.00h

PAGES: c. 279

AUDIENCE: Academic, government
and industrial sectors

BIC CODES: MMFP

THEMA CLASSIFICATION:
THEMAMKFP

Edited by one of the best scientists in the field, this series presents the latest updates in the field

A Volume in the *Advances in Parasitology* Series

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in the *Advances in Parasitology* series
- Updated release includes the latest information on *Advances in Parasitology*

DESCRIPTION

Advances in Parasitology Volume 124, the latest release in this esteemed series, highlights new advances in the field, with this new release including chapters on Geomorphological determinants and geospatial analyses of mosquito habitat for control and elimination studies of malaria in Africa, Immunology and Pathology of Echinostomes and other Intestinal Trematodes, PfEMP1 – Still of key importance in *Plasmodium falciparum* malaria immunity and pathogenesis, and more.



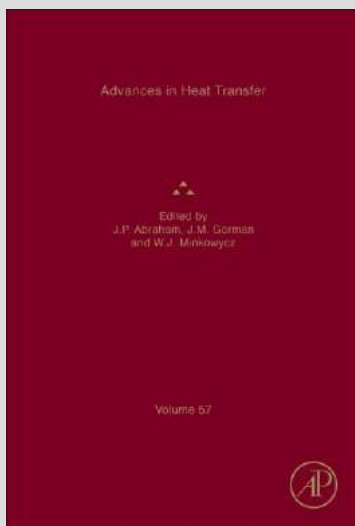
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SERIALS Immunology & Microbiology

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Advances in Heat Transfer, Vol 57

John Patrick Abraham, University of St. Thomas, Saint Paul, MN, USA; **Wolodymyr J. Minkowycz**, Professor of Mechanical Engineering, Department of Mechanical and Industrial Engineering, University of Illinois, Chicago, USA and **John M. Gorman**, University of Minnesota, Minneapolis, MN, USA

ISBN: 9780443295362
PUB DATE: Jun 01, 2024
LIST PRICE: £150.00 / \$217.00 / €155.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 279
AUDIENCE: Industry practitioners and academics teaching advanced courses
BIC CODES: TGB
THEMA CLASSIFICATION: THEMAPHFC

Edited by some of the best scientists in the field, this series presents the latest updates in the field of heat transfer

A Volume in the *Advances in Heat Transfer* Series

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in *Advances in Heat Transfer* serials

DESCRIPTION

Advances in Heat Transfer, Volume 57 presents the latest in a serial that highlights new advances in the field, with this updated volume presenting interesting chapters written by an international board of authors.



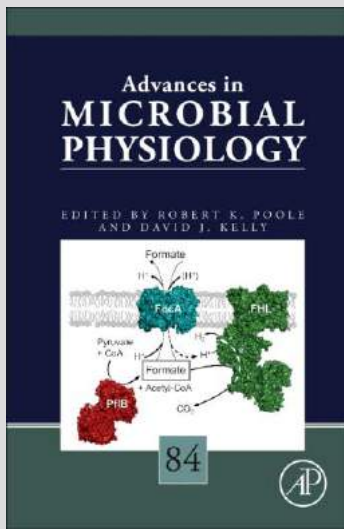
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SERIALS Engineering

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Advances in Microbial Physiology, Vol 84

Robert K. Poole, West Riding Professor of Microbiology, Department of Molecular Biology and Biotechnology, University of Sheffield, UK and **David J. Kelly**, Professor of Microbiology, Department of Molecular Biology and Biotechnology, University of Sheffield, UK

ISBN: 9780443295409

PUB DATE: Jun 01, 2024

LIST PRICE: £125.00 / \$179.00 /
€128.00

DISCOUNT: Serial

FORMAT: Hardback

TRIM: 6.00w x 9.00h

PAGES: c. 164

AUDIENCE: Microbiologists,
biochemists, biotechnologists, and
those interested in physiology,
microbial biochemistry and its
applications

BIC CODES: PSG, PSD, PSB, PHVN

THEMA CLASSIFICATION:
THEMAPSG; THEMAPSD;
THEMAPSB; THEMAPHVN

Edited by some of the best scientists in the field, this series presents the latest updates in the field of microbial physiology

A Volume in the *Advances in Microbial Physiology* Series

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in *Advances in Microbial Physiology* serial
- Covers Mycobacterial efflux systems, New insights in bacterial organophosphorus, The link between gut sulfidogenic bacteria and disease, and much more

DESCRIPTION

Advances in Microbial Physiology, Volume 84 in this ongoing serial, highlights new advances in the field with this new volume presenting interesting chapters. Each chapter is written by an international board of authors. Topics of interest in this update include Mycobacterial Efflux systems, New insights in bacterial organophosphorus cycling: from human pathogens to environmental bacteria, Link between gut sulfidogenic bacteria and disease, The Formate-H₂ Axis and its Importance for Microbial Physiology, Physiology of diazotrophs, Antibiotic efficacy, and Microbial metabolites as modulators of host physiology.



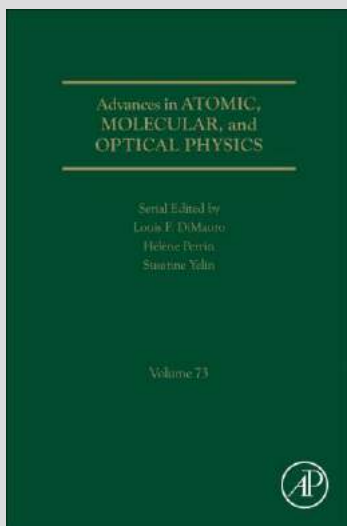
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SERIALS Immunology & Microbiology

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Advances in Atomic, Molecular, and Optical Physics, Vol 74

Susanne Yelin, Physics Department, University of Connecticut, Storrs, CT, USA; Louis F. Dimmauro, Ohio State University, USA and Hélène Perrin, Université Paris 13, Institut Galilée, France

ISBN: 9780443296802
PUB DATE: Jun 01, 2024
LIST PRICE: £165.00 / \$239.00 / €171.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 476
AUDIENCE: Any researcher interested in atomic, molecular, and optical physics.
BIC CODES: PHJ, PHM
THEMA CLASSIFICATION: THEMAPHJ; THEMAPHM

Delve into the forefront of atomic, molecular, and optical physics, featuring reviews on cutting high harmonic generation in thin-film samples

A Volume in the *Advances in Atomic, Molecular, and Optical Physics Series*

KEY FEATURES

- Covers ultrafast optics
- Includes update on high harmonic generation from thin-films
- Updates on quantum-computation assisted atomic and molecular calculations

DESCRIPTION

Advances in Atomic, Molecular, and Optical Physics, Volume 73 gives an overview on the latest evolutions in atomic, molecular, and optical physics, specifically promoting two important aspects of the field of ultrafast optics and strong fields. In particular, the book consists of a review over high harmonic generation (HHG) from thin-film samples, featuring experimental and theoretical studies of HHG from thin films in comparison to bulk crystals of the same materials and the specific interest in HHG from van der Waals materials and HHG studies at the 2D limit.

The second review concerns quantum computing technologies enabled studies of molecular processes using present-day devices, with applications in vibrational spectroscopy, electronic structure calculations, population transfer processes induced by a laser field, and interacting spin systems.



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COVER IMAGE
FORTHCOMING

Advances in Clinical Chemistry, Vol 120

Gregory S. Makowski, Vice President and Chief Scientific Officer, Clinical Laboratory Partners,
Newington, CT, USA

ISBN: 9780443297007

PUB DATE: May 16, 2024

LIST PRICE: £142.00 / \$205.00 /
€147.00

DISCOUNT: Serial

FORMAT: Hardback

TRIM: 6.00w x 9.00h

PAGES: c. 196

AUDIENCE: Clinical Laboratory
Professionals, Physicians and
Research Scientists

BIC CODES: PSB, PHVN, PSA, PSD

THEMA CLASSIFICATION:
THEMAPSB; THEMAPHVN;
THEMAPS; THEMAPSD

Publishes cutting-edge reviews in the field of clinical chemistry that include the expertise of international contributors

A Volume in the *Advances in Clinical Chemistry* Series

KEY FEATURES

- Provides the most up-to-date technologies in clinical chemistry and clinical laboratory science
- Authored by world renowned clinical laboratory scientists, physicians, and research scientists
- Presents the international benchmark for novel analytical approaches in the clinical laboratory

DESCRIPTION

Advances in Clinical Chemistry, Volume 120, the latest installment in this internationally acclaimed series, contains chapters authored by world-renowned clinical laboratory scientists, physicians, and research scientists.



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COVER IMAGE
FORTHCOMING

Advances in Ecological Research, Vol 70

Edited by : **Kim Yates**, Emergency Medicine Specialist Director of Emergency Medicine Research and **Alex Dumbrell**, University of Essex, UK

ISBN: 9780443297328
PUB DATE: Jun 01, 2024
LIST PRICE: £151.00 / \$188.99 /
€174.99
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 296
AUDIENCE: Researchers and
Academia, Environmental
Professionals, Educators and
Students, Scientific Institutions and
Libraries, Industry Professionals
BIC CODES: RNC, RN
THEMA CLASSIFICATION:
THEMAPSAF; THEMATQ

Edited by one of the best scientists in the field, this series presents the latest updates in the field of ecological research

A Volume in the *Advances in Ecological Research* Series

KEY FEATURES

- Provides the latest information on cancer research
- Offers outstanding and original reviews on a range of cancer research topics
- Serves as an indispensable reference for researchers and students alike

DESCRIPTION

Advances in Ecological Research, Volume 70 highlights new advances in the field, with this new volume presenting interesting chapters written by an international board of authors



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COVER IMAGE
FORTHCOMING

Coulomb Interactions in Particle Beams, Vol 230

Peter W. Hawkes, Founder-President of the European Microscopy Society and Fellow, Microscopy and Optical Societies of America; member of the editorial boards of several microscopy journals and Serial Editor, *Advances in Electron Optics*, France and **Martin Hýtch**, Senior Scientist, French National Centre for Research (CNRS), Toulouse, France

ISBN: 9780443297847

PUB DATE: Jun 01, 2024

LIST PRICE: £169.00 / \$245.00 / €175.00

DISCOUNT: Serial

FORMAT: Hardback

TRIM: 6.00w x 9.00h

PAGES: c. 216

AUDIENCE: Physicists, electrical engineers, applied mathematicians in all branches of image processing and microscopy as well as electron physics in general

BIC CODES: TJFD, TGB, UYS

THEMA CLASSIFICATION:

THEMAUYS; THEMATJF;

THEMATGB

Presents cutting-edge articles on the latest developments in all areas of microscopy, image science, and related subjects in electron physics

A Volume in the *Advances in Imaging and Electron Physics* Series

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in the *Advances in Imaging and Electron Physics* series

DESCRIPTION

Coulomb Interactions in Particle Beams, Volume 230, the latest release in the *Advances in Imaging and Electron Physics* series, merges two long-running serials, *Advances in Electronics and Electron Physics* and *Advances in Optical and Electron Microscopy*. The series features articles on the physics of electron devices (especially semiconductor devices), particle optics at high and low energies, microlithography, image science, digital image processing, electromagnetic wave propagation, electron microscopy, and the computing methods used in all these domains.



