

Health & Science

New Books Preview

March 2024



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Contents

Health & Science

Medical Education

- 3 Internal Medicine
- 4 Microbiology
- 5 OB/GYN
- 6 Review/Reference

Nursing & Health Professions

- 8 Dentistry
- 10 Nursing
- 20 Occupational Therapy
- 21 Respiratory Care
- 22 Surgical Technology
- 23 Veterinary Medicine

Clinical Reference

- 24 Dermatology
- 25 OB/GYN
- 26 Ophthalmology
- 27 Paediatrics

Science

- 28 Agronomy & Agriculture
- 32 Applied Geoscience

- 34 Biomedical Engineering
- 37 Biomedical Science
- 57 Chemical Engineering
- 64 Chemistry
- 81 Computer Science
- 86 Criminal Justice
- 87 Ecology
- 88 Energy & Power
- 92 Engineering/ Electronics
- 111 Environmental Science
- 113 Food Science & Technology
- 119 Geology
- 122 Geophysics
- 123 Higher Education
- 128 Immunology
- 129 Life Sciences
- 140 Ocean Science
- 141 Pharmaceutical Sciences
- 144 Psychology & Neuroscience
- 154 Serials
- 171 William Andrew
- 185 Woodhead

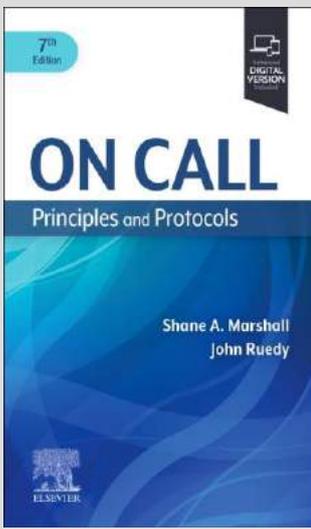
N.B. Please note prices and publication dates may be subject to change without prior notice. Late Addition titles are ones that missed the corresponding New Books Preview Month.

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+



On Call Principles and Protocols, 7e

Principles and Protocols

Shane A. Marshall, MD, FRCPC, Consultant Cardiologist, Department of Medicine, King Edward VII Memorial Hospital; Director, The Cardiac Echo Lab, Paget, Bermuda and **John Ruedy**, MDCM, FRCPC, LLD (hon), DMED (hon), Professor Emeritus of Pharmacology, Faculty of Medicine, Dalhousie University, Halifax, Nova Scotia, Canada

ISBN: 9780443111044
PREVIOUS ISBN: 9780323479769
PUB DATE: Mar 01, 2024
LIST PRICE: £29.99 / \$45.99 / €34.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 580
ILLUSTRATIONS: Approx. 95 ills
AUDIENCE: Medical students, residents
BIC CODES: MJ, MBPC
THEMA CLASSIFICATION:
THEMAMJ; THEMAMBPC

Essential on-call information in a quick-reference, highly instructive pocket format

A Volume in the *On Call* Series

KEY FEATURES

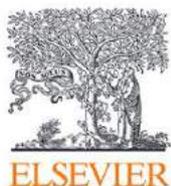
- Features a logical, highly templated format so you can locate critical information quickly.
- Includes new content on COVID-19 in chapters on Viruses and Shortness of Breath and Fever.
- Covers essential topics such as Approach to Diagnosis and Management of On-Call Problems; Documentation; Assessment and Management of Volume Status; and HIV, HBV, HCV, Influenza, and the House Officer.
- Delivers consistent, easy-to-follow coverage of the most common on-call problems and approaches, including what to do from the initial phone call, "Elevator Thoughts," how to immediately identify major threats to life, what to do at the bedside, and how to avoid common mistakes for every call.
- Provides updated content and references, as well as an extensively revised drug formulary of commonly prescribed medications, keeping you on the cutting edge of current, evidence-based information.
- Serves as the perfect bridge to clinical medicine for students transitioning to the hospital setting, a trusty "peripheral brain" for residents, and a handy reminder for more experienced practitioners.
- 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

Ideal for any on-call professional, resident, or medical student, this highly templated, best-selling reference covers the common problems you'll encounter while on call in the hospital. *On Call Principles and Protocols, 7th Edition*, by Drs. Shane A. Marshall and John Ruedy, provides key information in time-sensitive, challenging situations. You'll gain speed, skill, and knowledge with every call - from diagnosing a difficult or life-threatening situation to prescribing the right medication.



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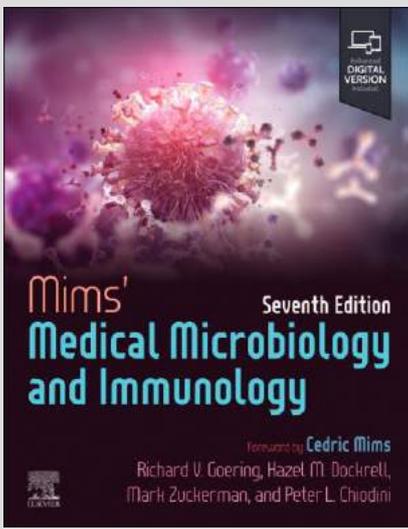


Medical Education Clinical Student -
Internal Med

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

Also includes resources via:





Mims' Medical Microbiology and Immunology, 7e

Richard Goering, BA MSc PhD, Professor and Chair, Department of Medical Microbiology and Immunology, Creighton University School of Medicine, Omaha, Nebraska.; **Hazel M. Dockrell**, BA (Mod) PhD, Professor of Immunology, Faculty of Infectious and Tropical Diseases, London School of Hygiene and Tropical Medicine, London, UK; **Mark Zuckerman**, BSc(Hons), MBBS, MRCP, MSc, FRCPath, Consultant Virologist and Honorary Senior Lecturer, South London Specialist Virology Centre, King's College Hospital NHS Foundation Trust, King's College London School of Medicine, London, UK; **Peter L. Chiodini**, BSc, MBBS, PhD, FRCP, FRCPath, FFTM, RCPS(Glas), Consultant Parasitologist, Hospital for Tropical Diseases, London and Honorary Professor, London School of Hygiene and Tropical Medicine, London, UK

ISBN: 9780323937252

PREVIOUS ISBN: 9780702071560,
9780702071546

PUB DATE: Mar 15, 2024

LIST PRICE: £62.99 / \$89.99 / €73.99

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 11

ILLUSTRATIONS: 500

BIC CODES:

THEMA CLASSIFICATION:

THEMAMKFM; THEMAMJCM

Core textbook uniting key concepts of microbiology and immune response

KEY FEATURES

- Clear writing and easy-to-understand explanations – perfect for students learning to grasp the fundamentals of both microbiology and immunology
- User-friendly format with colour coding, key concept boxes, and dynamic illustrations for easy navigation
- Organised by body system – goes beyond the 'bug parade' to help you understand clinical context
- Pathogen Parade (electronic supplement) – a quick cross-referenced glossary of viruses, bacteria, parasites, and fungi
- Vaccine Parade (electronic supplement) – quick-reference coverage of the most commonly used vaccines in current clinical practice
- Clinical cases and multiple-choice self-assessments (electronic supplement) support learning

DESCRIPTION

MIMS' Medical Microbiology and Immunology is loved internationally for its thorough yet easy-to-follow coverage of microbiology, infectious diseases, and immunology as a dynamic interplay between microbes and host. Covering the fundamentals of these closely linked disciplines, *MIMS'* takes a systems approach to elaborate on epidemiology, clinical presentation, pathogenesis, and diagnostic approaches, as well as treatment and infection control considerations, supplemented by case-based examples. Complex scientific and clinical concepts are explained clearly and simply with the help of illustrations and a range of accompanying online content. Students will come away with a deep understanding of topics and processes, and will return to this book for reference time and again.



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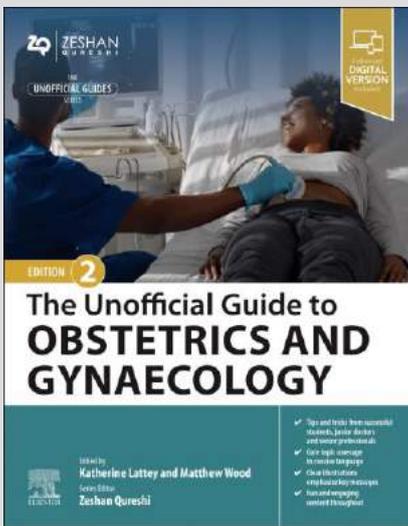


Medical Education Basic Science

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

Also includes resources via:





The Unofficial Guide to Obstetrics and Gynaecology, 2e

Edited by : **Matthew G Wood**; **Katherine Lattey** and **Zeshan Qureshi**, BM, BSc (Hons), MSc, MRCPCH, FAcadMed, MRCPS(Glasg), Paediatric Registrar, London Deanery, United Kingdom

ISBN: 9780443110207
PREVIOUS ISBN: 9780957149977
PUB DATE: Mar 01, 2024
LIST PRICE: £39.99 / \$49.99 / €46.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 460
BIC CODES: MJT
THEMA CLASSIFICATION:
THEMAMKC

A Volume in the *Unofficial Guides* Series

DESCRIPTION

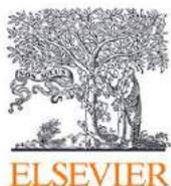
The unique and award-winning Unofficial Guides series is a collaboration between senior students, junior doctors and specialty experts. This combination of contributors understands what is essential to excel on your course, in exams and in practice – as well as the importance of presenting information in a clear, fun and engaging way. Packed with hints and tips from those in the know, when you are in a hurry and need a study companion you can trust, reach for an Unofficial Guide.

Written by registrars who understand just what you need, The Unofficial Guide to Obstetrics and Gynaecology is designed to help you pass the O&G finals with ease. It contains clear summaries of the core topics, followed by more than 300 multiple choice questions and fully explained answers. High quality images, clinical cases and engaging content make it enjoyable to read.

The guide will help you navigate a difficult specialty, which combines medicine and surgery. It is a book that you can come back to time and again during your study, and later when you are working on the wards.



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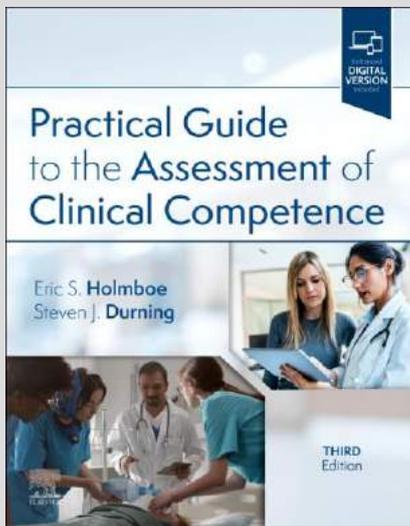


Medical Education UKNL Clinical
Students

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Also includes resources via:





Practical Guide to the Assessment of Clinical Competence, 3e

Eric S. Holmboe, MD, MACP, FRCP, Senior Vice President, Milestones Development and Evaluation, Accreditation Council for Graduate Medical Education, Chicago, Illinois; Professor Adjunct, Yale University, New Haven, Connecticut; Adjunct Professor of Medicine, Feinberg School of Medicine, Northwestern University, Chicago, Illinois and **Steven James Durning**, MD, PhD, MACP, Professor of Medicine and Pathology, Uniformed Services University of the Health Sciences, Bethesda, MD

ISBN: 9780443112263

PREVIOUS ISBN: 9780323447348

PUB DATE: Mar 01, 2024

LIST PRICE: £44.99 / \$69.99 / €51.99

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 374

AUDIENCE: Medical educators involved in conducting assessments of undergraduate and postgraduate medical students: Faculty, Deans, Administrators, Curriculum Designers, Instructors/Educators, Education Researchers, grad students in basic sci programs leading to medical educator positions (Anatomy Education tracks, etc.)

BIC CODES: MJ

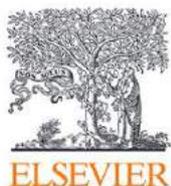
THEMA CLASSIFICATION:
THEMAMJ

DESCRIPTION

Offering a multifaceted, practical approach to the complex topic of clinical assessment, *Practical Guide to the Assessment of Clinical Competence, 3rd Edition*, is designed to help medical educators employ better assessment methods, tools, and models directly into their training programs. World-renowned editors and expert contributing authors provide hands-on, authoritative guidance on outcomes-based assessment in clinical education, presenting a well-organized, diverse combination of methods you can implement right away. This thoroughly revised edition is a valuable resource for developing, implementing, and sustaining effective systems for assessing clinical competence in medical school, residency, and fellowship programs.



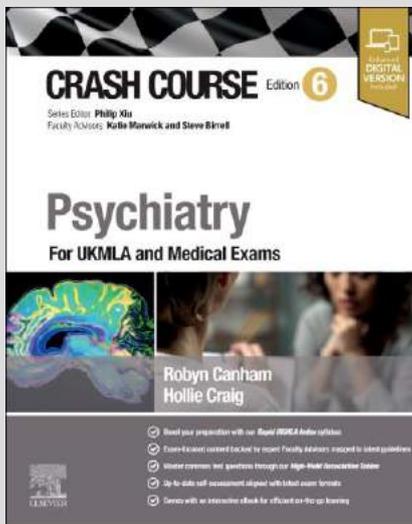
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Medical Education Medical Textbook
<https://virtuale.elsevier.com>, www.elsevier.com

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Crash Course Psychiatry, 6e

Robyn Canham; Hollie Craig; Katie FM Marwick, MA (Hons), MBChB (Hons), MCRPsych, PhD, Honorary Specialty Registrar in General Adult Psychiatry, NHS Lothian; Clinical Lecturer in Psychiatry, University of Edinburgh, UK; **Philip Xiu**, MA (Cantab) MB BChir MRCP MRCGP MScClinEd FHEA MacadMed RCPsych, GP Registrar, Yorkshire Deanery, Leeds, UK. and **Steve Birrell**

ISBN: 9780443115738
PREVIOUS ISBN: 9780702073830
PUB DATE: Mar 01, 2024
LIST PRICE: £32.99 / \$40.99 / €38.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 0
BIC CODES: MMH
THEMA CLASSIFICATION:
THEMAMKL

A Volume in the *CRASH COURSE* Series

KEY FEATURES

- Fully aligned to UKMLA requirements, with key 'conditions' and 'presentations' highlighted in handy checklists - save valuable revision time and be confident you have the syllabus covered
- Written by senior students and recent graduates - those closest to what is essential for exam success
- Quality assured by leading Faculty Advisers - ensures complete accuracy of information
- Features the ever popular 'Hints and Tips' boxes and other useful aide-mémoires - distilled wisdom from those in the know
- Updated self-assessment section matching the latest exam formats – confirm your understanding and improve exam technique fast

DESCRIPTION

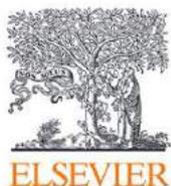
Crash Course – your effective every-day study companion PLUS the perfect antidote for exam stress! Save time and be assured you have the essential information you need in one place to excel on your course and achieve exam success.

A winning formula now for over 25 years, having sold over 1 million copies and translated in over 8 languages, each series volume has been fine-tuned and fully updated with a full-colour layout tailored to make your life easier. Especially written by senior students or junior doctors – those who understand what is essential for exam success – with all information thoroughly checked and quality assured by expert *Faculty Advisers*, the result is books that exactly meet your needs and you know you can trust.

Each chapter guides you succinctly through the full range of curriculum topics in the UKMLA syllabus, integrating clinical considerations with the relevant basic science and avoiding unnecessary or confusing detail. A range of text boxes help you get to the hints, tips and key points you need fast! A fully revised self-assessment section matching the latest exam formats is included to check your understanding and aid exam preparation. The accompanying enhanced, downloadable eBook completes this invaluable learning package.



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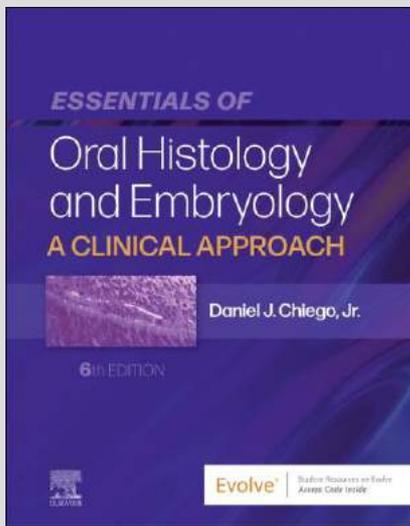


Medical Education UKNL Clinical
Students

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

Also includes resources via:





Essentials of Oral Histology and Embryology, 6e

A Clinical Approach

Daniel J. Chiego Jr., MS, PhD, Associate Professor, Department of Cariology, Restorative Sciences, and Endodontics, University of Michigan, Ann Arbor, MI, USA

ISBN: 9780323876643
PREVIOUS ISBN: 9780323497251
PUB DATE: Mar 01, 2024
LIST PRICE: £77.99 / \$95.99 / €90.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 228
ILLUSTRATIONS: Approx. 550 illustrations (550 in full color)
BIC CODES: MMD
THEMA CLASSIFICATION: THEMAMKE; THEMAMFCH

Master the essentials of oral biology with a patient-centered approach

KEY FEATURES

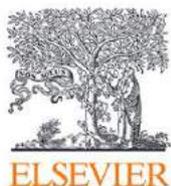
- **Cutting-edge content** provides essential knowledge of the basics of oral biology with a focus on practical clinical application.
- **Clinical Comment, Consider the Patient, Quandaries in Science, and Case Study boxes** apply scientific content to everyday dental practice and explore the boundaries of scientific research.
- **Self-evaluation questions and practice quizzes** help you prepare for classroom and national board exams.

DESCRIPTION

Essentials of Oral Histology and Embryology: A Clinical Approach, 6th Edition uses a patient-centered approach to help dental professionals build a strong foundation in oral biology and basic science. It provides clear explanations of the anatomy of oral and facial tissues — and of normal and abnormal orofacial development — so that you can provide effective oral health care for all patients. In addition to the stages of tooth development, it covers eruption and shedding of teeth, plus the parts of teeth — including enamel, dentin, dental pulp, and cementum. Written by Daniel J. Chiego, Jr., a noted dental educator and researcher, this book gives you the knowledge you need to succeed in the classroom and in clinical practice.



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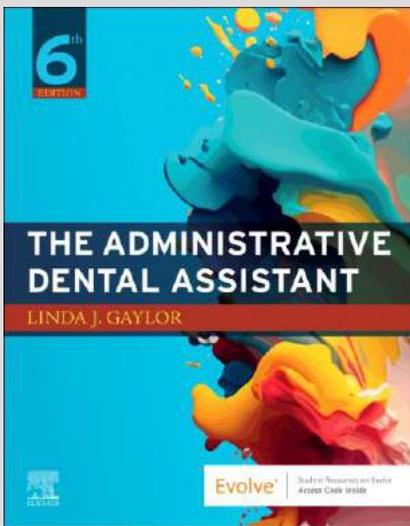


Health Professions I (HP1) Dental Hygiene

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

Also includes resources via:





The Administrative Dental Assistant, 6e

Linda J. Gaylor, RDA, BPA, MEd, Retired Coordinator, Curriculum and Instruction San Bernardino County Superintendent of Schools Regional Occupational Program, Career Training, and Support Services San Bernardino, California

ISBN: 9780323934961

PREVIOUS ISBN: 9780323672429

PUB DATE: Mar 01, 2024

LIST PRICE: £74.99 / \$93.99 / €86.99

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 316

BIC CODES: MMD

THEMA CLASSIFICATION:

THEMAMKE

Gain the knowledge and skills you need to succeed as an administrative dental assistant

KEY FEATURES

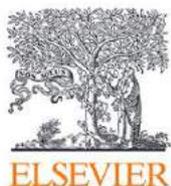
- **Comprehensive coverage and a clear, concise organization** make it easier to understand how to organize and operate today's dental office.
- **Procedures boxes** provide step-by-step instructions on a wide variety of dental office duties.
- **"Anatomy of..." illustrations** help to describe common office functions, computerized forms, and dental office equipment.
- **Patient Records** provide examples of electronic and paper forms with an explanation of how to use and fill out the forms.
- **What Would You Do?, Food for Thought, and HIPAA boxes** highlight key information and help you to apply what you have learned and to develop critical thinking and problem-solving skills.
- **Career-Ready Practices activities** at the end of each chapter provide assignments allowing you to practice the specific skills needed in today's dental office.

DESCRIPTION

Gain the knowledge and skills you need to manage a modern dental practice! **The Administrative Dental Assistant, 6th Edition** explains how to perform key office tasks such as patient scheduling, inventory control, basic bookkeeping, and records management. Not only does the book guide you through day-to-day office functions, but it helps you master problem-solving skills and learn communication tools and skills as you become an effective member of the healthcare team. Written by respected Dental Assisting educator Linda J. Gaylor, this practical guide also includes online exercises and downloadable Dentrix practice management software for plenty of realistic, hands-on practice.



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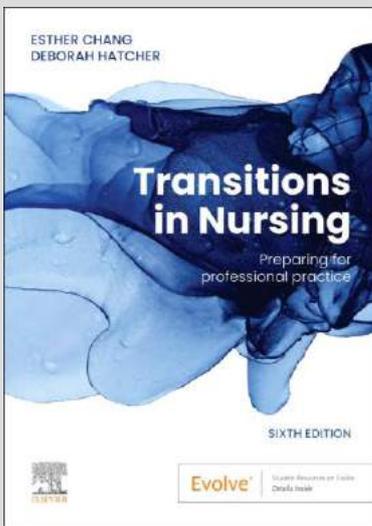


Health Professions I (HP1) Dental Assisting

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

Also includes resources via:





Transitions in Nursing, 6e

Preparing for Professional Practice

Esther Chang, RN, CM, PhD, MEdAdmin, BAppSc(AdvNur), DNE, Director of Research, School of Nursing and Midwifery, Western Sydney University, NSW and **Deborah Hatcher**, RN, Dip(Teach), BHSc(N), MHPed, PhD, MACN, Dean of the School of Nursing and Midwifery and Parramatta South campus Provost at Western Sydney University

ISBN: 9780729544610
PREVIOUS ISBN: 9780729543040
PUB DATE: Jan 11, 2024
LIST PRICE: £46.99 / \$59.99 / €51.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 0
BIC CODES: MQC
THEMA CLASSIFICATION:
THEMAMQC

Transitions in Nursing

KEY FEATURES

- Fully updated, evidence-based, **comprehensive content** from experts in the field
- **Practical strategies and suggestions** for removing stress, strain and culture shock
- A focus on **self-care**
- **Case studies, reflective questions and exercises** throughout to help apply learning to the real-life workplace

Student and Instructor resources on Evolve:

- Case studies + reflective questions

DESCRIPTION

Now in its sixth edition, *Transitions in Nursing* continues to challenge, motivate and assist students as they transition to the workforce in different health environments.

The text provides practical, real-life support for nurses preparing for professional practice, ensuring they have a comprehensive understanding of what they will encounter and how best to manage the transition period. It covers common issues faced by graduate nurses, important skills for dealing with the world of work, and the organisational environments in which nurses work.

This edition features new contributors, new content, and the latest evidence-based research, statistics, standards and procedures, making it a must-have addition for all senior nursing students and recent graduates.



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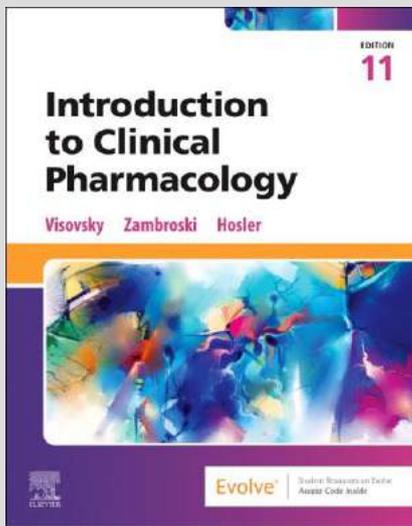


Nursing Health Prof ANZ Nursing
Education ANZ

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

Also includes resources via:





Introduction to Clinical Pharmacology, 11e

Constance G Visovsky, PhD, RN, ACNP-BC, FAAN, Professor and Lewis & Leona Hughes Endowed Chair in Nursing Science, College of Nursing, University of South Florida, Tampa, Florida; **Cheryl H. Zambroski**, PhD, RN, Associate Professor, College of Nursing, University of South Florida, Tampa, Florida and **Shirley M. Hosler**, RN, BSN, MSN, Adjunct Faculty, Santa Fe Community College, Santa Fe, New Mexico

ISBN: 9780443113369
PREVIOUS ISBN: 9780323880428,
9780323755351
PUB DATE: Mar 01, 2024
LIST PRICE: £72.99 / \$92.99 / €84.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 434
BIC CODES: MQC
THEMA CLASSIFICATION:
THEMAMQC

Learn the principles of pharmacology and administer drugs safely

KEY FEATURES

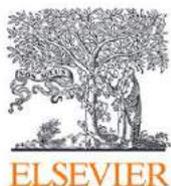
- **Ideal scope of content and readability for LPN/LVN programs** provides illustrated, need-to-know pharmacology information, and includes a new *Drugs for Cancer Treatment* chapter.
- **A focus on drug categories** helps you understand the actions and uses of drug classes and provides a framework for safe, effective practice as new drugs are introduced to the market.
- **Rationales** accompany nursing actions, helping you understand *why* actions or precautions are necessary and to better communicate directions to patients and their families.
- **Safety Alert boxes and Black Box Warnings** highlight important nursing considerations for safe medication administration and monitoring.
- **Lifespan Considerations boxes** draw attention to information that is especially important when giving a specific drug to older adults, children, or pregnant/lactating women.
- **Get Ready for the Next Generation NCLEX® Examination!** section includes key points, review questions, and case studies with critical thinking questions to prepare you for the pharmacology questions on the NCLEX-PN® Exam.
- **Top Tips for Safety and Memory Jogger features** help you remember key information.
- **Online video clips on medication administration procedures** provide you with a visual reference for safe drug administration.
- **Key terms** include definitions and page references to help you improve terminology and language skills before you enter clinical practice.

DESCRIPTION

Learn the principles of pharmacology and administer drugs safely! **Introduction to Clinical Pharmacology, 11th Edition** provides the essential information that LPNs and vocational nurses need to administer medications in all practice settings. It shows how drugs and drug classes work, so you can understand why drugs are given and evaluate the expected response as well as side effects and adverse effects. In each drug category, an overview of the nursing process outlines the nurse's role when administering drugs. This edition includes a new *Drugs for Cancer Treatment* chapter and *Get Ready for the Next Generation NCLEX® Examination!* case studies and questions to help you prepare for the newest version of the NCLEX exam. Written by an experienced team of authors led by Dr. Constance G. Visovsky, this book is the only pharmacology text designed specifically for LPN/LVNs.



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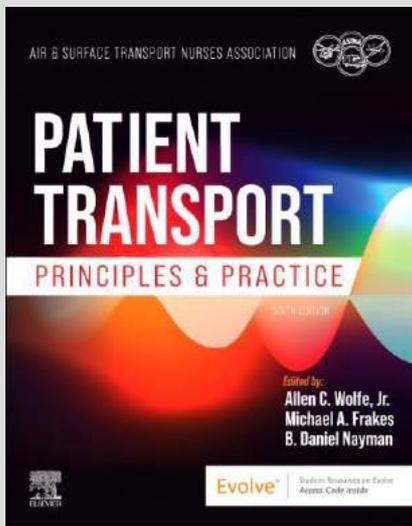


Nursing LPN Nursing

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

Also includes resources via:





Patient Transport: Principles and Practice, 6e

Edited by : Air & Surface Transport Nurses Associati; Allen Wolfe; Michael Frakes and Danny Nayman

ISBN: 9780443105708
PREVIOUS ISBN: 9780323401104
PUB DATE: Mar 01, 2024
LIST PRICE: £97.99 / \$120.99 / €114.99
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 428
BIC CODES: MQCL1
THEMA CLASSIFICATION:
THEMAMQCL1

Prepare for certification as a flight and ground transport nurse

KEY FEATURES

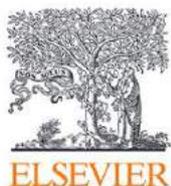
- **In-depth coverage of expert care delivery in transport** meets the needs of all healthcare providers including registered nurses, paramedics, physicians, respiratory therapists, pilots, mechanics, and communication specialists.
- **Real-life scenarios** demonstrate how to apply concepts to situations similar to those seen in practice.
- **Information on important safety regulations** is based on the latest updates from the Federal Aviation Association and the National Transportation Safety Board.
- **Coverage of injuries commonly encountered in flight and ground nursing** includes discussions of pathophysiology, assessment, planning, implementation, and evaluation.
- **Detailed coverage of management issues** include scene management, communication, safety, disaster management/triage, quality management, and marketing/public relations.
- **Focus on interprofessionalism and collaboration** emphasizes the importance of teamwork in ensuring successful patient outcomes.
- **Evolve website** includes 350 questions and answers mapped to the CRFN®/CTRN® exams for additional preparation.

DESCRIPTION

Prepare for certification as a flight and ground transport nurse! **ASTNA: Patient Transport: Principles & Practice, 6th Edition** addresses the scenarios and injuries commonly encountered in transport nursing, and provides a comprehensive, one-of-a-kind study tool for taking certification exams including the CFRN®, CTRN®, FP-C®, and CCP-C®. Coverage includes the role of air and ground transport personnel, along with topics such as transport physiology, communications, teamwork, safety, airway management, shock, and the different types of trauma. New to this edition is an *Aviation for Medical Personnel* chapter. Written by the Air & Surface Transport Nurses Association, this resource helps you gain the knowledge and skills you need to succeed on your exam and to transport patients safely.



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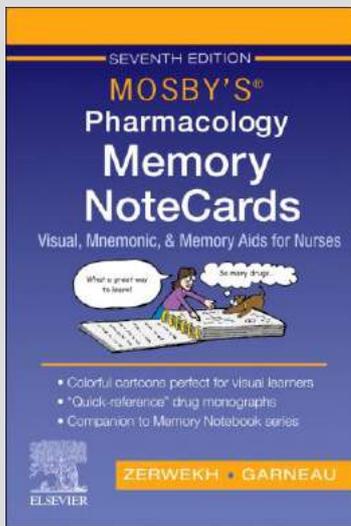


Nursing Nursing DESCRIPTION

Offering a multifaceted, practical approach to the

Also includes resources via:





Mosby's Pharmacology Memory NoteCards, 7e

Visual, Mnemonic, and Memory Aids for Nurses

JoAnn Zerwekh, EdD, RN, President/CEO, Nursing Education Consultants, Inc, Chandler, Arizona and Ashley Garneau, PhD, RN, Nursing Faculty, GateWay Community College, Phoenix, Arizona

ISBN: 9780443110986
PREVIOUS ISBN: 9780323661911
PUB DATE: Jun 12, 2024
LIST PRICE: £25.99 / \$31.99 / €30.99
DISCOUNT:
FORMAT: Spiral bound
TRIM:
PAGES: c. 0
BIC CODES: MQC
THEMA CLASSIFICATION:
THEMAMQCM

Bring your pharmacology review to life with more than 100 colorful flashcards

KEY FEATURES

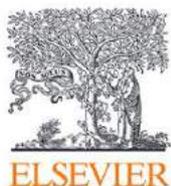
- **UNIQUE! Color-highlighted monographs** include drug uses, contraindications and precautions, side effects, important nursing implications, serious/life-threatening implications, and patient teaching, making it easier remember nursing priorities on common medications.
- **UNIQUE! Mnemonics and other time-tested memory aids** help you grasp and remember even the most complex concepts.
- **UNIQUE! More than 100 full-color cartoons** offer humorous and memorable presentations of key drugs.
- **What You Need to Know sections** on each card cover key information in a quick and easy-to-review format.
- **Thick pages and a spiral-bound format** create a portable tool that is durable enough for the clinical environment.
- **Colored thumb tabs** at the bottom of the page allow you to find topics quickly.

DESCRIPTION

Bring your pharmacology review to life with more than 100 colorful flashcards! **Mosby's Pharmacology Memory NoteCards: Visual, Mnemonic, & Memory Aids for Nurses, 7th Edition** uses cartoons, humor, and concise summaries to make studying easier and more fun. These unique cards may be used as either a spiral-bound notebook or detached for use as individual flashcards, so they are perfect for studying while on the go. Created by nursing educators JoAnn Zerwekh and Ashley Garneau, these durable notecards will help you prepare for class, clinicals, or the NCLEX® examination. There's no other study tool like it!



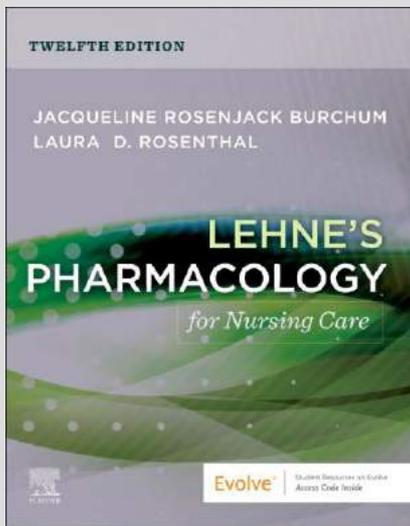
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Nursing Nursing
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Also includes resources via:





Lehne's Pharmacology for Nursing Care, 12e

Jacqueline Rosenjack Burchum, DNSc, FNP-BC, CNE, Associate Professor, College of Nursing, Department of Advanced Practice and Doctoral Studies, University of Tennessee Health Science Center, Memphis, Tennessee and **Laura D. Rosenthal**, DNP, ACNP, Assistant Professor, College of Nursing, Assistant Professor, School of Medicine, University of Colorado, Anschutz Medical Campus

ISBN: 9780443107108
PREVIOUS ISBN: 9780323825221, 9780323829717
PUB DATE: Mar 14, 2024
LIST PRICE: £106.99 / \$131.99 / €124.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 0
BIC CODES: MQC
THEMA CLASSIFICATION: THEMAMQC

Master an understanding of pharmacology — and apply that understanding to nursing practice

KEY FEATURES

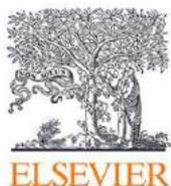
- **Clear, engaging writing style** simplifies complex concepts, making difficult pharmacology content not only understandable but actually enjoyable.
- **Prototype Drugs approach** focuses on representative agents that characterize all members of a given drug group, so that you can apply your understanding to related drugs that are currently available and those that will be released in the future.
- **Nursing implications of drug therapy** are integrated throughout to show the relationship between drug therapy and nursing care, and also recapped in *Summary of Major Nursing Implications* sections.
- **Special Interest Topic boxes** examine the everyday impact of pharmacology with engaging vignettes such as *Vaping* and *Severe Acute Respiratory Syndrome Coronavirus-2 (COVID-19) Vaccine*.
- **Safety Alerts** call out important safety concerns related to contraindications, adverse effects, and more.
- **Concise drug summary tables** present key information for individual drugs, including drug class, generic and trade names, dosages, routes, and indications.
- **Person-Centered Care Across the Life Span tables** summarize safe and appropriate care for patients from infancy to older adulthood.

DESCRIPTION

Master an understanding of pharmacology — and apply that understanding to nursing practice! With an engaging approach that actually makes learning nursing pharmacology enjoyable, **Lehne's Pharmacology for Nursing Care, 12th Edition** makes it easier to understand difficult pharmacologic principles and the clinical use of drugs. The book discusses physiology and pathophysiology for each of the major drug families, using drug prototypes to simplify learning. What's more, it focuses your attention on the most important content, limiting discussions of drug interactions and adverse effects to those that matter most. Written by nursing educators Jacqueline Rosenjack Burchum and Laura D. Rosenthal, this text emphasizes the understanding of drugs and drug therapy as opposed to simply memorizing drug facts.



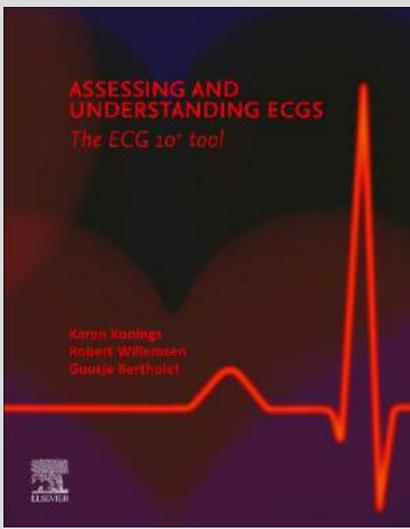
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Nursing Nursing
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Assessing and Understanding ECGs: The ECG 10+ tool

Karen TS Konings, MD, PhD, General practitioner, specialised in cardiovascular disease;
Robert TA Willemsen, General practitioner, specialized in cardiovascular disease and **Guusje JM Bertholet**, Medical illustrator

ISBN: 9780323880800
PUB DATE: Mar 01, 2024
LIST PRICE: £39.99 / \$54.99 / €45.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 0
AUDIENCE: Advanced practitioners (ACPs) and Nurse Practitioners who have a requirement to assess ECGs, particularly those working in a primary care setting.
BIC CODES: MJD
THEMA CLASSIFICATION: THEMAMQH; THEMAMQC

ECGs made simple for non-cardiologist physicians and healthcare workers

KEY FEATURES

- Logical and easy to follow – written in plain language for non-cardiology clinicians
- Bespoke images specially created to support understanding
- Unique and visually uniform translation from the heart function to the ECG-view enables the reader to thoroughly understand the ECG
- Full explanation of the electrophysiological function of the heart and related PQRST-waves as seen on the 12-lead ECG ('from pump to paper')
- Introduction and explanation of ECG10+ - a safe and systematic method to assess ECGs quickly and thoroughly
- Simple checklist to facilitate ECG interpretation in daily practice
- 61 case studies describe highly relevant clinical ECG-related problems in out-of-hospital situations, for practising theory and the ECG10+ method
- Summaries and reference chapter provide a concise overview

DESCRIPTION

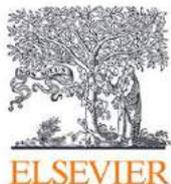
This new title is ideal for clinicians working in out-of-hospital settings who need to interpret electrocardiography safely and understand when to consult a cardiologist.