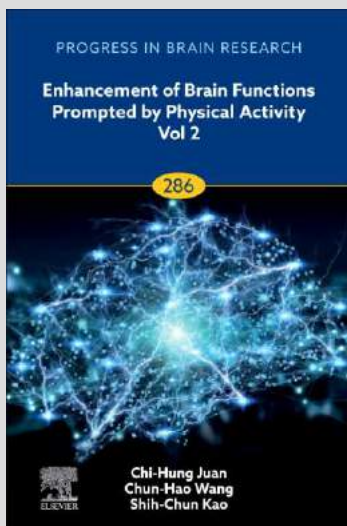
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SERIALS Physics & Astronomy

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Enhancement of Brain Functions Prompted by Physical Activity Vol 2, Vol 286

Edited by : **Chi-Hung Juan**, Chair Professor of Cognitive Neuroscience in the Institute of Cognitive Neuroscience, National Central University, Taiwan; **Chun-Hao Wang**, Institute of Physical Education, Health & Leisure Studies, and the Department of Psychology at National Cheng Kung University and **Shih-Chun Kao**, assistant professor in the Department of Health and Kinesiology at Purdue University

ISBN: 9780443314889
PUB DATE: Jun 01, 2024
LIST PRICE: £199.95 / \$288.00 / €206.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 236
AUDIENCE: Undergraduates, graduates, academics, and researchers in the field of neurology and brain research
BIC CODES: JMM, PSAN
THEMA CLASSIFICATION: THEMAJMM; THEMAPAN

Edited by some of the best scientists in the field, this series presents the latest updates in the field of brain research

A Volume in the *Progress in Brain Research* Series

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in *Progress in Brain Research* series
- Updated release includes the latest information on Enhancement of Brain Functions Prompted by Physical Activity

DESCRIPTION

Enhancement of Brain Functions Prompted by Physical Activity, Volume Two, Volume 286 in the *Progress in Brain Research* series, highlights new advances, with this updated volume presenting chapters on a variety of timely topics, including Predicting sports performance of elite female soccer players through smart wearable measurement platform, Physical activity and verbal memory performance: mediating effects of resting-state brain activity, Associations between physical activity, body composition, and cognitive performance among female office workers, Grip strength, working memory, and emotion perception in middle aged males, Association of aerobic fitness and grip strength with cognitive and academic performance in Arab children, and much more.



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SERIALS Neuroscience
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VERTEBRATE PATTERN
FORMATION



Edited by
Moises Mallo



Vertebrate Pattern Formation, Vol 159

Edited by : **Moises Mallo**, Gulbenkian Institute of Science (IGC) Lisbon, Portugal

ISBN: 9780128234617
PUB DATE: May 08, 2024
LIST PRICE: £128.00 / \$210.00 /
€150.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 436
AUDIENCE: Researchers and
students
BIC CODES: PST
THEMA CLASSIFICATION:
THEMAPST

Edited by one of the best scientists in the field, this series presents the latest updates in the field of developmental biology

A Volume in the *Current Topics in Developmental Biology Series*

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in the *Current Topics in Developmental Biology* series
- Updated release includes the latest information on the Vertebrate Pattern Formation

DESCRIPTION

Vertebrate Pattern Formation, Volume 159 in the *Current Topics in Developmental Biology* series, highlights advances in the field, with this volume presenting interesting chapters on timely topics, including Hox genes patterning the vertebrate body, Endodermal patterning, The use of organoids/gastruloids to understand development, Cell shape and movements controlling development, Neural crest and placodes in vertebrate development, Patterning of the neural tube, Non-canonical Wnt signaling in axial extension, The control of transitions along the main body axis, Emergence of a left-right symmetric body plan in vertebrate embryos, Formation of the vascular system, Generation of patterns in the paraxial mesoderm, and more.



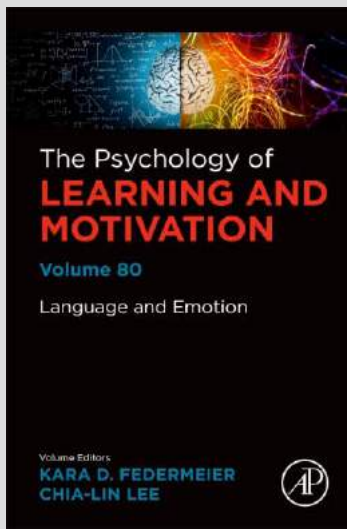
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SERIALS Biochemistry, Genetics & Molecular Biology

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The Intersection of Language with Emotion, Personality, and Related Factors, Vol 80

Edited by : **Kara D. Federmeier**, Professor, Department of Psychology, University of Illinois Urbana-Champaign, IL, USA and **Chia-Lin Lee**

ISBN: 9780443293986
PUB DATE: May 08, 2024
LIST PRICE: £98.50 / \$142.00 / €102.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 228
AUDIENCE: Researchers and students in cognitive psychology
BIC CODES: JMR
THEMA CLASSIFICATION: THEMAJMR

Essential, authoritative reference on the psychology of learning and motivation for researchers and academics working in cognitive science

A Volume in the *Psychology of Learning and Motivation Series*

KEY FEATURES

- Presents the latest information in the highly regarded *Psychology of Learning and Motivation* series
- Provides an essential reference for researchers and academics in cognitive science
- Contains information relevant to both applied concerns and basic research

DESCRIPTION

The Intersection of Language with Emotion, Personality, and Related Factors, Volume 80 in *The Psychology of Learning and Motivation* series, features empirical and theoretical contributions in cognitive and experimental psychology, ranging from classical and instrumental conditioning to complex learning and problem-solving. Chapters in this release include The landscape of emotional language processing in bilinguals, What's in an emotion word? The role of labeling in emotion regulation and well-being, Language in the eyes of emotional readers, Language, loneliness, and personality, Reading Emotion in Context: the Reciprocal Relationship between Feelings and Words, and Language and sociocultural environments influence our understanding and experience of emotions.



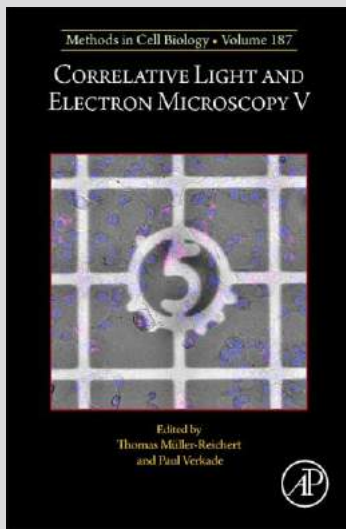
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SERIALS Psychology

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Correlative Light and Electron Microscopy V, Vol 187

Edited by : **Thomas Müller-Reichert**, Prof. Dr, Core Facility Cellular Imaging (CFCI), Faculty of Medicine Carl Gustav Carus, Technische Universität Dresden, Germany and **Paul Verkade**, The University of Bristol, Bristol, UK

ISBN: 9780323951418
PUB DATE: Apr 30, 2024
LIST PRICE: £139.00 / \$175.00 / €160.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 16
AUDIENCE: Academic, researchers, government and industrial sectors
BIC CODES: PSD, PSC, PSF
THEMA CLASSIFICATION: THEMAPSD; THEMAPSC; THEMAPSF

Edited by one of the best scientists in the field, this series presents the latest updates in the field of cell biology

A Volume in the *Methods in Cell Biology* Series

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in the *Methods in Cell Biology* series
- Includes the latest information on the topic of development, characterization and applications in CAR T Cells

DESCRIPTION

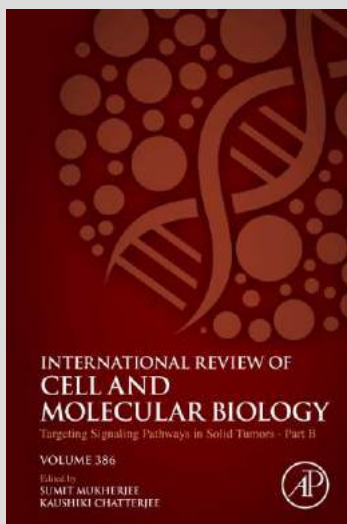
Correlative Light and Electron Microscopy V, Volume 187 in the *Methods in Cell Biology* series, highlights advances in the field, with this new volume presenting interesting chapters on timely topics, including Orthotopic brain tumor models derived from glioblastoma stem-like cells, RNA sequencing in hematopoietic stem cells, Generation of inducible pluripotent stem cells from human dermal fibroblasts, In vitro preparation of dental pulp stem cell grafts combined with biocompatible scaffolds for tissue engineering, Gene expression knockdown in chronic myeloid leukemia stem cells, Identification and isolation of slow-cycling GSCs, Assessment of CD133, EpCAM, and much more.



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Targeting Signaling Pathways in Solid Tumors Part B, Vol 386

Edited by : **Sumit Mukherjee** and **Kaushiki Chatterjee**

ISBN: 9780443235481
PUB DATE: Jul 01, 2024
LIST PRICE: £165.00 / \$239.00 / €171.00
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 248
AUDIENCE: Researchers, Medical Professionals, Students
BIC CODES: PSC, PSD, PSF
THEMA CLASSIFICATION: THEMAPSC; THEMAPSD; THEMAPSF

Edited by one of the best scientists in the field, this series presents the latest updates in the field

A Volume in the *International Review of Cell and Molecular Biology Series*

KEY FEATURES

- Provides the latest information on cancer research
- Offers outstanding and original reviews on a range of cancer research topics
- Serves as an indispensable reference for researchers and students alike

DESCRIPTION

Targetting Signaling Pathways in Solid tumour Part B, highlights new advances in the field, with this new volume presenting interesting chapters. Each chapter is written by an international board of authors.



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COVER IMAGE
FORTHCOMING

Cannabidiol in Neurology and Psychiatry, Vol 177

Edited by : Elaine Del-Bel; Sabrina Francisca de Souza Lisbôa and Felipe V. Gomes

ISBN: 9780443235917

PUB DATE: Jul 01, 2024

LIST PRICE: £145.00 / \$210.00 / €150.00

DISCOUNT: Serial

FORMAT: Hardback

TRIM: 6.00w x 9.00h

PAGES: c. 300

AUDIENCE: Undergraduates, graduates, academics, and researchers in the field of Neurobiology

BIC CODES: PSAN, MJN

THEMA CLASSIFICATION: THEMAMKJ; THEMAPSAN

Edited by one of the best scientists in the field, this series presents the latest updates in the field of neurobiology

A Volume in the *International Review of Neurobiology Series*

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in the *International Review on Neurobiology series*
- Updated release includes the latest information on Cannabidiol in Neurology and Psychiatry

DESCRIPTION

Cannabidiol in Neurology and Psychiatry, Volume 177 in the *International Review in Neurobiology series*, highlights new advances in the field, with this new volume presenting interesting chapters on topic such as Historical perspective on the therapeutic potential of cannabidiol, Cannabidiol: pharmacodynamics pharmacokinetic, Cannabidiol and Alzheimer's disease, Cannabidiol on anxiety disorders, Cannabidiol on psychosis, Cannabidiol on autism spectrum disorders, Cannabidiol in Epilepsy, Cannabidiol in Ischemia/stroke, Cannabidiol in Depression, Cannabidiol and Abuse of drugs, and much more.

Additional chapters cover Cannabidiol in fear response and PTSD, Cannabidiol and Pain. and Cannabidiol and Parkinson's disease.



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COVER IMAGE
FORTHCOMING

Method of process systems in energy systems: Current system part I, Vol 8

Faisal Khan, Mary Kay O'Connor Process Safety Center, Artie McFerrin Department of Chemical Engineering, Texas A&M University, College Station, TX, USA; **Efstratios Pistikopoulos**, Director, Texas A&M Energy Institute, Dow Chemical Chair, USA and **Zaman Sajid**

ISBN: 9780443297748
PUB DATE: Jul 01, 2024
LIST PRICE: £198.99 / \$245.00 / €228.99
DISCOUNT: Serial
FORMAT: Hardback
TRIM: 6.00w x 9.00h
PAGES: c. 279
AUDIENCE: Engineering practitioners as well researchers
BIC CODES: TDCB
THEMA CLASSIFICATION: THEMATDC

Edited by one of the best scientists in the field, this series presents the latest updates in the field of chemical process safety

A Volume in the *Methods in Chemical Process Safety* Series

KEY FEATURES

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- Presents the latest release in the *Methods in Chemical Process Safety* series
- Includes the authority and expertise of leading contributors from an international board of authors

DESCRIPTION

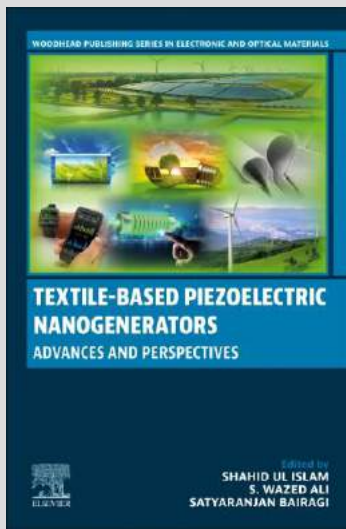
Method of Process Systems in Energy Systems: Current System Part 1, Volume Eight, the latest release in the *Methods in Chemical Process Safety* series, highlights new advances in the field, with this new volume presenting interesting chapters written by an international board of authors.



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Textile-Based Piezoelectric Nanogenerators

Advances and Perspectives

Edited by : **Shahid Ul Islam**, Department of Applied Sciences and Humanities, Faculty of Engineering and Technology, Jamia Millia Islamia, New Delhi 110025, India; **S. Wazed Ali**, Associate Professor, Indian Institute of Technology (IIT) Delhi, India and **Satyanjan Bairagi**, Research Associate, University of Glasgow, UK

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TRIM: 6.00w x 9.00h
PAGES: c. 511
AUDIENCE: Materials Scientists and Engineers, Energy Scientists
BIC CODES: TDH
THEMA CLASSIFICATION: THEMATDCP; THEMATDPF; THEMATGMP

Comprehensive reference on the current research directions of piezoelectric textiles for renewable energy technologies

A Volume in the *Woodhead Publishing Series in Electronic and Optical Materials* Series

KEY FEATURES

- Introduces textile-based piezoelectric materials used for energy harvesting from mechanical energy waste
- Covers fabrication of piezoelectric nanogenerators in conventional textiles for the development of next-generation wearable energy harvesters
- Provides systematic and comprehensive coverage of the topic and highlights current and potential applications of textile-based piezoelectric nanogenerators for further investigation

DESCRIPTION

Textile-Based Piezoelectric Nanogenerators: Advances and Perspectives reviews materials, fabrication methods, and applications of piezoelectric textile materials for smart wearable systems and portable electronic technologies. In the book, current achievements in piezoelectric nanogenerators are summarized, and applications of the textile-based piezoelectric nanogenerators in the fields of sensing, structural health monitoring, and energy harvesting are discussed. Drawbacks and opportunities in these areas are also investigated, making this reference suitable for materials scientists and engineers in academia and R&D.



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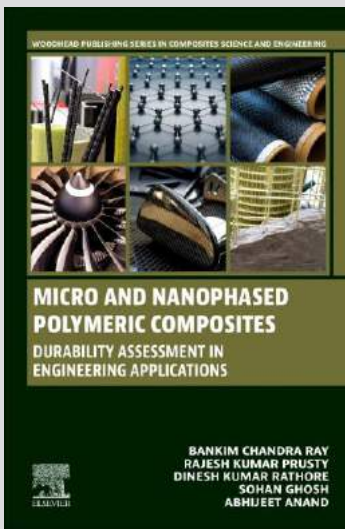
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Micro and Nanophased Polymeric Composites

Durability Assessment in Engineering Applications

Bankim Chandra Ray, Professor, Metallurgical and Materials Engineering Department, National Institute of Technology, Rourkela, India; **Rajesh Kumar Prusty**, Assistant Professor, Metallurgical and Materials Engineering Department, National Institute of Technology, Rourkela, India; **Dinesh Kumar Rathore**, Department of Mechanical Engineering, Malaviya National Institute of Technology, Jaipur, India; **Sohan Kumar Ghosh**, Materials Design Division, Department of Physics, Chemistry and Biology, Linköping University, Sweden and **Abhijeet Anand**, Metallurgical and Materials Engineering Department, National Institute of Technology Rourkela, Odisha, Rourkela, India



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TRIM: 6.00w x 9.00h
PAGES: c. 260
AUDIENCE: Academic and industrial researchers, materials scientists and engineers working in the design, analysis and manufacture of composite material systems in various industrial sectors including aerospace, automotive, marine, offshore, civil and space
BIC CODES: TGM
THEMA CLASSIFICATION: THEMATGM

A comprehensive reference resource that focuses on in-service environmental damage and degradation studies of FRP composites

A Volume in the *Woodhead Publishing Series in Composites Science and Engineering Series*

KEY FEATURES

- Covers various micro-mechanisms of failure under different environmental conditions, including moisture diffusion kinetics and the effects of aging parameters on microstructures
- Discusses the impact of different nanoscale reinforcements on the environmental durability of conventional FRP composites
- Presents a comprehensive approach with widespread applications such as low earth orbit space environments and different corrosive environments

DESCRIPTION

Micro and Nanophased Polymeric Composites: Durability Assessment in Engineering Applications provides a comprehensive review of in-service environmental damage and degradation studies of FRP composites in a broad range of different applications. End-users such as academic and industrial researchers and materials scientists and engineers working in the design, analysis, and manufacture of composite material systems will be able to identify the possible superior advantages and limitations of FRP composites in various applications. Particular emphasis is given on the identification of various failure micro-mechanisms leading to unprecedented failure in different harsh and hostile environments.

Divided into two distinct parts, the first section focuses on fundamentals, with key chapters on the main constituents of FRP composites, mechanical properties, characterization techniques, and processing and fabrication techniques. Part two focuses on polymer composites under different in-service applications, including the marine and space environment, chemical and corrosive environments, high and low temperature environments, and other critical environments.



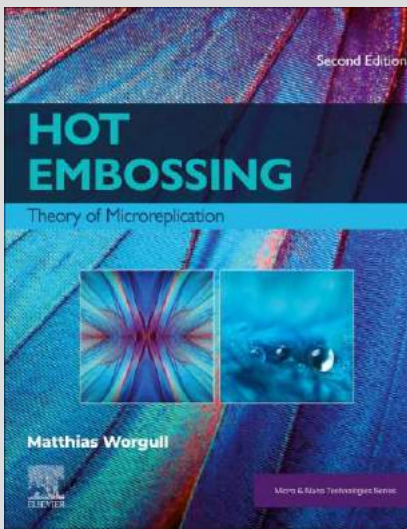
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ENGINEERING Materials

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Hot Embossing, 2e

Theory of Microreplication

Matthias Worgull, Lecturer, Institute of Microstructure Technology, Karlsruhe Institute of Technology, Germany

ISBN: 9780128211939

PREVIOUS ISBN: 9780323165549

PUB DATE: Jul 01, 2024

LIST PRICE: £185.00 / \$240.00 /

€210.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 465

AUDIENCE: Materials Scientists and Engineers

BIC CODES: TGM, TJ, TBN, TJFD, TDP

THEMA CLASSIFICATION:

THEMATGM; THEMATJF;

THEMATBN; THEMATJFD;

THEMATD

Explores theory and practice of microreplication, focusing on hot embossing, nanoimprint, thermoforming, and roll-to-roll replication

A Volume in the *Micro and Nano Technologies Series*

KEY FEATURES

- Comprehensively updated to include new techniques, processes, and variables that have come to prominence in recent years
- Includes new chapters that address monitoring, properties of molded parts, 3D thermoforming, hot pulling, functional materials, smart surfaces, and upscaling by roll-2-roll
- Discusses the entire microreplication process, from theory and processes to technology and mold to surface-oriented applications

DESCRIPTION

Hot Embossing: Theory of Microreplication, Second Edition presents the current state-of-the-art in microreplication, with a focus on hot embossing, nanoimprint, thermoforming, and roll-to-roll replication. Polymer processing, the theory of polymers and the processing of polymers are discussed in detail. The book contains in-depth analysis of processing processes and replication techniques, including mold fabrication. Monitoring, data analysis and reliability of molded parts is also discussed. In this updated edition, new processes are included, such as the process of micro- and nanothermoforming to generate 3D structures and the hot pulling processes to generate hierarchical structures with high aspect ratios.

Based on hot pulling, "Nanofur" for Oil-water-separation is a large-scale biomimetic application. Upscaling, especially the seamless roll-to-roll replication, is also explored. The book is designed to cover the entire workflow for a seamless lithographic sleeve. This new edition marks a substantial update of the previous edition, incorporating several new chapters. It is an important resource for materials scientists and engineers working in the areas of micro- and nanofabrication.



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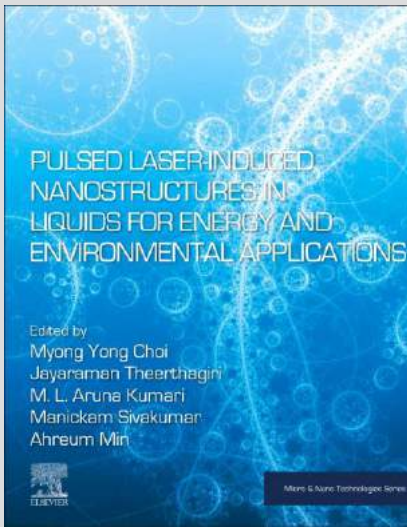
ENGINEERING Nanotechnology

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Pulsed Laser-Induced Nanostructures in Liquids for Energy and Environmental Applications

Edited by : **Myong Yong Choi**, Director, Core-Facility Center for Photochemistry & Nanomaterials, Department of Chemistry, Research Institute of Natural Sciences, Gyeongsang National University, Jinju, Republic of Korea; **Jayaraman Theerthagiri**, Research Fellow, Core-Facility Center for Photochemistry & Nanomaterials, Department of Chemistry, Research Institute of Natural Sciences, Gyeongsang National University, Jinju, Republic of Korea; **M L Aruna Kumari**, Assistant Professor, Department of Chemistry, The Oxford College of Science, (Affiliated to Bangalore University), Bengaluru, Karnataka, India; **Manickam Sivakumar**, Chemical and Nanopharmaceutical Process Engineering, Department of Chemical and Petroleum Engineering, Faculty of Engineering, Universiti Teknologi Brunei



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DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 310

AUDIENCE: Researchers, graduate students and engineers working in the field of nanotechnology, Materials scientists interested on renewable energy and environmental science
BIC CODES: TGM, TJ
THEMA CLASSIFICATION: THEMATGM; THEMATJFD

Provides in-depth knowledge of nanostructured materials and their energy-level mechanisms, along with the latest nanotechnology-based applications in energy and environmental remediation

A Volume in the *Micro and Nano Technologies Series*

KEY FEATURES

- Provides basic principles of pulsed laser–matter interaction, with a focus on the resulting material responses compared to other conventional techniques and state-of-the-art applications
- Offers comprehensive coverage of pulsed laser induced nanomaterials and their potential energy and environmental applications
- Examines the properties of pulsed laser induced nanostructures that make them so adaptable

DESCRIPTION

Pulsed Laser-Induced Nanostructures in Liquids for Energy and Environmental Applications covers fundamental insights on the mechanism of pulsed laser techniques by considering various experimental conditions to accelerate hypotheses that are appropriate for the production of efficient nanomaterials. In this book, readers will learn about the major advancements in the field of pulsed laser technologies during the past decades, current applications, and the future impacts of pulsed laser technologies. This book provides a comprehensive overview of the development of nanostructured catalytic materials via pulsed laser techniques, their use as energy, environment-related applications and their present trend in the industry and market.

In addition, it highlights the latest advances related to the application of these nanostructured materials produced via pulsed laser in liquid techniques in various energy (supercapacitor, batteries, and hydrogen production) and environmental remediation (wastewater treatment and conversion of waste into value-added product) processes. Recent progress on several kinds of both photo and electroactive nanomaterials is reviewed, along with essential aspects that govern catalytic behaviors and corresponding stability.