The book presents a new method, ECG10⁺, for assessing ECGs without missing relevant pathology. The method enables readers systematically and safely to read ECGs by addressing 10 ECG findings and linking them to the clinical presentation. The book covers indications and quality of assessment, how to undertake ECGs, explanations of equipment and assessment of the various types of ECG waves.

Assessing and Understanding ECGs is ideal for GPs, nurses and other healthcare workers who may need to make or interpret ECGs, as well as residents and clinicians working in hospital settings both in and outside cardiology.



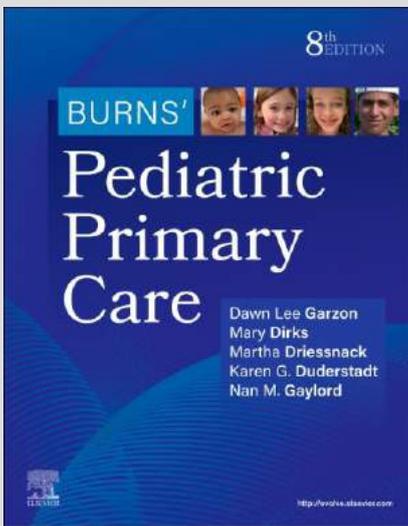
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Nursing UK Post - Registration
<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Burns' Pediatric Primary Care, 8e

Edited by : **Dawn Lee Garzon**, PhD, CPNP-PC, PMHS, FAANP, FAAN, Pediatric Nurse Practitioner, St. Louis Children's Hospital, St. Louis, MO; **Mary Dirks**, DNP, RN, ARNP, CPNP-PC, FAANP, Clinical Professor and Assistant Dean for Graduate Practice Programs, The University of Iowa; **Martha Driessnack**, PhD, PNP-BC, Associate Professor, School of Nursing, Oregon Health Sciences University, Portland, Oregon; **Karen G. Duderstadt**, PhD, RN, CPNP, FAAN, Clinical Professor and Coordinator of PNP Specialty, University of California San Francisco and **Nan M. Gaylord**, PhD, RN, CPNP-PC, PMHS, FAANP, FAAN, Professor, College of Nursing, U. of Tennessee

ISBN: 9780323882316
PREVIOUS ISBN: 9780323581967,
9780323677004
PUB DATE: Mar 01, 2024
LIST PRICE: £127.99 / \$156.99 /
€147.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 1102
BIC CODES: MQC
THEMA CLASSIFICATION:
THEMAMQC

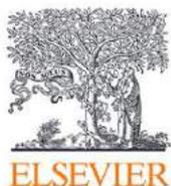
A comprehensive foundation for pediatric primary care from the unique perspective of the Nurse Practitioner

DESCRIPTION

Build a comprehensive foundation in children's primary care. Burns' Pediatric Primary Care, 8th Edition, covers the full spectrum of health conditions seen in primary care pediatrics, emphasizing both prevention and management. This in-depth, evidence-based textbook is the only one on the market written from the unique perspective of the Nurse Practitioner. It guides you through assessing, managing, and preventing health problems in children from infancy through adolescence. Key topics include developmental theory, issues of daily living, the health status of children today, and diversity and cultural considerations. Updated content throughout reflects the latest research evidence, national and international protocols, and standardized guidelines. Additionally, this edition includes three new chapters on topics such as palliative care; inclusivity, equity, diversity, and justice; and child maltreatment.



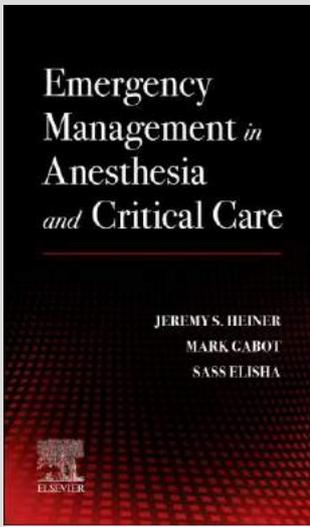
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<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Emergency Management in Anesthesia and Critical Care

Sassoon Michael Elisha, EdD, APRN, CRNA, Assistant Director, School of Anesthesia, Kaiser Permanente, California State University, Fullerton; **Jeremy S. Heiner**, EdD, CRNA, Academic & Clinical Faculty, California State University, Fullerton and **Mark Gabot**, DNP, CRNA

ISBN: 9780443106934
PUB DATE: Mar 01, 2024
LIST PRICE: £57.99 / \$79.99 / €67.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 220
BIC CODES: MQCL2
THEMA CLASSIFICATION:
THEMAMQCL2

Effectively manage emergency events in anesthesia and critical care with this quick-reference tool

KEY FEATURES

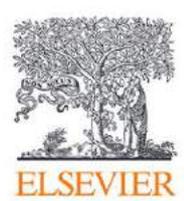
- **Convenient outline format** features consistent headings, including *Treatment, Physiology and Pathophysiology, Signs and Symptoms, Differential Diagnosis, and Suggested Readings.*
- **Easy-to-read, uniform, and concise writing style** makes this text a valuable resource for practicing clinicians, educators, and students.
- **Quick-reference format** is ideal for use during simulations.
- **Coverage of common major critical events** offers anesthetists quick access to vital information in the operating room.
- **Expert author team** includes leading experts in anesthesia and critical care.

DESCRIPTION

Every moment counts when treating an emergency event. **Emergency Management in Anesthesia and Critical Care** provides quick access to essential information for rapidly identifying and treating complex medical emergencies. Its compact size makes this reference easy to carry in a pocket in the OR, ICU, ED, or critical care setting. An outline format with consistent headings and a logical organization puts vital content at your fingertips. It is also an ideal tool for developing and conducting crisis simulation scenarios to prepare for emergencies before they happen.

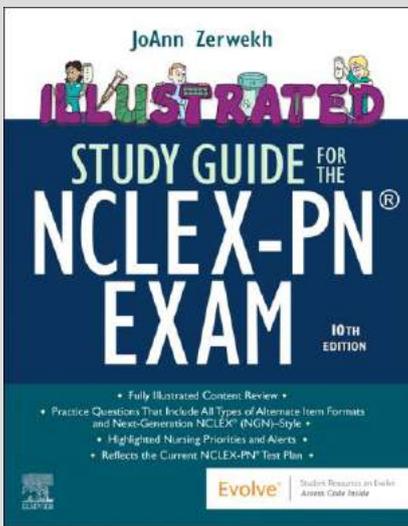


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Nursing Nursing
<https://virtuale.elsevier.com>, www.elsevier.com

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 eBooks for Medical Education
ELSEVIER



Illustrated Study Guide for the NCLEX-PN® Exam, 10e

JoAnn Zerwekh, EdD, RN, President/CEO, Nursing Education Consultants, Inc, Chandler, Arizona

ISBN: 9780443110351
PREVIOUS ISBN: 9780323760027
PUB DATE: Mar 01, 2024
LIST PRICE: £42.99 / \$52.99 / €49.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 553
BIC CODES: MQC
THEMA CLASSIFICATION:
THEMAMQC

Who says studying for the NCLEX-PN® can't be fun?

KEY FEATURES

- **Mnemonic cartoons** provide a fun, easy way to review and remember key nursing concepts and disease processes.
- **More than 3,000 review questions on the Evolve companion website** are available in both study and quiz modes and separated by content area, allowing customized review based on personal study needs. The review questions include multiple choice, alternate item format, and NGN.
- **Answers and rationales** are provided for all review questions.
- **Test Alert! boxes** in the book highlight key concepts frequently found on the NCLEX® examination.
- **Nursing Priority boxes** make it easier to distinguish priorities of nursing care.
- **Older Adult Care Focus boxes** in the book provide special considerations and nursing care strategies for the older adult.
- **Pharmacology tables** make key drug information easy to find, with high-alert medications noted by a special icon.
- **Appendixes for each chapter** summarize medications and nursing procedures for quick reference.
- **Special icons** distinguish pediatric and adult disorders and identify content on self-care and home care
- **A separate chapter on pharmacology and medication administration** helps you focus on this area of emphasis on the NCLEX® examination.

DESCRIPTION

Who says studying has to be boring? The **Illustrated Study Guide for the NCLEX-PN® Exam, 10th Edition** uses colorful drawings and mnemonic cartoons to bring difficult concepts to life and help you recall the content you need to know to excel on the NCLEX-PN examination. Written in a concise and visually appealing outline format, this book makes learning and studying easier and more fun. The companion Evolve website includes more than 3,000 review questions, including alternate item and Next Generation NCLEX® formats, and allows you to personalize your study by creating practice exams, identifying strengths and weaknesses, and reviewing answers and rationales.



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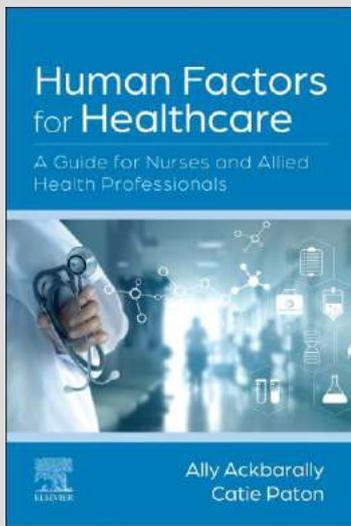


Nursing LPN Nursing

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

Also includes resources via:





Human Factors for Healthcare

A Manual for Nurses and Allied Health Professionals

Edited by : **Ally Ackbarally** and **Catie Paton**, BA, MSc, PGCE

ISBN: 9780702084874
PUB DATE: Mar 01, 2024
LIST PRICE: £35.99 / \$44.99 / €42.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 212
AUDIENCE: Faculty members in nursing and allied health schools, nurse educators in hospitals and other healthcare settings
BIC CODES: MQC
THEMA CLASSIFICATION:
THEMAMQC

Unique resource on a crucial area of patient safety

KEY FEATURES

- Covers the basic concepts right through to the most up-to-date research on human factors, including:
 - Patient safety
 - Human error
 - Human factors for non-medical practitioners
 - Human Factors in urgent, unscheduled and emergency care
 - Non-technical skills
 - The role of communication
 - Teamwork
 - Leadership
 - Situation Awareness and Decision Making
 - Workplace culture
 - Stress and fatigue
 - Resilience
- Reflects the requirements of the 2018 NMC Standards of Proficiency for RNs and HCPC (2023) Standards of Proficiency for AHPs.
- Features experts in the field from a variety of settings

DESCRIPTION

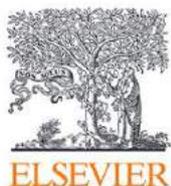
Human factors such as fatigue and poor communication can increase the risk of safety incidents. This new book is the first to address the specific needs in this area of nurses and allied health professionals, who make up the majority of the workforce.

The aim of the book is to support understanding of human factors and the role they play in quality and safety. It will help the reader identify risks, understand human error, and develop non-technical skills (social, cognitive and personal) that will support them in their practice across a range of clinical environments.

With contributions by leading experts in this emerging area, many of whom remain in practice, *Human Factors for Healthcare* is an ideal textbook for teaching and learning in both academic and clinical settings.



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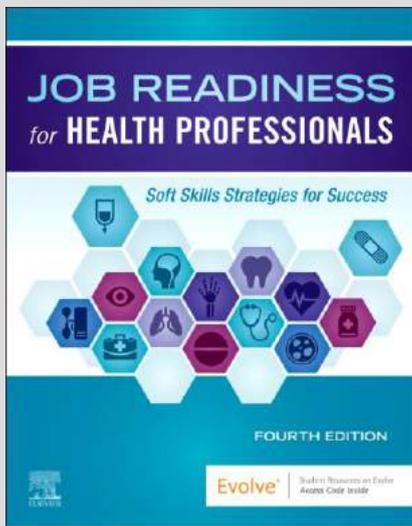


Nursing UK Nursing

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Job Readiness for Health Professionals, 4e

Soft Skills Strategies for Success

ISBN: 9780443111082
PREVIOUS ISBN: 9780323635998
PUB DATE: Mar 01, 2024
LIST PRICE: £58.99 / \$71.99 / €67.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 424
BIC CODES:
THEMA CLASSIFICATION:
THEMAMB

Master the soft skills you need to succeed as a healthcare professional

KEY FEATURES

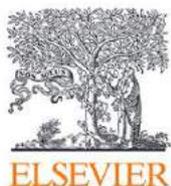
- **Guidelines to building a professional portfolio** include checklists, a certificate, mock interviews, and ways to keep resumes up to date, all helping you create an effective tool demonstrating job readiness and advancement.
- **Critical-thinking and problem-solving skills** prepare you to analyze and handle situations, to better manage conflict and to quickly and effectively adapt to changes.
- **Case studies** show how specific soft skills are related to the challenges and issues of the healthcare profession.
- **Work-text format** includes journaling and self-reflection activities, providing opportunities to practice and apply skills.
- **Learning objectives** for each chapter provide measurable outcomes for you to achieve.
- **Logical organization of topics** begins with self-management and interpersonal skills, and moves on to communication skills, career building skills, and finally planning and advancing a career.
- **Storytelling approach** uses vignettes and realistic scenarios to make the content more personal and relatable.

DESCRIPTION

Master the soft skills you need to succeed as a healthcare professional! A guide to personal behaviors, **Job Readiness for Health Professionals, 4th Edition** covers 48 different soft skills, including effective communication, collaborating with colleagues, time management, and searching for and applying for jobs. Engaging, hands-on exercises help you apply these skills in a variety of circumstances and practice settings. Easy to read and easy to follow, this book describes the proven strategies and practices that will help you find your first healthcare job and advance in your career.



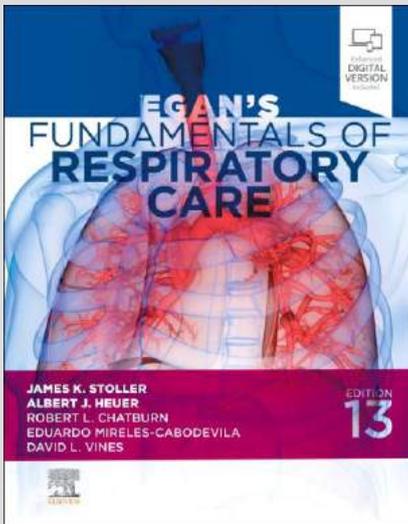
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Health Professions II (HP2) Health Occupation
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Also includes resources via:





Egan's Fundamentals of Respiratory Care, 13e

Edited by : **James K. Stoller**, MD, MS, FAARC, FCCP, Jean Wall Bennett Professor of Medicine, Cleveland Clinic, Cleveland Clinic Lerner College of Medicine Chair, Education Institute Cleveland Clinic; **Albert J. Heuer**, PhD, MBA, RRT, RPFT, FAARC, Program Director and Professor, Masters in Health Care Management Rutgers - School of Health Professions Newark; **David L. Vines**, PhD, RRT, FAARC, FCCP, Chairperson and Respiratory Care Program Director Department of Cardiopulmonary Sciences Rush University Medical Center Chicago, Illinois; **Robert L. Chatburn**, MHHS, RRT-NPS, FAARC, Professor of Medicine, Case Western Reserve University; Director, Simulation Fellowship, Respiratory Institute, Cleveland Clinic Lerner College of Medicine, Cleveland, OH and **Eduardo Mireles-Cabodevila**, MD

ISBN: 9780323931991

PREVIOUS ISBN: 9780323749527,
9780323511124, 9780323811217,
9780323811224

PUB DATE: Jan 24, 2024

LIST PRICE: £128.99 / \$160.99 /
€149.99

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 1386

AUDIENCE: Respiratory therapy
students in two- & four-year programs

BIC CODES:

THEMA CLASSIFICATION:

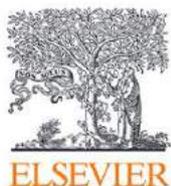
THEMAMQS

DESCRIPTION

Master the principles and skills you'll need to succeed as a respiratory therapist! Egan's Fundamentals of Respiratory Care, 13th Edition provides a solid foundation in respiratory care and covers the latest advances in this dynamic field. For more than 50 years, this text has been the go-to resource to understand the role of the respiratory therapist, the scientific basis for treatment, and clinical applications. Comprehensive chapters prepare you for clinical and exam success by correlating to the 2020 NBRC Exam matrices. The 13th Edition includes updated coverage of COVID-19, the latest AARC clinical practice guidelines, and a new enhanced eBook version included with print purchase.



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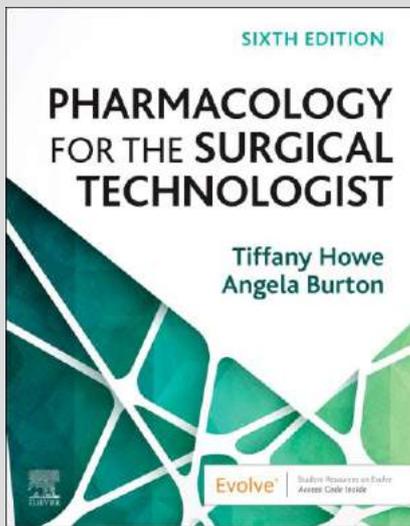


Health Professions II (HP2)
Respiratory Therapy

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

Also includes resources via:





Pharmacology for the Surgical Technologist, 6e

Tiffany Howe, CST, CSFA, FAST, MBA, Vice President for Teaching and Learning, Western Dakota Tech, Rapid City, South Dakota. and Angela Burton, CST, FAST, General Clinical Resource, Black Hills Surgical Hospital, Rapid City, South Dakota.

ISBN: 9780443109096
PREVIOUS ISBN: 9780323661218
PUB DATE: Mar 01, 2024
LIST PRICE: £74.99 / \$92.99 / €87.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 240
BIC CODES: MQ
THEMA CLASSIFICATION:
THEMAMQ

The Surgical Technologist's complete guide to pharmacology — from drug calculations to safe medication handling

KEY FEATURES

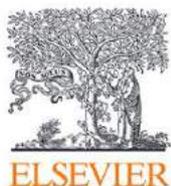
- **Pharmacology content** is specifically tailored to meet the unique needs of the Surgical Technologist and includes all areas designated in the *AST Core Curriculum for Surgical Technology*.
- **Chapter study questions** help you measure your knowledge and apply learning to practice, while also serving as a review tool for classroom and certification exams.
- **Advanced practice content**, centering on issues specific to the Surgical First Assistant, provides you with information to help advance your career and keep this text as a professional reference.
- **Caution feature boxes** focus attention on drug and surgical safety issues, while *Insight* boxes provide in-depth, cutting-edge information on specific products, procedures, and processes in the operating room.
- **Additional learning features** include *Tech Tips* from experts, *Notes* that simplify difficult concepts, *Quick Question* boxes that quiz you on foundational knowledge, and *Make It Simple* boxes that review medical terminology.
- **Comprehensive glossary** supports key terms highlighted throughout the text.

DESCRIPTION

Learn pharmacology from the text designed specifically for surgical technologists! **Pharmacology for the Surgical Technologist, 6th Edition** prepares you to work in an operating room by providing an in-depth understanding of surgical medications. It covers everything a surgical technologist needs to know, including basic pharmacology, dosage calculations, safe handling of medications, terminology, and drug effects and side effects. For Surgical First Assistant courses, many chapters include coverage of advanced practice. Written by a surgical technology educator and a practicing surgical technologist, this book covers all areas of pharmacology and anesthesia that are designated in the *AST Core Curriculum for Surgical Technology*.



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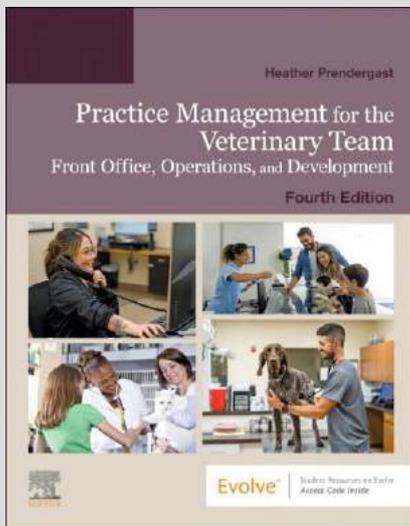


Health Professions II (HP2) Health Occupation

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

Also includes resources via:





Practice Management for the Veterinary Team, 4e

Front Office, Operations, and Development

Heather Prendergast, BS, RVT, CVPM, SPHR, Certified Practice Manager, Jornada Veterinary Clinic, Las Cruces, New Mexico

ISBN: 9780443117084
PREVIOUS ISBN: 9780323570404
PUB DATE: Mar 01, 2024
LIST PRICE: £73.99 / \$92.99 / €85.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 417
BIC CODES: MZ
THEMA CLASSIFICATION:
THEMAMZ

Gain the practice management skills you need to be a valuable asset to the veterinary team

KEY FEATURES

- **Comprehensive coverage of practice management skills** includes leadership, financial management, and strategic planning, as well as telephone skills, appointment scheduling, admitting and discharging patients, and communicating with clients.
- **Coverage of clinical assisting** ranges from examinations and history-taking for patients, to kennels and boarding procedures.
- **Veterinary Ethics and Legal Issues chapter** helps you learn to protect the practice and run a practice based on ethical principles and veterinary laws.
- **End-of-chapter review questions** reinforce key concepts and measure mastery of the content.
- **End-of-chapter Practice Managers Survival Checklist** allows you to review the most essential information.
- Versatile text can be used by practice managers to **study for the CVPM exam**.



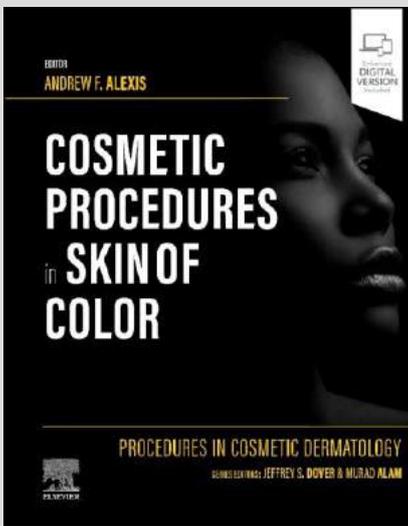
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Health Professions I (HP1)
Veterinary Technology
<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Procedures in Cosmetic Dermatology: Cosmetic Procedures in Skin of Color

Andrew F. Alexis, MD, Professor, Icahn School of Medicine at Mount Sinai, Chairman of Dermatology, Mount Sinai Morningside and Mount Sinai West, New York, New York

ISBN: 9780323831444
PUB DATE: Mar 14, 2024
LIST PRICE: £110.99 / \$136.99 / €129.99
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 246
AUDIENCE: Cosmetic dermatologists
BIC CODES: MJK
THEMA CLASSIFICATION: THEMAMJK

Master today's in-demand cosmetic dermatology procedures

KEY FEATURES

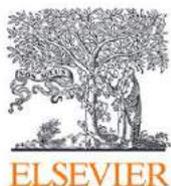
- Provides **complete, clear descriptions** for aesthetic dermatological concerns in patients with skin of color, including dedicated chapters on populations of African, East Asian, South Asian, Middle Eastern, and Hispanic/Latino ancestry.
- Covers management of **key dermatologic conditions** in skin of color including melasma, post-inflammatory hyperpigmentation, hair loss, and keloids.
- Features **high-quality images and numerous procedural videos** demonstrating exactly how to perform today's most requested or most challenging procedures.
- Presents **preferred methods and step-by-step techniques** for chemical peels, laser hair removal, laser resurfacing, laser treatment of pigmented lesions, hair transplantation, botulinum toxins, soft tissue fillers, periorbital rejuvenation, and more.
- Shares the **knowledge and expertise** of editor and cosmetic dermatologist, Andrew F. Alexis, MD, MPH, of New York City's Center for Diverse Skin Complexions, who is often asked by patients, "Can we use this treatment safely on *my* skin?"—reflecting concerns regarding complications following cosmetic procedures in patients with non-white skin types.
- **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

Offering a **step-by-step, practical approach** to increasingly requested cosmetic procedures, *Procedures in Cosmetic Dermatology: Cosmetic Treatment of Skin of Color*, enables you to master the up-to-date cosmetic techniques that produce the superior results your patients expect. Edited by renowned dermatologist, Dr. Andrew F. Alexis, along with **hand-selected experts in this rapidly growing field**, it provides practical insights into safe and effective approaches to cosmetic procedures in skin of color that can be performed by dermatologists—all **abundantly illustrated and evidence based**. A **substantial video library** demonstrating preferred techniques and modalities helps you successfully incorporate the latest procedures into your practice.



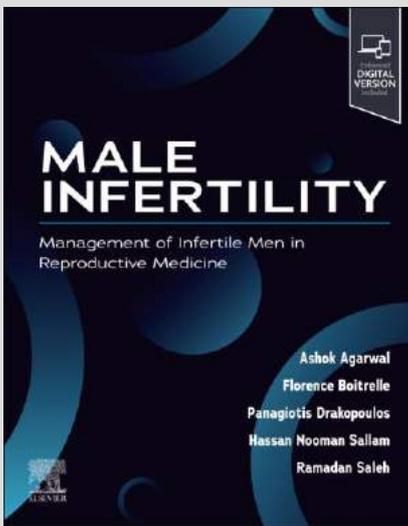
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Speciality Medicine Dermatology
<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Male Infertility

Management of Infertile Men in Reproductive Medicine

Edited by : **Ashok Agarwal**, PhD, HCLD (ABB), ELD (ACE), Head, Andrology Center, Director of Research, American Center for Reproductive Medicine, Cleveland, Ohio; **Florence Boitrelle**, ART and Andrology-Hospital of Poissy St. Germain, University Paris-Saclay, Paris, France; **Panagiotis Drakopoulos**, Centre for Reproductive Medicine, Universitair Ziekenhuis Brussel, Vrije Universiteit Brussel,; **Hassan Nooman Sallam** and **Ramadan Saleh**

ISBN: 9780323930475
PUB DATE: Mar 15, 2024
LIST PRICE: £101.99 / \$125.99 / €118.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 332
AUDIENCE: Gynecologists, reproductive medicine specialists
BIC CODES: MJT
THEMA CLASSIFICATION: THEMAMKC

Practical, real-world guidance on male infertility, from diagnosis through treatment

KEY FEATURES

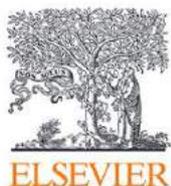
- Covers **diagnostic aspects of male infertility** (clinical, laboratory, and imaging methods) as well as **various therapeutic options** including classical and advanced surgical procedures.
- Discusses intrauterine insemination, conventional in vitro fertilization, intracytoplasmic sperm injection, sperm cryopreservation, preimplantation genetic testing, and more.
- Begins each chapter with **key points** and ends with **clinical scenarios** of real-life problems and their solutions.
- Shares the knowledge and expertise of **global experts in the field**.
- **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

Despite the fact that about half of infertility problems stem from male factors, gynecologists are often the first health care providers to perform the initial assessment of the infertile couple. For this reason, it is critical that gynecologists and reproductive medicine specialists remain up to date on the **primary conditions that cause male infertility**, as well as **current diagnostic tools and treatment options** of both natural and assisted conception. From diagnosis through treatment, *Male Infertility: Management of Infertile Men in Reproductive Medicine* offers **expert, straightforward guidance** on the pathophysiology and management of male infertility for clinicians who assist couples early in the process of trying to conceive.



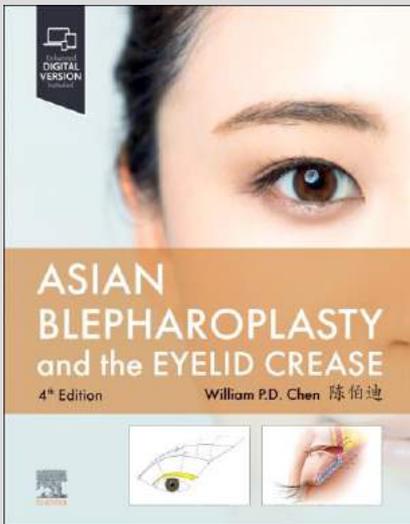
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Speciality Medicine OB/Gyn
<https://virtuale.elsevier.com>, www.elsevier.com

Also includes resources via:





Asian Blepharoplasty and the Eyelid Crease, 4e

William P. Chen, MD, FACS, Clinical Professor of Ophthalmology, Department of Ophthalmology, University of California Los Angeles, School of Medicine, Los Angeles; Senior Attending Surgeon, Ophthalmic Plastic Surgery Service, Harbor-UCLA Medical Center, Torrance and Private Practice, Long Beach and Newport Beach, California

ISBN: 9780323878760

PREVIOUS ISBN: 9780323355728

PUB DATE: Mar 01, 2024

LIST PRICE: £174.99 / \$241.99 /

€203.99

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 380

AUDIENCE: Oculoplastic surgeons; ophthalmologists

BIC CODES: MJQ

THEMA CLASSIFICATION:

THEMAMJQ

Master the latest surgical techniques for optimal patient outcomes.

KEY FEATURES

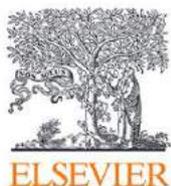
- Revised throughout with updated case examples, select new patient photos, and updated coverage based on the recent literature.
- Eight new chapters cover Control of Eyelid Crease Depth During Construction; Ratios in Double Lid Segment; Revisional Asian Blepharoplasty; Paths, Pitfalls, and Solutions in Asian Blepharoplasty; Failure Analysis; An Operative Primer, and more.
- Contains a new paradigm of scoring suboptimal findings based on eyelid crease height, depth, and crease shape, providing realistic assessment and comparison.
- Step-by-step instructions for optimizing the biodynamics for eyelid crease formation; how to eliminate the prominent medial upper lid fold; removing tissues as a trapezoidal block using minimized steps; and much more.
- Expanded guidance on managing complications integrated throughout, with surgical pearls and summative boxes where relevant.
- High-quality, full-color artwork shows three-dimensional representations of key anatomy and procedural steps.
- Extensive collection of case studies, with before and after patient photos; plus practice worksheets, appendix tables, comprehensive references, and pearls and pitfalls throughout.
- 35 comprehensive videos cover primary surgery as well as revisional procedures, and can be viewed step by step or as an entire sequence.
- 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

Regarded as the “go-to” reference on this complex and intricate procedure, Dr. William P. Chen’s Asian Blepharoplasty and the Eyelid Crease, 4th Edition, has been thoroughly revised to include the most up-to-date and authoritative information you need to expand your practice or refine your skills. Ideal for plastic surgeons, ophthalmologists, and cosmetic dermatologic surgeons, this unique multimedia resource offers comprehensive coverage of eyelid anatomy, surgical approaches, and revision surgery—all highlighted by more than 450 step-by-step illustrations, 35 comprehensive videos, and 10 “short step” videos that provide operative guidance and illustrate patient outcomes over time.



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Speciality Medicine Ophthalmology
Surgery

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

Also includes resources via:





Neonatology: Questions and Controversies Series 7-volume Series Package, 4e

Richard Polin, MD, William T. Speck Professor of Pediatrics, College of Physicians and Surgeons, Columbia University, Director, Division of Neonatology, Morgan Stanley Children's Hospital of New York - Presbyterian Columbia University Medical Center, New York, New York

ISBN: 9780443119422

PREVIOUS ISBN: 9780323582889

PUB DATE: Mar 18, 2024

LIST PRICE: £362.99 / \$449.99 /

€424.99

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 0

AUDIENCE: neonatologists, neonatal nurse practitioners, pediatricians

BIC CODES: MJW, MJWN

THEMA CLASSIFICATION:

THEMAMKDN

Stay up to date with the most challenging aspects of neonatal care

A Volume in the *Neonatology: Questions & Controversies* Series

KEY FEATURES

Each thoroughly updated, full-color, new edition of Neonatology Questions and Controversies:

- Provides a clear management strategy for common and rare neonatal disorders, offering guidance based on the most up-to-date understanding of underlying pathophysiology.
- Places emphasis on controversial areas that can entail different approaches.
- Features the most current clinical information throughout, including numerous new chapters that keep you up to date.
- Highlights gaps in knowledge that should serve as a strong stimulus for future research.
- Utilizes a consistent chapter organization to help you find information quickly and easily, and contains numerous charts, graphs, radiographic images, and photographs throughout.
- Offers the most authoritative advice available from world-class neonatologists who share their knowledge of new trends and developments in neonatal care. These experts have spent their careers listening, learning, questioning, and teaching to ensure they stay at the top of their field and teach others along the way.

DESCRIPTION

Dr. Richard Polin's Neonatology Questions and Controversies series highlights the toughest challenges facing physicians and care providers in clinical practice, offering trustworthy guidance on up-to-date diagnostic and treatment options in the field. In each title of this 7-volume series, renowned experts address the clinical problems of greatest concern to today's practitioners, helping you provide optimal, evidence-based care to every patient.



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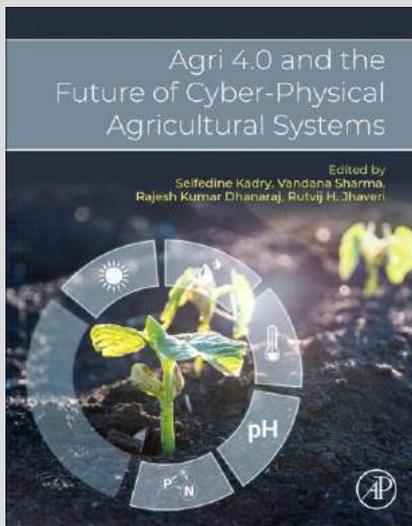


Speciality Medicine Peds

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

Also includes resources via:





Agri 4.0 and the Future of Cyber-Physical Agricultural Systems

Edited by : **Seifedine Kadry**, Professor, Noroff University College, Norway; **Vandana Sharma**, Associate Professor, Amity Institute of Information Technology, Amity University, U.P, India; **Rajesh Kumar Dhanaraj**, Professor, Symbiosis International (Deemed University), Pune, India; **Rutvij H. Jhaveri**, Department of Computer Science and Engineering, School of Technology, Pandit Deendayal Energy University, India and **Gandhiya Vendhan**, Professor, Bharathiar University, India

ISBN: 9780443131851
PUB DATE: Apr 01, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 279

AUDIENCE: Researchers in cyber-physical and AI focused on agricultural applications Professionals seeking agricultural solutions using cyber-physical systems. Advanced level students in related courses

BIC CODES: LNKF, UB, KNAC, UFL

THEMA CLASSIFICATION:

THEMAUB; THEMAKNA; THEMAKJT; THEMAUFL; THEMALNKF

Teaches readers how to apply digitized data to automate agriculture

KEY FEATURES

- Addresses one of the most complex applications of CPS
- Describes various technologies, covering CPS in agriculture from precision agriculture to smart supply chain management
- Focuses on the digital framework, tools, and systems capable of supporting Agri 4.0

DESCRIPTION

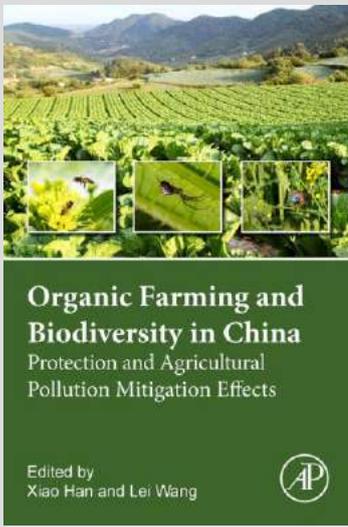
Agri 4.0 and the Future of Cyber-Physical Agricultural Systems is the first book to explore the potential use of technology in agriculture with a focus on technologies that enable the reader to better comprehend the full range of CPS opportunities. From planning to distribution, CPS technologies are available to impact agricultural output, delivery, and consumption. Specific sections explore ways to implement CPS effectively and appropriately and cover digitalization of agriculture, digital computers to assist the processes of agriculture with digitized data and allied technologies, including AI, Computer Vision, Big data, Block chain, and IoT. Other sections cover Agri 4.0 and how it can digitalize, estimate, plan, predict, and produce the optimum agricultural inputs and outputs required for commercial purposes. The global team of authors also presents important insights into promising areas of precision agriculture, autonomous systems, smart farming environment, smart production monitoring, pest detection and recovery, sustainable industrial practices, and government policies in Agri 4.0.