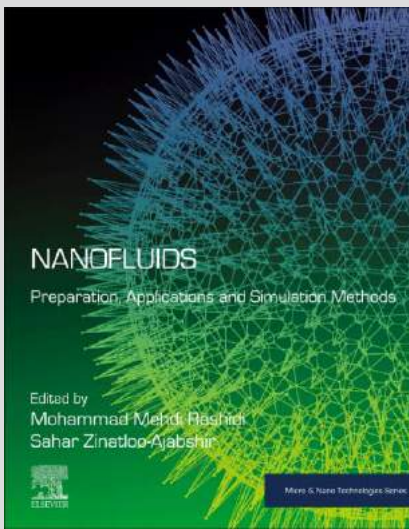
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Nanofluids

Preparation, Applications and Simulation Methods

Edited by : **Mohammad Mehdi Rashidi**, Professor of Mechanical Engineering, Institute of Fundamental and Frontier Sciences, University of Electronic Science and Technology of China, China and **Sahar Zinatloo-Ajabshir**, Associate Professor of Nanoscience and Nanotechnology, Department of Chemical Engineering, University of Bonab, Iran

ISBN: 9780443136252
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LIST PRICE: £175.00 / \$225.00 / €200.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 191 x 235

PAGES: c. 430

AUDIENCE: Academic and industrial researchers, materials scientists and engineers, nanotechnologists, and chemists working in the development of nanomaterials and nanofluids for heat transfer in energy and engineering applications, Postgraduate students in the above disciplines

BIC CODES: TGM

THEMA CLASSIFICATION:
THEMATGM

Covers the synthesis of nanostructures, preparation of nanofluids, different applications, and proposed models for fluid mechanics and heat transfer

A Volume in the *Micro and Nano Technologies Series*

KEY FEATURES

- Covers the synthesis of nanostructures, preparation of nanofluids, different applications and proposed models for fluid mechanics and heat transfer
- Presents recent advances on preparation methods, including green chemistry-based methods for preparation of nanomaterials and nanofluids
- Includes novel model-based approaches such as molecular dynamics and Lattice Boltzmann methods
- Delves into applications in renewable energy technologies and thermal management
- Contains a Semi-analytical approach for solving Time-Fractional Navier-Stokes Equation

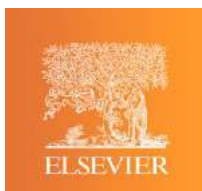
DESCRIPTION

Nanofluids: Preparation, Applications and Simulation Methods provides a comprehensive review of recent advances in this important research field. Different approaches for preparing some remarkable families of nanofluids such as aluminum oxide-based nanofluids, CuO/Cu-based nanofluids, carbon nanotubes/graphene-based nanofluids, ZnO-based nanofluids, Fe₃O₄ based nanofluids, and SiO₂ based nanofluids are discussed in detail, along with their current and potential applications. Different approaches for numerical, semi-analytical, and analytical simulations are also discussed, including the Lattice Boltzmann method, as well as advanced analytical techniques such as the Differential Transform Method, the Homotopy Analysis Method, and Optimal Homotopy Analysis.

The book will be a valuable reference resource for academic and industrial researchers, materials scientists and engineers, nanotechnologists, and chemists working in the development of nanomaterials and nanofluids for heat transfer in energy and engineering applications.



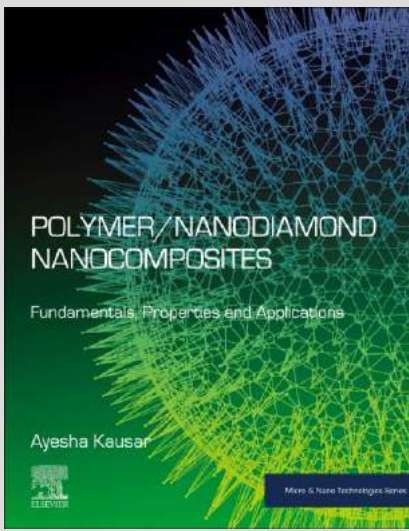
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Polymer/Nanodiamond Nanocomposites

Fundamentals, Properties and Applications

Ayesha Kausar, Professional Scientist, Pakistan's National Centre for Physics, Islamabad, Pakistan

ISBN: 9780443159084
PUB DATE: Jul 01, 2024
LIST PRICE: £165.00 / \$213.00 / €190.00
DISCOUNT: Reference
FORMAT: Paperback
TRIM: 7.50w x 9.25h
PAGES: c. 325
AUDIENCE: Scientists and researchers from both academia and industry including material scientists, physicists, chemists, biologists, and other experts who are engaged in the research and development of high-performance polymer/nanodiamond nanocomposites, Postgraduate students studying nanoscience and technology especially advanced nanodiamond-based nanomaterials
BIC CODES: TJ
THEMA CLASSIFICATION: THEMATJFD

Covers the latest advances in polymer/nanodiamond nanocomposites from fundamentals to applications

A Volume in the *Micro and Nano Technologies Series*

KEY FEATURES

- Covers the latest advances in polymer/nanodiamond nanocomposites
- Includes important fundamentals, properties, and applications
- Examines nanodiamond nanofiller derived polymeric nanocomposites
- Discusses a wide range of technical applications in aerospace, automobiles, coatings, corrosion resistance, shape memory, energy devices, and biomedical fields

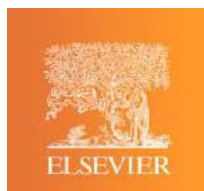
DESCRIPTION

Polymer/Nanodiamond Nanocomposites: Fundamentals, Properties and Applications provides an up-to-date review of these materials. The structure, design, processing, and properties, as well as technological advancements, are all thoroughly discussed. Several practical and potential application areas are also identified such as tribological aerospace/automobile materials (thermally conducting, lubricant, and radiation shielding), coatings/anti-corrosion nanomaterials, shape memory nanocomposites, energy devices (Li ion batteries and solar cells), and biomedical nanomaterials (drug delivery, tissue engineering, biosensor, imaging).

Current difficulties and potential opportunities are also discussed in detail. The book covers all aspects of these new novel materials' design, structure, manufacture, and applications, offering an up-to-date, comprehensive knowledge resource for materials scientists, researchers, and engineers.



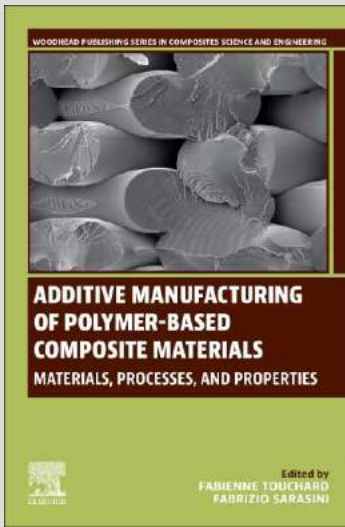
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Additive Manufacturing of Polymer-Based Composite Materials

Materials, Processes, and Properties

Edited by : **Fabienne Touchard**, PPRIME Institute, ISAE-ENSMA Department of Physics and Mechanics of Materials, ISAE-ENSMA, France and **Fabrizio Sarasini**, Assistant Professor, Department of Chemical Engineering, Materials and Environment of the Faculty of Civil and Industrial Engineering, Sapienza University of Rome, Italy

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PAGES: c. 446

AUDIENCE: Academic and industrial researchers, materials scientists and engineers, manufactures and postgraduate students interested in polymer matrix composite materials, specifically composites design, and additive manufacturing technologies
BIC CODES: TDCP, TDCQ
THEMA CLASSIFICATION: THEMATDPF; THEMATGM; THEMATGMP

This book provides an overview on additive manufacturing of polymer matrix composites

A Volume in the *Woodhead Publishing Series in Composites Science and Engineering Series*

KEY FEATURES

- Provides an overview of different methods for additive manufacturing of polymer-based matrix composites
- Covers long and short fiber-based composites and corresponding application examples
- Addresses the development and properties of a wide range of matrices (thermoplastics, thermosets), and fibers (natural and synthetic) in a user-specified orientation, continuous or random organization and hierarchical structures
- Presents sustainability and structural reliability of composite structures
- Displays a careful balance between materials science and technology, providing a detailed understanding of how composites' properties, processing, performance, and structure are interrelated

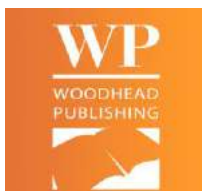
DESCRIPTION

Additive Manufacturing of Polymer-based Composite Materials: Materials, Processes, and Properties presents the latest developments in additive manufacturing of polymer matrix composites and illustrates the large range of composite materials that can be obtained. Different technologies are presented with their own specificities such as: fused filament fabrication, wet fiber placement, stereolithography, and direct-ink-writing. Composites with chopped or continuous reinforcement, with synthetic or natural fibers, with thermoplastic or thermoset resin are compared and described in detail. Their thermal, physical, electrical, and mechanical properties are discussed.

The book is dedicated to professionals involved in engineering design and production, as well as industrial communities who want to gain in-depth knowledge in the field of 3D printed composites.



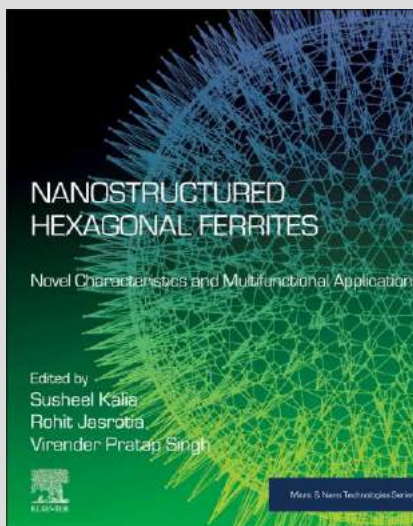
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ENGINEERING Materials

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Nanostructured Hexagonal Ferrites

Novel Characteristics and Multifunctional Applications

Edited by : **Susheel Kalia**, Associate Professor and Head, Department of Chemistry, Army Cadet College Wing of Indian Military Academy Dehradun, India; **Rohit Jasrotia**, Research Fellow and Assistant Professor at INTI International University, Malaysia and **Virender Pratap Singh**, Assistant Professor of Physics, Department of Physics, Netaji Subhash Chander Bose Memorial Government Degree College, Hamirpur, India

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PAGES: c. 279

AUDIENCE: Academia: Researchers and advanced students across nanotechnology, polymer science, composite science, chemistry, and materials science and engineering. Industry: Scientists, engineers, and R&D professionals with an interest in hexaferrites and advanced nanostructures for a range of advanced applications (electronics, environment, etc.)

BIC CODES: TJ, TGM
THEMA CLASSIFICATION: THEMATGM; THEMATJFD

A detailed guide on preparation methods and advanced properties of hexagonal ferrites for state-of-the-art applications

A Volume in the *Micro and Nano Technologies Series*

KEY FEATURES

- Introduces fabrication, characterization, processing, and preparation methods for hexagonal ferrites
- Analyzes structure and properties of nanohexaferrites and their suitability in a range of applications
- Opens the door to novel utilizations across electronic devices, energy storage, and wastewater remediation

DESCRIPTION

Nanostructured Hexagonal Ferrites: Novel Characteristics and Multifunctional Applications presents the latest advances in hexaferrite nanostructures, which offer reliability, stability, and efficiency in a range of advanced applications. The book begins by introducing the structure, characteristics, fabrication, processing, characterization methods, and composites of hexagonal ferrites in detail. Solid-state chemistry and magnetic, magnetoelectric, multiferroic, and dielectric properties are examined. Subsequent chapters then provide in-depth coverage of the preparation of nanohexaferrites with specific properties for target applications, in areas such as magnetic energy storage, high-frequency devices, microwave devices, stealth technologies, gyromagnetic devices, and wastewater remediation.

This is a valuable resource for researchers and advanced students across nanotechnology, polymer science, composite science, chemistry, and materials science and engineering, as well as industrial scientists, engineers, and R&D professionals with an interest in hexaferrites and advanced nanostructures for advanced applications.



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ENGINEERING Nanotechnology

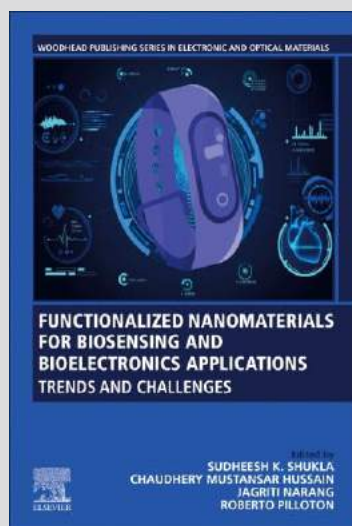
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Functionalized Nanomaterials for Biosensing and Bioelectronics Applications

Trends and Challenges

Edited by : **Sudheesh K. Shukla**, Department of Chemical Sciences, University of Johannesburg, Doornfontein Campus, Johannesburg, South Africa; Department of Biomedical Engineering, School of Biological Engineering and Life Science, Shobhit Institute of Engineering & Technology (Deemed-to-be University), Modipuram, Meerut, India; School of Chemical Engineering and Physical Sciences, Lovely Professional University, Phagwara, India; **Chaudhery Mustansar Hussain**, PhD, New Jersey Institute of Technology, Newark, NJ, USA; **Jagriti Narang**, Department of Biotechnology



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DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 360

ILLUSTRATIONS: 70 illustrations (20 in full color)

AUDIENCE: Materials Scientists and Engineers Analytical Chemists, Biomedical Engineers

BIC CODES: TJ, TGM, TJFD

THEMA CLASSIFICATION:

THEMATJF; THEMATGM

Presents recent advances in understanding, fabrication methods, and application directions of the integration of functionalized nanomaterial systems with sensing platforms

A Volume in the *Woodhead Publishing Series in Electronic and Optical Materials* Series

KEY FEATURES

- Introduces the most common functionalized nanomaterials and their morphologies, properties, and mechanisms for sensing applications
- Reviews functionalization and fabrication methods and techniques for the integration of one- and two-dimensional materials for sensing applications
- Addresses the most relevant applications of functionalized nanomaterials for biosensing and bioelectronics applications

DESCRIPTION

Functionalized Nanomaterials for Biosensing and Bioelectronics Applications: Trends and Challenges describes current and future opportunities for integrating the unique properties of two-dimensional nanomaterials with bioelectronic interfaces. Sections focus on background information and fundamental concepts, review the available functionalized nanomaterials and their properties, explore the integration of functionalized nanomaterials with bioelectronics, including available fabrication and characterization methods, electrical behavior at the interface, and design and synthesis guidelines, and review examples of microsystems where functionalized nanomaterials are being integrated with bioelectronics. This book is suitable for researchers and practitioners in academia and R&D working in materials science and engineering, analytical chemistry, and related fields.



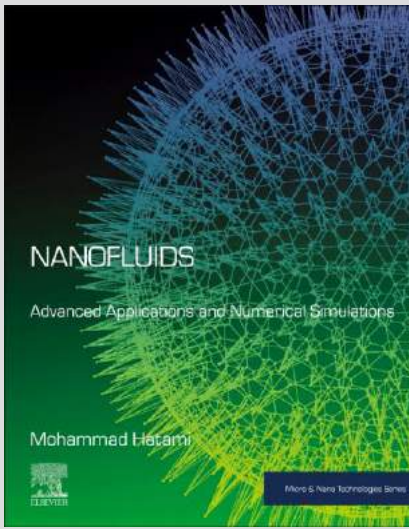
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ENGINEERING Electrical

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Nanofluids

Advanced Applications and Numerical Simulations

Mohammad Hatami, Associate Professor, Department of Mechanical Engineering, Esfarayen University of Technology, Esfarayen, North Khorasan, Iran

ISBN: 9780323956789
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LIST PRICE: £180.00 / \$230.00 / €200.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 325

AUDIENCE: Researchers and advanced students working in nanofluids, simulation, and numerical methods, and across nanotechnology, biomedicine, electronics, energy, chemistry, materials science, and mechanical engineering. Scientists, engineers, and R&D professionals with an interest in nanofluids, simulation, and numerical methods for advanced applications (electronics, energy, biomedicine, automotive)

BIC CODES: TGM, TJ

THEMA CLASSIFICATION: THEMATGM; THEMATJFD

A complete guide to numerical methods for nanofluid analysis, including a range of applications

A Volume in the *Micro and Nano Technologies Series*

KEY FEATURES

- Presents numerical methods for modelling of nanofluids in details
- Examines stability, magnetic field, electric field, and other effects on behavior and optical properties
- Explores cutting-edge applications of nanofluids by numerical methods

DESCRIPTION

Nanofluids: Advanced Applications and Numerical Simulations combines the mathematical and numerical studies of nanofluids and their application to a range of applications. The book begins by introducing the principles of nanofluids, structures, types, properties, methods and stability. This is followed by a detailed chapter that explains a full range of numerical techniques for the modeling of nanofluids. Subsequent chapters offer in-depth coverage of target areas, including cooling and heating applications, micro-electric and magnetic devices, chemistry and oil recovery, biomedicine, renewable energy, and automotive engineering.

Throughout the book, methods for numerical modelling are described in detail, with supporting equations, techniques, and applied examples. This is a valuable resource for advanced students, scientists, engineers, and R&D professionals working with nanofluids, simulation, and numerical methods for advanced applications, as well as researchers across nanotechnology, biomedicine, electronics, energy, chemistry, materials science and mechanical engineering.



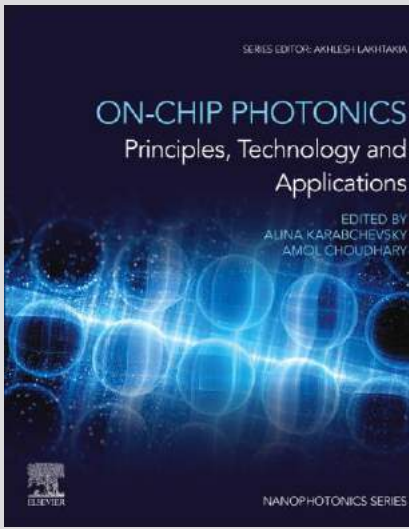
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ENGINEERING Nanotechnology

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On-Chip Photonics

Principles, Technology and Applications

Edited by : **Alina Karabchevsky**, Ben-Gurion University, School of Electrical and Computer Engineering, Department of Electrooptics and Photonics, Beer-Sheva, Israel; **Amol Choudhary**, Indian Institute of Technology (IIT), Department of Electrical Engineering, and the Bharti School of Telecommunication Technology and Management Delhi, India and **Akhlesh Lakhtakia**, Evan Pugh University Professor and The Charles Godfrey Binder (Endowed) Professor, Department of Engineering Science and Mechanics, Pennsylvania State University, USA

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LIST PRICE: £180.00 / \$235.00 / €225.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 502

AUDIENCE: Materials Scientists and Engineers

BIC CODES: TTB, TGM

THEMA CLASSIFICATION: THEMATTB; THEMATGM

Comprehensive reference on applications-specific research directions of on-chip photonics including principles, materials, and methods to enable commercial translation

A Volume in the *Nanophotonics* Series

KEY FEATURES

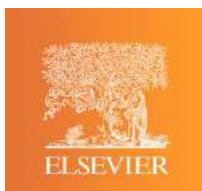
- Introduces advanced concepts of passive and active on-chip photonic components
- Discusses emerging applications of on-chip photonics, quantum technologies, computing, and more
- Reviews materials, computational tools, and suggestions for the realization of on-chip photonic devices

DESCRIPTION

On-Chip Photonics: Principles, Technology and Applications reviews the advances of integrated photonic devices and their demonstrated applications. The discussed applications encompass a wide range of cutting-edge technologies, including quantum photonics, lasers on a chip, mid-infrared and overtone spectroscopies, all-optical processing on a chip, logic gates on a chip, and cryptography on a chip. The summaries in the book chapters facilitate an understanding of the field and enable the application of optical waveguides in a variety of optical systems. Overviews of computational tools, material platforms, and suggestions for the realization of on-chip photonic devices are also included



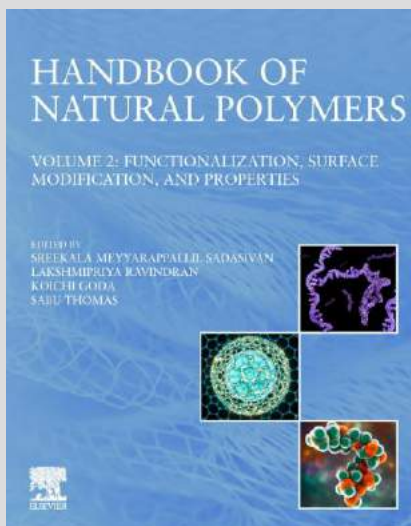
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Handbook of Natural Polymers, Volume 2

Functionalization, Surface Modification, and Properties

Edited by : **M.S. Sreekala**, Associate Professor, School of Chemical Sciences, Mahatma Gandhi University, Kottayam, Kerala, India, and Joint Director, International and Inter-University Centre for Nanoscience and Nanotechnology and School of Nanoscience and Technology, Mahatma Gandhi University, Kottayam, Kerala, India; **Lakshmipriya Ravindran**, Assistant Professor, School of Energy Materials, Mahatma Gandhi University, Kottayam, Kerala, India; **Koichi Goda**, Full Professor, Department of Mechanical Engineering, Yamaguchi University, Japan

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PAGES: c. 651

AUDIENCE: Researchers, scientists, and advanced students interested in preparation and application of natural polymers, from a range of disciplines including polymer chemistry, polymer physics, surface science, nanotechnology, composite science, materials science, biomedical engineering, environmental science, chemical engineering, and mechanical engineering. Engineers and R&D with an interest in polymers from natural sources, across a range of industries (biomedical, pharmaceutical, packaging, environmental, consumer products, automotive, etc.)

BIC CODES: TDCP, PHFC, TGM, PNR

THEMA CLASSIFICATION:
THEMATDCP; THEMATGMP;
THEMATDPF; THEMAPHFC;
THEMATGM



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A complete guide to functionalization, modification, and properties of natural polymers, highlighting latest techniques and application potential

KEY FEATURES

- Provides systematic coverage of the latest methods for functionalization, surface modification, and properties' analysis of natural polymers
- Includes an extensive range of natural polymer sources, including established biopolymers and emerging materials
- Explores modifications and properties of natural polymers and their related composites, blends, IPNs, gels and nanoparticles

DESCRIPTION

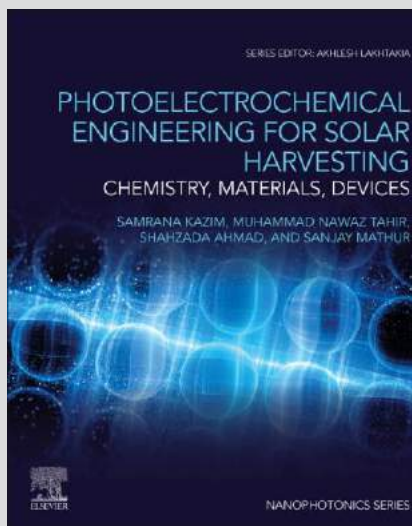
The Handbook of Natural Polymers, Volume Two: Functionalization, Surface Modification, and Properties covers modifications, functionalization, analysis and properties of polymers from natural sources. The book begins by introducing the current state-of-the-art, challenges and opportunities in natural polymers. This is followed by detailed coverage of methods for chemical, physical and surface modifications, and functionalization of natural polymers, including nanocellulose composites, gluten, chitin, alginate, pectin, keratin, shellac, wool, hemicellulose, lignin, natural rubber, albumin, collagen, gelatin, zein, soya protein, silk fibroin, gutta percha and gum. The final chapters explain several other key aspects, such as microscopical and spectroscopical analysis, mechanical, thermal, and more.

The book aims to offer potential avenues for the preparation, modification, and implementation of advanced natural polymer-based materials with the desired properties for specific applications.