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FOOD SCIENCE, TECHNOLOGY & NUTRITION
<https://virtuale.elsevier.com>, www.elsevier.com



Organic Agriculture and Biodiversity in China

Edited by : **Xiao Han**, Organic Food Development Center, Nanjing Institute of Environmental Sciences, Nanjing, China and **Lei Wang**, Organic Food Development Center, Nanjing Institute of Environmental Sciences, Nanjing, China

ISBN: 9780323906029
PUB DATE: Mar 01, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 213

AUDIENCE: Researchers and policy makers in the fields of organic agriculture and biodiversity protection.

Advanced undergraduate or graduate students in agricultural, conservation, or Chinese economic studies

BIC CODES: PSV, TVD, RN, TVK, TVH, TV, TB

THEMA CLASSIFICATION:

THEMATVK; THEMATPSV;

THEMATVH; THEMATQ; THEMATV;

THEMATB

Explores the role that organic agriculture plays in biodiversity protection and how the government can support or hinder organic agriculture

KEY FEATURES

- Reviews the origin and development of organic agriculture
- Introduces the current status and policies of biodiversity conservation in China
- Compares the biodiversity between organic and conventional agriculture
- Presents innovative information from exclusive studies on organic agriculture development and biodiversity protection in China

DESCRIPTION

Organic Agriculture and Biodiversity in China provides a comprehensive introduction to the development of organic agriculture in China, covering its origins, government policies, management and institutional systems, and socio-economic benefits. It also provides insights into China's policies on biodiversity conservation and the implementation of biodiversity conventions. Through the use of case studies, the book showcases the role and effectiveness of organic agriculture in conserving biodiversity. Additionally, it presents an outlook on the future development of organic agriculture and biodiversity conservation in China.

Written by experts from the Nanjing Institute of Environmental Science, Ministry of Ecology and Environment (MEE), Jiangsu Vocational College of Agriculture and Forestry, Hebei University of Engineering, and other esteemed institutions, this book explores the role that organic agriculture plays in protecting biodiversity and how the government can support or hinder organic agriculture. Through the utilization of in-depth interviews with farmers and government agencies, field surveying, and literature review, the book critically reviews novel research to provide a systematic comparison of biodiversity between organic and conventional agriculture.

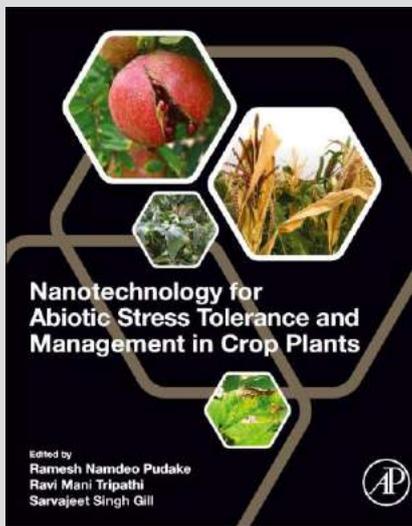
Organic Agriculture and Biodiversity in China is an important resource for researchers, students, policymakers, and the general public seeking to understand the environmental impact of organic agriculture.



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FOOD SCIENCE, TECHNOLOGY & NUTRITION
<https://virtuale.elsevier.com>, www.elsevier.com



Nanotechnology for Abiotic Stress Tolerance and Management in Crop Plants

Edited by : **Ramesh Namdeo Pudake**, Assistant Professor, Amity Institute of Nanotechnology, Amity University, India; **Ravi Mani Tripathi**, Associate Professor, Amity Institute of Nanotechnology, Amity University, Uttar Pradesh, India and **Sarvajeet Singh Gill**, Assistant Professor of Ag. Biotechnology, Stress Physiology and Molecular Biology Lab, Centre for Biotechnology, Faculty of Life Sciences, MD University, Rohtak, India

ISBN: 9780443185007
PUB DATE: Mar 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 330

AUDIENCE: Undergraduate and graduate students, teachers, and professors in agriculture, nanotechnology, and biotechnology universities, professionals/practitioners in research institutes involved in plant science, material science, and crop production research

BIC CODES: PST, TVK

THEMA CLASSIFICATION: THEMATVK; THEMAPST

Helps readers understand the potential benefits of nanoscience on crop protection and yield

KEY FEATURES

- Presents advancements in the understanding of molecular and physiological interaction between nanoparticles and crop plants
- Includes figures and illustrations to help readers visualize and easily understand the role of nanomaterials
- Serves as an ideal reference for those studying smart nanomaterials, biosensors, and nanodevices for real-time plant stress measurement

DESCRIPTION

Nanotechnology for Abiotic Stress Tolerance and Management in Crop Plants reviews the most recent literature on the role of nanomaterials in achieving sustainability in crop production in stressful environments. This book explores the adverse conditions caused by abiotic stress to crop plants and the methods by which these conditions can be potentially overcome through developments in nanoscience and nanotechnology. Abiotic stresses such as drought, salinity, temperature stress, excessive water, heavy metal stress, UV stress etc. are major factors which may adversely affect the growth, development, and yield of crops.

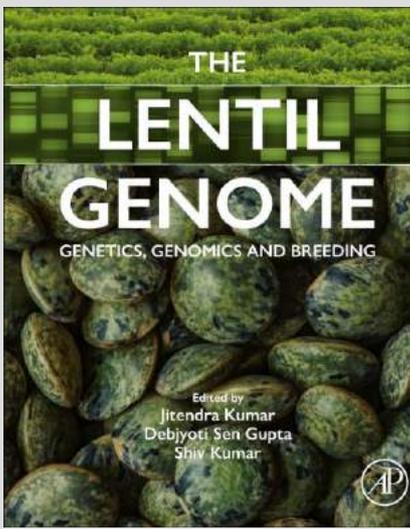
While recent research for ways of overcoming the physiological and biochemical changes brought on by these stresses has focused on genetic engineering of plants, additional research continues into alternative strategies to develop stress tolerant crops, including the use of nanoscience and nanotechnology.



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FOOD SCIENCE, TECHNOLOGY & NUTRITION
<https://virtuale.elsevier.com>, www.elsevier.com



The Lentil Genome

Genetics, Genomics and Breeding

Edited by : **Jitendra Kumar**, Principal Scientist, Division of Crop Improvement, Indian Institute of Pluses Research, Kanpur, India; **Debjyoti Sen Gupta**, Scientist (Sr. Scale), ICAR-Indian Institute of Pulses Research in Kanpur, India and **Shiv Kumar**, Biodiversity and Integrated Gene Management Program, International Center for Agricultural, Research in the Dry Areas (ICARDA), Rabat, Morocco

ISBN: 9780443194092
PUB DATE: Mar 01, 2024
LIST PRICE: £165.00 / \$200.00 /
€190.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 370

AUDIENCE: Lentil researchers and scientists of the world, Researchers working in crop improvement, breeding, genetics and related subjects, Post graduate scholars in plant breeding, genetics, cytogenetics and biotechnology

BIC CODES: TVK, KNAC, TCB, TV

THEMA CLASSIFICATION:

THEMATVK; THEMAKNA;

THEMAKCM; THEMATCB; THEMATV

Helps readers understand the impact of breeding on the future of lentil, a globally important crop

KEY FEATURES

- Focuses on the latest tools and strategies for genome sequencing
- Includes discussions of public and private genome sequencing and how the information is leading to advancements
- Highlights the impact on germplasm characterization gene discovery and generic improvement in post genome era
- Presents insights from leading experts from around the globe

DESCRIPTION

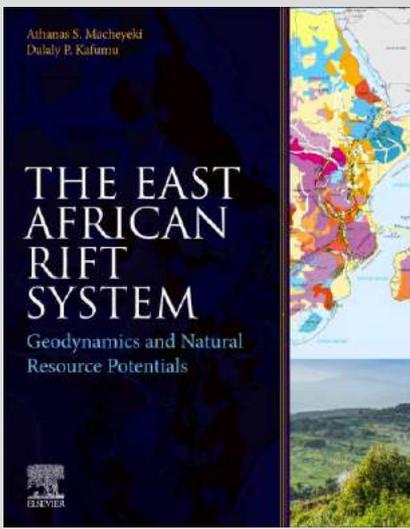
The Lentil Genome: Genetics, Genomics and Breeding is a comprehensive volume on this important legume, from its economic importance to the latest in sequencing. The book includes botanical descriptions, discussion of lentil genetics, cytogenetics and breeding, molecular mapping genes and QTLs, as well as structural and functional genomics, genome sequencing, assembly, repetitive genome, gene annotation and synteny. Lentil [*Lens culinaris* ssp. *culinaris* Medikus] is among the earliest domesticates from the Near-East Fertile Crescent and plays a vital role in nutritional wellbeing and livelihood for the small-scale farmers in the dryland agricultural ecosystems of South Asia, Sub-Saharan Africa, West Asia, and North Africa. The classical plant breeding approach of selection-recombination-selection has been used successfully for genetic improvement in lentil. However further genetic improvement for developing the high yielding cultivars is required knowledge of gene network underlying the complex traits. Realizing the importance of genomics enabled improvement in crop plants, the scientific community has recently placed major emphasis on whole genome sequencing in many major crops including lentil. This compilation of the latest lentil genome research serves the immediate needs of students, scientists and is needed to strengthen conventional crop improvement strategies of lentil.



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FOOD SCIENCE, TECHNOLOGY & NUTRITION
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The East African Rift System

Geodynamics and Natural Resource Potentials

Athanas Simon Macheyeke, Department of Geology, College of Earth Sciences and Engineering, The University of Dodoma Tanzania and **Dalaly Peter Kafumu**, Parliament Member, Tanzania, United Republic of Tanzania

ISBN: 9780323956420
PUB DATE: Mar 01, 2024
LIST PRICE: £126.00 / \$165.00 /
€143.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 252
AUDIENCE: Students, Researchers
and Practitioners across Exploration
Geology and Oil and Gas/Mining
Industries
BIC CODES: TNCC
THEMA CLASSIFICATION:
THEMATNCC

Comprehensive coverage of the science and economic potential of the East African Rift System

KEY FEATURES

- Connects the science of Rift Systems to their economic potentials using the East African Rift System as the prime example;
- Includes discussion and case studies from rift systems around the world;
- Features chapters dedicated to natural resources such as mineral deposit types (Au, He, REE, U) and the basic principles of their exploration

DESCRIPTION

The East African Rift System: Geodynamics and Natural Resource Potentials provides state-of-the-art knowledge on the processes pertaining to intra continental rifting right from general basic principles of rifting, volcanic activities and microplates. It also provides knowledge on key natural resources available in the rift system that include geothermal and mineral resources as well as hydrogeological and hydrocarbon resources. Each aspect discussed in the East African Rift System has its equivalent case study and readers interested in each rift of the world will find something connected or linked to their rift system of interest, be it a sub-chapter on rifting processes or natural resource models.

The East African Rift System: Geodynamics and Natural Resource Potentials also describes rifting models of selected major rifts (especially continental rifts) of the world such as the Basin and Range Province, Rio Grande (USA); Rhine Graben (France and Germany); the Tibetan Rohai (Tibet); the Shaanxi Bohai (China); Lake Baikal (Russia); North Island (Australia) and the Aegean Sea Rift (Turkey). Key aspects presented are: rift type, rift age, rift physical dimensions, geothermal gradient models, natural resources and where possible, models of exploration of particular natural resources have been provided.



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EARTH & ENVIRONMENT Applied Geoscience
<https://virtuale.elsevier.com>, www.elsevier.com

Wengang Zhang
Yanmei Zhang
Runhong Zhang
Yongqin Li
Li Hong

Design of Deep Braced Excavation in Urban Geotechnical Environments



Design of Deep Braced Excavation in Urban Geotechnical Environments

Wengang Zhang, Full Professor, School of Civil Engineering, Chongqing University, China; **Yanmei Zhang**, Associate Professor, Chongqing University, China; **Runhong Zhang**, Chongqing University, China; **Yongqin Li**, Chongqing University, China and **Li Hong**, Chongqing University, China

ISBN: 9780443138829
PUB DATE: Mar 01, 2024
LIST PRICE: £142.00 / \$185.00 /
€165.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 716

AUDIENCE: Geotechnical design engineers and researchers in geotechnical engineering, geological engineering, or civil engineering. Engineers working in infrastructure sectors

BIC CODES: RBG

THEMA CLASSIFICATION:
THEMARBG

Valuable reference on both theory and practical application in understanding deep braced excavation in urban environments

KEY FEATURES

- Presents the latest theory and knowledge surrounding deep braced excavations
- Systematically outlines theory, field reports, calculations, and back analysis, making it much easier to master the work relevant with deep braced excavations
- Provides detailed visual elements and hyperlinks to additional images and video for case excavations to enhance understanding

DESCRIPTION

Design of Deep Braced Excavation in Urban Geotechnical Environments presents the design and calculation of deep braced excavation in urban geotechnical environments, considering the soil characteristics of spatial variability and anisotropy, as well as excavation responses of urban adjacent utilities such as pipelines, tunnels, foundation piles, and buildings. The text begins with coverage of overall stability, earth pressure and strut force, retaining wall responses, and ground movements. Numerical modeling and computer codes are also outlined in detail. Final chapters conclude with an examination of the determination of excavation responses of urban adjacent utilities and failure analysis based on several case histories.

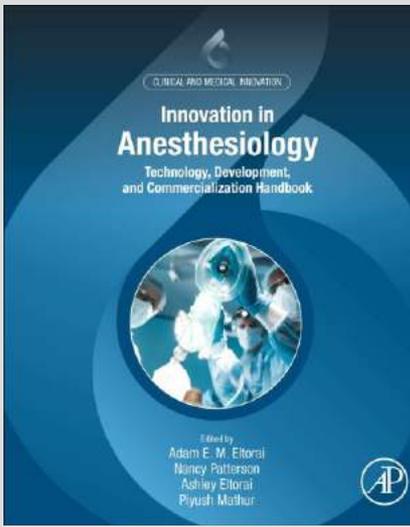
This book will be ideal for those that need the latest knowledge in both theory and practical application for deep excavation problems.



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EARTH & ENVIRONMENT Applied Geoscience
<https://virtuale.elsevier.com>, www.elsevier.com



Clinical and Medical Innovation in Anesthesiology

Technology, Development, and Commercialization Handbook

Ashley Eltorai, Staff Physician, Anesthesiology and Critical Care, Yale-New Haven Hospital; Assistant Professor, School of Medicine, Yale University, Connecticut, USA; **Piyush Mathur**, Program Director, Anesthesia Critical Care Fellowship Program, Anesthesia Institute, The Cleveland Clinic, Ohio, USA and **Adam E.M. Eltorai**, Brown University Warren Alpert Medical School, Marlborough, MA, USA

ISBN: 9780128183816
PUB DATE: Dec 01, 2023
LIST PRICE: £91.95 / \$120.00 / €105.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 200
AUDIENCE: Biomedical engineers, graduate students, researchers, and clinicians in anesthesiology
BIC CODES: MQW
THEMA CLASSIFICATION: THEMATCB; THEMAMQW

A step-by-step guide to bring technological innovations in anesthesiology from concept to market

A Volume in the *Clinical and Medical Innovation Series*

KEY FEATURES

- Helps readers understand everything involved in bringing clinical and medical innovation in anesthesiology from concept to market
- Features case studies on innovative products from around the world
- Includes end-of-chapter 'Getting Started' sections to encourage readers to learn from real projects and apply important lessons to their own work

DESCRIPTION

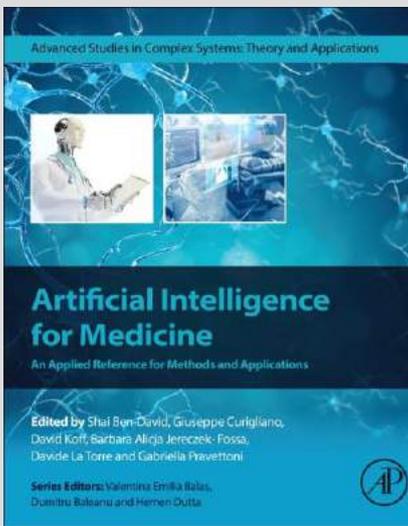
Clinical and Medical Innovation in Anesthesiology: Technology, Development, and Commercialization reflects recent trends of industry globalization and value-conscious healthcare. Written by a team of medical, engineering and business experts, this book provides a clear process for the identification, invention and implementation of new solutions in anesthesiology. Readers will gain practical advice, as well as examples of both successful and failed case studies. This is the ideal resource for anesthesiology clinicians, students and researchers who not only want to bring patient use and application to their inventions but also understand all steps needed to bring an idea for technical innovation to market.



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



Artificial Intelligence for Medicine

An Applied Reference for Methods and Applications

Edited by : **Shai Ben- David**, PhD, Professor, David Cheriton School of Computer Science, University of Waterloo, Canada.; **Giuseppe Curigliano**, MD PhD, Professor and Director, Division of Early Drug Development for Innovative Therapy, University of Milan, Italy.; **David Koff**, MD, Professor and Director, Medical Imaging Informatics Research Centre, McMaster University, Canada.; **Barbara Alicja Jereczek-Fossa**, MD PhD, Director, Division of Radiotherapy, European Institute of Oncology, University of Milan, Italy.; **Davide La Torre**, PhD, HDR, Professor and Director, Artificial Intelligence Institute, SKEMA Business School and Universite' Cote d'Azur, France. and **Gabriella Pravettoni**, PhD, Professor and Director, Psycho-Oncology Division, University of Milan, Italy

ISBN: 9780443136719
PUB DATE: Mar 01, 2024
LIST PRICE: £138.00 / \$180.00 / €160.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 279
AUDIENCE: The primary audience includes research clinicians, biomedical engineers, and biomedical researchers with an interest in developing applied computational intelligence for clinical medicine applications. As such, Computer Scientists and researchers in Artificial Intelligence and Machine Learning will also be a primary audience for the book.
BIC CODES: UYQ
THEMA CLASSIFICATION: THEMAUYQ

Covers the essentials and principles of using AI in medicine

A Volume in the *Advanced Studies in Complex Systems* Series

KEY FEATURES

- Covers the basic concepts of Artificial Intelligence and Machine Learning, methods and practices, and advanced topics and applications to clinical and precision medicine
- Presents readers with an understanding of how AI is revolutionizing medicine by demonstrating the applications of computational intelligence to the field, along with an awareness of how AI can improve upon traditional medical structures
- Provides researchers, practitioners, and project stakeholders with a complete guide for applying AI techniques in their projects and solutions

DESCRIPTION

Artificial Intelligence for Medicine: An Applied Reference for Methods and Applications introduces readers to the methodology and AI/ML algorithms as well as cutting-edge applications to medicine, such as cancer, precision medicine, critical care, personalized medicine, telemedicine, drug discovery, molecular characterization, and patient mental health. Research in medicine and tailored clinical treatment are being quickly transformed by artificial intelligence (AI) and machine learning (ML). The content in this book is tailored to the reader's needs in terms of both type and fundamentals. It covers the current ethical issues and potential developments in this field.

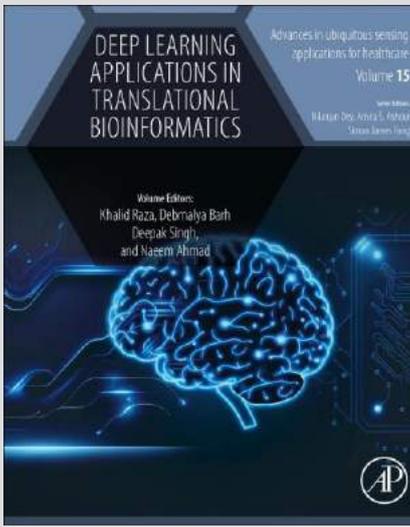
This book will be beneficial for academics, professionals in the IT industry, educators, students, and anyone else involved in the use and development of AI in the medical field.



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ENGINEERING Biomedical
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Deep Learning Applications in Translational Bioinformatics

Edited by : **Khalid Raza**, Department of Computer Science, Jamia Millia Islamia (Central University), Jamia Nagar, New Delhi India; **Debmalya Barh**, Federal University of Minas Gerais Belo Horizonte Brazil; **Deepak Singh**, Department of Computer Science and Engineering, National Institute of Technology Raipur Chhattisgarh India and **Naeem Ahmad**, Department of Computer Science and Engineering, National Institute of Technology Raipur Chhattisgarh India

ISBN: 9780443222993
PUB DATE: Mar 01, 2024
LIST PRICE: £138.00 / \$170.00 / €165.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 233
AUDIENCE: Researchers and graduate students in bioinformatics, health informatics, and machine learning.
BIC CODES: TBC, UYQ, MQW
THEMA CLASSIFICATION: THEMATBC; THEMATCB; THEMAMQW; THEMAUYQ

Provides an in-depth analysis of the use of deep learning to translational bioinformatics

A Volume in the *Advances in ubiquitous sensing applications for healthcare* Series

KEY FEATURES

- Addresses the practical application of deep learning algorithms to a wide range of bioinformatics challenges
- Presents integrative and multidisciplinary approaches to ubiquitous healthcare
- Includes case studies to illustrate the concepts discussed

DESCRIPTION

Deep Learning Applications in Translational Bioinformatics, a new volume in the *Advances in Ubiquitous Sensing Application for Healthcare* series, offers a detailed overview of basic bioinformatics, deep learning, various applications of deep learning in translational bioinformatics including deep learning ensembles, deep learning in protein classification, detection of various diseases, prediction of antiviral peptides, identification of antibiotic resistance, computer aided drug design and drug formulation.

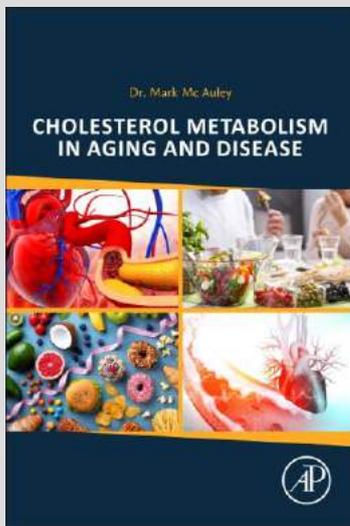
This new volume helps researchers working in the field of machine learning and bioinformatics to foster future research and development in ensemble deep learning and inspire new bioinformatics applications that cannot be attained by using traditional machine learning models.



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



Cholesterol Metabolism in Aging and Disease

Mark Mc Auley, Senior Lecturer, University of Chester, UK

ISBN: 9780128227923
PUB DATE: Mar 01, 2024
LIST PRICE: £115.00 / \$150.00 / €131.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 225
AUDIENCE: Graduate and PhD students as well as researchers interested or working in various aspects of aging, clinical researchers and medical professionals in biogerontology and geriatrics
BIC CODES: MJX
THEMA CLASSIFICATION: THEMAMKN

Covers fundamental concepts of cholesterol metabolism and the application of this knowledge to key aspects of human aging, physiology and disease

KEY FEATURES

- Offers detailed, yet accessible descriptions of the biochemistry of cholesterol metabolism and the changes that take place as we age
- Emphasizes the mechanistic changes to cholesterol metabolism which take place with age
- Discusses the importance of cholesterol metabolism and how disruptions to it underpin age-related diseases

DESCRIPTION

Cholesterol Metabolism in Aging and Disease provides in-depth coverage on the mechanistic intersection between the aging process and cholesterol metabolism. The book covers the discovery of cholesterol, its biochemistry, and how it came to have such a prominent role in aging and disease. Important areas such as cholesterol biosynthesis and cellular cholesterol homeostasis are described in detail. Technological advancements in computational modeling are also discussed to help improve our understanding of cholesterol metabolism so that new therapeutic avenues are opened to help treat age-related diseases associated with the dysregulation of this key system. This is a must have reference for students and researchers interested in, or working in, various aspects of aging. In addition, it is ideal for clinician researchers and gerontologists.



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COVER IMAGE
FORTHCOMING

New Combination Approaches to Enhance Rituximab-Based Lymphoma Therapies

Benjamin Bonavida, Professor, Department of Microbiology, Immunology and Molecular Genetics, University of California, Los Angeles, USA

ISBN: 9780128164075

PUB DATE: Feb 01, 2024

LIST PRICE: £115.00 / \$150.00 / €131.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 230

AUDIENCE: Cancer researchers, medical oncologists, clinicians, pharmacologists, translational investigators

BIC CODES: KNDH1, MBNH

THEMA CLASSIFICATION:

THEMAMF; THEMATCB; THEMAPS

General updated information on the resistance of various human lymphoma/leukemia subtypes to anti-CD20 therapeutic antibodies

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

KEY FEATURES

- Provides a general overview of various sensitizing agents that can work effectively when used in combination with anti-CD20 antibodies to reverse resistance
- Offers potential underlying mechanisms by which the cancer cells are either inherently resistant or become unresponsive to further antibody treatments
- Discusses how to develop new targeted agents to underlie resistance in order to expand research on this field

DESCRIPTION

New Combination Approaches to Enhance Rituximab-Based Lymphoma Therapies provides general updated information on the resistance of various human lymphoma/leukemia subtypes to anti-CD20 therapeutic antibodies. It discusses also the description of various targeted sensitizing agents that can reverse innate or acquired resistance when used in combination with various FDA-approved anti-CD20 antibodies. There have been a lot of reports in which the treatment with anti-CD20 antibodies for various lymphomas/leukemias has resulted in significant clinical responses; however, there have been also subsets of cancer patients who did not respond initially and several of the responding patients developed resistance to subsequent treatments with the same or different regimens. Therefore, the use of various immunosensitizing agents targeting resistant factors to reverse resistance has been considered and this book discusses each of them in depth, such as Bortezomib, Immunomodulation Agents, Obinutuzumab, Tumor Suppressors, and HDAC Inhibitors. This book is a valuable source for cancer researchers, oncologists, pharmacologists and different members of biomedical field interested in fighting cancer resistance to anti-CD20 antibodies.



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Genomic and Precision Medicine in Clinical Practice

Series Editor: **Dhavendra Kumar**

Genomic and Molecular Cardiovascular Medicine

Edited by Dhavendra Kumar, Arthur A.M. Wilde, and Perry Mark Elliott



Genomic and Molecular Cardiovascular Medicine

Edited by : **Dhavendra Kumar**, Visiting Professor, Genomic Policy Unit, Faculty of Life Sciences and Education, The University of South Wales; Consultant in Clinical Genetics, University Hospital of Wales, Institute of Medical Genetics, Cardiff University, Cardiff, UK; **Arthur A.M. Wilde**, Professor in Cardiology, Heart Centre, Department of Clinical and Experimental Cardiology, Academic Medical Centre, University of Amsterdam, Amsterdam, The Netherlands and **Perry Mark Elliott**, Professor of Cardiovascular Medicine and Director, Centre for Heart Muscle Disease, University College London, London, UK

ISBN: 9780128229514
PUB DATE: Nov 15, 2023
LIST PRICE: £127.00 / \$165.00 /
€144.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 350

AUDIENCE: Students and Trainees in General Medicine, Cardiology, Cardiovascular surgery, Pathology, Preventive & Public health Practicing clinical cardiologists and cardiac surgeons, Academic cardiologists and cardiac surgeons Investigators in cardiovascular science, Practitioners and professionals in cardiovascular preventive and public health

BIC CODES: PSA

THEMA CLASSIFICATION:

THEMAPS

An up-to-date, authentic resource on the genomic and molecular basis of cardiovascular medicine and surgery

A Volume in the *Genomic and Precision Medicine in Clinical Practice* Series

KEY FEATURES

- Includes clinical applications of genomic and molecular new knowledge, along with advances in the practice of cardiovascular medicine and surgery
- Provides wide coverage of all major clinical and preventive aspects of clinical cardiology, including multi-disciplinary team care
- Focuses on targeted gene and molecular therapy in clinical cardiovascular medicine and surgery

DESCRIPTION

The Genomic and Molecular Cardiovascular Medicine largely focuses on pertinent genomic and molecular aspects of cardiovascular medicine relevant to all levels of clinical practice, from primary care to preventive healthcare. The book also focuses on practice applications of translational genomic and molecular developments and advances that impact on cardiovascular system structure and function. Each chapter is evidence-based and comprehensive, with in-depth, cutting-edge knowledge relevant to the practice of clinical cardiology and cardiovascular surgery. The book aims to fill a major gap of knowledge resource focused on genomic and molecular aspects of contemporary cardiovascular medicine and surgery practice.

In view of scientific and technical complexities of the field, the book is written by a team of globally acknowledged experts in respective clinical, investigative, therapeutic and preventive aspects. The current practices within cardiovascular medicine and surgery offer excellent opportunity for genomic and molecular applications to achieve the high order effectiveness with maximum efficiency.



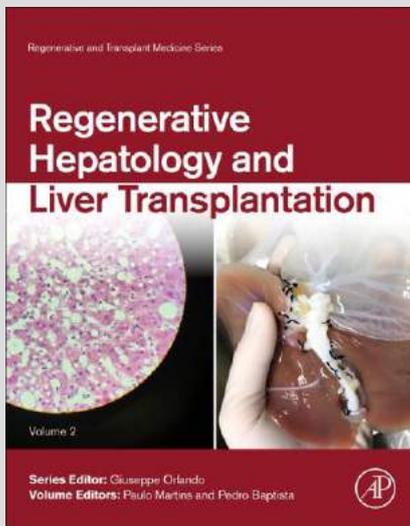
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Regenerative Hepatology and Liver Transplantation, Vol 2

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: Mar 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 730
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.

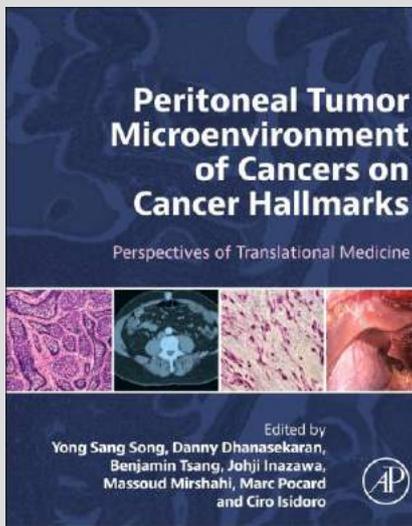


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Peritoneal Tumor Microenvironment of Cancers on Cancer Hallmarks

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: Mar 01, 2024
LIST PRICE: £141.00 / \$180.00 / €158.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 249
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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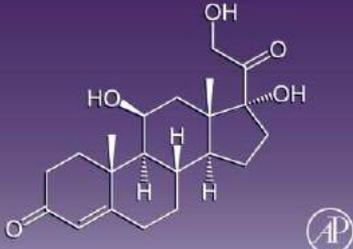


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REPLACEMENT THERAPIES IN ADRENAL INSUFFICIENCY

Peter C. Hindmarsh and Kathy Geertsma



Replacement Therapies in Adrenal Insufficiency

Peter C. Hindmarsh, Professor of Pediatric Endocrinology and Divisional Clinical Director for Pediatrics and Adolescents, UCLH, Developmental Endocrinology Research Group, University College London, UK and **Kathy Geertsma**, Chair CAHISUS Support and Information Group, London, UK

ISBN: 9780128245484
PUB DATE: Nov 01, 2023
LIST PRICE: £95.95 / \$125.00 / €109.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 468
ILLUSTRATIONS: Approx. 200 illustrations (200 in full color)
AUDIENCE: Researchers and Healthcare Professionals who are involved in the care of patients with adrenal insufficiency. Caregivers of patients with adrenal insufficiency
BIC CODES: MJG
THEMA CLASSIFICATION: THEMAMJG; THEMAMFGM

Complete reference on all updates on current causes and mechanisms of adrenal insufficiency

KEY FEATURES

- Provides available treatment means and how to apply them in varying situations, including use among the chronically ill and within emergency settings
- Includes "Clinical Messages" within each chapter that provide clinical applications for the latest research in each discipline area, with a specific disease focus
- Outlines practical points in the management of adrenal insufficiency, including daily maintenance therapy, illness, sick days, emergencies and travel

DESCRIPTION

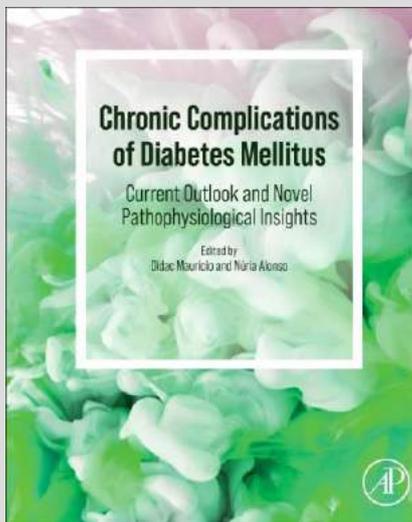
Replacement Therapies in Adrenal Insufficiency provides a thorough understanding of the conditions which result in adrenal insufficiency. Never before has one source of information combined all updates on current causes and mechanisms of adrenal insufficiency to allow for quick reference and subsequent treatment decisions. Scientific data on this broad condition includes specific disease coverage of Addison's disease, hypopituitarism, congenital adrenal hypoplasia and adrenalectomy. Practical points in diagnosis, dosing, drug interactions, replacement therapies and emergency situations are also provided as guidance for overall management.



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Chronic Complications of Diabetes Mellitus

Current Outlook and Novel Pathophysiological Insights

Edited by : **Didac Mauricio**, Chief Physician and Acting Head, Department of Endocrinology and Nutrition, University Hospital Germans Trias i Pujol, Barcelona, Spain; Associate Professor, School of Medicine, University of Lleida, Lleida, Spain; CIBER of Diabetes and Associated Metabolic Diseases (CIBERDEM), Instituto de Salud Carlos III, Spain and **Nuria Alonso**, Staff endocrinologist and head of the diabetes section at the Department of Endocrinology & Nutrition at University Hospital Germans Trias i Pujol Badalona, Spain. She is Assistant Professor at the Faculty of Medicine, Autonomous University of Barcelona

ISBN: 9780323884266
PUB DATE: Nov 01, 2023
LIST PRICE: £127.00 / \$165.00 / €144.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 290
AUDIENCE: Endocrinologists, diabetologists, general practitioners, primary care physicians, graduate students, diabetes researchers. Practitioners working on cardiovascular medicine, nephrology, ophthalmology, or liver disease may be interested in part of the content
BIC CODES: MJG, MJGD
THEMA CLASSIFICATION: THEMAMJG; THEMAMFGM

Discusses chronic complications of diabetes mellitus and provides a holistic view of the disease, including a thorough discussion on classical and nonclassical complications

KEY FEATURES

- Describes pathophysiology, clinical aspects and treatment of complications of diabetes, including nonclassical complications such as diabetic bone disease and diabetic cardiomyopathy
- Addresses and discusses challenges in the management of diabetes complications, including prevention and therapeutic strategies
- Presents up-to-date, thoroughly referenced information for clinicians, researchers and other healthcare providers

DESCRIPTION

Chronic Complications of Diabetes Mellitus: Current Outlook and Novel Pathophysiological Insights provides a holistic view of the disease, discussing not only its classical complications but also the under recognized and managed conditions associated with diabetes. Chapters also discuss advances in our understanding of the genomic architecture of diabetes complications and how precision medicine can be used to personalize their management. Endocrinologists, diabetologists, primary care physicians and researchers interested in complications of diabetes mellitus and cutting-edge information will find this to be a comprehensive tome on the topic.

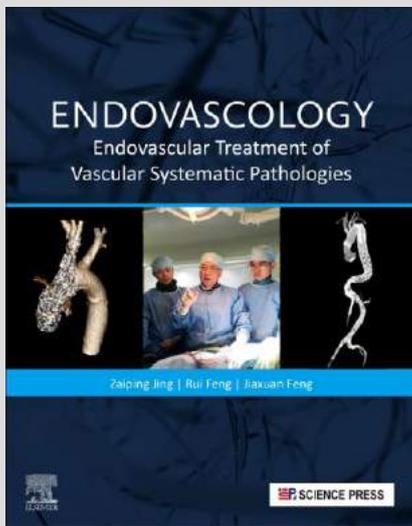
Diabetes complications include pathological changes usually related to the vascular system and classical target organs. However, there are also nonclassical complications independent or partially independent from vascular damage that are often overlooked.



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Endovascology

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: Mar 01, 2024
LIST PRICE: £115.00 / \$150.00 / €131.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 300

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

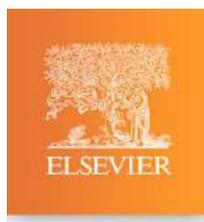
- Gives an international audience access to many years of research and practice in endovascular techniques, including clinical outcomes, from clinicians at the Vascular Surgery Department of Changhai Hospital, a pre-eminent institute in China
- Offers an exhaustive survey of vascular diseases including 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. Endovascology 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. *Endovascology: 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 endovascology. It will be of use to surgeons, trainees in minimally invasive cardiovascular techniques, vascular disease researchers, and medical students alike.