ENGINEERING Materials

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Photoelectrochemical Engineering for Solar Harvesting

Chemistry, Materials, Devices

Edited by : **Samrana Kazim**, Ikerbasque fellow and Group leader, Basque Centre for Materials, Applications, and Nanostructures (UPV), Spain; **Muhammad Nawaz Tahir**, Assistant Professor, Chemistry Department, King Fahd University of Petroleum and Minerals, Dhahran, Kingdom of Saudi Arabia; **Shahzada Ahmad**, Ikerbasque professor, University of Basque Country, Spain and **Sanjay Mathur**, Director, Institute of Inorganic Chemistry, University of Cologne, Germany

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PAGES: c. 558
AUDIENCE: Materials Scientists, Inorganic Chemists, Chemical Engineers, Process Engineers, Energy
BIC CODES: TJFD, TGM
THEMA CLASSIFICATION: THEMATGM; THEMATJF

Overview of experimental approaches towards the design of innovative energy materials for solar energy fuel production

A Volume in the *Nanophotonics* Series

KEY FEATURES

- Covers the design of innovative energy materials such as photocatalysts and water oxidation catalysts for solar energy harvesting
- Reviews computational and theoretical approaches before providing a comprehensive overview of experimental directions
- Provides information to guide photon and photoelectrochemical engineering of catalysts for solar applications

DESCRIPTION

Photoelectrochemical Engineering for Solar Harvesting: Chemistry, Materials, Devices provides an up-to-date appraisal of the photon engineering of innovative catalysts for solar energy harvesting. This book analyzes the overall progress, potential challenges, and the industrialization of new catalysts in the near future. The primary emphasis is on experimental approaches from materials synthesis to device applications, however, there is also an introduction to relevant photochemistry concepts. This book is suitable for materials scientists and chemists who, through the use of photonics, are in continuous pursuit of improving the efficiencies of different devices used to capture solar energy for the generation of sustainable fuel.

Sunlight-driven fuel synthesis is the most sustainable and potentially economical option for producing energy vectors through water splitting. Thus, this book focuses on the design of photocatalysts and water oxidation catalysts, as artificial photosynthesis and hydrogen fuel production via water oxidation (in place of fossil fuels) are two promising approaches towards renewable energy.



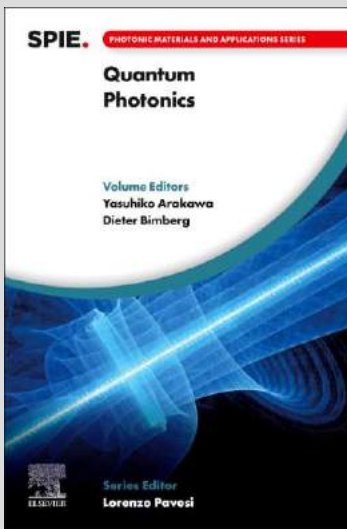
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ENGINEERING Nanotechnology

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Quantum Photonics

Edited by : **Yasuhiko Arakawa**, Specially Appointed Professor, Institute for Nano Quantum Electronics, The University of Tokyo; Professor Emeritus, The University of Tokyo; Program Director, MEXT Q-LEAP and Supervisor, CREST Quantum Technology and **Dieter Bimberg**, Director, Bimberg Chinese–German Center for Green Photonics, Chinese Academy of Sciences at CIOMP, Changchun and Founding Director, Center of Nano Photonics, TU Berlin, Germany

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PAGES: c. 532
AUDIENCE: Materials Scientists and Engineers; Electrical Engineers
BIC CODES: TGM, TJFD, TTB
THEMA CLASSIFICATION: THEMATGM; THEMATJF; THEMATTB

Important introduction to the field of quantum photonics, including physics, materials, devices, and system applications

A Volume in the *Photonic Materials and Applications Series*

KEY FEATURES

- Covers the whole quantum photonics field, including nanostructured materials, physics, modelling, and quantum technology applications ranging from applications of q-bit emitters to quantum dot lasers
- Comprehensively and systematically reviews fundamentals and applications of quantum photonics for beginners in the field
- Provides foundational knowledge for modern photonics-related quantum technologies

DESCRIPTION

Quantum Photonics aims to serve as a comprehensive and systematic reference source for entrants to the field of quantum photonics, including updated topics on quantum photonics for researchers working in this field. The book reviews the fundamental knowledge of modern photonics related quantum technologies, key concepts of quantum photonic devices, and quantum photonics applications. The book is suitable for graduate students, researchers, and engineers who want to learn quantum photonics fundamentals.

The editors, who are leaders in this field, have formulated this book as an introduction to the cutting-edge research in quantum photonics. Researchers and students involved in the development of semiconductor optoelectronics and optical communication systems should also find this book helpful.



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ENGINEERING Electrical

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Magnetic Nanoparticles in Nanomedicine

Edited by : **Kai Wu**, Assistant Professor, Texas Tech University, Department of Electrical and Computer Engineering, USA and **Jian-Ping Wang**, University of Minnesota, USA

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PAGES: c. 418

AUDIENCE: Researchers working in the areas of magnetic materials and biomedical applications. Senior undergraduates and graduate students in Electrical Engineering, Materials Science, Biomedical Engineering, Chemical Engineering, Engineers working in the industry of magnetic nanomaterials, Clinicians working in magnetic therapy and magnetic diagnosis

BIC CODES: PHK, TGM, MQW, MBG

THEMA CLASSIFICATION:
THEMATGM; THEMAPHK;
THEMAMQW; THEMAMBG;
THEMATCB

Explores the most recent advances in the medical use of magnetic nanoparticles

A Volume in the *Woodhead Publishing Series in Electronic and Optical Materials* Series

KEY FEATURES

- Provides a valuable tool for academics and clinicians, pushing the frontiers of magnetic-based early-stage disease diagnosis and screening
- Clearly explains the synthesis, functionalization, and biocompatibility of magnetic nanoparticles
- Describes micromagnetic simulation, a valuable tool for predicting the properties of magnetic nanomaterials

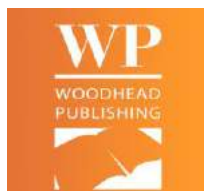
DESCRIPTION

Magnetic Nanoparticles in Nanomedicine provides readers with the fundamental theories and principles of magnetic materials, the synthesis and surface functionalization strategies of MNPs, and the standard techniques for characterizing physicochemical properties of MNPs. Other sections review MNP-based therapies such as magnetic hyperthermia therapy, drug/gene delivery, and magnetic neurostimulation and cover MNP-based in vitro and in vivo disease diagnosis, respectively, including techniques such as magnetoresistive (MR), nuclear magnetic resonance (NMR), magnetic particle spectroscopy (MPS) biosensing platforms, magnetic resonance imaging (MRI), and magnetic particle imaging (MPI).

Final chapters address biocompatibility and safety issues in applying MNPs to in vivo biomedical applications, including coverage of the toxicity of MNPs to human tissues, the immune responses of the human body to these particles, as well as blood circulation time of MNPs.



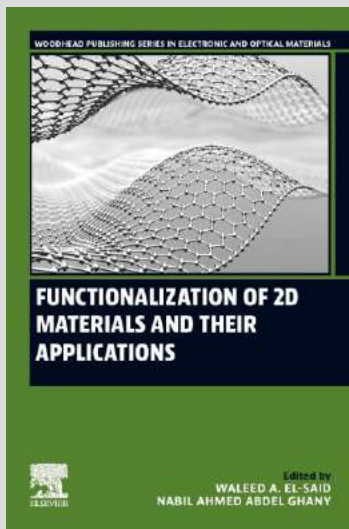
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ENGINEERING Electrical

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Functionalization of 2D Materials and Their Applications

Edited by : **Waleed A. El-Said**, Associate Professor, Chemistry Department, Assiut University, Assiut, Egypt and **Nabil Ahmed Abdel Ghany**, Professor, Physical Chemistry Department, National Research Centre (NRC), Giza, Egypt

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FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 412
ILLUSTRATIONS: Approx. 213 illustrations (113 in full color)
AUDIENCE: Materials Scientists and Engineers, Physicists, Chemists
BIC CODES: TGM, TJFD, TJ
THEMA CLASSIFICATION: THEMATGM; THEMATJF

Introduces advances in the synthesis and fabrication of nanopatterned 2D materials and their applications in energy production, conversion and storage, and more

A Volume in the *Woodhead Publishing Series in Electronic and Optical Materials* Series

KEY FEATURES

- Reviews the latest advances in the fabrication of 2D materials, including nanopatterned, composite, and porous 2D materials
- Explores the functionalization of 2D materials, with particular attention given to the electrical, thermal, and optical properties that make these materials useful for a wide range of applications
- Discusses the applications of 2D materials in energy, sensing, environmental remediation, and electronics

DESCRIPTION

Functionalization of 2D Materials and Their Applications reviews the synthesis and characterization of nanopatterned 2D materials and how to modify different substrates with these materials. Each chapter emphasizes fabrication, including the fabrication of different morphologies of graphene and transition metal dichalcogenides (TMDCs), the fabrication of different composites and the surface modification of different nanopatterned graphene and TMDCs, and the effects of these nanostructures on the different properties of the modified substrates, such as the electrical, thermal and optical properties, and more. The applications of graphene and TMDCs in the enhancement of Raman spectroscopy, solar cells, fuel cells, supercapacitors, biosensors, chemical sensors, water treatment, water desalination, perovskite photodetectors, energy storage devices, environmental applications and cell-based chips are also reviewed.



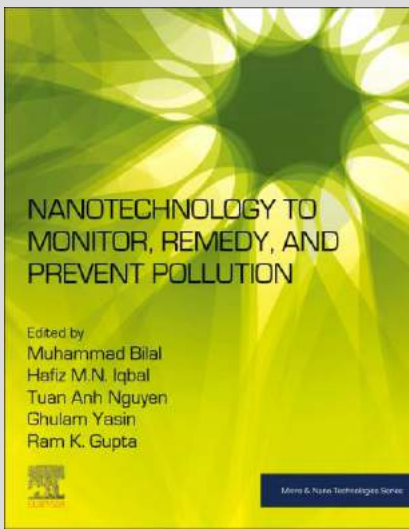
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ENGINEERING Electrical

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Nanotechnology to Monitor, Remedy, and Prevent Pollution

Edited by : **Muhammad Bilal**, Associate Professor, Department of Sanitary Engineering, Faculty of Civil and Environmental Engineering, Gdańsk University of Technology, Gdańsk, Poland; **Hafiz M. N. Iqbal**, Research Professor, School of Engineering and Sciences, Tecnológico de Monterrey, Mexico; **Ram K. Gupta**, Professor, Department of Chemistry, Kansas Polymer Research Center, Pittsburg State University, Pittsburg, KS, USA; **Tuan Anh Nguyen**, PhD, Senior Principal Research Scientist, Institute for Tropical Technology, Vietnam Academy of Science and Technology, Hanoi, Vietnam and **Ghulam Yasin**, Researcher, School of Environment and Civil Engineering, Dongguan University of Technology, Guangdong, China

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PAGES: c. 664
AUDIENCE: Academics and researchers, undergraduate and postgraduate students of programs/courses on environmental engineering for sustainability, environmental sciences (including ecology and conservation, green chemistry, plant science, zoology, mineralogy, oceanography, limnology, soil science, geology, physical geography, and atmospheric science), biotechnology/biomaterials and nanotechnology/nanomaterials.
BIC CODES: TGM, RN, TJ
THEMA CLASSIFICATION: THEMATQ; THEMATJFD; THEMATGM

An essential reference text on the latest developments in nanoremediation technologies and materials

A Volume in the *Micro and Nano Technologies Series*

KEY FEATURES

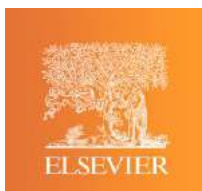
- Comprehensively presents applications of state-of-the-art nanotechnologies and nanomaterials for control, prevention, and removal of persistent air, water, and soil pollutants.
- Provides a new benchmark for pros and cons of established processes for nano remediation, revealing the importance of such research beyond national boundaries and policies.
- Classifies noise as a contaminant and discusses how its real impacts on human and animal life can be limited through impedance-matching nanotechnology.

DESCRIPTION

For decades an increasingly rapid urbanization pace, modern industrial development, and constantly intensive agricultural practices have caused controlled or uncontrolled release of hazardous contaminants that seriously threaten our environment. All natural spheres (atmosphere, hydrosphere, biosphere, lithosphere, and anthroposphere) seem to have been exposed to harmful practices and emerging research in nanomaterials is now trying to combat their adverse impact on physical ecosystems and organisms, as well as human health. In this context, pollution remediation at the nanoscale has come to the forefront for its potential to unlock sustainable, highly efficient, and cost-effective technologies, capable to restore in situ or ex situ land, water, and air resources.