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

**A Multidisciplinary Approach
to Managing Swallowing
Dysfunction in Older People**



A Multidisciplinary Approach to Managing Swallowing Dysfunction in Older People

Pere Clavé, Prof. Pere Clavé is a digestive surgeon, professor at the Universitat Autònoma de Barcelona (UAB), Director of Research and Innovation at the Consorci Sanitari del Maresme and principal investigator of the CIBERehd (Centro de Investigación Biomédica en Red en Enfermedades Hepáticas y Digestivas, Instituto de Salud Carlos III) group on Gastrointestinal Physiology. and **Omar Ortega**, Dr. Omar Ortega is a postdoctoral researcher at Hospital de Mataró (Fundació Salut del Consorci Sanitari del Maresme) and affiliate partner of CIBERehd (Centro de Investigación Biomédica en Red en Enfermedades Hepáticas y Digestivas, Instituto de Salud Carlos III).

ISBN: 9780323916868
PUB DATE: Dec 01, 2023
LIST PRICE: £127.00 / \$165.00 /
€144.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 300

AUDIENCE: Researchers, physicians and healthcare professionals dealing with dysphagia: translational researchers, gastroenterologists, ENT, speech and language therapists, nurses, dietitians, radiologists, surgeons, pulmonologists, geriatricians, and dentists; Students or novice healthcare professionals who want to know more about the pathology of oropharyngeal dysphagia in the elderly

BIC CODES: PSA

THEMA CLASSIFICATION:
THEMAPS

Complete reference on oropharyngeal dysphagia that focuses on the older patient phenotype to detect, diagnose, treat and manage this geriatric syndrome

KEY FEATURES

- Presents full coverage of swallowing impairments in the older population and oropharyngeal dysphagia as a newly defined geriatric syndrome
- Explores the latest innovations and research in the field for pathophysiology, diagnosis, ethics, treatment and potential complications
- Expertly written chapters by international leading experts in the fields of dysphagia and geriatric medicine are included

DESCRIPTION

A Multidisciplinary Approach to Managing Swallowing Dysfunction in Older People provides comprehensive coverage on oropharyngeal dysphagia (OD), focusing on older patient phenotypes. The book provides the knowledge needed for translational researchers and professionals to aid in the detection, diagnosis, treatment and management of OD, ultimately improving patient quality of life. OD has been recently considered a geriatric syndrome because of its high prevalence, the increase of life-expectancy and the need to be managed by a multidisciplinary approach. This reference takes a novel approach to OD, covering all aspects as a geriatric syndrome, examining a complicated and multi-level topic in a succinct way.

Contents include the most innovative information available in current literature combined with practical applications to improve the diagnosis and treatments of OD as a geriatric syndrome. This is the perfect reference for translational researchers, physicians and healthcare professionals dealing with OD.

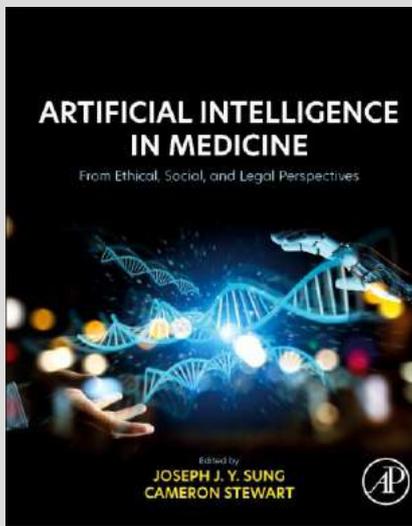


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Artificial Intelligence in Medicine

From Ethical, Social, and Legal Perspectives

Edited by : **Joseph JY Sung**, MD, PhD, Distinguished University Professor & Dean, Lee Kong Chian School of Medicine; Senior Vice President (Health and Life Sciences) Nanyang Technological University and **Cameron Stewart**, BEc, LLB, PhD, Associate Professor of Law, Macquarie University Honorary Associate Professor of Law, Centre for Values in Ethics, Medicine and the Law, University of Sydney, Legal Practitioner, NSW Supreme Court Barrister and Solicitor, High Court of Australia

ISBN: 9780323950688
PUB DATE: Jan 01, 2024
LIST PRICE: £126.00 / \$165.00 / €143.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 280

AUDIENCE: Healthcare providers, specifically medical doctors who are taking care of patients and need to work with AI in providing care and need to know the capabilities of AI, the role they play in using AI-assisted medicines, and the ethical-social aspects of such applications, Engineers who are working on developing AI tools for the application in medicine. They need to understand the hurdle and challenges one has to overcome to put technology on the ground for clinical applications

BIC CODES: MBF

THEMA CLASSIFICATION:
THEMAPSAX

Explains the capabilities of artificial intelligence, pointing to the ethical and social issues of machine-driven healthcare, and offers suggestions to resolve these issues by conducting pragmatic research, by establishing national and international guidelines, and by relieving the associated anxiety with AI medicine

KEY FEATURES

- Discusses the issues that must be addressed to improve acceptance and diminish the anxiety and lack of trust surrounding the care of human health by machines
- Examines the delicate issues surrounding the use of AI in making life-and-death decisions
- Sets the framework of social, ethical, and legal aspects of healthcare for the future

DESCRIPTION

Although AI is opening new and exciting opportunities in healthcare, implementation still faces challenges. *Artificial Intelligence in Medicine: From Ethical, Social, and Legal Perspectives* provides answers on how to improve acceptance and diminish the anxiety of the use of AI-assisted medicine. Through a series of social, ethical, and legal discussions from clinicians, social scientists, ethicists, and legal experts this important reference has coverage that includes good data custodianship and stewardship; data access, data bias, data & healthcare equity; privacy and confidentiality; algorithmic understanding; and regulatory guidance, accountability, and legal responsibility. This reference will explain to healthcare providers how AI will enhance healthcare, will introduce to scientists and researchers the ethical and social aspect of AI that needs to be addressed, and will urge policymakers and health authorities to consider the legal framework needed to implement AI technology in healthcare.



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Application of Artificial Intelligence in Early Detection of Lung Cancer



Jhiliam Mukherjee, Madhuchanda Kar,
Amlan Chakrabarti, and Sayan Das



Application of Artificial Intelligence in Early Detection of Lung Cancer

Amlan Chakrabarti, Full Professor and Director, A.K.Choudhury School of Information Technology, University of Calcutta, India; **Madhuchanda Kar**, Clinical Director of Department of Oncology, Peerless Hospital Kolkata, India; **Jhiliam Mukherjee**, Senior Research Fellow, Centre of Excellence in Systems Biology and Biomedical Engineering, University of Calcutta, India and **Sayan Das**, Radiation Oncologist and Associate Consultant, Department of Interventional Radiology and Imaging, Peerless Hospital Kolkata, India

ISBN: 9780323952453
PUB DATE: Mar 01, 2024
LIST PRICE: £127.00 / \$165.00 /
€144.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 430

AUDIENCE: Researchers and graduate students on cancer research, oncologists, Clinical researchers, radiologists

BIC CODES: UFL, MBF

THEMA CLASSIFICATION:
THEMAKJT; THEMAUFL

Presents cutting-edge artificial intelligence techniques to predict and diagnose lung cancer

KEY FEATURES

- Provides an overview of the latest developments of artificial intelligence technologies applied to the detection of pulmonary nodules
- Discusses the different technologies available and guides readers step-by-step to the most applicable one for the specific lung cancer type
- Describes the entire study design on prediction of lung cancer to help readers apply it to their research successfully

DESCRIPTION

Application of Artificial Intelligence in Early Detection of Lung Cancer presents the most up-to-date computer-aided diagnosis techniques used to effectively predict and diagnose lung cancer. The presence of pulmonary nodules on lung parenchyma is often considered an early sign of lung cancer, thus using machine and deep learning technologies to identify them is key to improve patients' outcome and decrease the lethal rate of such disease. The book discusses topics such as basics of lung cancer imaging, pattern recognition techniques, deep learning, and nodule detection and localization. In addition, the book discusses risk prediction based on radiological analysis and 3D modeling.

This is a valuable resource for cancer researchers, oncologists, graduate students, radiologists, and members of biomedical field who are interested in the potential of AI technologies in the diagnosis of lung cancer.



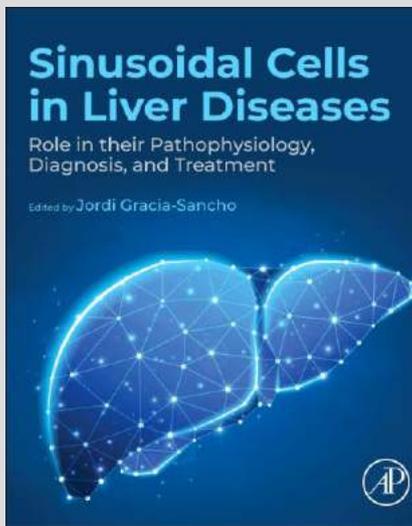
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Sinusoidal Cells in Liver Diseases

Role in their Pathophysiology, Diagnosis, and Treatment

Edited by : **Jordi Gracia-Sancho**, BSc, PhD, Ramón y Cajal Researcher in Biomedicine, Barcelona Hepatic Hemodynamic Laboratory, Institut d'Investigacions Biomèdiques, August Pi i Sunyer Hospital Clinic de Barcelona - CIBEREHD, Spain

ISBN: 9780323952620
PUB DATE: Mar 01, 2024
LIST PRICE: £134.00 / \$165.00 / €160.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 280
AUDIENCE: Basic, translational, and clinical researchers in digestive medicine, gastroenterology, and hepatology, clinicians dealing with digestive diseases, Translational and clinical researchers in vascular diseases
BIC CODES: PSA
THEMA CLASSIFICATION: THEMAPS

Presents comprehensive coverage of the current knowledge on the role of sinusoidal cells in liver diseases, delineating new avenues of research and novel therapeutic options

KEY FEATURES

- Provides a comprehensive update on the role of sinusoidal cells in acute and chronic liver diseases
- Covers our current understanding of the role of sinusoidal cells as therapeutic targets to improve liver diseases
- Presents the latest research in the development of novel biomarkers of liver diseases that derive from sinusoidal cells

DESCRIPTION

Sinusoidal Cells in Liver Diseases: Role in their Pathophysiology, Diagnosis, and Treatment provides a state-of-the-art review on recent advances surrounding the role of liver sinusoidal cells (LSECs, HSCs, macrophages, and other non-parenchymal cells) in acute and chronic liver diseases. Coverage emphasizes disease pathophysiology, novel mechanisms, unmet clinical questions, development of biomarkers and treatment opportunities. By focusing on the role of sinusoidal cells in human liver diseases, this reference provides a comprehensive overview of the role of sinusoidal cells in acute and chronic liver diseases, in its pathophysiology and mechanisms, and in the development of novel biomarkers and new therapeutics.

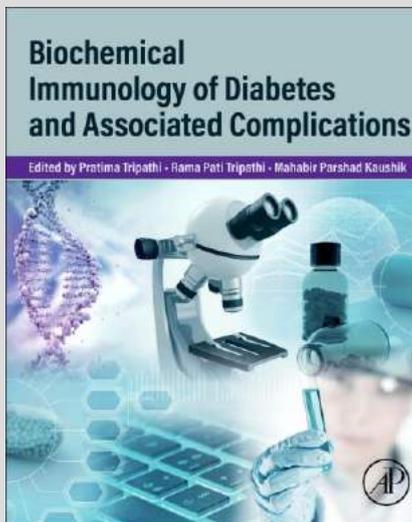
Cells of the liver vasculature play an essential role in the pathophysiology of acute and chronic liver diseases and are considered key therapeutic targets to treat most of human hepatopathies. Coverage in this reference includes the phenotypic changes occurring in liver vascular cells and how cells contribute to the development of microcirculatory dysfunction, fibrosis, inflammation, and liver failure.



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Biochemical Immunology of Diabetes and Associated Complications

Edited by : **Pratima Tripathi**, M.Sc., Ph.D., Assistant Professor, Department of Biotechnology ,National Institute of Pharmaceutical Education and Research.; **Rama Pati Tripathi**, M.Sc., M.Phil., Ph.D, Adjunct Professor at Mody University & Niper Raebareli, Lucknow . CSIR-Central Drug Research Institute and **Mahabir Parshad Kaushik**, M.Sc. Ph.D., Amity University Madhya Pradesh

ISBN: 9780443131950
PUB DATE: Mar 01, 2024
LIST PRICE: £126.00 / \$165.00 /
€143.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 316

AUDIENCE: Medical practitioners, researchers, medical students, master's and doctoral students, It could be used as reference book for science postgrad

BIC CODES: MJGD

THEMA CLASSIFICATION:
THEMAMFGM; THEMAMJG

A guide to better understanding the diagnosis and management of diabetes and associated complications

KEY FEATURES

- Presents information on Immunosuppression and Immunomodulation that directly or indirectly affects the biochemistry underlying diabetes
- Highlights the association of immunological and biochemical aspects in diabetes to gain a better understanding in handling the disease
- Presents the latest research on inflammatory-mediated responses in the development of diabetes
- Includes a chapter of Case studies related to the diseases in question

DESCRIPTION

Biochemical Immunology of Diabetes and Associated Complications offers in-depth coverage of the association of biochemical and immunological aspects of the human body in diabetes. It discusses the suppression and modulation of the immune system and the impact of immunochemicals on the biochemical pathways in diabetes, along with associated complications. The book enumerates the exigency in knowledge about the immunomodulators as therapeutic targets to cure the syndrome. It will serve as an important reference for medical practitioners, researchers, medical students, masters and doctoral students. In addition, it could also be used as a reference for science graduates, science teachers, and researchers.

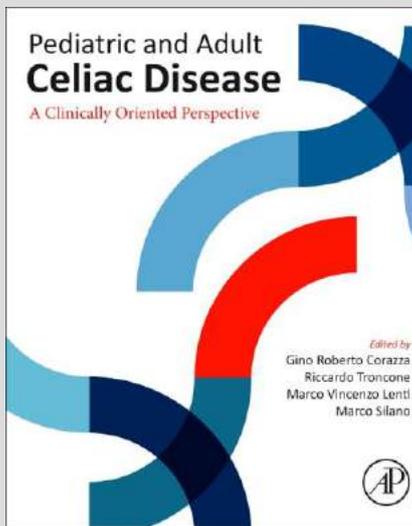


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Pediatric and Adult Celiac Disease

A Clinically Oriented Perspective

Edited by : **Gino Roberto Corazza**, Emeritus Professor of Internal Medicine, Department of Internal Medicine, University of Pavia, Pavia, Italy; **Riccardo Troncone**, Full Professor and Head, Department of Pediatrics, University of Naples, Naples, Italy; **Marco Vincenzo Lenti**, Associate Professor of Internal Medicine, Department of Internal Medicine, University of Pavia, Pavia, Italy and **Marco Silano**, Research Director, Head of the Department of Cardiovascular and Endocrine-metabolic Diseases and Aging, Istituto Superiore di Sanità, Rome, Italy

ISBN: 9780443133596
PUB DATE: Mar 01, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 0
AUDIENCE: Researchers and clinicians dealing with coeliac disease
BIC CODES: PSA
THEMA CLASSIFICATION: THEMAPS

Provides practical coverage of translational and clinical aspects of coeliac disease

KEY FEATURES

- Provides a comprehensive and practical view, encompassing all disease forms and stages
- Covers the clinical aspects of coeliac disease at all stages, providing deep clinical insights
- Presents decision trees, tables, figures, and algorithms that aid in easily finding content to guide diagnosis

DESCRIPTION

Pediatric and Adult Coeliac Disease: A Clinically Oriented Perspective provides an up-to-date, comprehensive, and critical overview of coeliac disease, its complications, and related disorders. The book covers epidemiological, pathogenetic, diagnostic, and treatment issues, including pediatric and adult cases, with a broad and international view. This is the perfect reference for researchers dedicated to advancing the field of translational coeliac disease research as well as clinicians who are diagnosing and managing coeliac disease throughout all of its various stages.

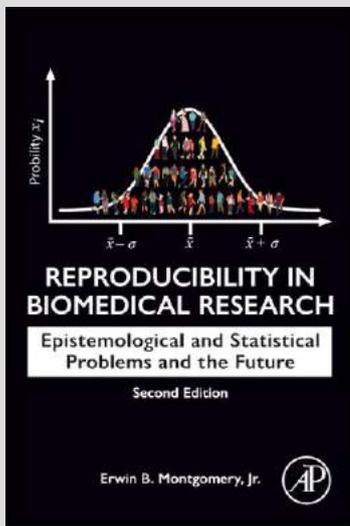


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Reproducibility in Biomedical Research, 2e

Epistemological and Statistical Problems and the Future

Erwin B. Montgomery Jr., Emeritus Professor, Department of Medicine (Neurology), McMaster University, Hamilton, ON, Canada

ISBN: 9780443138294

PREVIOUS ISBN: 9780128174432

PUB DATE: Mar 01, 2024

LIST PRICE: £95.95 / \$125.00 / €109.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 391

AUDIENCE: Graduate students and researchers in biomedical areas, Clinicians, policymakers, grant administrators

BIC CODES: PSB, PHVN, MMG

THEMA CLASSIFICATION:

THEMAPSB; THEMAPHVN;

THEMAMKG

A reference for biomedical researchers who want to understand issues of reproducibility and reduce risk in their experiments

KEY FEATURES

- Includes four new chapters and updates across the book, covering recent developments of issues affecting reproducibility in biomedical research
- Covers reproducibility of results from machine learning AI algorithms
- Presents new case studies to illustrate challenges in related fields
- Includes a companion website with interactive exercises and summary tables

DESCRIPTION

Reproducibility in Biomedical Research: Epistemological and Statistical Problems, Second Edition explores the ideas and conundrums inherent in scientific research. This second edition addresses new challenges to reproducibility in biosciences, namely reproducibility of machine learning Artificial Intelligence (AI), reproducibility of translation from research to medical care, and the fundamental challenges to reproducibility. All current chapters are expanded to cover advances in the topics previously addressed. This book provides biomedical researchers with a framework to better understand the reproducibility challenges in the area. Newly introduced interactive exercises and updated case studies help students understand the fundamental concepts involved in the area.

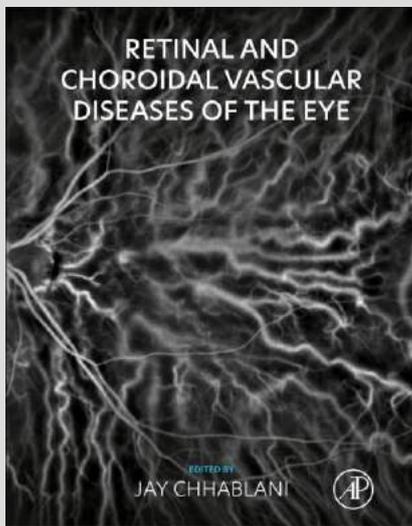


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Retinal and Choroidal Vascular Diseases of the Eye

Edited by : **Jay Chhablani**, MD, Associate Professor of Ophthalmology, University of Pittsburgh School of Medicine, USA.

ISBN: 9780443155833
PUB DATE: Mar 01, 2024
LIST PRICE: £126.00 / \$165.00 / €143.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 372
AUDIENCE: Medical and surgical retina specialists, Ophthalmologists, Students in medicine and ophthalmology
BIC CODES: PSA
THEMA CLASSIFICATION: THEMAPS

Discover the latest advances surrounding retinal and choroidal vascular diseases

KEY FEATURES

- Explores numerous retinal and choroidal disease entities and their pathogenic mechanisms
- Features multimodal images to help illustrate and describe the disease entities
- Discusses innovative treatment options for choroidal vascular diseases
- Considers the latest clinical trials related to retinal and choroidal disorders, and provides key learnings

DESCRIPTION

Retinal and Choroidal Vascular Diseases of the Eye explores a variety of retinal and choroidal vascular diseases, covering their pathogenesis, clinical features, and management strategies. The book begins with an outline of the basic features of retinal and choroidal vasculature before moving on to imaging techniques. Chapters then delve into specific diseases and abnormalities, as well as vascular diseases that are associated with systemic inflammatory diseases. The book then moves onto considering vascular diseases associated with system conditions before considering vascular tumors. Recent innovations and upcoming treatment options are also explored for the various diseases throughout the book.

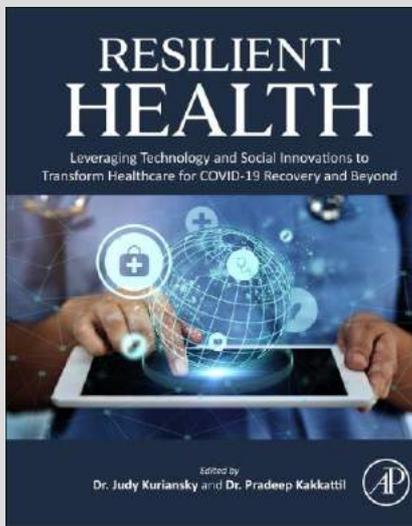
This comprehensive reference provides a deep dive into vascular diseases of the eye, and is a must-have reference for ophthalmologists, medical and surgical retina specialists, and researchers in related fields.



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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: Dec 01, 2023
LIST PRICE: £115.00 / \$150.00 / €131.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 1200
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.

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. Contributions from world experts cover 8 essential parts: The context and challenges for resilient health systems to shape the future; developments and directions (AI, VR, MR, IVAs and more); an innovations toolbox, also targeted for special populations and settings (women, youth, ageing, migrants, disabled persons, indigenous peoples, in the workplace); the role of stakeholders (governments, the United Nations bodies, and the public and private sector); forums and networks; innovative financing; resources, lessons learned and the way forward.



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The Covid-19 Response in New York City

Crisis Management in the Epicenter
of the Epicenter

Edited by
Laura Iavicoli, Syra Madad, Eric Wei



The Covid-19 Response in New York City

Crisis Management in the Largest Public Health System

Edited by : **Syra S. Madad**, DHSc, MSc, MCP, Senior Director, System-wide Special Pathogens Program, NYC Health + Hospitals, NY, USA; **Laura G. Iavicoli**, Associate Professor, Emergency Medicine, Mount Sinai School of Medicine, New York, NY, USA and **Eric K. Wei**, MD, Senior Vice President and Chief Quality Officer for NYC Health + Hospitals and Interim Chief Executive Officer for NYC Health + Hospitals / Elmhurst, New York, NY, USA

ISBN: 9780443187551
PUB DATE: Mar 01, 2024
LIST PRICE: £121.00 / \$150.00 /
€142.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 230

AUDIENCE: Healthcare Providers,
Emergency Managers, Healthcare
Leadership, Public Health
Practitioners, Anyone interested in the
COVID-19 Pandemic Response

BIC CODES: PSA

THEMA CLASSIFICATION:
THEMAPS

A review of the Covid-19 response at its epicenter in New York City's largest public health system

KEY FEATURES

- Provides historical context of the COVID-19 response by NYC Health + Hospitals
- Covers how to respond to a mass influx of patients and sustained crisis over a year+
- Presents information on standing up genomic sequencing

DESCRIPTION

The COVID-19 Response in New York City: Crisis Management in the Largest Public Health System provides an historical accounting of the response to the COVID-19 pandemic through the eyes of the largest public health system in the United States. The book offers a roadmap to guide healthcare systems and their providers in the event of future pandemics. Readers will learn about surge staffing and level loading, as well as tips from the ED and ICUs on how to respond to an unprecedented influx of inpatients.

Written by healthcare providers who were at the epicenter of the pandemic in New York City, this book provides a sound accounting of the response to the pandemic in one of the world's largest cities.

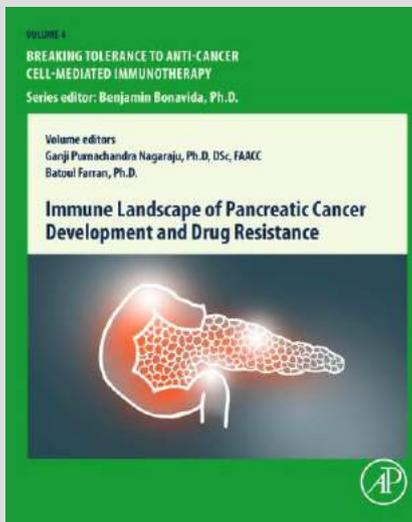


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Immune Landscape of Pancreatic Cancer Development and Drug Resistance

Edited by : **Batoul Farran**, Associate scientist, Department of Oncology, Albert Einstein College of Medicine, Bronx, USA and **Ganji Purnachandra Nagaraju**, Assistant Professor, School of Medicine, Division of Hematology and Oncology, University of Alabama, Birmingham, AL, United States.

ISBN: 9780443235238
PUB DATE: Mar 01, 2024
LIST PRICE: £142.00 / \$175.00 / €170.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 310
AUDIENCE: Graduate students and researchers in cancer research
Oncologists, clinicians
BIC CODES: PSA
THEMA CLASSIFICATION:
THEMAPS

Provides an overview of potential combination strategies and the latest clinical trials in pancreatic cancer

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

KEY FEATURES

- Summarizes the potential combination strategies and latest clinical trials in pancreatic cancer
- Provides an in-depth overview of our current understanding of pancreatic cancer development, including its mutational and immune features
- Explores some of the new immune-based therapies aimed at targeting PC
- Shows pancreatic cancer progression and basic elements in tumor microenvironments and their role in PC progression, also covering immunotherapy strategies

DESCRIPTION

Immune Landscape of Pancreatic Cancer Development and Drug Resistance explores advances in immune-based therapies aimed at harnessing the power of the immune system against pancreatic cancer and rewiring tumor microenvironments to eradicate pancreatic cells. With a strong focus on the development of therapeutic methods to improve the survival rates of pancreatic cancer, this book also shows the latest trends in immune targeted approaches for pancreatic cancer treatment. In 12 chapters, the book discusses our current understanding of PC development and its various mutational and immune features and explore some of the new immune-based therapies aimed at targeting pancreatic cancer.

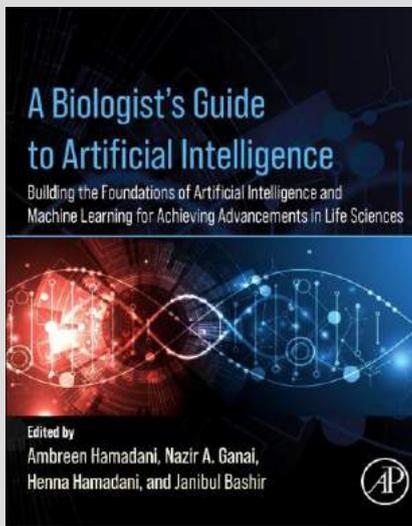
This book is a valuable resource for health professionals, scientists and researchers, students, and all those who wish to broaden their knowledge of advances in immunotherapy in pancreatic cancer.



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A Biologist's Guide to Artificial Intelligence

Building the foundations of Artificial Intelligence and Machine Learning for Achieving Advancements in Life Sciences

Edited by : **Ambreen Hamadani**, BVSc & AH, MVSc, PhD, Post Doctoral Fellow, National Institute of Technology, Srinagar, India; **Nazir A Ganai**, BVSc, MVSc, PhD, PDF, Vice Chancellor, Sher-e-Kashmir University of Agricultural Sciences and Technology, Kashmir, India; **Hamadani Henna**, B.V.Sc. & A.H., M.V.Sc., PhD, Assistant Professor, Faculty of Veterinary Sciences and Animal Husbandry, Sher-e-Kashmir University of Agricultural Sciences and Technology of Kashmir. and **J Bashir**, Assistant Professor, National Institute of Technology, Srinagar, India

ISBN: 9780443240010
PUB DATE: Mar 01, 2024
LIST PRICE: £141.99 / \$175.00 / €166.99

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 205

AUDIENCE: Scholars, Researchers and Scientists working in the diverse areas of life Sciences, biological sciences and computer science, Undergrad and grad students pursuing their degrees in all areas of Life Sciences, industry sector and for trained professional working in this interdisciplinary sector

BIC CODES: MBF

THEMA CLASSIFICATION: THEMAPSAX

Provides an overview of the basics of AI for life science biologists

KEY FEATURES

- Helps biologists to succeed in understanding the concepts of Artificial Intelligence and machine learning.
- Equips with new data mining strategies an easy interface into the world of Artificial Intelligence.
- Enable the researchers to enhance their own sphere of researching Artificial Intelligence.

DESCRIPTION

A Biologist's Guide to Artificial Intelligence: Building the Foundations of Artificial Intelligence and Machine Learning for Achieving Advancements in Life Sciences provides an overview of the basics of Artificial Intelligence for life science biologists. In 14 chapters/sections, readers will find an introduction to Artificial Intelligence from a biologist's perspective, including coverage of AI in precision medicine, disease detection, and drug development. The book also gives insights into the AI techniques used in biology and the applications of AI in food, and in environmental, evolutionary, agricultural, and bioinformatic sciences. Final chapters cover ethical issues surrounding AI and the impact of AI on the future.

This book covers an interdisciplinary area and is therefore is an important subject matter resource and reference for researchers in biology and students pursuing their degrees in all areas of Life Sciences. It is also a useful title for the industry sector and computer scientists who would gain a better understanding of the needs and requirements of biological sciences and thus better tune the algorithms.



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COVER IMAGE
FORTHCOMING

Advances in Natural Gas: Formation, Processing, and Applications.

Volume 5: Natural Gas Impurities and Condensate Removal

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

ISBN: 9780443192234
PUB DATE: Jan 01, 2024
LIST PRICE: £185.00 / \$235.00 / €205.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 586

AUDIENCE: Researchers in academia, students and professors in chemical engineering, oil and gas engineering, and mechanical engineering Extractive companies, process design companies, oil, gas and petrochemical industries, R&D departments in refinery and petrochemistry, energy production and utilities, power generation plants

BIC CODES: THFP, TH, TDCB

THEMA CLASSIFICATION: THEMAKNB; THEMATHFP; THEMATDC

Describes various membrane technologies for particulates and condensates removal from natural gas

KEY FEATURES

- Introduces different impurities and condensates of natural gas, also discussing their characteristics
- Includes common methods for particulates and condensates removal from natural gas such as adsorption, absorption, and cryogenic techniques
- Describes various membrane technologies for particulates and condensates removal from natural gas

DESCRIPTION

Advances in Natural Gas: Formation, Processing, and Applications: Volume Five, Natural Gas Impurities and Condensate Removal is a volume in a comprehensive eight-volume set of books that discuss the theoretical basics and practical methods of various aspects of natural gas, from exploration and extraction, to synthesizing, processing, purifying, and producing valuable chemicals and energy. This volume comprehensively discusses the characteristics and properties of natural gas condensates and dehydrated non-acidic impurities. It describes related environmental challenges, removal standards, policies, regulations, and economic assessments.

Sections cover particulates (such as aerosols, arsenic, etc.) and condensates removal techniques from natural gas as well as mercury, nitrogen and helium removal from natural gas by absorption, adsorption and membrane-based processes.



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CHEMISTRY Chemical Engineering
<https://virtuale.elsevier.com>, www.elsevier.com

COVER IMAGE
FORTHCOMING

Advances in Natural Gas: Formation, Processing, and Applications.

Volume 6: Natural Gas Transportation and Storage

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

ISBN: 9780443192258
PUB DATE: Jan 01, 2024
LIST PRICE: £185.00 / \$235.00 / €205.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 530
AUDIENCE: Describes different apparatus for natural gas transportation and storage
BIC CODES: TDCB, TH, THFP
THEMA CLASSIFICATION: THEMATDC; THEMAKNB; THEMATHFP

Volume 6 of eight volume set describing different apparatus for natural gas transportation and storage

KEY FEATURES

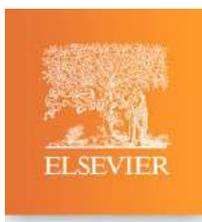
- Introduces various natural gas transportation technologies (LNG, CNG, ANG, ...)
- Describes different apparatus for natural gas transportation and storage
- Includes various challenges of natural gas transportation such as fouling deposition and pipeline problems

DESCRIPTION

Advances in Natural Gas: Formation, Processing, and Applications: Volume Six, Natural Gas Transportation and Storage is a volume in a comprehensive eight-volume set of books that discuss the theoretical basics and practical methods of various aspects of natural gas, from exploration and extraction, to synthesizing, processing, purifying, and producing valuable chemicals and energy. This volume in the set introduces transportation and storage challenges, hydrates formation, extraction, and prevention. It covers different natural gas transportation technologies (such as LNG, CNG, ANG, GTS, etc.), introduces related apparatus for natural gas transportation and storage, and explains challenges of natural gas transmission.



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CHEMISTRY Chemical Engineering
<https://virtuale.elsevier.com>, www.elsevier.com

COVER IMAGE
FORTHCOMING

Advances in Natural Gas: Formation, Processing, and Applications.

Volume 8: Natural Gas Process Modelling and Simulation

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

ISBN: 9780443192296

PUB DATE: Jan 01, 2024

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

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 753

AUDIENCE: Researchers in academia, students and professors in chemical engineering, oil and gas engineering, and mechanical engineering Extractive companies, process design companies, oil, gas and petrochemical industries, R&D departments in refinery and petrochemistry, energy production and utilities, power generation plants

BIC CODES: KCN, RN

THEMA CLASSIFICATION:

THEMAKCVG; THEMATQ

Describes modeling and simulation procedures of producing chemicals and energy from natural gas

KEY FEATURES

- Introduces modeling and simulation methods for natural gas sweetening and purification
- Describes modeling and simulation procedures of producing chemicals and energy from natural gas
- Discusses theoretical basics and models of natural gas hydrates

DESCRIPTION

Advances in Natural Gas: Formation, Processing, and Applications: Volume Eight, Natural Gas Process Modelling and Simulation is a volume in a comprehensive eight-volume set of books that discuss the theoretical basics and practical methods of various aspects of natural gas, from exploration and extraction, to synthesizing, processing, purifying, and producing valuable chemicals and energy. This volume introduces transportation and storage challenges as well as hydrates formation, extraction, and prevention. Sections cover modeling of natural gas sweetening, dehydration and other impurities removal processes, apparatus, and simulation of processes and apparatus dealing with producing chemicals and energy from natural gas.

In addition, the book introduces modeling and simulation of natural gas hydrate related processes, covering modeling basics, numerical approaches, and optimization techniques.



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CHEMISTRY Chemical Engineering
<https://virtuale.elsevier.com>, www.elsevier.com

COVER IMAGE
FORTHCOMING

Electrochemical Power Sources: Fundamentals, Systems, and Applications

Simulation Models of Secondary Batteries: From Quantum Physics to Techno-economic Scale

Edited by : **Julia Kowal**, Head of chair Electrical Energy Storage Technologies, Berlin, Germany and **Dirk Uwe Sauer**, Head of chair Electrochemical Energy Conversion and Storage Systems, Aachen, Germany

ISBN: 9780128199879
PUB DATE: Mar 01, 2024
LIST PRICE: £165.00 / \$210.00 /
€185.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 300

AUDIENCE: Engineers working on the electrical and thermal design of battery systems including battery management systems electrical and mechanical engineers, material scientists, chemists, engineers, Researchers working on the improvement of cells, lifetime prediction etc.

BIC CODES: TDCB

THEMA CLASSIFICATION:
THEMATDC

Describes approaches for battery simulation models for R&D, design, and battery

KEY FEATURES

- Overviews many different battery modeling approaches
- Outlines how to choose the best model for a given purpose
- Offers a complete range from particle to system model
- Includes electrical, thermal, and aging models
- Discusses limitations of modeling approaches

DESCRIPTION

Electrochemical Power Sources: Fundamentals, Systems, and Applications: Simulation Models of Secondary Batteries: From Quantum Physics to Techno-economic Scale gives an overview of the different modeling approaches for battery simulation models used for different purposes, such as battery pack design or state of charge estimation. Solutions for different applications are presented, and a classification into electrical, thermal, aging models is given, along with degree of precision ranging from physico-chemical, over impedance based to energy flow or empirical models with their specific advantages and disadvantages.

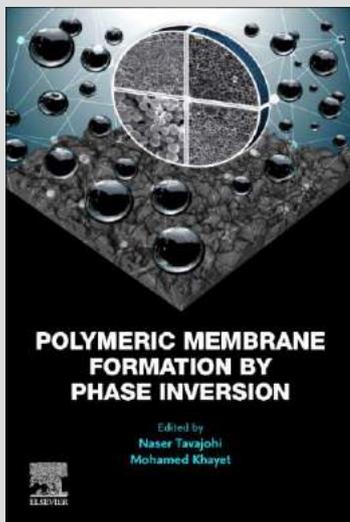
In applications such as a vehicle energy management, it is important to know the state of the battery, e.g., what is the remaining driving range or when should the battery be replaced.



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CHEMISTRY Chemical Engineering
<https://virtuale.elsevier.com>, www.elsevier.com



Polymeric Membrane Formation by Phase Inversion

Edited by : **Naser Tavajohi**, Department of Chemistry, Umea University, Umea, Sweden and **Mohamed Khayet**, Complutense University of Madrid, Spain

ISBN: 9780323956284
PUB DATE: Mar 01, 2024
LIST PRICE: £175.00 / \$225.00 / €200.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 300

AUDIENCE: Academic and industrial researchers, membrane and membrane process engineers, chemical and environmental engineers involved in energy production, gas separation, organic/organic and organic/water separation, and overall water production and water treatment including desalination, domestic and industrial wastewater, contaminated groundwater remediation and oil-well produced water.

BIC CODES: TCB

THEMA CLASSIFICATION:
THEMATCB

Comprehensively covers the formation of synthetic polymeric membranes by different methods from both kinetic and thermodynamic perspectives

KEY FEATURES

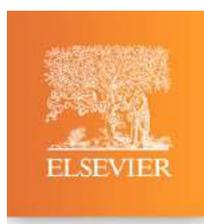
- Analyzes membrane formation by phase inversion and modeling
- Includes state-of-the-art membrane formation methods and related characterization techniques
- Discusses solvent toxicity and sustainability issues of membrane production

DESCRIPTION

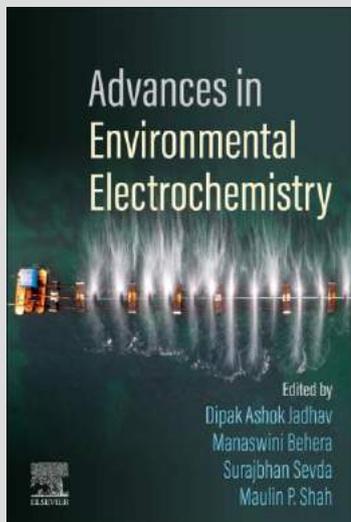
Polymeric Membrane Formation by Phase Inversion analyzes the four main phase inversion techniques. Effective parameters in each technique are covered, along with the methodologies needed to prepare advanced membranes for specific separations in both liquid and gas phases. Roll-to-roll casting, spinning hollow fiber, and electrospinning nanofibers are presented, along with an analysis of the impact of solvent toxicity, membrane production, and the source of raw materials on the environment. The book describes a roadmap for designing different morphological characteristics for preparing specific membranes for special applications, along with the merits and disadvantages of each method. This book provides an easy, comprehensive reference for academic and industry professionals working in membrane engineering.



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CHEMISTRY Chemical Engineering
<https://virtuale.elsevier.com>, www.elsevier.com



Advances in Environmental Electrochemistry

Edited by : **Dipak Ashok Jadhav**; **Manaswini Behera**, Assistant Professor, School of Infrastructure (Civil Engineering), Indian Institute of Technology, Bhubaneswar, India; **Surajbhan Sevda**, Assistant Professor, Department of Biotechnology, National Institute of Technology, Warangal, India and **Maulin P Shah**

ISBN: 9780443188206
PUB DATE: Mar 01, 2024
LIST PRICE: £175.00 / \$225.00 / €200.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 380
AUDIENCE: Chemical Engineers, Environmental Engineers and Biotechnologists
BIC CODES: TDCP, TDCQ
THEMA CLASSIFICATION: THEMATDPF; THEMATGM; THEMATGMP

Covers the fundamentals of environmental electrochemistry and its applications

KEY FEATURES

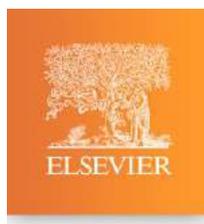
- Covers advances in bio-electrochemical systems for wastewater treatment and resource recovery
- Explains the role of electrochemistry and electrochemical techniques in environmental bioremediation
- Includes lifecycle analysis and a technoeconomic assessment of electrochemical-based reactors for environmental monitoring

DESCRIPTION

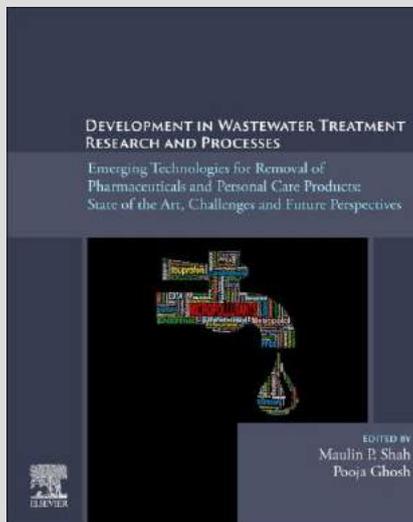
Advances in Environmental Electrochemistry provides the basics of environmental electrochemistry, including redox reactions for contaminant removal, bio-electrochemical systems, electrochemical reactor design and the various electrochemistry-based techniques for practical wastewater degradation, environmental remediation and bioenergy recovery from waste. Technologies acting as key indicators for addressing the various aspects of environmental electrochemistry are covered, along with comparisons to conventional methods and potential ways forward. This book will be of interest to chemical engineers, environmental engineers, and all those interested in environmental biotechnology, bio-electrochemical systems, electrochemical sensors, advanced oxidation processes, biological wastewater treatment, and waste to energy recovery.



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CHEMISTRY Chemical Engineering
<https://virtuale.elsevier.com>, www.elsevier.com



Development in Wastewater Treatment Research and Processes

Emerging Technologies for Removal of Pharmaceuticals and Personal Care Products: State of the Art, Challenges and Future Perspectives

Edited by : **Maulin P Shah** and **Pooja Ghosh**, DST-Inspire Faculty, Indian Institute of Technology Delhi, India

ISBN: 9780443192074
PUB DATE: Mar 01, 2024
LIST PRICE: £180.00 / \$230.00 / €200.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 350

AUDIENCE: (Under)graduate students and researchers in academia in chemical and environmental sciences, bioscience, and microbiology, Researchers in wastewater treatment industries, solid waste treatment industries, pharmaceuticals, agro-based industries, biotechnological industries

BIC CODES: MMG, KNXC, TDCB, TQSW1, TC, PSG

THEMA CLASSIFICATION:

THEMAMKG; THEMATDC;
THEMAKNX; THEMAPSG;
THEMATQSW

Introduces emerging trends in remediation technologies for removal of pharmaceuticals and personal care products from water and wastewater

KEY FEATURES

- Offers a comprehensive discussion of PPCP management and remediation, highlighting future perspectives
- Provides access to the latest and novel information on PPCPs
- Delivers easy access to state-of-the-art literature at one place

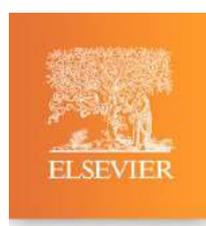
DESCRIPTION

Development in Wastewater Treatment Research and Processes: Emerging Technologies for Removal of Pharmaceuticals and Personal Care Products: State of the Art, Challenges and Future Perspectives provides a holistic overview on the recent advances and challenges associated with pharmaceuticals and personal care products (PPCP) removal from water and wastewater. The book covers advanced remediation technologies such as microbial fuel cells (MFCs), microalgae, and hybrid technologies, and focuses on the environmental sustainability of each technology, using lifecycle assessment.

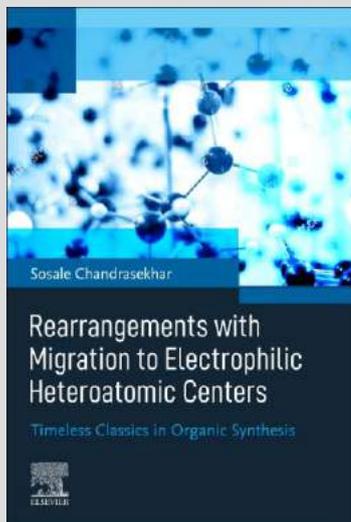
This book will help students and researchers in carrying out research on further advancements in the field, also helping them apply this to the real-world conditions.



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CHEMISTRY Chemical Engineering
<https://virtuale.elsevier.com>, www.elsevier.com



Rearrangements with Migration to Electrophilic Heteroatomic Centers

Timeless Classics in Organic Synthesis

Sosale Chandrasekhar, Professor, Department of Organic Chemistry, Indian Institute of Science, Bangalore, Karnataka, India

ISBN: 9780128237434
PUB DATE: Aug 01, 2024
LIST PRICE: £175.00 / \$225.00 / €200.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 280

AUDIENCE: Senior undergraduate students and researchers, including both academic and industrial researchers engaged in organic synthesis. Pharmaceutical chemists, particularly those engaged in process development

BIC CODES: PNN

THEMA CLASSIFICATION:
THEMAPNN

Covers the basic principles and synthetic applications of a critically important class of organic reactions

KEY FEATURES

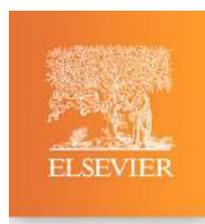
- Summarizes mechanistic background with an emphasis on synthetic applications
- Includes up-to-date references that allow for locating original papers for experimental procedures
- Provides applications in the synthesis of complex molecules and natural products to judge the scope and limitations of each reaction

DESCRIPTION

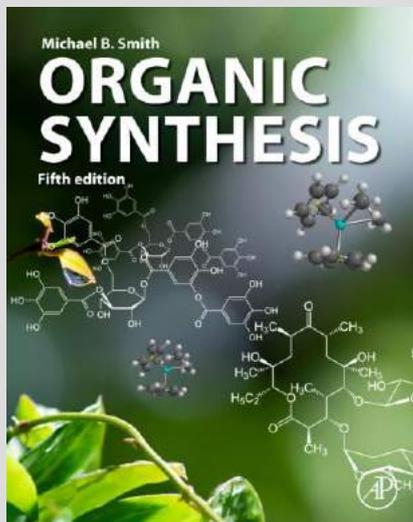
Rearrangements with Migration to Electrophilic Heteroatomic Centers: Timeless Classics in Organic Synthesis covers the basic principles and synthetic applications of a critically important class of organic reactions that date back to the founding period of organic chemistry. These reactions are not only of historical and pedagogical interest, but also have great practical value to this day, being inevitable in any strategy concerning the introduction of nitrogen and oxygen functionality. The book is made up of three parts, dealing with the Beckmann reaction, the Hoffmann family of reactions and the Baeyer-Villiger reaction. The book strikes a balance between delineation and exhaustiveness, with up-to-date references for readers requiring in-depth coverage. Relevant industrial applications, including pharmaceutical processes, are included.



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CHEMISTRY Organic Chemistry
<https://virtuale.elsevier.com>, www.elsevier.com



Organic Synthesis, 5e

Michael Smith, Department of Chemistry, University of Connecticut, USA

ISBN: 9780443158674
PREVIOUS ISBN: 9780128007204
PUB DATE: Mar 01, 2024
LIST PRICE: £123.00 / \$160.00 / €139.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 1023
AUDIENCE: Graduate students in Organic Chemistry, undergraduate Chemistry majors in advanced undergraduate courses, Organic Chemists working in the pharmaceutical industry
BIC CODES: PNN
THEMA CLASSIFICATION: THEMAPPN

A synthesis-based approach to learning and teaching organic reactions

KEY FEATURES

- Provides new content, reaction examples, and study problems from recent research
- Features improved organization, new art, and new chapter content on process chemistry and green organic chemistry
- Includes revised homework for each chapter, with new examples and questions

DESCRIPTION

Organic Synthesis, Fifth Edition provides a reaction-based approach to this important branch of organic chemistry. Updated and accessible, this eagerly-awaited revision offers a comprehensive foundation for graduate students coming from disparate backgrounds and knowledge levels, to provide them with critical working knowledge of basic reactions, stereochemistry and conformational principles. This reliable resource uniquely incorporates molecular modeling content, problems, and visualizations, and includes reaction examples and homework problems drawn from the latest in the current literature.

There have been advancements in organic reactions, particularly organometallic reactions, and there is a need to show how these advancements have influenced current organic synthesis. The goal is to revise and update the examples of reaction examples taken from the synthesis literature from about 2017-2023. The reactions illustrate those that are used most often in modern organic synthesis, but recent examples will show their current relevance. Where new approaches and new reactions have been developed for organic synthesis, examples will be added as new material.

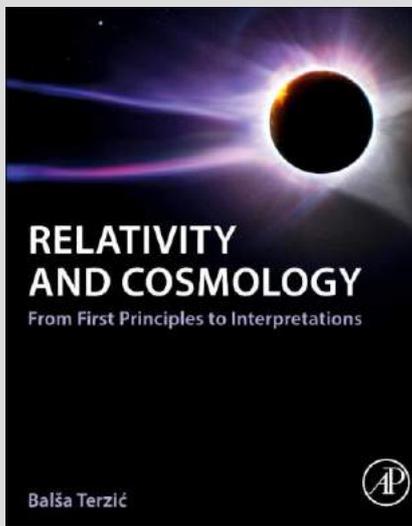


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PHYSICS

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Relativity and Cosmology

From First Principles to Interpretations

Baša Terzić, Associate Professor and Graduate Program Director, Old Dominion University, Norfolk, VA, USA

ISBN: 9780443235429
PUB DATE: Aug 12, 2024
LIST PRICE: £80.95 / \$99.95 / €94.95
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 251
AUDIENCE: Senior undergraduate students majoring in physics, Professionals / researchers / academics applying relativity and cosmology principles in research and applied settings, who require an introduction or refresher to the subject, or study an adjacent field, like mathematics or engineering
BIC CODES: PGK
THEMA CLASSIFICATION: THEMAPGK

Valuable and accessible introductory text on the application of physics principles in cosmology and relativity, from foundational classical mechanics to exploring black holes

KEY FEATURES

- Introduces practical, mathematical approaches for applying fundamental concepts in relativity and cosmology
- Places emphasis on illustrative pedagogical approach with applied examples
- Strikes a balance between the breadth and the depth of the material presented, frequently tying the new material – including relativistic mechanics and gravity – to the classical mechanics and gravity with which readers may be more familiar
- Includes numerous figures, examples, illustrative problems and appendices, which provide convenient access to the important physics concepts used in the text
- Offers online support, including a full solutions manual for qualified instructors and additional programming resources (PowerPoints and Python files)

DESCRIPTION

Baša Terzić's *Relativity and Cosmology: From First Principles to Interpretations* provides a high-quality and highly relevant astrophysics grounding for senior undergraduate students.

This comprehensive textbook emphasizes an illustrative, pedagogical approach. The book aims to strike a balance between the breadth and the depth of the material presented, frequently tying new material – relativistic mechanics and gravity – to the classical mechanics and gravity with which readers may be more familiar.

Baša Terzić's *Relativity and Cosmology: From First Principles to Interpretations* includes robust content and corresponding exercises, figures, and appendices on many exciting developments in the field, including relativistic mechanics; Newtonian classical mechanics; relativistic spacetime; special relativity; general relativity; tensor calculus; cosmology; Einstein's field equations; dark matter; dark energy; and black holes. This accessible first edition delivers helpful and engaging additions to the role and importance of physics in cosmology and relativity. It is ideal for courses in physics, astrophysics, astronomy, and related subjects.

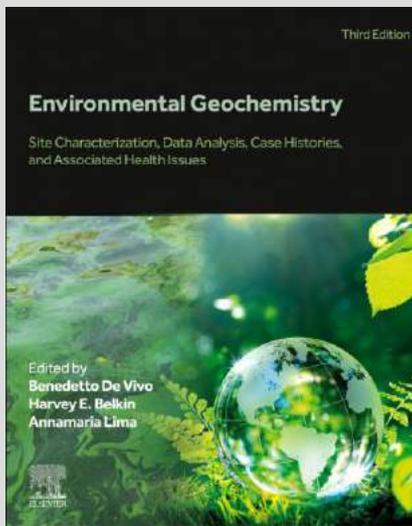


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PHYSICS

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



Environmental Geochemistry, 3e

Site Characterization, Data Analysis, Case Histories, and Associated Health Issues

Edited by : **Benedetto De Vivo**, Univ Telematica Pegaso, Napoli, Italy; and Adjunct Prof. at: Virginia Tech, Blacksburg, VA, USA; Nanjing University, Nanjing, P.R. China; Hubei Polytechnic University, Huangshi, P.R. China; **Harvey Belkin**, U. S. Geological Survey, Reston, Virginia, USA and **Annamaria Lima**, Universita di Napoli Federico II, Naples, Italy

ISBN: 9780443138010
PREVIOUS ISBN: 9780444637635
PUB DATE: Mar 01, 2024
LIST PRICE: £125.00 / \$165.00 / €142.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 0
AUDIENCE: Practitioners, researchers, and post-graduate students in environmental sciences, geology, and engineering, Private companies working on site characterization and remediation projects, at both regional and local levels. Some university faculty may use it in environmental geochemistry for Master or PhD programs
BIC CODES: RBGK
THEMA CLASSIFICATION: THEMARBG

An invaluable update on the latest geochemical methods, techniques, and procedures and their application to study the distribution of potentially toxic substances and their potential impact on human health

KEY FEATURES

- In-depth examinations of the latest geochemical techniques and procedures
- Detailed analysis of various applied studies in pollution and contamination
- New case histories highlighting environmental pollution and related health issues

DESCRIPTION

Environmental Geochemistry: Site Characterization, Data Analysis, Case Histories, and Associated Health Issues provides a wealth of information on modern geochemical methods, techniques, and procedures for those studying toxic substances found in soil, air, and water. This new edition takes an especially close look at environmental pollution and its impact on human health.

The first third of the book looks at a variety of methods and procedures, such as taking groundwater samples, biological monitoring, geochemical mapping, and models of geochemical speciation. This is followed by a close look at different pollutants, including lead and pesticides. The authors conclude with several detailed case histories examining health issues resulting from environmental pollution.

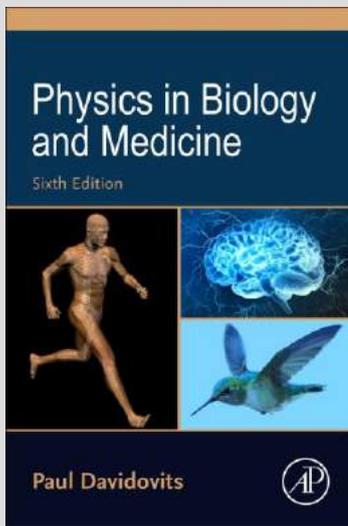
Environmental researchers and practitioners will return to this book again and again in their work towards understanding and reducing the environmental pollutants that affect our health.



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EARTH & ENVIRONMENT Geochemistry
<https://virtuale.elsevier.com>, www.elsevier.com



Physics in Biology and Medicine, 6e

Paul Davidovits, University Professor of Chemistry, Boston College, Massachusetts, USA

ISBN: 9780443215582
PREVIOUS ISBN: 9780443154638
PUB DATE: Jan 01, 2024
LIST PRICE: £76.95 / \$99.95 / €86.95
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 372
AUDIENCE: Students in undergraduate and graduate courses in Biophysics. Professionals / researchers / academics applying Biophysics principles in research and applied settings, who require an introduction or refresher to the subject
BIC CODES: PHVN
THEMA CLASSIFICATION: THEMAPHVN

Introductory text on the application of physics principles in the life sciences, specifically medicine, physiology, biology, nursing, and physical therapy

KEY FEATURES

- Provides practical information and techniques for building fundamental knowledge and applying physics and biology to the study of living systems
- Includes numerous figures, examples, illustrative problems, and appendices which provide convenient access to the important concepts of mechanics, electricity, and optics used in the text
- Features new and revised coverage on metamaterials, metabolism, and environmental science
- Offers online support, including a full solutions manual for qualified instructors and additional programming resources (PowerPoints) for students

DESCRIPTION

Physics in Biology and Medicine, Sixth Edition includes new, revised material and corresponding exercises on many exciting developments in the field. New sections cover biomechanics, biotribology, frictional properties of biological materials, 3-D printing and its use in medicine, new materials in dentistry, microfluidics, bioelectronic medicine, microsensors, and microscopy. This revised edition delivers helpful and engaging additions to the role and importance of physics in biology and medicine, including new coverage on metamaterials, metabolism, and environmental science. It is ideal for courses in biophysics, medical physics, and related subjects.

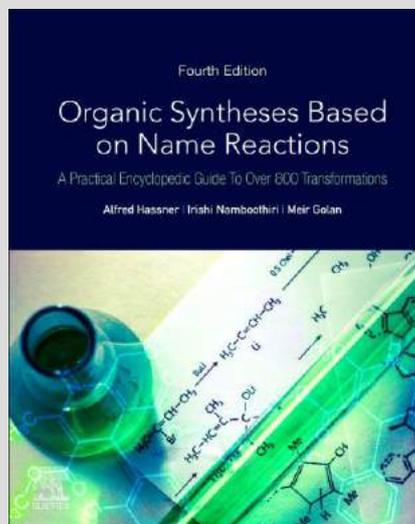


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PHYSICS

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



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

ISBN: 9780081029619

PREVIOUS ISBN: 9780080966304

PUB DATE: Mar 01, 2024

LIST PRICE: £200.00 / \$125.00 /

€109.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 730

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:

THEMAPNN

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

KEY FEATURES

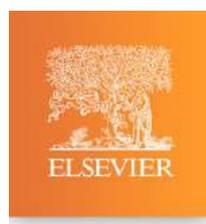
- Covers new examples of known reactions, particularly their asymmetric versions, new reactions involving metal-mediated catalysis and organocatalysis, and multi-component and cascade/domino versions of known reactions
- Provides a handy reference guide that explains 750 established named processes and 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.

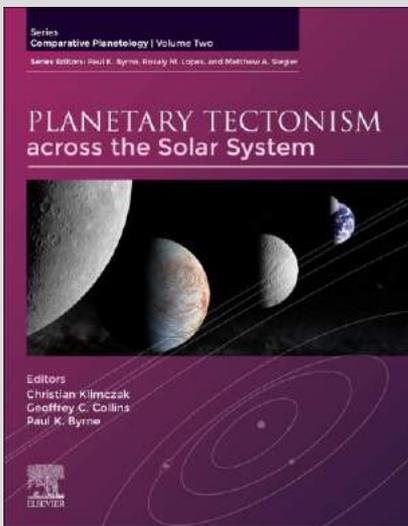


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CHEMISTRY Organic Chemistry

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



Planetary Tectonism across the Solar System, Vol 2

Edited by : **Christian Klimczak**, Assistant Professor, Department of Geology, University of Georgia - Athens, GA, USA; **Geoffrey C. Collins**, Professor of Geology, Department of Physics and Astronomy, Wheaton College, Norton, MA, USA and **Paul K. Byrne**, Assistant Professor, Department of Marine, Earth, and Atmospheric Sciences, North Carolina State University - Raleigh, NC, USA

ISBN: 9780128160923
PUB DATE: Nov 01, 2023
LIST PRICE: £118.00 / \$150.00 / €132.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 380
AUDIENCE: Planetary Scientists, Geologists, Geophysicists, seismologists, structural geologists, remote sensing specialists, third-level (i.e., college/university) educators delivering terrestrial and/or planetary tectonism materials to undergraduate students at first- and second-year levels
BIC CODES: PHVG, TTD, RBG
THEMA CLASSIFICATION: THEMAPHVG; THEMATTD; THEMARBG

Presents a systematic, cohesive approach to comparing and contrasting tectonism across the vast array of planetary bodies in the Solar System, including Earth

A Volume in the *Comparative Planetology Series*

KEY FEATURES

- Includes an introduction that places the book in the context of the larger Comparative Planetology series
- Compares tectonic processes on all relevant Solar System bodies, providing a systems-level understanding of this widespread phenomenon that shapes and drives the evolution of planets, moons and smaller bodies
- Features over 100 color illustrations and charts to better convey concepts
- Offers additional online content, including figures, animations, videos and interviews with contributing authors

DESCRIPTION

Planetary Tectonism across the Solar System, Volume Two in the Comparative Planetology series, addresses key questions surrounding planetary tectonism, such as our understanding of the global contraction of Mercury, the formation of giant rift zones on Saturn's icy moons, or the tessellated terrain on Venus. The book makes connections to Earth, such as how deformation on Mercury is both similar and different, and how to apply theoretical considerations behind plate tectonics on Earth to other planets. The book offers up-to-date, accessible and comprehensive discussions on the major tectonic processes and landforms that shape and drive the evolution of planets, moons and smaller bodies.

By placing a singular emphasis on comparing tectonic processes and landforms on all relevant Solar System bodies, with the explicit objective of providing a systems-level understanding of this widespread phenomenon, this book is ideal for anyone studying planetary tectonism.

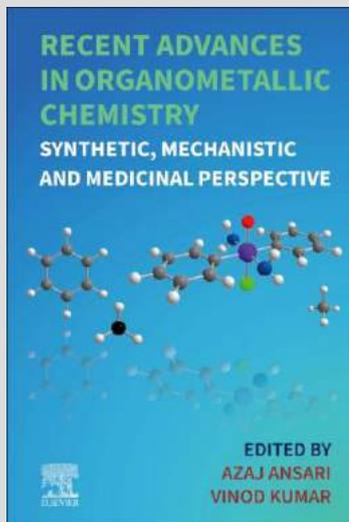


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EARTH & ENVIRONMENT

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



Recent Advances in Organometallic Chemistry

Synthetic, Mechanistic and Medicinal Perspective

Edited by : **Azaj Ansari**, Department of Chemistry, Central University of Haryana, Mahendergarh, India and **Vinod Kumar**, M.M.University, Mullana, Ambala, Haryana, India

ISBN: 9780323905961
PUB DATE: Mar 01, 2024
LIST PRICE: £175.00 / \$225.00 / €200.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 400

AUDIENCE: Researchers and advanced level students in the area of organometallic chemistry, Pharmaceutical scientists and those storage and memory devices fields

BIC CODES: PNN

THEMA CLASSIFICATION:
THEMAPNN

Covers the latest developments in the field of organometallic chemistry and corresponding applications

KEY FEATURES

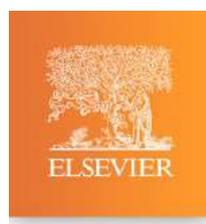
- Covers the basics of bonding, synthesis and properties of organometallic compounds
- Includes the role of computational chemistry and magnetochemistry
- Features recent developments with examples and applications

DESCRIPTION

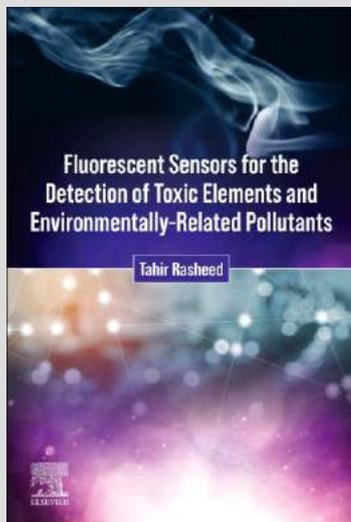
Recent Advances in Organometallic Chemistry: Synthetic, Mechanistic and Medicinal Perspective highlights recent advancements in the field of organometallic chemistry. Containing essential information for researchers and advanced-level students, especially those working in chemical synthesis, the book describes the role of organometallic compounds in different combinations in organic synthesis and pharmaceuticals as well as discussing spectral, magnetic and sensing features of the compounds. Including the role of computational investigations towards the mechanistic study of biomimic complexes in catalytic transformation reactions, the book provides a large number of examples along with their leading applications in other fields. Each chapter covers basic strategies, which are illustrated along with examples of the latest advancements in the field and in-depth explanations.



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CHEMISTRY Organic Chemistry
<https://virtuale.elsevier.com>, www.elsevier.com



Fluorescent Sensors for the Detection of Toxic Elements and Environmentally-Related Pollutants

Tahir Rasheed, Interdisciplinary Research Centre for Advanced Materials, King Fahd University of Petroleum and Minerals, Dhahran, Saudi Arabia

ISBN: 9780443132551
PUB DATE: Mar 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 280

AUDIENCE: Scientists and engineers working in both R&D and academia who want to learn more on chemical sensing, mostly for environmental and wastewater treatment. Science and engineering professionals to learn recent advances on basics and industrial applications of the chemical sensing applications of various environmental pollutants. Students, scientists, college and university professors, research professionals, technology investors and developers, research enterprises, R&D and defense research laboratories, academic and research libraries

BIC CODES: TGM

THEMA CLASSIFICATION:
THEMATGM

Provides a comprehensive and systematic introduction to the chemical sensing of environmental pollutants

KEY FEATURES

- Presents systematic approaches for detecting various chemical toxic analytes and different toxic species
- Offers modern designs for industrial scale sensing applications for various environmental pollutants
- Addresses chronological advancements of small and supra-molecular materials as advanced chemical sensors

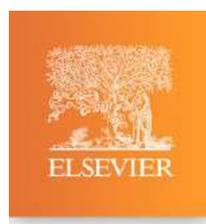
DESCRIPTION

Fluorescent Sensors for the Detection of Toxic Elements and Environmentally-Related Pollutants highlights the recent technological advancements of sensing applications for a variety of toxic elements and pollutants using small and supra-molecular materials as advanced chemical sensors. During the past decade, there has been an increasing amount of research on the detection of these pollutants due to the growing awareness of environmental contamination. This book focuses on increasing scientific and technological awareness in order to tackle pollutants arising from various industrial and biotechnological sectors.

In addition, the book discusses the most advanced industrial scale sensing materials and addresses current challenges during manufacturing and application. It will be a valuable reference source for materializing the synthesis of predesigned small and supramolecular fluorescent sensors of interest by presenting different strategies that can serve as a promising tool for researchers.



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CHEMISTRY Analytical Chemistry
<https://virtuale.elsevier.com>, www.elsevier.com

ORGANIC RADICALS

EDITED BY
CHUANYI WANG
ABDELLKADER LABIDI
ERIC LICHTFOUSE

Organic Radicals

Edited by : **Chuanyi Wang**, School of Environmental Science and Engineering, Shaanxi University of Science and Technology, Weiyang District, Xi'an, Shaanxi, P.R.China;
Abdellkader Labidi, Shaanxi University of Science and Technology, China and **Eric Lichtfouse**

ISBN: 9780443133466
PUB DATE: Mar 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 372

AUDIENCE: Postgraduate students and researchers in the field of Organic Chemistry and Environmental Chemistry

BIC CODES: PNN

THEMA CLASSIFICATION:
THEMAPNN

Describes properties and applications of organic radicals in various fields

KEY FEATURES

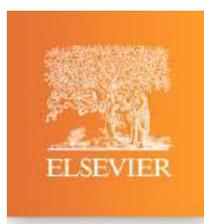
- Covers the main proprieties and current techniques in organic radicals' measurements, advantages, and disadvantages
- Analyzes the lifecycle analysis and the stability of organic radicals, their biodegradability, and biocompatibility
- Provides a comprehensive overview about the chemical synthesis of organic radicals, their physiochemical proprieties, and risks caused by the presence of high amounts of organic radicals

DESCRIPTION

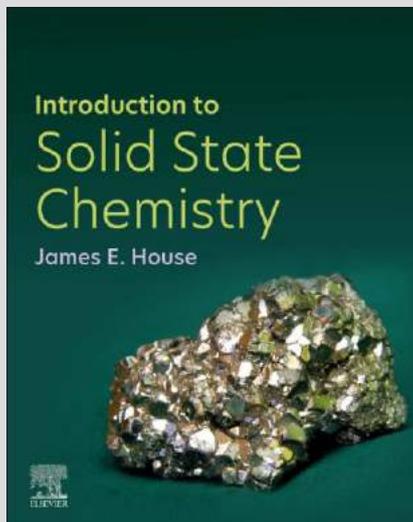
Organic Radicals summarizes the applications of these materials in several fields, in addition to analyzing challenges, limitations and impacts of materials containing organic radicals on human, plants, water, soil, and animals. Sections cover uses of organic radicals as effective precursors for block molecules building and discuss their effectiveness as precursors of organic radical-containing materials synthesis and their applications in medicine, biology, electronics, environmental sciences, plastics synthesis, polymers building and the several impacts after organic radicals uses. In recent years, the rapid development of organic radical-containing materials has afforded an interesting research area in various applications.



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CHEMISTRY Organic Chemistry
<https://virtuale.elsevier.com>, www.elsevier.com



Introduction to Solid State Chemistry

James E. House, Emeritus Professor of Chemistry, Illinois State University and Scholar in Residence, Illinois Wesleyan University, USA.

ISBN: 9780443134265

PUB DATE: Mar 01, 2024

LIST PRICE: £115.00 / \$150.00 /

€130.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 327

AUDIENCE: Upper-level undergraduate students and beginning graduate students who wish to obtain an introduction and overview to solid state chemistry. Students in materials science, some areas of engineering and physics. Students in physical geology classes

BIC CODES: TGM

THEMA CLASSIFICATION:

THEMATGM

Provides a comprehensive and foundational resource that describes the structures of solids, the behavior of solids under applied stresses, the types of reactions that solids undergo, and the phenomenological aspects of reactions in solids

KEY FEATURES

- Provides a fundamental introduction and entry point to solid state chemistry, acting as a useful prerequisite for further learning in the area
- Presents a balanced approach that not only emphasizes structures of solids but also provides information on reactions of solids and how they occur
- Gives much-needed focus to the kinetics of reactions of solids and their mechanisms where existing literature covers little of this
- Explores crucial solid state chemistry topics such as solar energy conversion, reactions of solid coordination compounds, diffusion, sintering, and other transformations of solids
- Features accessible and well-written examples and case studies featuring many new and bespoke supporting illustrations, offering an excellent framework that will help students to understand reaction mechanisms

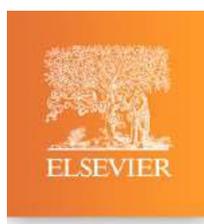
DESCRIPTION

Introduction to Solid State Chemistry provides a strong background to the structures of solids, along with the factors that determine this structure. The content presented stresses the transformations of solids, both in physical forms and chemical composition. In so doing, topics such as phase transitions, sintering, reactions of coordination compounds, and photovoltaic compounds are described, with kinetics and mechanisms of solid state reactions also covered. This book provides the chemistry of solids, structures of solids, the behavior of solids under applied stresses, the types of reactions that solids undergo, and the phenomenological aspects of reactions in solids.

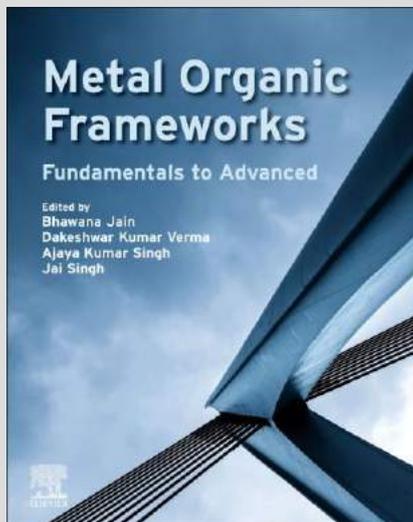
Kinetics of reactions in solids is very seldom covered in current literature and an understanding of the mechanisms of reactions in solids is necessary for many applications. James E. House provides a balanced treatment of structure, dynamics, and behavior of solids at a level commensurate with upper-level undergraduates or beginning graduate students who wish to obtain an introduction and overview to solid state chemistry.



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CHEMISTRY Physical and Theoretical Chemistry
<https://virtuale.elsevier.com>, www.elsevier.com



Metal Organic Frameworks

Fundamentals to Advanced

Edited by : **Jai Singh**, Associate Professor, Guru Ghasidas Vishwavidyalaya's, Department of Pure and Applied Science (Central University), Chhattisgarh, India; **Ajaya Kumar Singh**, Department of Chemistry, (DST-FIST Sponsored), Govt. V. Y. T. PG. Autonomous College, (College with Potential for Excellence), Chhattisgarh, India; **Bhawana Jain**, Siddhachalam Laboratory, Raipur, India and **Dakeshwar Kumar Verma**, Department of Chemistry, Government Digvijay Autonomous Postgraduate College, Rajnandgaon, Chhattisgarh, India

ISBN: 9780443152597

PUB DATE: Mar 01, 2024

LIST PRICE: £155.00 / \$200.00 /

€175.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 500

AUDIENCE: Researchers, advanced students working with MOFs and inorganic chemistry, general chemists, Chemical engineers and material scientists

BIC CODES: PNK

THEMA CLASSIFICATION:

THEMAPNK

Covers the synthetic advantages and versatile applications of metal-organic frameworks

KEY FEATURES

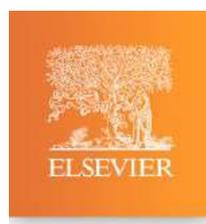
- Covers the synthetic advantages and versatile applications of metal-organic frameworks (MOFs) due to their organic-inorganic hybrid nature and unique porous structure
- Includes energy applications such as batteries, fuel storage, fuel cells, hydrogen evaluation reactions and super capacitors
- Features information on using MOFs as a replacement to conventional engineering materials as they are lightweight, less costly, environmentally-friendly and sustainable

DESCRIPTION

Metal Organic Frameworks: Fundamentals to Advanced offers a substantial and complete treatment of published results. The book includes a summary of current research, along with an in- depth explanation of Metal organic frameworks (MOFs) and applications in this versatile area. Metal organic frameworks (MOFs) are structured frameworks made up of metal ions and organic molecules. These materials are similar to sponges and can absorb, retain and remove molecules from their pores. As a result, metal-organic frameworks (MOFs) are the most rapidly evolving substances in chemistry with the highest surface areas due to their well-ordered pore structure. The exciting and vast surface area allows for more chemical reactions and molecule adsorption, hence this new resource provides the newest updates on the topics covered.