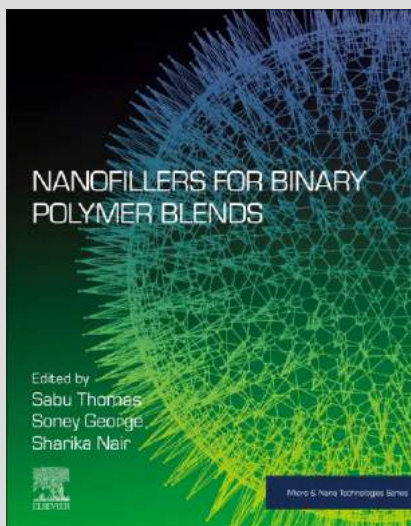
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Nanofillers for Binary Polymer Blends

Edited by : **Sabu Thomas**, Full Professor, International and Inter University Centre for Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala, India; **Soney C. George**, Dean of Research and Director of the Center for Nanoscience and Technology, Amal Jyothi College of Engineering, Kottayam, India. and **Sharika T. Nair**, Assistant Professor in the Department of Chemistry, St Xavier's College, Vaikom, Kottayam, India

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PAGES: c. 744
AUDIENCE: Materials Scientists, Engineers
BIC CODES: TGM
THEMA CLASSIFICATION: THEMATGM

Provides a detailed overview of the properties, manufacture and applications of nanofilled polymer blends

A Volume in the *Micro and Nano Technologies Series*

KEY FEATURES

- Outlines the various types of nanofillers, explaining how the properties of each enhances the morphology, rheology, mechanical, dynamic mechanical, viscoelastic, electrical and thermal properties of polymer blends
- Provides information on the theory, modeling and simulation of nano-filled polymer blends
- Assesses the mechanism of selective localization of nanofillers in polymer blends, the effect of localization of nanofillers on the microstructure, and the relative performance of polymer blends

DESCRIPTION

Nanofillers for Binary Polymer Blends covers major advances in the field of polymer-blend nanocomposites. The book encompasses the fundamentals of polymer blends, various nanofillers, experimental techniques used in their fabrication, the characterization of various polymer blend nanocomposites, and theoretical evaluations of various properties. The properties and potential applications that have been achieved in various polymer blends by the addition of nanofillers are also highlighted. Applications for commercial products, including automotive parts, packaging, construction materials, biotechnology, medical devices, building materials, computer housings, car interiors, etc., are also covered in detail. This is an important reference source for materials scientists and engineers looking to increase their understanding of how nanofillers are being used in polymer blends.



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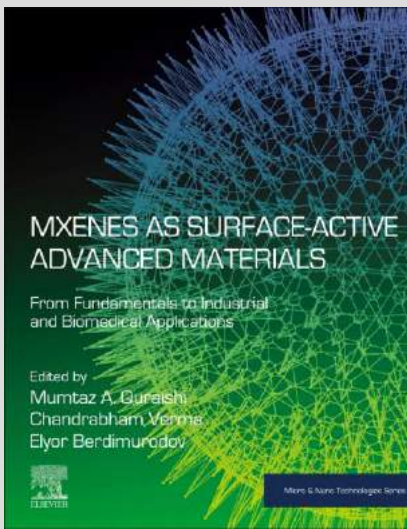
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MXenes as Surface-Active Advanced Materials

From Fundamentals to Industrial and Biomedical Applications

Edited by : **Mumtaz A. Quraishi**, Chair Professor, Interdisciplinary Center for Research in Advanced Materials, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia.; **Chandrabhan Verma**, Researcher, Department of Chemical and Petroleum Engineering, Khalifa University, Abu Dhabi, United Arab Emirates and **Elyor Berdimurodov**, Associate Professor, Faculty of Natural Sciences, National University of Uzbekistan, Karshi State University, Faculty of Natural Sciences, Karshi, Uzbekistan.



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AUDIENCE: Material scientists and engineers, academic and industrial researchers in the field of material science, nanotechnology, polymer science, 2D material chemistry, and inorganic chemistry, Professionals in the field of nanotechnology
BIC CODES: TGM, TJ
THEMA CLASSIFICATION: THEMATGM; THEMATJFD

Explores fundamental aspects related to the surface and interface interaction of MXenes nanostructures and their industrial and biomedical applications

A Volume in the *Micro and Nano Technologies Series*

KEY FEATURES

- Discusses fundamental characteristics, properties, synthesis methods, and processing techniques of MXenes
- Provides state-of-the-art information on the most recent advances, including theoretical and experimental studies and new applications
- Includes recent studies concerning surface chemistry and surface interaction of MXenes with different materials

DESCRIPTION

MXenes as Surface-Active Advanced Materials: From Fundamentals to Industrial and Biomedical Applications covers numerous aspects of the basic science and applications of MXenes, including synthesis, classification, structure, and properties, as well as applications in gas storage and separation, environment and catalysis, tribology, biomedicine, and more. The book focuses on the characterization, synthesis and properties of MXenes, including surface/interface chemistry properties and metal- MXenes interaction. Other sections illustrate the current and potential applications of these nanomaterials within industry and biomedicine. These include a thorough discussion of surface chemistry and surface interaction of MXenes with different materials, along with current and future applications.

This book provides a complete exploration of surface and interface applications of MXenes, highlighting established research and future perspectives, and is a valuable resource to scientists and professionals in the field of material science, nanotechnology, and 2D material chemistry.



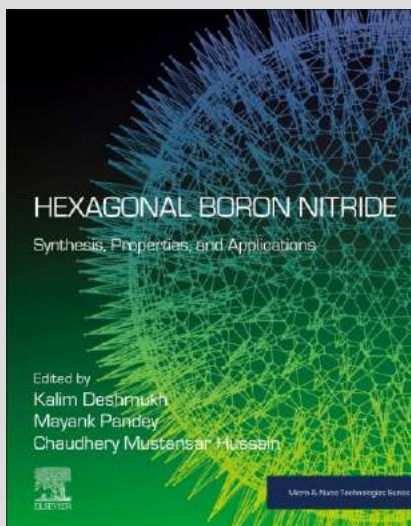
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Hexagonal Boron Nitride

Synthesis, Properties, and Applications

Edited by : **Kalim Deshmukh**, Senior Researcher, New Technologies - Research Centre, University of West Bohemia, Czech Republic; **Mayank Pandey**, Department of Electronics, Kristu Jayanti College (Autonomous), Bangalore, Karnataka, India and **Chaudhery Mustansar Hussain**, PhD, New Jersey Institute of Technology, Newark, NJ, USA

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AUDIENCE: Academia: Researchers and advanced students across nanotechnology, materials science, chemistry, environmental science, chemical engineering, biomedicine, electronics, and engineering. Industry: Scientists, engineers, and R&D professionals with an interest in advanced 2D materials or nanomaterials for various applications (electronics, biomedicine, environment, energy storage, sensing, etc.).

BIC CODES: TGM, TJ

THEMA CLASSIFICATION: THEMATGM; THEMATJFD

A thorough guide to hexagonal boron nitride, from fundamentals to preparation methods and advanced applications

A Volume in the *Micro and Nano Technologies Series*

KEY FEATURES

- Presents the synthesis, properties, functionalization, and characterization methods for hexagonal boron nitride
- Explores novel applications across biomedicine, electronics, energy storage, and water treatment
- Addresses key challenges, such as biocompatibility, toxicity, and environmental and health impact

DESCRIPTION

Hexagonal Boron Nitride: Synthesis, Properties, and Applications offers a comprehensive approach to hexagonal boron nitride (h-BN), covering synthesis, exfoliation, properties, characterization, functionalization, heterostructures, nanocomposites, and modelling and simulation, and guiding the reader towards advanced applications in biomedicine, electronics, energy storage, wastewater treatment, and other areas. The book begins by introducing hexagonal boron nitride, discussing classification, structure, synthesis methods, exfoliation, and functionalization techniques. This is followed by in-depth coverage of properties and characterization, as well as heterostructures and other two-dimensional materials and nanocomposites.

The fourth section of the book examines specific target applications, covering a range of cutting-edge areas including micro- and nano-electronics, anti-friction and anti-corrosive coatings, bone tissue engineering, wound healing, nanomedicine, drug delivery, catalysis, water treatment, energy storage and conversion, sensing and bio-sensing, and fire-retardant applications. Finally, computational modelling and simulation, and environmental aspects, are addressed in detail.



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ENGINEERING Nanotechnology

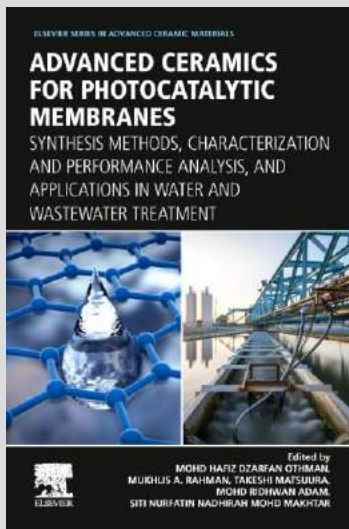
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Advanced Ceramics for Photocatalytic Membranes

Synthesis Methods, Characterization and Performance Analysis, and Applications in Water and Wastewater Treatment

Edited by : **Mohd Hafiz Dzarfan Othman**, PhD, Department of Energy Engineering, Faculty of Chemical and Energy Engineering; and Advanced Membrane Technology Research Centre (AMTEC), Universiti Teknologi Malaysia, Johor, Malaysia; **Mukhlis A. Rahman**, PhD, Faculty of Petroleum and Renewable Energy Engineering, Universiti Teknologi Malaysia, Johor, Malaysia; **Takeshi Matsuura**, Department of Chemical and Biological Engineering, University of Ottawa, Ottawa, ON, Canada; **Mohd Ridhwan Adam**, Senior Lecturer, School of Chemical Sciences,



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FORMAT: Paperback
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PAGES: c. 560

AUDIENCE: Academic researchers, industrial R&D working in separation science and membrane technology, materials scientists and engineers, chemists, environmental and chemical engineers working in water treatment, desalination, water purification and other contaminated liquid sources such as sewage, leachates, and oily waters, Membrane fabrication companies, regulators, and postgraduate students

BIC CODES: TDCP, TGM, TDCQ
THEMA CLASSIFICATION: THEMATDPF; THEMATGM; THEMATGMP

Presents a detailed review of recent research on advanced ceramic photocatalytic materials used in membrane processes for water and wastewater treatment

A Volume in the *Elsevier Series on Advanced Ceramic Materials Series*

KEY FEATURES

- Provides a comprehensive review of advanced ceramic materials used in photocatalytic membranes
- Covers synthesis of ceramic membranes via both physical and chemical approaches
- Discusses materials characterization, properties, and performance analysis
- Covers modeling, simulation, and the theory of mass transfer mechanisms
- Features applications in water and wastewater treatment
- Discusses system scale up, economic viability, and cost analysis

DESCRIPTION

Advanced Ceramics for Photocatalytic Membranes: Synthesis Methods, Characterization and Performance Analysis, and Applications in Water and Wastewater Treatment reviews recent research on the application and use of advanced ceramic materials in photocatalytic membrane processes. Sections cover current developments in photocatalytic membrane processes, synthesis and fabrication techniques using either physical or chemical approaches, diverse characterization methods and performance evaluations, and various types of environmental applications. The book is not only limited to the conceptual theory, it also gives a detailed review of recent progress in materials science. Readers will find applications in different disciplines, i.e., chemistry, physics, and mechanics that are critically required in modern science and engineering. This cross-the-board briefing on the field is suitable for use as a major reference, as well as a knowledge sharing tool.