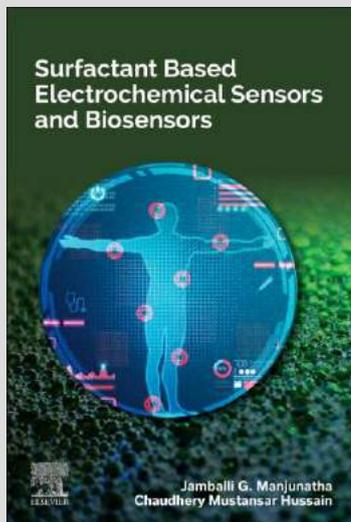


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CHEMISTRY Organic Chemistry

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



Surfactant Based Electrochemical Sensors and Biosensors

Edited by : **Jamballi G. Manjunatha**, Assistant Professor in Chemistry, FMKMC College Madikeri, Mangalore University, India and **Chaudhery Mustansar Hussain**, Adjunct Professor, New Jersey Institute of Technology (NJIT)

ISBN: 9780443154935
PUB DATE: Mar 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 500
AUDIENCE: Researchers and scientists working in the field of electrochemistry, chemistry, and chemical engineering Students, academics, industrialists in medical diagnostics, biotechnology and biomedical engineering
BIC CODES: TJFD, TGM
THEMA CLASSIFICATION: THEMATGM; THEMATJF

Presents emerging research trends and discusses the exploitation of surfactants for electrochemical sensor preparation and its applications for multidisciplinary fields

KEY FEATURES

- Presents emerging research trends and discusses the exploitation of surfactants for electrochemical sensor preparation and its applications for multi-disciplinary fields
- Addresses the development process for a sensitive, robust, and responsive sensor with the use of surfactants
- Presents the utilization of surfactant based sensors in real-time analysis

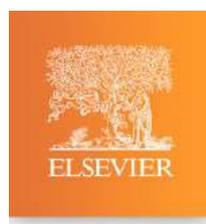
DESCRIPTION

Surfactant Based Electrochemical Sensors and Biosensors discusses the applications of surfactants for electrochemical sensors. Surfactant based electrochemical sensors exhibit elevated sensitivity, selectivity, stability and accuracy as compared to other analytical techniques. This book covers the emerging research trends and exploitation of surfactants for electrochemical sensor preparation for its applications in various fields such as academia, medicine, industry and monitoring of environmental species, expanding on scientific research in the field of electrochemistry on surfactant based electrochemical sensors.

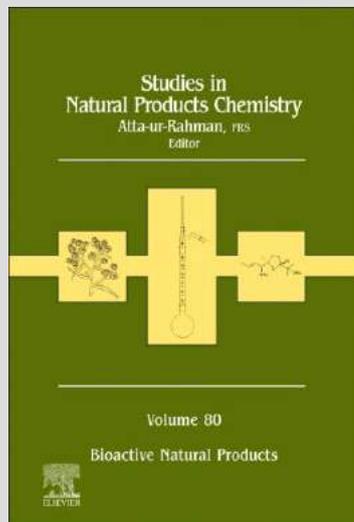
Sections present the characteristics of surfactants and discuss their application for the fabrication of electrochemical sensors and bio sensors, address the analysis of toxic chemicals and their quantitative determination and offers surfactant based sensing platforms for environmental modeling, discuss the significance of the analysis of molecules and ions in biological and pharmaceutical sampling, present new methodologies for the determination of food additives and biological molecules present in food samples, and explore the sustainability, safety and toxicity aspects.



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CHEMISTRY Analytical Chemistry
<https://virtuale.elsevier.com>, www.elsevier.com



Studies in Natural Products Chemistry, Vol 80

Edited by : **Atta-Ur Rahman**, Chairma, United Nations' committee on Science, Technology and Innovation, Pakistan

ISBN: 9780443155895
PUB DATE: Mar 01, 2024
LIST PRICE: £240.00 / \$315.00 / €270.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 465

AUDIENCE: Natural product chemists, medicinal chemists, pharmacologists as well as academic and industry researchers

BIC CODES: PNN

THEMA CLASSIFICATION: THEMAPPNN

An essential resource for researchers and engineers working in natural products and medicinal chemistry

KEY FEATURES

- Focuses on the chemistry of bioactive natural products
- Contains contributions by leading authorities in the field
- Presents sources of new pharmacophores

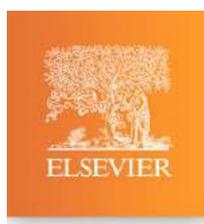
DESCRIPTION

Studies in Natural Products Chemistry covers the synthesis or testing and recording of the medicinal properties of natural products, providing cutting-edge accounts of the fascinating developments in the isolation, structure elucidation, synthesis, biosynthesis and pharmacology of a diverse array of bioactive natural products. Natural products in the plant and animal kingdom offer a huge diversity of chemical structures that are the result of biosynthetic processes that have been modulated over the millennia through genetic effects.

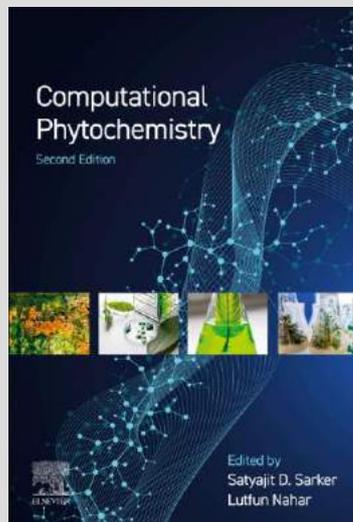
With the rapid developments in spectroscopic techniques and accompanying advances in high-throughput screening techniques, it has become possible to isolate and then determine the structures and biological activity of natural products rapidly, thus opening up exciting opportunities in the field of new drug development to the pharmaceutical industry.



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CHEMISTRY Organic Chemistry
<https://virtuale.elsevier.com>, www.elsevier.com



Computational Phytochemistry, 2e

Edited by : **Satyajit Dey Sarker**, Director, School of Pharmacy and Biomolecular Sciences, Liverpool John Moores University, Liverpool, UK and **Lutfun Nahar**, School of Pharmacy and Biomolecular Sciences, Liverpool John Moores University, UK

ISBN: 9780443161025

PREVIOUS ISBN: 9780128123645

PUB DATE: Mar 01, 2024

LIST PRICE: £180.00 / \$230.00 /

€200.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 0

AUDIENCE: Graduate students studying Phytochemistry; experienced and inexperienced researchers working in Phytochemistry; academics who teach Phytochemistry and Pharmacognosy

BIC CODES: MMG, PNN, TCB, PNRP

THEMA CLASSIFICATION:

THEMAPST; THEMAPNN; THEMAPNRA; THEMAMKG

Covers advancements in computational techniques and methods that have been incorporated in phytochemical research

KEY FEATURES

- Includes step-by-step protocols for various computational and mathematical approaches applied to phytochemical research.
- Features clearly illustrated chapters contributed by highly reputed researchers.
- Covers all key areas in phytochemical research, including virtual screening and metabolomics

DESCRIPTION

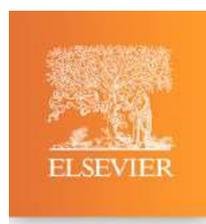
Computational Phytochemistry 2e: Explores how recent advances in computational techniques and methods have been embraced by phytochemical researchers to enhance many of their operations, refocusing and expanding the possibilities of phytochemical studies. By applying computational aids and mathematical models to extraction, isolation, structure determination and bioactivity testing, researchers can obtain highly detailed information about phytochemicals and optimize working approaches.

This book aims to support and encourage researchers currently working with, or looking to incorporate, computational methods into their phytochemical work. Topics in this book include computational methods for predicting medicinal properties, optimizing extraction, isolating plant secondary metabolites and building dereplicated phytochemical libraries. The role of high-throughput screening, spectral data for structural prediction, plant metabolomics and biosynthesis are all reviewed, before the application of computational aids for assessing bioactivities and virtual screening are discussed. Illustrated with detailed figures and supported by practical examples, this book is an indispensable guide for all those involved with the identification, extraction and application of active agents from natural products.

This new edition captures remarkable advancements in mathematical modelling and computational methods that have been incorporated in phytochemical research addressing, e.g., extraction, isolation, structure determination, and bioactivity testing of phytochemicals.

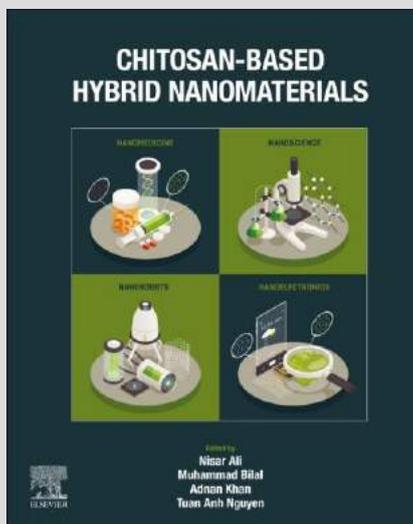


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CHEMISTRY Organic Chemistry

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



Chitosan-Based Hybrid Nanomaterials

Edited by : **Nisar Ali**, Professor, School of Applied Chemistry and Chemical Engineering, Huaiyin Institute of Technology, Meicheng road, Huai'an, China.; **Muhammad Bilal**, Associate Professor at the Department of Sanitary Engineering, Faculty of Civil and Environmental Engineering, Gdansk University of Technology, Gdansk, Poland; **Adnan Khan**, Professor, Institute of Chemical Sciences, University of Peshawar, Pakistan and **Tuan Anh Nguyen**, Principal Research Scientist, Institute for Tropical Technology, Vietnam Academy of Science and Technology, Hanoi, Vietnam

ISBN: 9780443218910
PUB DATE: Mar 01, 2024
LIST PRICE: £165.00 / \$200.00 / €190.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 372

AUDIENCE: Inorganic and organic chemists; several scientists working in the environmental sectors, agencies responsible for the environmental restoration, environmentalists

BIC CODES: PSD, TGM, TDM

THEMA CLASSIFICATION:

THEMAPSD; THEMATGM;

THEMATDPM

Provides comprehensive and state-of-the-art knowledge about the design, development, and application of environmentally friendly chitosan-based novel nanostructures

KEY FEATURES

- Covers properties, synthesis, and characterization of chitosan nanostructures and their utilization in the removal of contaminants
- Highlights the latest developments on the utilization of chitosan in environmental restoration
- Summarizes the importance of chitosan nanostructures for several applications

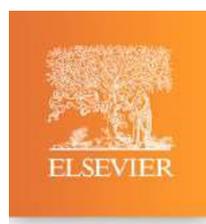
DESCRIPTION

Chitosan-based hybrid nanomaterials for environmental remediation focuses on chitosan, an abundantly occurring biopolymer, to present possibilities for the removal of contaminants and a greener approach towards a cleaner environment – combining nanotechnology with the deployment of naturally occurring materials to remedy environmental challenges.

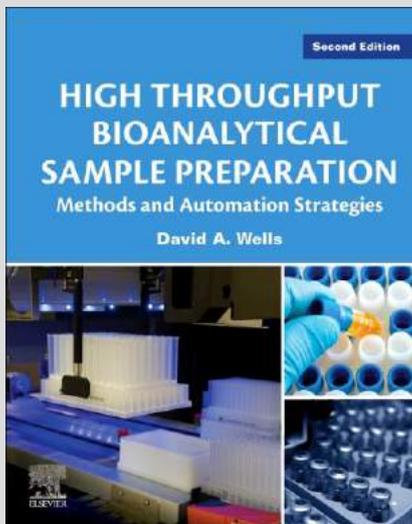
This book fills up research gaps, and the knowledge lagging in the context of chitosan-based nanomaterials. Considering the importance of naturally occurring materials with the applied knowledge of nanotechnology in the field of environmental restoration



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CHEMISTRY Inorganic Chemistry
<https://virtuale.elsevier.com>, www.elsevier.com



High Throughput Bioanalytical Sample Preparation, 2e

Methods and Automation Strategies

David A. Wells, Founder and Principal Scientist, Sample Prep Solutions, St. Paul, MN, USA

ISBN: 9780444637581

PREVIOUS ISBN: 9780444510297

PUB DATE: Sep 01, 2024

LIST PRICE: £240.00 / \$305.00 /

€280.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 740

AUDIENCE: Analytical chemists (particularly those performing sample preparation for bioanalytical applications), bench scientist supervising analysts, and pharma/biotech/CROs, Manufacturers of sample prep products, automation products, and accessory products, academic researchers, non-analytical chemists who are faced with sample preparation challenges

BIC CODES: PNF

THEMA CLASSIFICATION:

THEMAPNF

Must-have resource for industrial analytical chemists and others seeking to optimize their daily workflow with emerging preparation techniques

KEY FEATURES

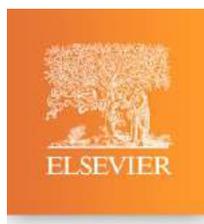
- Offers broad coverage of all sample preparation methods and techniques, including the latest industry developments in bioanalysis
- Provides detailed 'How-To' approaches for each technique, making its applications immediately implementable
- Authored by an industry analytical chemist who has more than 30 years of experience in all facets of sample preparation, drug analysis, and more
- Features a thorough and inclusive bibliography of related publications in the field

DESCRIPTION

High Throughput Bioanalytical Sample Preparation: Methods and Automation Strategies, Second Edition, is the go-to resource for industrial analytical chemists and others seeking the latest techniques for optimizing sample preparation in their everyday workflow. Outlining the latest preparation techniques from around the globe, this helpful guide provides answers to questions, including 'How do I automate a procedure?', 'How do I work to reduce matrix interferences?' 'Could I do this procedure online instead of in a manual batch?' 'What sorbent materials are available in the market?' 'How do I use a cation exchange resin?' 'What has been published on micro-sampling techniques?', and more. Featuring detailed coverage of the newer techniques that have emerged since the first edition was published, the book includes discussions on micro sampling and molecularly imprinted polymers, addresses the workflow pain points associated with extraction process efficiency, and outlines exactly how to optimize productivity through enhanced method development. Combining a step-by-step approach with a thorough explanation of the technology, this new edition features 40% new content and 60% revised content, accurately and thoroughly capturing the latest developments in research since the previous edition published in 2003.

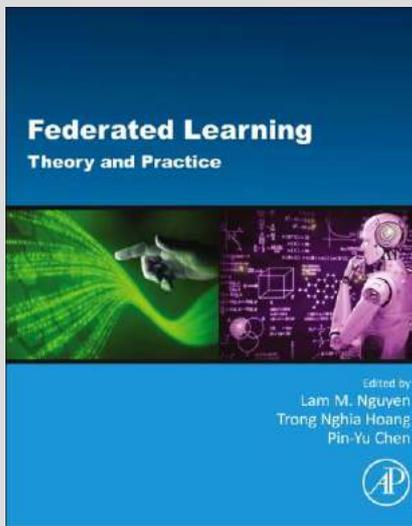


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CHEMISTRY Analytical Chemistry

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



Federated Learning

Theory and Practice

Edited by : **Lam M. Nguyen**; **Trong Nghia Hoang**, Assistant Professor, Washington State University, USA and **Pin-Yu Chen**, Research Staff member, IBM Thomas J. Watson Research Center, Yorktown Heights, NY, USA

ISBN: 9780443190377
PUB DATE: Jan 01, 2024
LIST PRICE: £95.95 / \$125.00 / €109.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 400

AUDIENCE: Researchers and students in computer science, computer engineering, engineering, and industry practitioners, Graduate courses in federated learning

BIC CODES: UYQM, UYQE, UYQ

THEMA CLASSIFICATION: THEMAUYQ; THEMAUYQE

A comprehensive reference on federated learning containing fundamentals, applications and state-of-the-art

KEY FEATURES

- Presents the fundamentals and a survey of key developments in the field of federated learning
- Provides emerging, state-of-the art topics that build on fundamentals
- Contains industry applications
- Gives an overview of visions of the future

DESCRIPTION

Federated Learning: Theory and Practice provides a holistic treatment to federated learning, starting with a broad overview on federated learning as a distributed learning system with various forms of decentralized data and features. A detailed exposition then follows of core challenges and practical modeling techniques and solutions, spanning a variety of aspects in communication efficiency, theoretical convergence and security, viewed from different perspectives. Part II features emerging challenges stemming from many socially driven concerns of federated learning as a future public machine learning service, and Part III and IV present a wide array of industrial applications of federated learning, including potential venues and visions for federated learning in the near future. This book provides a comprehensive and accessible introduction to federated learning which is suitable for researchers and students in academia and industrial practitioners who seek to leverage the latest advances in machine learning for their entrepreneurial endeavors

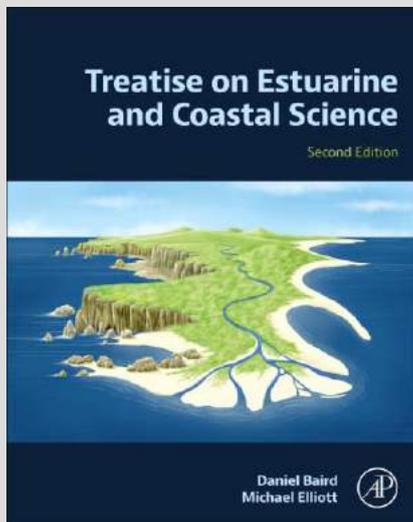


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Treatise on Estuarine and Coastal Science, 2e

Daniel Baird, Senior Professor, Department of Botany and Zoology, University of Stellenbosch, South Africa and **Michael Elliott**, Director, Institute of Estuarine and Coastal Studies (IECS) and Professor of Estuarine and Coastal Sciences, University of Hull, UK

ISBN: 9780323907989
PREVIOUS ISBN: 9780123747112
PUB DATE: Mar 15, 2024
LIST PRICE: £3630.00 / \$4500.00 / €4250.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 5200

AUDIENCE: Students and researchers in academic and research institutions serving the fields of earth, natural and social sciences: physical, chemical and biological oceanography, ecology, ecosystems modelling, environmental science and management, environmental economics. Environmental managers and policy makers interested in environmental, estuarine, wetland, coastal and marine areas worldwide

BIC CODES: RNC, PSPM, RBKC

THEMA CLASSIFICATION:

THEMAPSAF; THEMAPSPM;
THEMARBK

The most up-to-date treatment on estuarine and coastal ecosystem structure, function, socio-economics, management and response to climate change.

KEY FEATURES

- Comprehensive – a unique resource in the field, *Treatise on Estuarine and Coastal Science* covers system based coastal and estuarine science and management, linking physical, chemical and biological ecosystem processes with associated socio-economic issues
- Highly regarded: the previous edition was very well received by the market and widely used, with over 50,000 chapter downloads
- Updated and forward-looking: the new edition expands the previous version with significant updates and a whole new section on Climate Change and Coastal Ecosystems, covering the resistance and resilience of the estuaries, coasts and other transitional habitats and responses needed over the coming decades.

DESCRIPTION

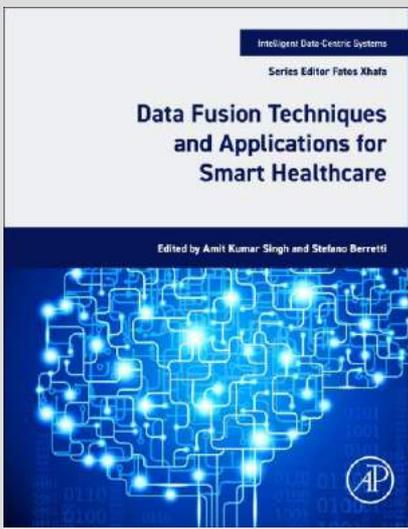
Treatise on Estuarine and Coastal Science, Four Volume Set is the most up-to-date reference work for system based coastal and estuarine ecosystem science and management. It addresses the big issues facing the estuaries and coastal zone; in particular how to best use multi- and inter-disciplinary science to ensure the sustainability of the environment. It focusses on the need to protect and maintain the natural functioning of the estuaries and coasts worldwide while delivering the ecosystem services from which society extract goods and benefits. Structured chapters, written by leaders in the field, include reference lists and additional reading, copious diagrams, case-studies, and especially provide synthesis diagrams and conceptual models of complex issues. The *Treatise* covers both the natural and social sciences, serving a wide audience which ranges from undergraduate students to established researchers and practitioners. The work avoids autecological studies but focusses on inter-linked physical-chemical-biological-ecosystem processes and associated socio-economic issues in the coastal zone. It examines estuaries and coasts, and their interactions and feedbacks with humanity, from the inland catchment/river basin to the ocean shelf. The new edition builds on and expands the previous version with significant updates and a whole new section on Climate Change and Coastal Ecosystems, covering the resistance and resilience of the estuaries, coasts and other transitional habitats to climate change, thereby determining changes and responses needed over the coming decades.



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MAJOR REFERENCE WORKS Earth & Environment
<https://virtuale.elsevier.com>, www.elsevier.com



Data Fusion Techniques and Applications for Smart Healthcare

Edited by : **Amit Kumar Singh**, Assistant Professor, Department of Computer Science and Engineering, National Institute of Technology Patna, Bihar, India and **Stefano Berretti**, Associate Professor, Department of Information Engineering, University of Florence(UNIFI), Florence, Italy.

ISBN: 9780443132339
PUB DATE: Mar 01, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 279

AUDIENCE: Researchers, scientists, developers, practitioners, and graduate students from academia and industry working in the major and interdisciplinary areas of computer science/engineering and biomedical engineering, specifically on data processing and security solutions for smart healthcare and medical data systems

BIC CODES: UY, UMB, UB, UYQE, PBD, UYQ

THEMA CLASSIFICATION:

THEMAUNC; THEMAUY;
THEMAPBD; THEMAUYQ;
THEMAUYQE; THEMAKJ;
THEMAUMB; THEMAUFL

Explores the latest research in multimodal medical data fusion for improved accuracy, assessment, and diagnostics

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

KEY FEATURES

- Presents broad coverage of applied case studies using data fusion techniques to mine, organize, and interpret medical data
- Investigates how data fusion techniques offer a new solution for dealing with massive amounts of medical data coming from diverse sources and multiple formats
- Chapters focus on identifying challenges, solutions and new directions which will be useful for graduate students, researchers, and practitioners from government, academia, industry, and healthcare

DESCRIPTION

Medical data exists in several formats, from structured data and medical reports to 1D signals, 2D images, 3D volumes, or even higher dimensional data such as temporal 3D sequences. Healthcare experts can make auscultation reports in text format; electrocardiograms can be printed in time series format, x-rays saved as images; volume can be provided through angiography; temporal information by echocardiograms, and 4D information extracted through flow MRI. Another typical source of variability is the existence of data from different time points, such as pre and post treatment, for instance. These large and highly diverse amounts of information need to be organized and mined in an appropriate way so that meaningful information can be extracted. New multimodal data fusion techniques are able to combine salient information into one single source to ensure better diagnostic accuracy and assessment.

Data Fusion Techniques and Applications for Smart Healthcare covers cutting-edge research from both academia and industry with a particular emphasis on recent advances in algorithms and applications that involve combining multiple sources of medical information. This book can be used as a reference for practicing engineers, scientists, and researchers. It will also be useful for graduate students and practitioners from government and industry as well as healthcare technology professionals working on state-of-the-art information fusion solutions for healthcare applications.

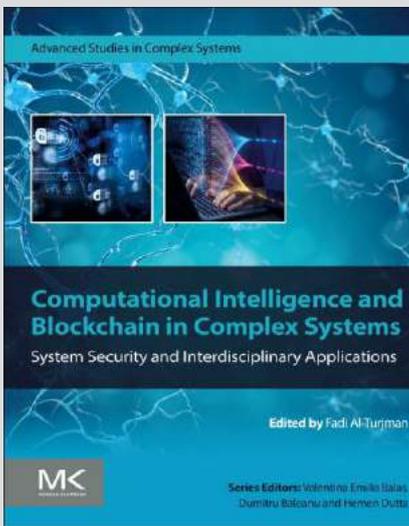


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COMPUTING

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



Computational Intelligence and Blockchain in Complex Systems

System Security and Interdisciplinary Applications

Edited by : **Fadi Al-Turjman**, PhD, Associate Dean and Founding Director, Artificial Intelligence Department, Near East University, Nicosia, Turkey.

ISBN: 9780443132681

PUB DATE: Mar 01, 2024

LIST PRICE: £138.00 / \$180.00 /

€160.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 0

AUDIENCE: Computer Scientists and researchers in Artificial Intelligence and Machine Learning, specifically in the field of developing Blockchain algorithms and applications. As such, academics, researchers, and professionals in a variety of research fields who work with AI, algorithms, and machine learning and their applications to complex systems will be a target audience. Engineers who need to understand the impacts of AI and Blockchain in complex systems, information security researchers and professionals who are required to secure computer networks and systems, as well as organizations who desire to implement AI and Blockchain in their systems

BIC CODES: UYQ

THEMA CLASSIFICATION:

THEMAUYQ



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The most comprehensive technical guide to developing AI algorithms for Blockchain applications in complex systems and networks

A Volume in the *Advanced Studies in Complex Systems* Series

KEY FEATURES

- Covers the research issues and concepts of Machine Learning technology in Blockchain
- Provides in depth information about handling and managing personal data by Machine Learning methods in Blockchain
- Help readers understand the links between Computational Intelligence, Blockchain, Complex Systems, and developing secure applications in multidisciplinary sectors

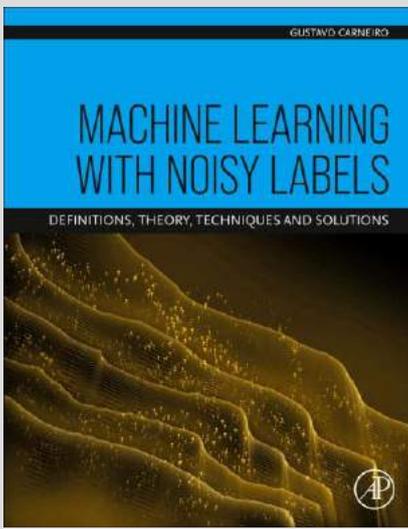
DESCRIPTION

Computational Intelligence and Blockchain in Complex Systems: System Security and Interdisciplinary Applications provides readers with a guide to understanding the dynamics of AI, Machine Learning, and Computational Intelligence in Blockchain, and how these rapidly developing technologies are revolutionizing a variety of interdisciplinary research fields and applications. The book examines the role of Computational Intelligence and Machine Learning in the development of algorithms to deploy Blockchain technology across a number of applications, including healthcare, insurance, smart grid, smart contracts, digital currency, precision agriculture, and supply chain. The authors cover the unique and developing intersection between cyber security and Blockchain in modern networks, as well as in-depth studies on cyber security challenges and multidisciplinary methods in modern Blockchain networks. Readers will find mathematical equations throughout the book as part of the underlying concepts and foundational methods, especially the complex algorithms involved in Blockchain security aspects for hashing, coding, and decoding.

Computational Intelligence and Blockchain in Complex Systems: System Security and Interdisciplinary Applications provides readers with the most in-depth technical guide to the intersection of Computational Intelligence and Blockchain, two of the most important technologies for the development of next generation complex systems.

COMPUTING

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



Machine Learning with Noisy Labels

Definitions, Theory, Techniques and Solutions

Gustavo Carneiro, Professor of AI and Machine Learning, Centre for Vision, Speech and Signal Processing (CVSSP), Surrey Institute for People-centred Artificial Intelligence, Department of Electrical and Electronic Engineering, The University of Surrey, UK

ISBN: 9780443154416
PUB DATE: Mar 01, 2024
LIST PRICE: £83.95 / \$110.00 /
€95.95

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 180

AUDIENCE: Senior undergraduates, graduate students and researchers in computer vision and medical imaging, machine learning, biomedical engineering, Radiologists

BIC CODES: UYQV, UYQM, UYQ

THEMA CLASSIFICATION:
THEMAUYQ; THEMAUYQV;
THEMAUYQP

Helps readers get up and running with machine learning with noisy labels

KEY FEATURES

- Shows how to design and reproduce regression, classification and segmentation models using large-scale noisy-label training sets
- Gives an understanding of the theory of, and motivation for, noisy-label learning
- Shows how to classify noisy-label learning methods into a set of core techniques

DESCRIPTION

Machine Learning and Noisy Labels: Definitions, Theory, Techniques and Solutions provides an ideal introduction to machine learning with noisy labels that is suitable for senior undergraduates, post graduate students, researchers and practitioners using, and researching, machine learning methods. Most of the modern machine learning models based on deep learning techniques depend on carefully curated and cleanly labeled training sets to be reliably trained and deployed. However, the expensive labeling process involved in the acquisition of such training sets limits the number and size of datasets available to build new models, slowing down progress in the field. This book defines the different types of label noise, introduces the theory behind the problem, presents the main techniques that enable the effective use of noisy-label training sets, and explains the most accurate methods.

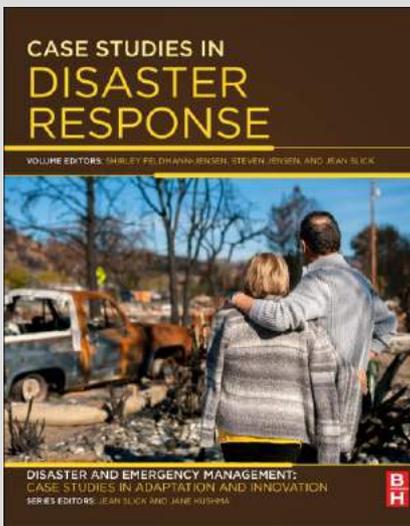


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COMPUTING

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Case Studies in Disaster Response

Disaster and Emergency Management: Case Studies in Adaptation and Innovation series

Edited by : **Shirley Feldmann-Jensen**, Program Coordinator & Lecturer for the Emergency Services Administration Master of Science Program at California State University, Long Beach, CA, USA; **Steven J. Jensen**, Emergency Services Leadership and Globalized Disaster Risk Management Expert and **Jean Slick**, Associate Professor, Disaster and Emergency Management, Royal Roads University, Victoria, Canada

ISBN: 9780128095263
PUB DATE: Mar 01, 2024
LIST PRICE: £61.95 / \$79.95 / €69.95
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 260
AUDIENCE: Researchers and practitioners in disaster and emergency management, secondary audience as supplemental text in graduate courses in disaster and emergency management
BIC CODES: JFFC, RNR
THEMA CLASSIFICATION: THEMARNR; THEMAJBFF

A new volume in the Disaster and Emergency Management: Case Studies in Adaptation and Innovation series

KEY FEATURES

- Presents in-depth cases studies in disaster response, one of the phases of disaster management
- Unites practice and research from multiple disciplines to highlight the complexity of disasters preparedness, including environmental and earth sciences, engineering, public health, geography, sociology, and anthropology, humanitarian aid, emergent threats, disaster response and resilience
- Examines policy and ethical dilemmas faced by decision-makers in disaster response situations

DESCRIPTION

Case Studies in Disaster Response, the latest release in the *Disaster and Emergency Management: Case Studies in Adaptation and Innovation* series, focuses on the key functions performed in the emergency response to a disaster, how these functions are coordinated, and typical challenges and issues that emerge. Cases address both hazard- and response-generated needs. Also explored are the needs generated by emergent threats (e.g., Ebola crisis), emergent technologies (e.g., social media), and emergent groups (e.g., social innovation teams) that set the stage for innovation and adaption.



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SECURITY

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

COVER IMAGE
FORTHCOMING

The Trans-Atlantic Research and Development Interchanges on Sustainability

Heriberto Cabezas, Senior Science Advisor, Sustainable Technology Division (STD), National Risk Management Research Laboratory (NRMRL), Office of Research and Development (ORD), U.S. EPA and Associate Professor, Faculty of Information Technology and Bionics, Peter Pazmany Catholic University, Hungary; **Urmila M Diwekar**, President, Vishwamitra Research Institute, USA; **Michael Narodslawsky**, Head, Institute for Resource Efficient and Sustainable Systems, Technische Universitat Graz, Graz, Austria; **Audrey L Mayer**, Michigan Technological University, USA and **Csaba Deák**, Professor and University Chancellor, University of Miskolc, Hungary

ISBN: 9780128245293
PUB DATE: Oct 01, 2024
LIST PRICE: £115.00 / \$150.00 / €131.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 390
AUDIENCE: Academics, researchers, undergraduates and postgraduates in sustainability science and any applicable science that takes sustainability into account, Ecology, environmental science, earth science, engineering, environmental management and related fields
BIC CODES: RN, TVF
THEMA CLASSIFICATION: THEMATVF; THEMATQ

An introduction to the Science of Suitability Systems, providing a synthesis of the discussions and results from the TARDIS workshops

A Volume in the *Science of Sustainable Systems* Series

KEY FEATURES

- Forms a comprehensive, foundational review of sustainability science, a crucial area in need of thorough understanding, research and application
- Covers local and global sustainability concepts, providing small and large-scale research on sustainability
- Delivers a collection of sustainability ideas and thinking from the TARDIS workshops not available elsewhere

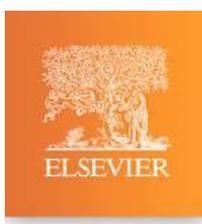
DESCRIPTION

The Trans-Atlantic Research and Development Interchanges on Sustainability is a comprehensive foundational look at sustainability science, developed directly from the outcomes and learnings of the Trans-Atlantic Research and Development Interchanges on Sustainability (TARDIS) workshop that has been ongoing since 2004. The book brings together the most thorough recent advances in concepts, theories, methods, models and applications to steer the course towards a sustainable and resilient future. It provides a source of information on sustainability science directly from the experiences of global sustainability scientists and their research data not found elsewhere.

This book will be an all-encompassing source of information on all aspects of sustainability science for academics, researchers and students in sustainability science and any applicable science that takes sustainability into account.

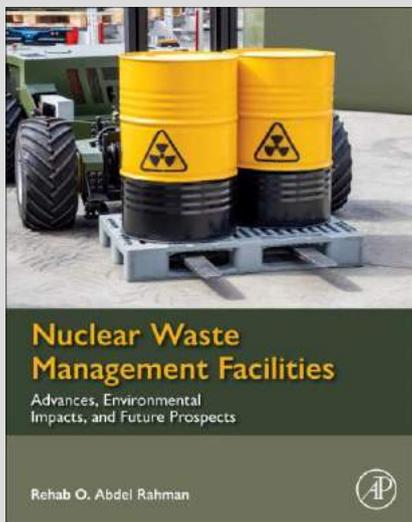


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EARTH & ENVIRONMENT

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



Nuclear Waste Management Facilities

Advances, Environmental Impacts, and Future Prospects

Edited by : **Rehab O Abdel Rahman**, Professor of Chemical Nuclear Engineering, Hot Laboratories and Waste Management, Atomic Energy Authority (AEA), Cairo, Egypt

ISBN: 9780323960083
PUB DATE: Mar 01, 2024
LIST PRICE: £138.00 / \$180.00 / €160.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 280
AUDIENCE: Students, researchers, regulators and operators interested in nuclear waste management facilities, nuclear engineering, environmental science and chemical engineering
BIC CODES: PHH
THEMA CLASSIFICATION: THEMAPHH

A comparative tool to check and compare international, regional and national legislations and technical practices in nuclear waste management strategies

KEY FEATURES

- Presents recent approaches used to assess and improve the safety and reduce the carbon footprints of nuclear waste management facilities
- Offers technical guidance to support the development and defense of the nuclear environmental impact assessment (NEIA), SAR, and Safety Cases to support waste management facilities' licensing throughout their lifecycles
- Highlights the future perspectives for wastes produced from innovative reactors and wastes containing emerging contaminants, such as nanomaterials and endocrine disruptive materials

DESCRIPTION

Nuclear Waste Management Facilities: Advances, Environmental Impacts, and Future Prospects examines best practices and trends in improving nuclear safety and reducing the negative environmental impacts of nuclear waste. With a strong emphasis on regulatory requirements, this reference is essential for designing new integrated waste management practices, using lessons learned from historical and current practices. Part One introduces the reader to the safety and environmental impacts of the nuclear industry. Part Two reviews recent technological and methodological approaches to enhancing safety, as well as reducing the carbon footprint of both individual processes and integrated facilities. Topics covered include waste processing, transmutation and decommissioning.

Part Three consider potential management schemes for special waste from innovative sources, and wastes that contain emerging contaminants, including waste recycling opportunities. This is a crucial tool needed to implement the safest and most environmentally considerate best practices within nuclear waste management facilities.

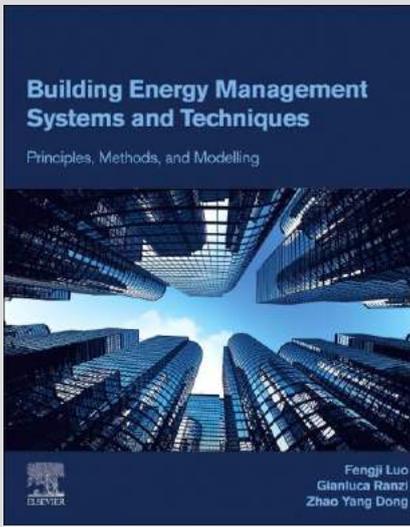


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PHYSICAL SCIENCES

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Building Energy Management Systems and Techniques

Principles, Methods, and Modelling

Fengji Luo, Academic Fellow and Researcher, School of Civil Engineering, The University of Sydney, Australia; **Gianluca Ranzi**, Professor and Director, Centre for Advanced Structural Engineering, School of Civil Engineering, The University of Sydney, NSW, Australia and **Zhao Yang Dong**, Professor, School of Electrical and Electronics Engineering at Nanyang Technological University, Singapore

ISBN: 9780323961073
PUB DATE: Mar 01, 2024
LIST PRICE: £108.00 / \$140.00 / €122.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 300

AUDIENCE: Postgraduate and advanced undergraduates enrolled in courses related to energy-efficient building systems and smart grids, and researchers working in the fields of smart grid, smart building/home, and energy demand response, Electrical engineers, civil engineers, building energy consultants, computing and communication engineers

BIC CODES: KNBN, THK

THEMA CLASSIFICATION:

THEMAKNB; THEMATHK

An introduction to the fundamental energy management techniques for modern buildings and basic design principles of building energy management systems

KEY FEATURES

- Integrates the latest techniques in the building energy management paradigm, such as appliance scheduling, peer-to-peer energy trading and occupant-to-grid integration
- Provides extensive application examples to help readers understand the design principles of different building energy management systems
- Includes step-by-step guidance on the methods, modeling techniques and applications presented in the book, including evolutionary computations
- Provides pseudocodes and optimization algorithms of the application examples to enable the reader to gain insight into the modelling details

DESCRIPTION

Building Energy Management Systems and Techniques: Principles, Methods, and Modelling presents the fundamental concepts, methodologies, modeling techniques, and design schemes of building energy management systems. Covering the latest developments and methodologies, the book brings together energy management, demand response, evolutionary computation, and fundamental programming. The book's authors explore the fundamental concepts related to building energy management systems and put them into the context of smart grids, demand response and demand side management, Internet of Things, and distributed renewable energy. Advanced topics provide the reader with an understanding of various energy management scenarios and procedures for modern buildings in an automatic and highly renewable-penetrated building environment. This includes a range of energy management techniques for building-side energy resources such as battery energy storage systems, plug-in appliances, and HVAC systems.

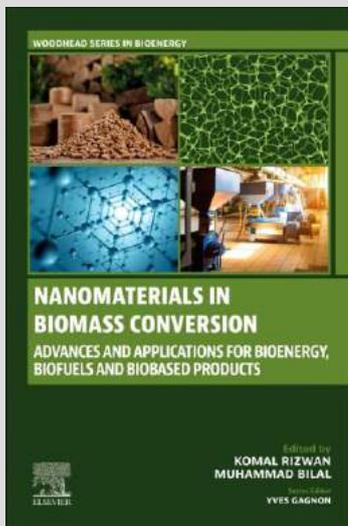


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ENGINEERING Energy

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



Nanomaterials in Biomass Conversion

Advances and Applications for Bioenergy, Biofuels and Bio-based Products.

Edited by : **Komal Rizwan**, Assistant Professor, Department of Chemistry, University of Sahiwal, Sahiwal, Pakistan and **Muhammad Bilal**, Associate Professor at the Department of Sanitary Engineering, Faculty of Civil and Environmental Engineering, Gdansk University of Technology, Gdansk, Poland

ISBN: 9780443135002
PUB DATE: May 01, 2024
LIST PRICE: £190.00 / \$250.00 / €220.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 480
AUDIENCE: Researchers and practicing engineers working in the field of bioenergy, biofuels, and biomaterials production, Graduate students in Renewable Energy, Chemical Engineering, Chemistry, Materials Science, and Environmental Science
BIC CODES: TGM
THEMA CLASSIFICATION: THEMATGM

A critical review of the fundamentals and technologies of biomass conversion using nanomaterials for the production of sustainable bioenergy and value-added products

A Volume in the *Woodhead Series in Bioenergy Series*

KEY FEATURES

- Critically examines the role of nanomaterials in the management of waste biomass applied to bioenergy and biofuels
- Explains the various nanotechnological methods for the conversion of waste biomass into value-added products
- Discusses the basic principles, operational aspects, ongoing developments, and future perspectives related to the applications of nanotechnologies and nanomaterials in biomass conversion
- Provides solutions to the key challenges of nanotechnologies and nanomaterials in the conversion of biomass, along with the future challenges and risks

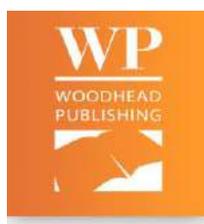
DESCRIPTION

Nanomaterials in Biomass Conversion: Advances and Applications for Bioenergy, Biofuels and Bio-based Products critically reviews the basic principles through to the latest advances in the emerging field of nanotechnology for the production of biofuels and bioenergy.

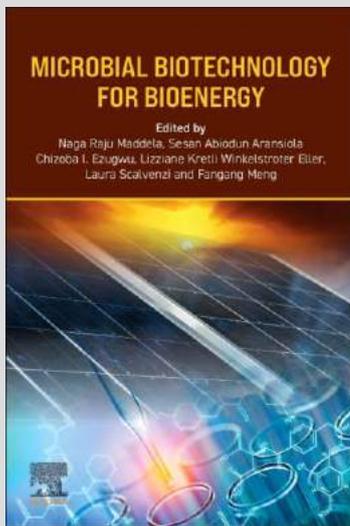
Divided into 3 parts, the first five chapters explain the fundamentals of nanomaterials, their properties, characterization, and basic processes for synthesis. Part 2, which constitutes the majority of the book, reviews the various methods and technologies for the conversion of biomass to bioenergy, biofuels, and value-added products using nanomaterials. This includes homogeneous and heterogeneous nano-catalytic systems, nano-photocatalytic conversion, nanomaterial-assisted anaerobic digestion, nanoparticles-immobilized enzymes conversion, the production of biogas, volatile fatty acids, and value-added products, and in carbon capture and conversion to sustainable energy products, as well as the potential of nano-biochar, nano-cellulose, and other nanomaterials in microbial fuel cells, bioelectrochemical systems, and batteries. Finally, Part 3 addresses the techno-economics and financial viability in the context of the circular economy, risk related to toxicology, stability, and environmental impacts, and considers the various challenges and future opportunities of biomass conversion through nanomaterials.



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Microbial Biotechnology for Bioenergy

Edited by : **Naga Raju Maddela**, Ph.D., Universidad Técnica de Manabí (UTM) ,Departamento de Ciencias Biológicas, Facultad de Ciencias de la Salud, Universidad Técnica de Manabí,; **Sesan Abiodun Aransiola**, Ph.D., Assistant Chief Scientist, Bioresources Development Centre, National Biotechnology Development Agency (NABDA).; **Chizoba I. Ezugwu**, Ph.D., Professor, Department of Analytical Chemistry, Physical Chemistry, and Chemical Engineering, University of Alcalá; **Lizziane Kretli Winkelstroter Eller**, Ph.D., Health Sciences Faculty and Master in Health Science, University of Western Sao Paulo; **Laura Scalvenzi**, Ph.D., Department of Life Sciences and Biotechnology, University of Ferrara and **Fangang Meng**, Sun Yat-sen University 1 School of Environmental Science and Engineering, Sun Yat-sen University, Guangzhou Guangdong Provincial Key Laboratory of Environmental Pollution Control and Remediation Technology, Guangzhou

ISBN: 9780443141126
PUB DATE: Mar 01, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 0
AUDIENCE: Biotechnologists, environmental engineers, and microbiologists interested in bioenergy, as well as students working in these areas. Policy-makers and professionals interested in bioenergy
BIC CODES: THX, TCB
THEMA CLASSIFICATION: THEMATCB; THEMATHV

The global trends, advances, and emerging technologies for the production of bioenergy using biotechnological and microbiological processes and their social, economic, and environmental impact

KEY FEATURES

- Reviews critically the past, present, and future technology of bioenergy and discuss fully the future projection of bioenergy, including the provision of global statistics, policies, and emerging technologies in bioenergy
- Analyzes how bioenergy technology improves quality of life by reducing air and water pollution and mitigates energy dependence by creating renewable resources in local communities
- Explores the environmental benefits of microbial remediation being incorporated into bioenergy production

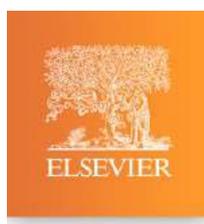
DESCRIPTION

Microbial Biotechnology for Bioenergy presents the new and emerging biotechnological and microbiological approaches in bioenergy and their economic, social, and environmental implications. Using the latest global data and statistics, it analyses how bioenergy technology improves quality of life by reducing air and water pollution and mitigates energy dependence by creating renewable resources in local communities.

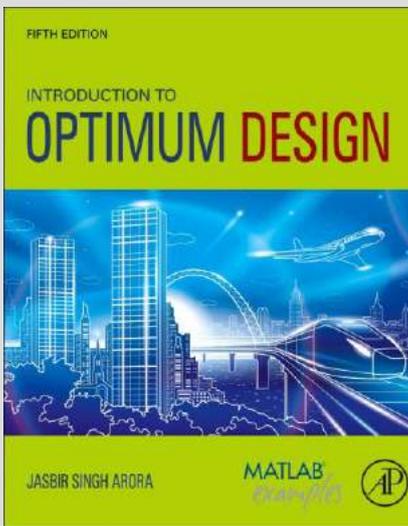
The book is formed of three sections; Section 1 addresses the “Sources, Challenges, and Environmental Views of Bioenergy” and includes an overview of bioenergy, global statistics and projections for future bioenergy development, the role of biotechnology and bioprocesses in bioenergy, feedstock sources, challenges, decarbonisation, and emerging innovations and technologies. Section 2 “Yesterday, Today, and Tomorrow: Innovations of Bioenergy” examines the vast topics of biotechnology and microbiology for bioenergy, reviewing both the present day state-of-the-art and future potential. Readers will find dedicated chapters on bioconversion of biomass energy and biological residues, the role of microbes, the potential of organic waste to provide bioenergy, the biotechnology of biofuels such as bioethanol, biodiesel, and biohydrogen, the sustainability of cellulosic ethanol energy and artificial photosynthesis, Power-to-X and integrating energy storage innovations, and the sustainability of microbial fuel cells. Finally, Section 3 explores the policies and environmental aspects of bioenergy, providing a global perspective on the current and future impact of bioenergy, including global projections based on present day global statistics.



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ENGINEERING Energy
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Introduction to Optimum Design, 5e

Jasbir Singh Arora, F. Wendell Miller Distinguished Professor, Emeritus, of Civil, Environmental and Mechanical Engineering, University of Iowa, USA, Department of Civil and Environmental Engineering & Department of Mechanical Engineering, University of Iowa, Iowa City, IA, USA

ISBN: 9780128183205
PREVIOUS ISBN: 9780128008065
PUB DATE: Feb 26, 2024
LIST PRICE: £108.00 / \$140.00 / €123.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 970
ILLUSTRATIONS: Approx. 220 illustrations
AUDIENCE: Upper level undergraduate and graduate engineering students and practitioners studying optimization and engineering design
BIC CODES: TGB, TRP, TBD
THEMA CLASSIFICATION: THEMATBC; THEMATD; THEMATRP; THEMATGB

Bestselling textbook on optimum design that enables instructors to teach optimization at any level of the engineering curriculum

KEY FEATURES

- Describes basic concepts of optimality conditions and numerical methods with simple and practical examples, making the material highly teachable and learnable
- Includes applications of optimization methods for structural, mechanical, aerospace, and industrial engineering problems
- Covers practical design examples and introduces students to the use of optimization methods
- Serves the needs of instructors who teach more advanced courses
- Features new or expanded content in such areas as reliability-based optimization, life-cycle optimization of structures, metamodeling, shape and topology optimization

DESCRIPTION

Introduction to Optimum Design, Fifth Edition is the most widely used textbook in engineering optimization and optimum design courses. It is intended for use in a first course on engineering design and optimization at the undergraduate or graduate level within engineering departments of all disciplines, but primarily within mechanical, aerospace and civil engineering. The basic approach of the text presents an organized approach to engineering design optimization in a rigorous yet simplified manner, illustrating various concepts and procedures with simple examples and demonstrating their applicability to engineering design problems. Formulation of a design problem as an optimization problem is emphasized and illustrated throughout the text. Excel and MATLAB are featured as learning and teaching aids. This new edition has been enhanced with new or expanded content in such areas as reliability-based optimization, lifecycle optimization of structures, metamodeling, shape and topology optimization, and combinatorial problems.

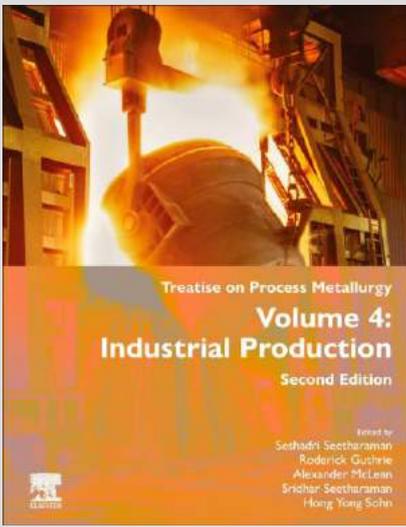


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ENGINEERING

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Treatise on Process Metallurgy, 2e

Volume 4: Industrial Production

Edited by : **Roderick Guthrie**, Department of Mining and Materials Engineering, McGill Metals Processing Centre, Quebec, Canada; **Alexander McLean**, Department of Materials Science and Engineering, University of Toronto, Toronto, Ontario, Canada; **Sridhar Seetharaman**, Colorado School of Mines, CO, 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: Mar 01, 2024
LIST PRICE: £285.00 / \$350.00 /
€335.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 900

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: TDM, TGM

THEMA CLASSIFICATION:
THEMATDPM; THEMATGM

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.

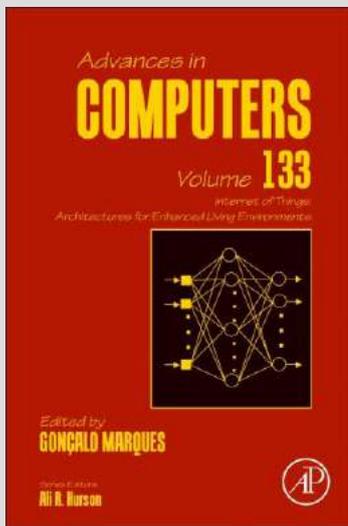


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ENGINEERING Materials

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



Internet of Things: Architectures for Enhanced Living Environments, Vol 133

Edited by : **Gonçalo Marques**, Polytechnic of Coimbra, ESTGOH, Rua General Santos Costa, 3400-124 Oliveira do Hospital, Portugal

ISBN: 9780323910897
PUB DATE: Mar 01, 2024
LIST PRICE: £126.00 / \$182.00 / €130.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 300
AUDIENCE: Researchers in high performance computer areas, hardware manufacturers, educational programs in physics and scientific computation and in computer science
BIC CODES: UMZ, PB
THEMA CLASSIFICATION: THEMAUM; THEMABP

Latest release in a series offering detailed coverage of innovations in computer hardware, software, theory, design, and applications

KEY FEATURES

- Contains novel subject matter that is relevant to computer science
- Includes the expertise of contributing authors
- Presents an easy to comprehend writing style

DESCRIPTION

Internet of Things: Architectures for Enhanced Living Environments, Volume 133 presents interesting chapters on a variety of timely topics, including Explainable Artificial Intelligence for Enhanced Living Environments: A Study on User Perspective, Human behavioral anomaly pattern mining within an IoT environment: an exploratory study, Indoor Activity Localization Technologies for Assisted Living: Opportunities, Challenges, and Future Directions, Smart Indoor Air Quality Monitoring for Enhanced Living Environments and Ambient Assisted Living, Usability evaluation for the IoT use in Enhanced Living Environments, Roadmap to the elderly enhanced living and care environments: applications and challenges on the Internet of Things domain, and much more.



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SERIALS Computer Science
<https://virtuale.elsevier.com>, www.elsevier.com



Machine Learning in Manufacturing

Quality 4.0 and the Zero Defects Vision

Carlos A. Escobar, Research scientist, School of Engineering and Sciences, Tecnológico de Monterrey, Mexico and **Ruben Morales-Menendez**, Dean of Graduate Studies, School of Engineering and Sciences, Tecnológico de Monterrey, Mexico

ISBN: 9780323990295
PUB DATE: Mar 01, 2024
LIST PRICE: £138.00 / \$180.00 / €160.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 280
AUDIENCE: Professional engineers, managers, and directors, Graduate students, the book will also include details for obtaining a green, black, and master black belt certification, can be used also by certifications institutions
BIC CODES: TRC, TGB
THEMA CLASSIFICATION: THEMATRC; THEMATGB

Helps readers understand Quality 4.0, how to implement it, and how to be change agents within an organization

KEY FEATURES

- Provides an understanding of the most relevant challenges posed to the application of Artificial Intelligence (AI) in manufacturing
- Includes analytical developments and applications and merges a quality vision with machine learning algorithms
- Features structured and unstructured data case studies to illustrate how to develop intelligent monitoring systems with the capacity to replace manual and visual tasks

DESCRIPTION

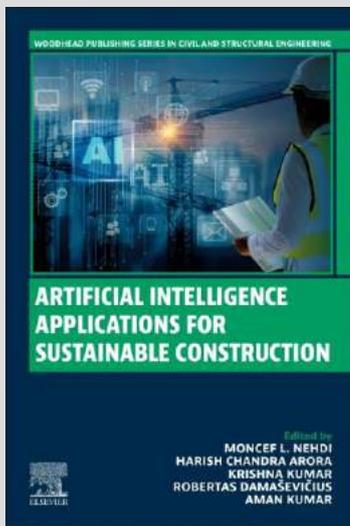
Machine Learning in Manufacturing: Quality 4.0 and the Zero Defects Vision reviews process monitoring based on machine learning algorithms and the technologies of the fourth industrial revolution and proposes Learning Quality Control (LQC), the evolution of Statistical Quality Control (SQC). This book identifies 10 big data issues in manufacturing and addresses them using an ad-hoc, 5-step problem-solving strategy that increases the likelihood of successfully deploying this Quality 4.0 initiative. With two case studies using structured and unstructured data, this book explains how to successfully deploy AI in manufacturing and how to move quality standards forward by developing virtually defect-free processes. This book enables engineers to identify Quality 4.0 applications and manufacturing companies to successfully implement Quality 4.0 practices.



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ENGINEERING Automotive & Aeronautical
<https://virtuale.elsevier.com>, www.elsevier.com



Application of Artificial Intelligence to Civil Engineering for Sustainable Construction

Edited by : **Moncef L. Nehdi**, PhD, PEng, FEIC, FAcI, FCSCE; **Harish Chandra Arora**; **Krishna Kumar**, Research and Development Engineer, UJVN Ltd. (A Govt. of Uttarakhand Enterprises), India; **Robertas Damaševičius**, Professor, Department of Software Engineering, Kaunas University of Technology, Kaunas, Lithuania and **Aman Kumar**

ISBN: 9780443131912
PUB DATE: Jul 01, 2024
LIST PRICE: £185.00 / \$245.00 /
€215.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 0

AUDIENCE: Academics and researchers, postgraduate and undergraduate students in the fields of civil/structural/construction/environmental/chemical/materials engineering and architecture. R&D specialists in industry; professional engineers; data scientists; materials scientists.

BIC CODES: TNC, TGM, TN, TBJ, AMCR, TBC, TNK, UYQ, TQ

THEMA CLASSIFICATION:

THEMATGM; THEMATN;
THEMAPBW; THEMATNC;
THEMAAMCR; THEMATNK;
THEMAUYQ; THEMAKNJ;
THEMATBC; THEMATQ

A comprehensive compendium on a variety of construction techniques and resources supported by AI-powered tools to contribute to reducing the civil engineering industry's impact on the environment.

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

KEY FEATURES

- Presents convincing “success stories” that encourage application of AI-powered tools to civil engineering.
- Provides a wealth of valuable technical information to address and resolve many challenging construction problems.
- Illustrates the most recent shifts in thinking and practice for sustainable construction to soon become the industry norm

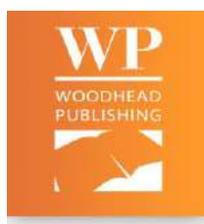
DESCRIPTION

Application of Artificial Intelligence to Civil Engineering for Sustainable Construction presents the latest developments in AI and ML technologies applied to real-world civil engineering concerns. With an increasing amount of attention on the environmental impact of every industry, more construction projects are going to require sustainable construction practices too. The present volume offers research evidence, simulation results, and case studies to support this change. Sustainable construction, in fact, not only uses renewable and recyclable materials when building new structures or repairing deteriorating ones, but also adopts all possible methods to reduce energy consumption and waste.

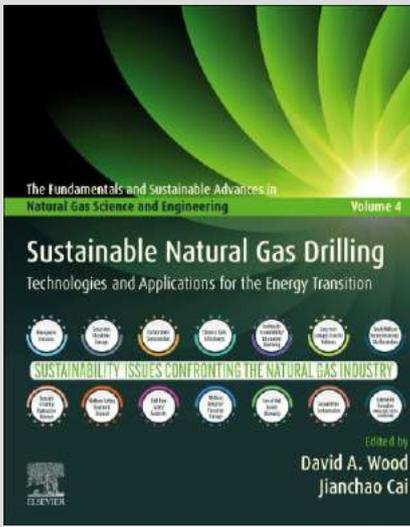
The concisely written but comprehensive practical knowledge put forward by this international group of highly specialized editors and contributors will prove to be beneficial to engineering students and professionals alike.



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Sustainable Natural Gas Drilling

Technologies and Applications for the Energy Transition

Edited by : **David Wood**, Owner/Consultant, DWA Energy Limited, UK and **Jianchao Cai**, Professor, Institute of Geophysics and Geomatics, China University of Geosciences, Wuhan, Hubei, China

ISBN: 9780443134227
PUB DATE: Mar 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 0
AUDIENCE: Natural gas engineers; drilling engineers; offshore engineers; carbon capture researchers
BIC CODES: TQ, THFG, THF
THEMA CLASSIFICATION: THEMATQ; THEMATHF

Advance natural gas drilling and operations to a net zero future with this multi-contributed reference

A Volume in the *The Fundamentals and Sustainable Advances in Natural Gas Science and Eng Series*

KEY FEATURES

- Accelerate emissions with case studies and visuals to illustrate how new principles can be applied in practical situations
- Understand innovative advances that are leading to improved environmental performance
- Bridge from theory to application with worldwide contributors representing academia and industry

DESCRIPTION

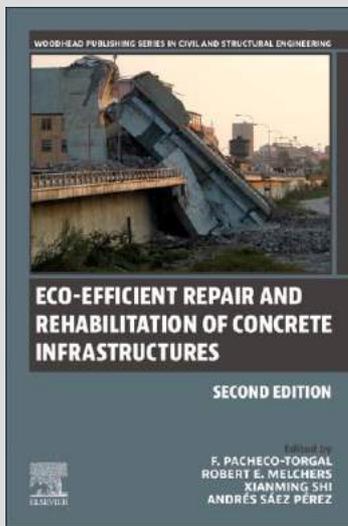
Sustainable Natural Gas Drilling, the latest release in *The Fundamentals and Sustainable Advances in Natural Gas Science and Engineering* series, delivers many of the technical fundamentals needed in the natural gas industry with an additional sustainability lens. Introductory topics include underbalanced technologies, well integrity, and well trajectory. Advanced applications include utilizing nanoparticles to reduce environmental impact, and techniques to drill for underground gas storage and carbon capture operations. Supported by corporate and academic contributors along with two well-distinguished editors, *Sustainable Natural Gas Drilling* provides today's natural gas engineers the knowledge to adjust current drilling practices in a more environmentally sustainable way.



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



Eco-efficient Repair and Rehabilitation of Concrete Infrastructures, 2e

Edited by : **Fernando Pacheco-Torgal**, Principal Investigator, C-TAC Research Centre, University of Minho, Guimaraes, Portugal.; **Robert Melchers**, University of Newcastle ,Australia.; **Xianming Shi**, Washington State University, USA and **Andres Saez Perez**, University of Seville, Spain

ISBN: 9780443134708
PREVIOUS ISBN: 9780081021811
PUB DATE: Mar 01, 2024
LIST PRICE: £195.00 / \$310.00 / €270.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 0
AUDIENCE: Civil and structural engineers, practicing engineers and contractors, and postgraduate students working on the service life assessment, non-destructive evaluation and retrofit, rehabilitation and repair of aging reinforced concrete structures.
BIC CODES: TGM, TN
THEMA CLASSIFICATION: THEMATGM; THEMATN

Provides an updated state-of-the-art review on eco-efficient repair and rehabilitation of concrete infrastructure

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

KEY FEATURES

- Presents the latest research findings on eco-efficient repair and rehabilitation of concrete infrastructures
- Provides comprehensive coverage from damage detection and assessment, to repair strategies, and structural health monitoring
- Diverse author base offering insights on construction practice and employed technologies worldwide
- Includes an entire section on NDT, innovative repair, and rehabilitation materials, as well as case studies on Life-cycle cost analysis and Life-cycle assessment

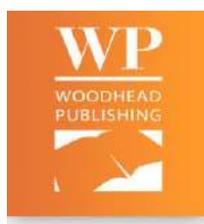
DESCRIPTION

Eco-efficient Repair and Rehabilitation of Concrete Infrastructures, Second Edition provides an updated state-of-the-art review on the latest advances in this important research field. The first section is brought fully up-to-date and focuses on deterioration assessment methods. Section two contains brand new chapters on innovative concrete repair and rehabilitation materials including: fly ash-based alkali-activated repair materials for concrete exposed to aggressive environments; repairing concrete structures with alkali-activated metakaolin mortars; concrete with micro encapsulated self-healing materials; concrete repaired with bacteria; concrete structures repaired with engineered cementitious composites; concrete repaired by electrodeposition; the assessment of concrete after repair operations and durability of concrete repair.

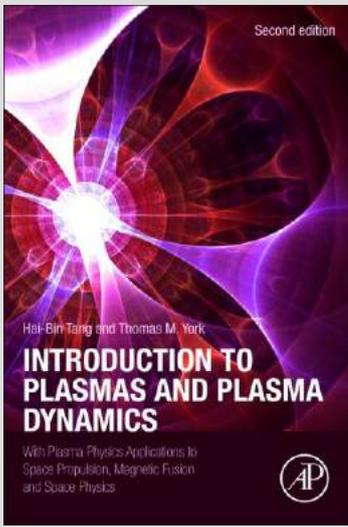
The final section has also been amended to include six new chapters on design, Life-cycle cost analysis and life-cycle assessment. These chapters include maintenance strategies for concrete structures; a comparison of different repair methods; life cycle assessment of the effects of climate change on bridge deterioration; life-cycle-cost benefits of cathodic protection of concrete structures; life-cycle cost analyses for concrete bridges exposed to chlorides and life-cycle analysis of repair of concrete pavements.



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Introduction to Plasmas and Plasma Dynamics, 2e

With Plasma Physics Applications to Space Propulsion, Magnetic Fusion and Space Physics

Haibin Tang, Deputy Director, Department of Aerospace Propulsion School of Astronautics, Beihang University, China

ISBN: 9780443136993

PREVIOUS ISBN: 9780128016619

PUB DATE: Mar 01, 2024

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

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 400

AUDIENCE: Engineers and researchers in aerospace engineering and other subjects related to plasma physics

BIC CODES: TGB

THEMA CLASSIFICATION:
THEMATGB

Accessible introduction to the understanding of high temperature, ionized gases necessary to conduct research and develop applications related to plasmas

KEY FEATURES

- Describes plasma applications with close reference to elementary processes, promoting a deeper understanding of plasmas in new fields
- Provides structured problems in every chapter that help readers grasp the book's practical lessons
- Includes a new chapter on numerical methods in plasmas that adds crucial context for experimental approaches

DESCRIPTION

Introduction to Plasmas and Plasma Dynamics: With Plasma Physics Applications to Space Propulsion, Second Edition provides an accessible introduction to the understanding of the high temperature, ionized gases necessary to conduct research and develop applications related to plasmas. Thoroughly updated and expanded, this second edition is also amended for greater ease of use with the inclusion of self-study problems. New chapters addressing numerical methods in plasmas, the kinetic description and analysis of plasma, and the chemistry of the ionosphere open up this subject to a broader range of readers.

Starting with the essential theory, this book goes on to describe relevant devices and mechanisms, before presenting a clear outline of the analysis and numerical details of plasma. The latest trends, concepts, and applications in plasma engineering are also addressed, including plasma formation and magnetic fusion, plasma thrusters and space propulsion.

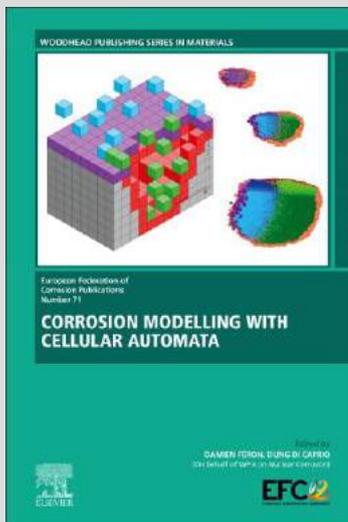


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ENGINEERING Mechanical

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



Corrosion Modelling with Cellular Automata

Edited by : **Damien Feron**, Director of Research, CEA and Professor, INSTN (Université Paris-Saclay), France and **Di Caprio Dung**, Researcher "Hors classe", CNRS, Institute of Research of Chimie Paris (IRCP), Paris, France

ISBN: 9780443137860
PUB DATE: Mar 01, 2024
LIST PRICE: £155.00 / \$190.00 / €180.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 214
AUDIENCE: Academic and industrial researchers, materials scientists and engineers working on the simulation, modelling, prevention, and control of corrosion
BIC CODES: TGM
THEMA CLASSIFICATION: THEMATGM

Describes the simulation and modeling of corrosion phenomena by cellular automata

A Volume in the *European Federation of Corrosion (EFC) Series Series*

KEY FEATURES

- Focuses on the use of cellular automata for modeling corrosion
- Covers recent advances in modeling generalized corrosion with cellular automata
- Illustrates how cellular automata can be used to model localized corrosion (pitting and intergranular corrosion)
- Spans various length scales from atomistic to mesoscale

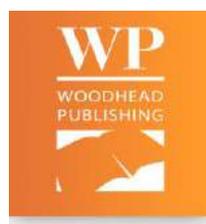
DESCRIPTION

Corrosion Modelling with Cellular Automata bridges the gap between finer scales based on atomic physics and the larger-scale based on physico-chemical properties of materials and their environments. The book describes the simulation and modeling of corrosion phenomena by cellular automata and underlines the collaborative and interdisciplinary relationships that underpin them. It explores the major achievements that have been performed to date, covers basic knowledge on cellular automata and corrosion phenomena, and includes sections on CA modeling of generalized and uniform corrosion in 2D and 3D under various conditions, including aqueous environments and high temperature processes.

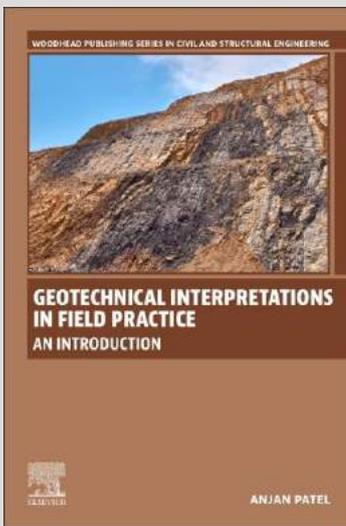
Finals sections present examples on the use of cellular automata for modeling localized corrosion as well as recent developments on intergranular corrosion. There is also a review on the use of CA for modeling pitting corrosion.



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Geotechnical Interpretations in Field Practice

An Introduction

Anjan Patel, Department of Civil Engineering, Visvesvaraya National Institute of Technology, Nagpur, South Ambazari Road, Nagpur, Maharashtra-440010, India

ISBN: 9780443140921
PUB DATE: Mar 01, 2024
LIST PRICE: £145.00 / \$190.00 / €170.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 210
AUDIENCE: The proposed book is intended to be a reference book for those in the geotechnical field at the start of their professional career. Moreover, geotechnical engineers and other field personnel involved in managing a geotechnical project will find this book of help. Will also serve as a reference for the course "Forensic geotechnical engineering" at the postgraduate level
BIC CODES: RBG
THEMA CLASSIFICATION: THEMARBG

Provides special focus on the importance of interpretation and engineering judgement in geotechnical projects

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

KEY FEATURES

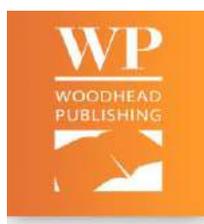
- Places an emphasis on the role of site interpretation and the application of engineering judgement
- Discusses project personnel and how they have to understand ground conditions to respond accordingly
- Includes real-life examples that will be of great help for all those involved in the planning and execution of geotechnical projects

DESCRIPTION

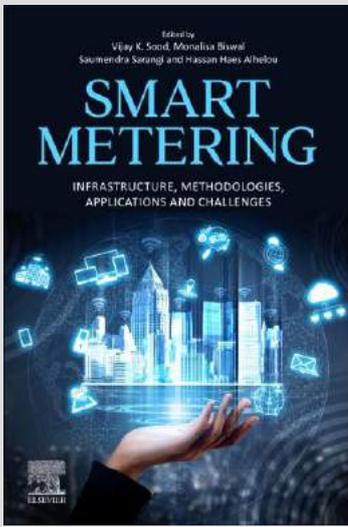
Geotechnical Interpretations in Field Practice: An Introduction provides the latest on field test results and theoretical knowledge, interpretation and engineering judgement and how this data is essential for proper planning and execution of ground investigations. Maximum subsurface information can be extracted with lesser budget if proper interpretation is made. In other words, no amount of site investigation is adequate without proper interpretation and application of engineering judgement. With this in consideration in mind, this book presents a special focus on the importance of interpretation and engineering judgment in geotechnical projects.



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Smart Metering

Infrastructure, Methodologies, Applications and Challenges

Edited by : **Vijay K. Sood**, member of the Professional Engineers of Ontario (PEO), a life fellow of the Institute of Electrical and Electronic Engineers (IEEE), a fellow of the Engineering Institute of Canada (EIC) and emeritus fellow of the Canadian Academy of Engineering (CAE).; **Monalisa Biswal**, assistant professor of the Department of Electrical Engineering at the National Institute of Technology Raipur, Chhattisgarh, India.; **saumendra sarangi**, assistant professor in the Department of Electrical Engineering MNNIT, Allahabad. and **Hassan Haes Alhelou**, A/Professor at Department of Electrical Power Engineering, Tishreen University, 2230 Lattakia, Syria

ISBN: 9780443153174
PUB DATE: Mar 01, 2024
LIST PRICE: £138.00 / \$180.00 / €160.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 280
AUDIENCE: Postgraduate students, researchers, and industry practitioners who work in the domains of power grid engineering, smart meters, smart energy technologies, and energy systems, Energy policy makers
BIC CODES: TH, KNB, THRM
THEMA CLASSIFICATION: THEMATH; THEMAKNB; THEMATHY; THEMATHR

A detailed overview of the architectural requirements, applications, challenges, and solutions for smart metering

KEY FEATURES

- Discusses advanced architecture in the context of establishing smart meters in smart grids for enhanced operation and data utilization
- Provides detailed discussions on smart meter data analysis
- Explores the design of smart meters and possible implementation of AI, ML, and other advanced methodologies to enhance the functions of power systems using smart meter data

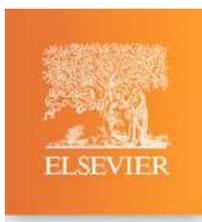
DESCRIPTION

Smart Metering: Infrastructure, Methodologies, Applications and Challenges combines the fundamentals of smart meters in smart grids with the latest advances and technologies in advanced smart infrastructure. With a strong focus on practical guidance and applications, this book examines the design and implementation of smart meters, as well as cybersecurity and data management challenges. Following an introduction to smart grid architecture, the book details design elements of smart meters to enable them for specific applications such as recording the energy consumption of users, load forecasting, resilience enhancement and energy theft detection.

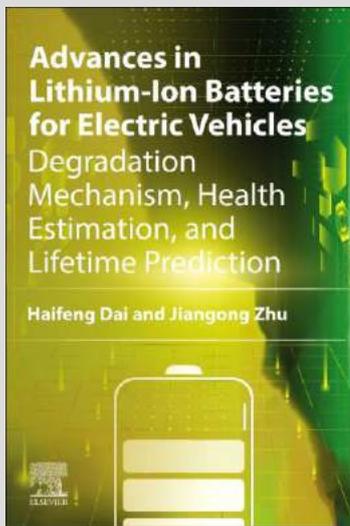
A deep dive into smart meter data analytics is then presented, accompanied by load forecasting methods and their advantages and challenges. Subsequent chapters also discuss outage management, fault identification and other applications of smart meters, including power network connection verifications. This is a comprehensive resource on smart metering and a valuable read to students, researchers and engineers interested in power systems engineering, smart grids, and smart energy technologies.