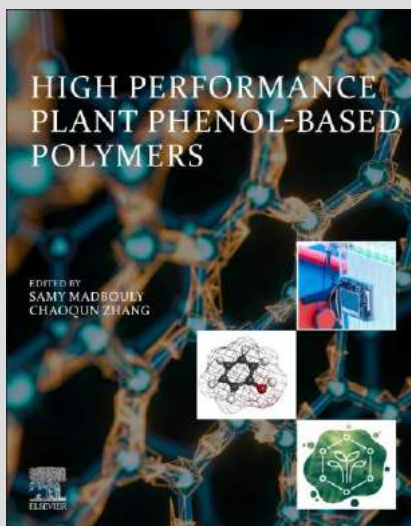
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High Performance Plant Phenol-Based Polymers

Edited by : **Samy Madbouly**, Pacific Northwest National Laboratory, Richland, WA, USA. and **Chaoqun Zhang**, College of Materials and Energy, South China Agricultural University, Guangzhou, China

ISBN: 9780443190193
PUB DATE: May 02, 2024
LIST PRICE: £185.00 / \$240.00 / €210.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 7.50w x 9.25h

PAGES: c. 356

AUDIENCE: Academia: Researchers and advanced students across polymer science, composite science, chemistry, materials science, biotechnology, and engineering. Industry: Engineers, scientists, and R&D professionals with an interest in advanced bio-based polymers and sustainable materials.

BIC CODES: TDCP, TGM, PNR

THEMA CLASSIFICATION: THEMATDCP; THEMATGMP; THEMATDPF; THEMATGM

A cutting-edge guide to plant phenol-based polymers, including fundamentals, preparation methods, and applications

KEY FEATURES

- Reviews the current state-of-the-art in phenol-based polymers, composites, and nanocomposites
- Guides the reader through the preparation of a range of advanced polymers based on plant phenols
- Provides a critical review of current applications in various fields, such as biomedicine and automotive

DESCRIPTION

High Performance Plant Phenol-Based Polymers brings together the latest advances in phenol-based polymers, composites, and nanocomposites, covering synthesis, preparation, characterization, processing, and applications.

Bio-renewable plant phenols represent a diverse class of chemicals with great industrial significance due to their unique structures and high abundance. The depolymerization process of lignin into small bio-based phenols is a relatively new approach and has received considerable attention recently.

This process produces key intermediates, phenolic compounds that can be used to develop and design a wide range of high-performance, bio-renewable, and multifunctional polymers and composites.

This book will provide materials scientists and engineers with a useful framework to help take advantage of the latest research conducted in this rapidly advancing field, enabling them to develop and commercialize their own products quickly and more successfully. The book will be of practical interest to academic researchers, industrial scientists, engineers, and advanced students in the area of materials science and engineering, particularly those with an interest in high-performance bio-based polymers and composites.



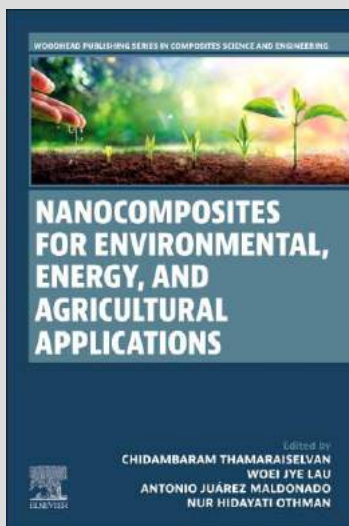
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Nanocomposites for Environmental, Energy, and Agricultural Applications

Edited by : **Chidambaram Thamaraiselvan**, Interdisciplinary Centre for Energy Research, Indian Institute of Science, Bangalore, India; **Woei Jye Lau**, Advanced Membrane Technology Research Centre, Universiti Teknologi Malaysia, Malaysia; **Antonio Juárez Maldonado**, Departamento de Botánica, Universidad Autónoma Agraria Antonio Narro, Saltillo, Coahuila, Mexico and **Nur Hidayati Othman**, School of Chemical Engineering, College of Engineering, Universiti Teknologi MARA, Shah Alam, Selangor, Malaysia

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FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 465

AUDIENCE: Academic and industrial researchers, materials scientists and engineers, and chemists working in nanomaterials synthesis and development. Postgraduate students in all the above-mentioned disciplines, environmental technology specialists, energy conservation researchers and those working in agriculture especially in nanomaterials development

BIC CODES: TDCP, TDCQ
THEMA CLASSIFICATION: THEMATDPF; THEMATGM; THEMATGMP

Provides up-to-date information on recent research progress in nanocomposites for environmental, energy, and agricultural applications

A Volume in the *Woodhead Publishing Series in Composites Science and Engineering Series*

KEY FEATURES

- Provides recent research progress on nanocomposites for environmental, energy, and agricultural applications
- Includes related case studies based on pilot-scale and full-scale processes
- Emphasizes the application of nanocomposites for water/wastewater treatment, sustainable energy production, and agricultural processes

DESCRIPTION

Nanocomposites for Environmental, Energy and Agricultural Applications presents a comprehensive overview of recent developments and prospects for nanocomposites in sustainable/green energy production, water/wastewater treatment as well as crop production.

Each chapter introduces the fundamental principles as well as the design and characterization of nanocomposites for various applications. This includes detailed discussions of nanocomposites technology, including mixed matrix membranes for water and gas separation, nanohybrid catalysts for organic pollutants degradation and sustainable energy production as well as advanced nanocomposites of different structural dimensions (0D, 1D, 2D and 3D) for agricultural utilization.

The book also discusses the challenges of lab-based research towards industrial implementation and related case studies based on pilot and full-scale processes. At the end of each chapter, future opportunities for improvement will be provided to offer researchers a new research direction. The book will be a practical guide for researchers and scientists working in the fields of nanotechnology and nanomaterials science and technology.



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Non-halogenated Flame-Retardant Technology for Resin Thermosets and Composites

Edited by : **Yuan Hu**, State Key lab of Fire Science (SKLFS), University of Science and Technology of China (USTC), Hefei, Anhui, China and **Xin Wang**, State Key lab of Fire Science (SKLFS), University of Science and Technology of China (USTC), Hefei, Anhui, China

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PAGES: c. 372

AUDIENCE: Academic researchers and industrial R&D working in the field of polymer materials science and engineering, flame retardancy of materials, polymer chemistry and those working with flame retardant epoxy-based composite materials and fire safety and engineering Postgraduate and masters' students in the above fields

BIC CODES: TDCP, TDCQ
THEMA CLASSIFICATION: THEMATDPF; THEMATGM; THEMATGMP

Provides a comprehensive review of the latest developments in the field of flame retardant epoxy resin thermosets and composites

A Volume in the *Woodhead Publishing Series in Composites Science and Engineering Series*

KEY FEATURES

- Covers basic properties, flame retardant mechanisms, emerging nanomaterials, and industrial applications
- Provides the latest information on biobased flame retardants
- Discusses hybridization technologies between different morphologies

DESCRIPTION

Non-halogenated Flame-Retardant Technology for Epoxy Resins, Thermosets and Composites provides a comprehensive and up-to-date review of the latest advances and technological developments in the field. Chapters cover important flame-retardant systems based on phosphorus, nitrogen, silicon, and boron as well as novel flame retardant epoxy nanocomposites such as graphene, graphitic carbon nitride, MoS₂, phosphorene, CNTs, LDHs, and POSS. The use of flame retardant epoxy thermosets and composites in varying applications are also covered, for example, in coatings and paints, in electric and electronic applications, and in aviation and automotive sectors.

This comprehensive book will be an essential reference resource for academic and industrial researchers as well as materials scientists and polymer engineers. It will also be ideal for anyone working in the development of flame retardant epoxy-based materials.



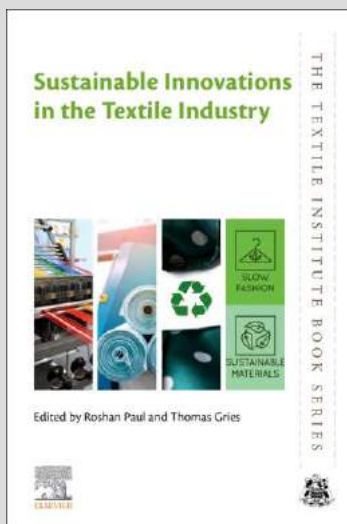
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Sustainable Innovations in the Textile Industry

Edited by : **Roshan Paul**, RWTH Aachen University, Germany. Functional finishing, smart coatings, eco-friendly colouration, denim and jeans, personal protective equipment, technical textiles, effluent treatment, sustainability, biotransformation, bioeconomy, circular economy. and **Thomas Gries**, RWTH Aachen University, Germany. Textile innovation, digitalisation, sustainability, biotransformation, decarbonisation, textile recycling, circular economy, bioeconomy, and energy and material efficiency.

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FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 567
AUDIENCE: Academics and researchers with an interest in textile sustainability, and professionals working in textile and related industries.
BIC CODES: TGM
THEMA CLASSIFICATION: THEMATGM

Addresses advances taking place at every stage of the textile supply chain that are leading to improvements in sustainability and resource efficiency

A Volume in the *The Textile Institute Book Series* Series

KEY FEATURES

- Emphasizes innovative production technologies, the biotransformation of the textile industry, the circular economy, recycling, and the green future of textiles
- Addresses sustainability in business and logistics, explaining how these functions influence the environmental impact of other stages of the value chain
- Provides a guide to the eco-labels and assessment methods used by industry

DESCRIPTION

Sustainable Innovations in the Textile Industry addresses advances taking place at every stage of the textile value chain that are leading to improvements in sustainability and resource efficiency. It contains comprehensive coverage of the complete textile process sequence, including fiber to textile manufacture and wet processing techniques, such as dyeing, printing, finishing, coating and cleaning. In addition, it also provides the latest industry knowledge on technological advances in textile machinery, supply chain, recycling, effluent discharge, and other innovations that enhance sustainability. This holistic approach is required to effectively address the sustainability issue, which requires action across the value chain.

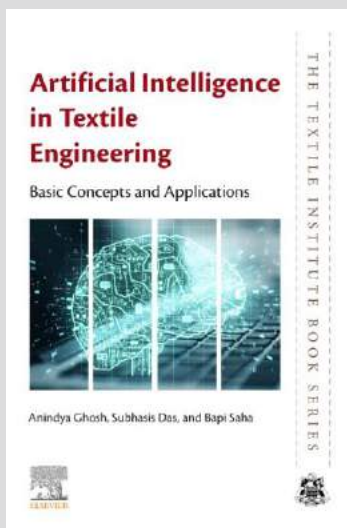
Having included historical aspects of sustainability in textiles as well as the state of the art in innovative fibers, chemicals and manufacturing processes, this book is essential reading for anyone interested in sustainable directions in the textile industry.



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Artificial Intelligence in Textile Engineering

Basic Concepts and Applications

Anindya Ghosh, Associate Professor at the Government College of Engineering and Textile Technology, Berhampore, West Bengal, India.; **Subhasis Das**, Assistant Professor in the Department of Textile Technology, Government College of Engineering & Textile Technology, Berhampore. and **Bapi Saha**, Assistant Professor of mathematics at the Government College of Engineering and Textile Technology, Berhampore, West Bengal, India.

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DISCOUNT: Reference
FORMAT: Paperback
TRIM: 6.00w x 9.00h
PAGES: c. 279
AUDIENCE: Researchers in academia and industry involved in textile engineering R&D
BIC CODES: TGM, TDH
THEMA CLASSIFICATION: THEMATGM; THEMATDPF

Explains artificial intelligence techniques from first principles, helping textile material scientists and engineers find innovative new solutions

A Volume in the *The Textile Institute Book Series* Series

KEY FEATURES

- Includes MATLAB® codes for solving various artificial intelligence techniques
- Provides case studies, practical examples of textile engineering problems and self-study problems in each chapter
- Presents step-by-step mathematical derivations of artificial intelligence techniques throughout

DESCRIPTION

Artificial Intelligence in Textile Engineering: Basic Concepts and Applications explains techniques from first principles in the perfect way for textiles materials scientists and engineers. The book discusses how the technology has caused a substantial impact across the textiles supply chain, making products more efficient, flexible, and reliable. Techniques such as artificial neural network, support vector machine, fuzzy logic, rough set, evolutionary algorithm, and hybrid intelligence systems are described with application to textiles. Readers are supported throughout with step-by-step mathematical derivations of AI techniques, case studies, and MATLAB codes, giving readers from different backgrounds the perfect entry to AI solutions.



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