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



Advances in Lithium-Ion Batteries for Electric Vehicles

Degradation Mechanism, Health Estimation, and Lifetime Prediction

Haifeng Dai, Professor at Tongji University, School of Automotive Studies, Tongji University, CHINA and **Jianguo Zhu**, Associate Professor at Tongji University, School of Automotive Studies, Tongji University, China.

ISBN: 9780443155437
PUB DATE: Mar 01, 2024
LIST PRICE: £138.00 / \$180.00 / €160.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 325
AUDIENCE: Researchers, students and engineers interested in the areas of lithium-ion batteries, energy storage, and automotive engineering
BIC CODES: TRC, THRM, WG, TR
THEMA CLASSIFICATION: THEMATRC; THEMATHR; THEMATHY; THEMAWG; THEMATR

A systematic investigation of the battery tests, degradation mechanisms, modeling, and management technologies for electric vehicle development and applications

KEY FEATURES

- Evaluates the cause of battery degradation from the material level to the cell level
- Explains key battery basic lifetime test methods and strategies
- Presents advanced technologies of battery state of health estimation

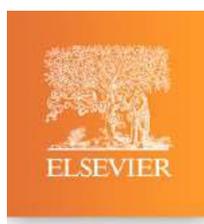
DESCRIPTION

Advances in Lithium-Ion Batteries for Electric Vehicles: Degradation Mechanism, Health Estimation, and Lifetime Prediction examines the electrochemical nature of lithium-ion batteries, including battery degradation mechanisms and how to manage the battery state of health (SOH) to meet the demand for sustainable development of electric vehicles. With extensive case studies, methods and applications, the book provides practical, step-by-step guidance on battery tests, degradation mechanisms, and modeling and management strategies. The book begins with an overview of Li-ion battery aging and battery aging tests before discussing battery degradation mechanisms and methods for analysis.

Further methods are then presented for battery state of health estimation and battery lifetime prediction, providing a range of case studies and techniques. The book concludes with a thorough examination of lifetime management strategies for electric vehicles, making it an essential resource for students, researchers, and engineers needing a range of approaches to tackle battery degradation in electric vehicles.

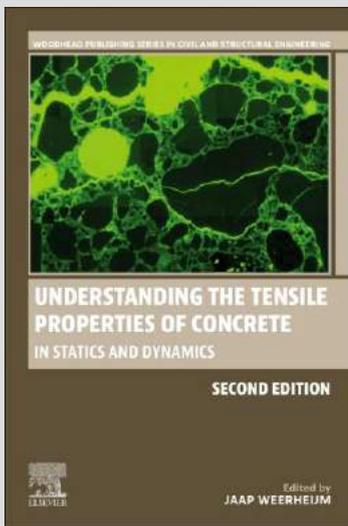


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ENGINEERING Electrical

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Understanding the Tensile Properties of Concrete, 2e

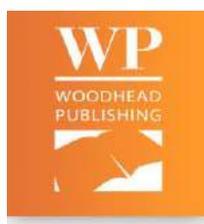
In Statics and Dynamics

Edited by : **Jaap Weerheijm**, Delft University of Technology, The Netherlands

ISBN: 9780443155932
PREVIOUS ISBN: 9780081015728,
9780857090454
PUB DATE: Mar 01, 2024
LIST PRICE: £185.00 / \$230.99 /
€217.99
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 430
AUDIENCE: Civil engineers, concrete
companies, construction companies;
Graduate students in civil engineering
programs at universities; Practicing
engineers, researchers and those
involved in making decisions
regarding infrastructure; Local
authorities and government
departments with an interest in
architectural engineering, construction
and materials, disaster reduction,
environmental engineering, maritime
structural technology, transportation
engineering and urban planning
BIC CODES: TNK
THEMA CLASSIFICATION:
THEMATNK



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Presents important research on understanding the tensile properties of concrete under static and dynamic loading

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

KEY FEATURES

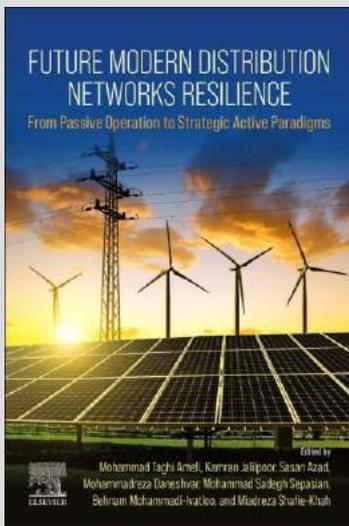
- Presents recent research in the areas of understanding the response mechanisms of concrete under tensile conditions
- Provides a summary of the most important parameters that affect the tensile response of concrete and shows how multi scale modeling is used to relate concrete composition to tensile properties
- Highlights the dynamic behavior of concrete from different viewpoints and provides practical examples of how detailed knowledge on tensile properties is used by engineers in structural applications
- Presents recent advancements in tensile strength determination under static and dynamic loading conditions for concrete structures

DESCRIPTION

Understanding the Tensile Properties of Concrete: In Statistics and Dynamics, Second Edition summarizes recent research on this important subject. After an introduction to concrete, the book is divided into two distinct parts. Part One starts with a summary chapter on the most important parameters that affect the tensile response of concrete. Chapters show how multiscale modeling is used to relate concrete composition to tensile properties. Part Two focuses on dynamic response and starts with an introduction to the different regimes of dynamic loading, ranging from low frequency loading by wind or earthquakes to extreme dynamic conditions due to explosions and ballistic impacts.

Following chapters review dynamic testing techniques and devices that deal with the various regimes of dynamic loading. Later chapters highlight the dynamic behavior of concrete from different viewpoints, and the book ends with a chapter on practical examples of how detailed knowledge on tensile properties is used by engineers in structural applications. Drawing on the work of some of the leading experts in the field, the book is fully updated and will be a valuable reference for civil and structural engineers as well as those researching this important material.

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Future Modern Distribution Networks Resilience

From Passive Operation to Strategic Active Paradigms

Edited by : **Miadreza Shafie-Khah**, School of Technology and Innovations Flexible Energy Resources, University of Vaasa, Vaasa, Finland.; **Mohammad Taghi Ameli**, Department of Electrical Engineering & Electrical Network Research Institute, Shahid Beheshti University, Tehran, Iran.; **Kamran Jalilpoor**, Department of Electrical Engineering, Shahid Beheshti University, Tehran, Iran.; **Sasan Azad**, Department of Electrical Engineering & Electrical Network Research Institute, Shahid Beheshti University, Tehran, Iran.; **Mohammadreza Daneshvar**, Research Assistant, Smart Energy Systems Lab in Electrical Power Systems Engineering at the University of Tabriz, Iran; **Mohammad Sadegh Sepasian**, Department of Electrical Engineering, Shahid Beheshti University, Tehran, Iran.

ISBN: 9780443160868
PUB DATE: Mar 01, 2024
LIST PRICE: £138.00 / \$180.00 / €160.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 0
AUDIENCE: Graduate students, researchers and engineers interested in energy systems, power engineering, and renewable energy
BIC CODES: THRD, THRM
THEMA CLASSIFICATION: THEMATH; THEMATHR; THEMATHY

Practical approaches for improving energy systems' resilience with an emphasis on economic results and cost-effective strategies

KEY FEATURES

- Reviews related concepts to active distribution systems resilience before, during, and after a sudden disaster
- Presents analysis of risk and vulnerability for reliable evaluation, sustainable operation, and accurate planning of energy grids against low-probability and high-impact events
- Highlights applications of practical metrics for resilience assessment of future energy networks
- Provides guidance for the development of cost-effective resilient techniques for reducing the vulnerability of electrical grids to severe disasters

DESCRIPTION

Future Modern Distribution Networks Resilience: From Passive Operation to Strategic Active Paradigms examines the combined impact of low-probability and high-impact events on modern distribution systems' resilience. Using practical guidance, the book provides comprehensive approaches for improving energy systems' resilience by utilizing infrastructure and operational strategies.

Divided in three parts, Part One provides a conceptual introduction and review of power system resilience, including topics such as risk and vulnerability assessment in power systems, resilience metrics, and power systems operation and planning. Part Two discusses modelling of vulnerability and resilience evaluation indices and cost-benefit analysis. Part Three reviews infrastructure and operational strategies to improve power system resilience, including robust grid hardening strategies, mobile energy storage and electric vehicles, and networked microgrids and renewable energy resources.

With a strong focus on economic results and cost-effectives, *Future Modern Distribution Networks Resilience* is a practical reference for students, researchers and engineers interested in power engineering, energy systems, and renewable energy.

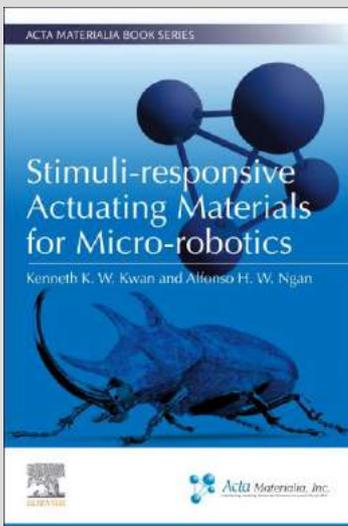


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ENGINEERING Electrical

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Stimuli-responsive Actuating Materials for Micro-robotics

Kenneth K. W. Kwan, Ph.D., University of Hong Kong and **Alfonso H. W. Ngan**, Ph.D., University of Hong Kong

ISBN: 9780443160943
PUB DATE: Mar 01, 2024
LIST PRICE: £165.00 / \$215.00 / €190.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 370
AUDIENCE: Materials Scientists and Engineers, Mechanical Engineers, Robotics Engineers
BIC CODES: TGM, TJ
THEMA CLASSIFICATION: THEMATGM; THEMATJFD

An examination of smart material systems for micro-robotics and their sensory responses

A Volume in the *Acta Materialia Book Series* Series

KEY FEATURES

- Examines high-performance stimuli-responsive actuating materials for micro-robotics applications
- Discusses common enabling technologies and micro-robotics device construction, with a focus on integration of materials
- Reviews the application prospects of material-driven micro-robots in micro-surgery and compact engineering

DESCRIPTION

Stimuli-responsive Actuating Materials for Micro-robotics examines the latest stimuli-responsive actuating materials with high potential for applications in microrobotics. The material science, functionalities, performance, and synthesis of these materials are reviewed. Then, the common enabling technologies for material and signal integration such as 3/4D printing and interface engineering, and chemo-mechanics modeling of the materials are discussed. Finally, there is a chapter that looks at the prospects of materials for micro-robotics, including case studies for specific applications such as self-folding origami robots and robots for micro-surgery. This book is suitable for researchers and practitioners working in the subject areas of materials science and engineering.



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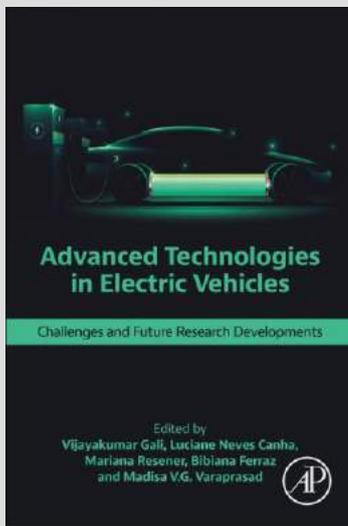


ENGINEERING Materials
<https://virtuale.elsevier.com>, www.elsevier.com

Advanced Technologies in Electric Vehicles

Challenges and Future Research Developments

Edited by : **Vijayakumar Gali**, Assistant Professor of Electrical and Electronics Engineering, Poonima University, Jaipur, India; **Luciane Neves Canha**, Universidade Federal de Santa Maria, Departamento de Eletromecanica e Sistemas de Potencia, Campus Universitario, Santa Maria, Brazil; **Mariana Resener**, Universidade Federal do Rio Grande do Sul, Escola de Engenharia - Campus Centro, Brazil; **Bibiana Ferraz**, Universidade Federal do Rio Grande do Sul, Escola de Engenharia - Campus Centro, Porto Alegre-RS, Brazil and **Madisa V.G. Varaprasad**, Vignan Institute of Information Technology, Besides VSEZ , Duvvada, Vadlapudi Post, Gajuwaka, Visakhaptnam, India



ISBN: 9780443189999
PUB DATE: Mar 01, 2024
LIST PRICE: £141.99 / \$175.00 / €166.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 800
AUDIENCE: Graduate students and researchers interested in electric vehicle technology. Engineers working in the design and manufacture of electric vehicles.
BIC CODES: PHH
THEMA CLASSIFICATION: THEMAPHH

A comprehensive guide to electric vehicle technologies that provides fundamentals and theory as well as the latest advances and techniques

KEY FEATURES

- Provides the latest advances in battery management systems to address power quality issues
- Explains step-by-step methodologies for the testing of EV battery systems
- Explores the technological options for charging systems and charging infrastructure

DESCRIPTION

Advanced Technologies in Electric Vehicles: Challenges and Future Research Developments discusses fundamental and advanced concepts, challenges and future perspectives surrounding EVs. Sections cover advances and long-term challenges such as battery life span, efficiency, and power management systems. In addition, the book covers all aspects of the EV field, including vehicle performance, configuration, control strategy, design methodology, modeling and simulation for different conventional and modern vehicles based on mathematical equations. By tackling the fundamentals, theory and design of conventional electric vehicles (EVs), hybrid electric vehicles (HEVs), and fuel cell vehicles (FCVs), this book presents a comprehensive reference.

Investment in hybrid and electric vehicle (EV) technology research has been increasing steadily in recent years, both from governments and within companies. The role of the combustion engine in causing climate change has put the automobile industry on a path of rapid evolution towards electric vehicles, bringing experts with a range of backgrounds into the field.

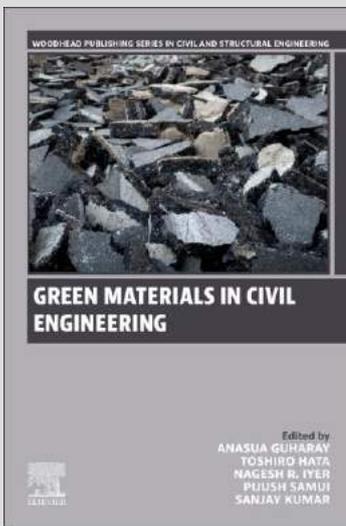


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ENGINEERING Mechanical

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



Green Materials in Civil Engineering

Edited by : **Anasua GuhaRay**, Associate Professor, Department of Civil Engineering, BITS Pilani, Hyderabad Campus, India; **Toshiro Hata**, Professor, Department of Environmental and Civil Engineering, Hiroshima University, Japan; **Nagesh R. Iyer**, Fellow of the Indian National Academy of Engineering and currently Dean (Infrastructure, Planning & Support) & Visiting Professor, Indian Institute of Technology Dharwad, India; **Pijush Samui**, Associate Professor, National Institute of Technology, Patna, India and **Sanjay Kumar**, Assistant Professor, Department of Civil Engineering, NIT Patna, India

ISBN: 9780443191060
PUB DATE: Mar 01, 2024
LIST PRICE: £165.00 / \$205.99 / €194.99
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 430
AUDIENCE: Academic and industrial researchers, materials scientists and civil engineers who are working in the development of construction materials and utilization of waste and other
BIC CODES: TGM, TN
THEMA CLASSIFICATION: THEMATGM; THEMATN

Act as a centralized resource, covering the application and use of green materials in civil engineering

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

KEY FEATURES

- Provides an up-to-date and comprehensive resource on the use of green materials in civil engineering
- Covers green concrete, agricultural waste, industrial by-products, biological and waste materials such as smart materials, microbially generated calcium precipitation, recycled asphalt and natural fibers
- Discusses selection criteria, durability, lifecycle, recyclability, and regulatory measures

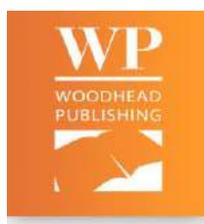
DESCRIPTION

Green Materials in Civil Engineering provides a comprehensive resource for practitioners to learn more about the utilization of these materials in civil engineering, as well as their practical applications. Novel green materials such as fly ash, slag, fiber-reinforced concrete and soil, smart materials, biological materials, and waste materials such as mineral wastes, building and demolition waste, recycled asphalt, coal gangue and industrial by-products are discussed in detail. Emphasis is placed on understanding the qualities, selection criteria, products and applications, durability, life cycle, and recyclability of these materials.

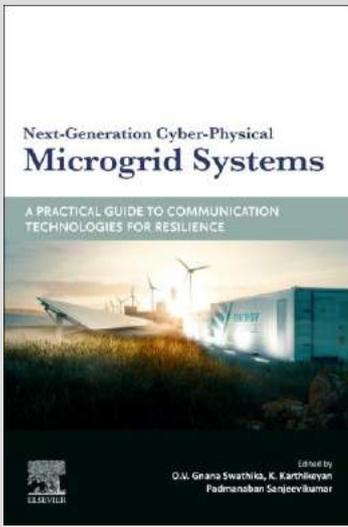
The book will be a valuable reference resource for academic and industrial researchers, materials scientists, and civil engineers who are working in the development of construction materials, utilization of waste, and other fine by-products in the production of concrete and other construction materials.



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



Next-Generation Cyber-Physical Microgrid Systems

A Practical Guide to Communication Technologies for Resilience

Edited by : **O.V. Gnana Swathika**, Associate Professor, Centre for Smart Grid Technologies, School of Electrical Engineering, Vellore Institute of Technology (Chennai), India.; **R. Karthikeyan**, Chief Engineering Manager, Larsen & Toubro Pvt. Ltd., India and **Sanjeevikumar Padmanaban**, Professor, Department of Electrical Engineering, IT and Cybernetics, University of South-Eastern Norway, Porsgrunn, Norway

ISBN: 9780443221873
PUB DATE: Mar 01, 2024
LIST PRICE: £150.00 / \$185.00 / €175.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 233
AUDIENCE: Industry professionals designing energy grids/systems and researchers working on those areas
BIC CODES: THRM
THEMA CLASSIFICATION: THEMATHR; THEMATHY

Provides a practical guide to communication technologies for the integration of distributed energy sources into resilient microgrids

KEY FEATURES

- Provides a practical reference for resilience in cyber-physical microgrid with distributed and renewable integration
- Summarizes the opportunities and challenges arising from implementation of communication technologies
- Includes simulations, models, case studies, and test codes to maximize practical application for students and professionals

DESCRIPTION

Next-Generation Cyber-Physical Microgrid Systems: A Practical Guide to Communication Technologies and Resilience presents the opportunities and challenges of using communication network technology to integrate distributed generation systems into microgrids.

Working their way through case studies and theoretical strategies, the global range of authors analyze the particular needs of different system structures, including DC, AC-DC and hybrid microgrids, island-bound or grid-connected systems, and case studies in wind power and photovoltaic systems. Risks arising from the communication networks are addressed in detail, with strategies covered including modelling, cyber-physical security set-ups, applications of blockchain, demand-response analyses, and the impact and mitigation of cyber-attacks. Power-electronics interfaces for the integration of these technologies are demonstrated and explained.

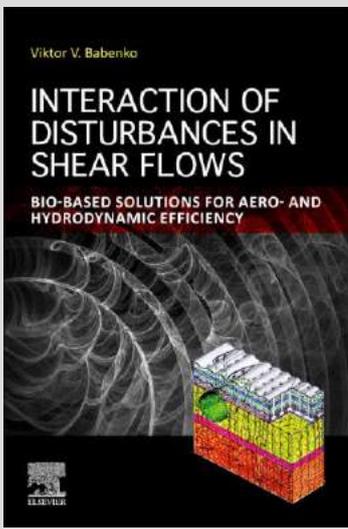
With a wealth of real-world, practical advice for the implementation and protection of these communication strategies, Next-Generation Cyber-Physical Microgrid Systems will be a useful resource for researchers and industry professionals developing the sustainable energy systems of the future.



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



Interaction of Disturbances in Shear Flows

Bio-based Solutions for Aero- and Hydrodynamic Efficiency

Viktor V. Babenko, Emeritus Professor and former Dept. Head, Department of Information Systems in Hydroaeromechanics and Ecology, Institute of Hydromechanics, National Academy of Sciences of Ukraine, Kiev, Ukraine

ISBN: 9780443241468
PUB DATE: Mar 01, 2024
LIST PRICE: £202.99 / \$250.00 / €236.99

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 606

AUDIENCE: Postgraduate students, researchers, and academics in aerospace engineering, automotive engineering, marine engineering, and advanced/applied mechanical engineering programs specifically orientated to fluid dynamics and the study of stressed shell structures

BIC CODES: TRP, TB, UY, TNC, TGB, PBW, TGMF2, TTS, PHDF, TBJ, TGMF1, TGMF, TRC, PHU

THEMA CLASSIFICATION:

THEMATRP; THEMAPHDF;
THEMAPBW; THEMATJF;
THEMATGMF; THEMAPHU;
THEMATRC; THEMATGB;
THEMATNC; THEMAUY;
THEMATTS; THEMATB

Describes bio-based techniques for solving real-world problems relating to aero- and hydrodynamics for improved efficiency and reliability of vehicles

KEY FEATURES

- Presents data obtained through flow visualization using the tellurium method and multi-colored tinted jets.
- Offers a complete picture of shear flows, taking an interdisciplinary approach.
- Applies practical solutions to problems being studied both in academia and industry.

DESCRIPTION

Interaction of Disturbances in Shear Flows aims to provide a comprehensive, in-depth overview of the current state of knowledge on the subject.

Authored by a highly reputed expert with decades of experience and many software patents to his credit, the volume explores the state of the art in computational fluid dynamics to demonstrate how physical measurements and visualization patterns can be applied in solving various aero- and hydrodynamic problems. It also delves into analytical methodologies to compare and contrast with the theoretical models most commonly used in the field. Additionally, it demonstrates the significance of comprehending and managing disturbances in shear flows, with discussions of applications of the research to optimize the design of aircraft, automotive vehicles, and marine vessels, with a strong emphasis on enhancing aero- and hydrodynamic efficiency, fuel economy, and the reduction of harmful emissions.

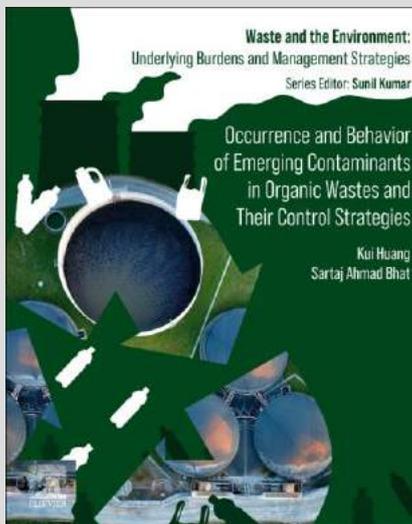
Academic and industry-based readers alike will find this a useful resource to equip themselves with the tools to understand and address practical engineering and modelling challenges they are faced with in their research or work.



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ENGINEERING Automotive & Aeronautical
<https://virtuale.elsevier.com>, www.elsevier.com



Occurrence and Behavior of Emerging Contaminants in Organic Wastes and Their Control Strategies

Edited by : **Kui Huang**, Professor, School of Environmental and Municipal Engineering, Lanzhou Jiaotong University, Lanzhou, China; **Jiachao Zhang**, Professor, Hunan Agricultural University, School of Environmental Science and Engineering, Hunan, China and **Sartaj Ahmad Bhat**, Postdoctoral Researcher, River Basin Research Center, Gifu University, Gifu, Japan

ISBN: 9780443135859
PUB DATE: Mar 01, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 425
AUDIENCE: Environmental scientists, researchers, undergraduate, graduate and postgraduate students, managers, engineers, municipal and environmental engineers, waste treatment engineers and managers, microbiologists, and environmental health and risk scientists
BIC CODES: RN, TQSR
THEMA CLASSIFICATION: THEMATQ; THEMARNH; THEMATQSR

Provides up-to-date information on the occurrence, monitoring, and behavior of emerging contaminants

A Volume in the *Waste And The Environment: Underlying Burdens And Management Strategies* Series

KEY FEATURES

- Covers a broad range of information on different emerging contaminants presented in different types of organic wastes
- Deals with insights, behaviors, monitoring, and pathways of emerging contaminants in the classification, transport, treatment, and disposal of organic wastes
- Illustrates the environmental risks of emerging contaminants in final waste products of organic wastes
- Highlights feasible control strategies for emerging contaminants during the whole process of organic waste management

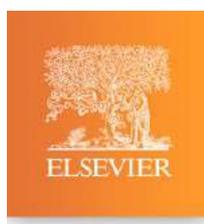
DESCRIPTION

Occurrence and Behavior of Emerging Contaminants in Organic Wastes and Their Control Strategies provides updated information on the occurrence, monitoring, and behavior of emerging contaminants discharged into the environment from different anthropogenic activities as well as organic wastes management practices, which can be beneficial in classifying and broadly addressing the assessment, treatment, disposal, and management of organic wastes. This book covers the occurrences of nanoparticles, microplastics, antibiotic resistance genes, disinfection by-products, medical waste, pharmaceutical and personal care products, and other emerging contaminants discharged in different types of organic wastes.

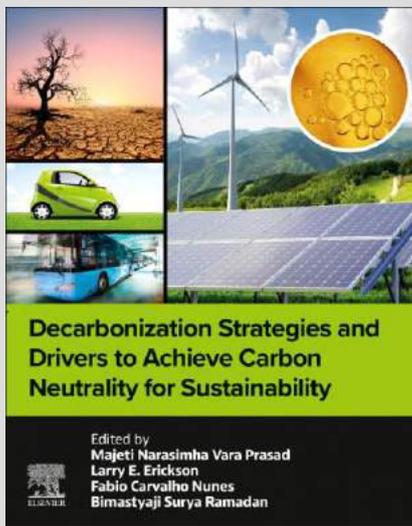
Researchers, scientists, graduate, and postgraduate students will find this book to be a timely contribution that will be useful in identifying and comprehensively addressing occurrence and behavior of emerging contaminants in organic wastes.



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EARTH & ENVIRONMENT Environmental Management
<https://virtuale.elsevier.com>, www.elsevier.com



Decarbonization Strategies and Drivers to Achieve Carbon Neutrality for Sustainability

Edited by : **Majeti Narasimha Vara Prasad**, Emeritus Professor, School of Life Sciences, University of Hyderabad, Hyderabad, India; **Larry Erickson**, Professor, Chemical Engineering, Kansas State University; **Fabio Carvalho Nunes**, Sc. Geochemistry and Environment (2005), Ph.D. in Coastal and Sedimentary Geology, Professor and Researcher, Federal Institute of Education, Science and Technology of Bahia (IF BAIANO). Environmental consultant job in licensing projects, impact assessment and environmental management and **Bimastyaji Surya Ramadan**, M.Sc. in soil remediation and Ph.D. in Environmental Systems, Assistant Professor from Department of Environmental Engineering Department, Faculty of Engineering, Universitas Diponegoro, and a researcher in Environmental Sustainability Research Center (ENSI-RC) Universitas Diponegoro, Indonesia

ISBN: 9780443136078
PUB DATE: May 01, 2024
LIST PRICE: £115.00 / \$150.00 /
€130.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 0

AUDIENCE: Environmental scientists, energy scientists, academics, engineers, researchers, policymakers, managers, master and undergraduate students

BIC CODES: TVF, RN, PHVJ, TH, THX

THEMA CLASSIFICATION:

THEMATVF; THEMATQ;

THEMARBP; THEMATH; THEMATHV

Highlights the importance of different strategies for decarbonization

KEY FEATURES

- Provides strategies for the implementation of decarbonization
- Explores the possibilities for reducing the emission of greenhouse gases
- Suggests actions and possible solutions to counteract climate change and its consequences

DESCRIPTION

Decarbonization Strategies and Drivers to Achieve Carbon Neutrality for Sustainability emphasizes the significance of various decarbonization strategies. It is expected to solve some of the problems centered around decarbonization and available technologies and to diversify renewable energy supply in different sectors contributing to energy security.

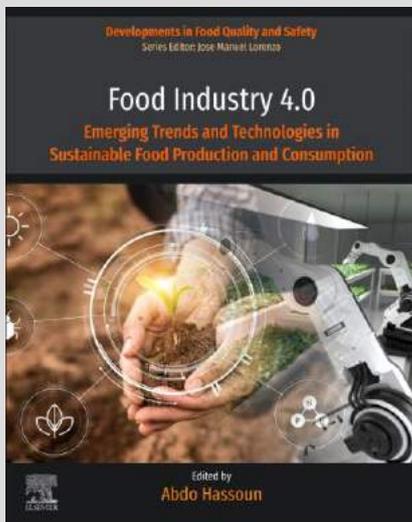
The book covers contribution of bioenergy to decarbonization, non-fossil energy targets, role of wind energy, hydrogen energy, potential of geothermal energy, nuclear energy, wind to energy, role of electrification and carbon capture, utilization and storage (CCUS) technologies are covered in this work. *Decarbonization Strategies and Drivers to Achieve Carbon Neutrality for Sustainability* aims to explain how reducing petroleum consumption and supplementing alternate sources of renewable fuels is vital and would strengthen decarbonization.



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EARTH & ENVIRONMENT Environmental Management
<https://virtuale.elsevier.com>, www.elsevier.com



Food Industry 4.0

Emerging Trends and Technologies in Sustainable Food Production and Consumption

Edited by : **Abdo Hassoun**, Chief Executive Officer of Safir, Sustainable AgriFoodtech Innovation and Research, France

ISBN: 9780443155161
PUB DATE: Apr 01, 2024
LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 300

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. 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

BIC CODES: TDCT, MMFM

THEMA CLASSIFICATION: THEMAMKFM; THEMATDCT



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Provides comprehensive information about the fourth industrial revolution (Industry 4.0) innovations and relevant technologies used in the food industry

A Volume in the *Developments in Food Quality and Safety Series*

KEY FEATURES

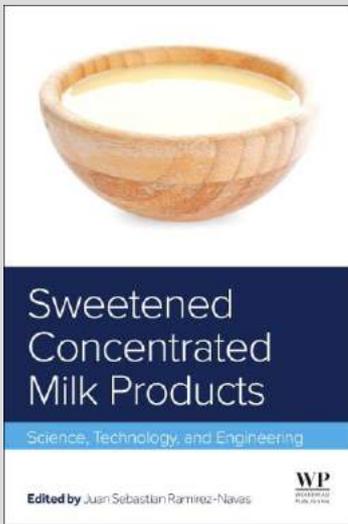
- Provides a comprehensive view of Industry 4.0 technologies as applied to the food industry
- Covers the most trend topics related to novel foods in the light of emerging innovations and developments
- Discusses how implementing innovative technologies holds significant potential to increase efficiency and value added, save time and cost, and increase profitability in various food sectors

DESCRIPTION

Developments in Food Quality and Safety 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.

Volume 4, *Food Industry 4.0: Emerging Trends and Technologies in Food Production and Consumption* covers several technologies (e.g., robotics, smart sensors, artificial intelligence, and big data) at different development and research levels in order to provide holistic multidisciplinary approaches that embrace simultaneously as many Industry 4.0 technologies as possible, reflecting the long journey of food from farm (or sea) to fork. Chapters explore automation, digitalization, and green technologies, besides food quality, food safety food traceability, processing and preservation 4.0. Topics such as smart sensors, artificial intelligence and big data revolution, additive manufacturing, and emerging food trends are also explored. The series is edited by Dr. José Manuel Lorenzo and authored by a team of global experts in the fields of Food Quality and Safety, providing comprehensive knowledge to food industry personals and scientists.

FOOD SCIENCE, TECHNOLOGY & NUTRITION
<https://virtuale.elsevier.com>, www.elsevier.com



Sweetened Concentrated Milk Products

Science, Technology, and Engineering

Juan Ramirez-Navas, Professor, Chemical Program, Cooperative University of Colombia and Assistant Professor, Food Engineering School, University of Valle, Colombia

ISBN: 9780128233733
PUB DATE: Dec 01, 2023
LIST PRICE: £195.00 / \$250.00 / €220.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 220
AUDIENCE: Researchers and practitioners in dairy science, specifically those in milk product R&D and quality control. Advanced undergraduate and graduate students in food science, dairy science, and food quality control courses
BIC CODES: TDCT
THEMA CLASSIFICATION: THEMATDCT

Presents the first comprehensive text on sweetened concentrated candies, delicacies, evaporated and condensed milk products

KEY FEATURES

- Offers the most current data and information on sweetened, concentrated milk products
- Discusses formulations, technology, product defects and solutions for each SCM product
- Includes examples of experimental design and applications of innovative processes for those working in SCM research and development

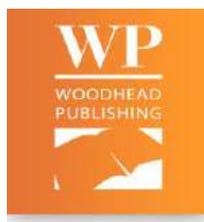
DESCRIPTION

Sweetened Concentrated Milk Products: Science, Technology, and Engineering provides the most updated and comprehensive knowledge on different SCM products, delving into the production processes for each. Written by international experts, this book discusses existing information on concentrated milk and its more commercial forms, including evaporated and condensed milks. Other products detailed in this text include dulce de leches, such as sweetened caramelized goat's milk, *panelitas de leche* (milk panels), and various milk-based delicacies. The book presents the definition, main characteristics, common defects, and elaboration process for each commercial form.

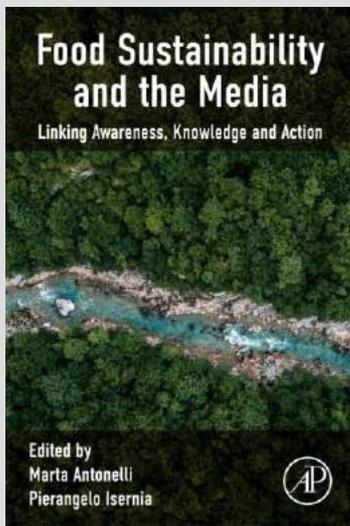
In addition, the book includes lifetime calculation data and results of the addition of whey into milk candies. Lastly, it provides information on the quality parameters which all SCMs must meet, including experimental design and application examples in SCM research and development. This is a vital resource for researchers and practitioners in dairy science with interests and work in SCM product formulation, technology, and seeking solutions for their defects.



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Food Sustainability and the Media

Linking Awareness, Knowledge and Action

Edited by : **Marta Antonelli**, Senior Research Associate, Euro-Mediterranean Centre on Climate Change, Rome, Italy and **Pierangelo Isernia**, Department of Social, Political and Cognitive Sciences, University of Siena, Siena, Italy

ISBN: 9780323912273
PUB DATE: Nov 01, 2023
LIST PRICE: £115.00 / \$150.00 /
€131.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 220

AUDIENCE: Specialists in the field of food security, sustainability and media studies and to private and public actors working in these areas. It is especially suited for adoption in both graduate and postgraduate courses on food security, sustainability, media and communication studies

BIC CODES: KJS, LND, LNKF, RNFF, TDCT

THEMA CLASSIFICATION:

THEMATDCT; THEMAKJS;

THEMAJW; THEMALNDB;

THEMALNKF

Explore the roles the media plays in raising awareness, spurring action, and increasing understanding about food security and global sustainability issues

KEY FEATURES

- Addresses both conceptual and theoretical issues
- Presents a diversified set of methodological perspectives, theoretical backgrounds and issues
- Provides a conclusion that ties the content together, exploring the role of the media and food sustainability in Europe and the U.S.

DESCRIPTION

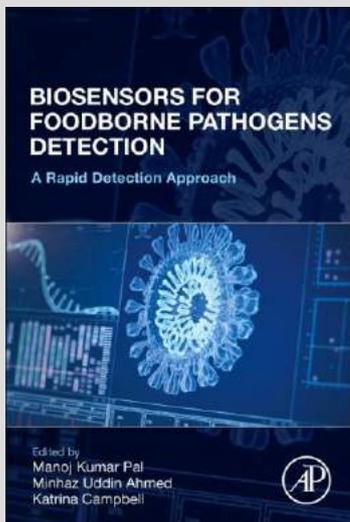
Food Sustainability and the Media: Linking Awareness, Knowledge and Action is the first book to explore the roles that the media plays in raising awareness, spurring action, and increasing understanding about food security and global sustainability issues. The book addresses the means of leveraging traditional and new media to advance food and sustainability discourse by linking awareness, knowledge, and action. The book links sustainability and food security in media communication to address different topics, including the way climate change is framed by the media, key factors of success and failure in NGOs, public and corporate communication, and climate change denial.



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FOOD SCIENCE, TECHNOLOGY & NUTRITION
<https://virtuale.elsevier.com>, www.elsevier.com



Biosensors for Foodborne Pathogens Detection

A Rapid Detection Approach

Edited by : **Manoj Kumar Pal**, Department of Life Sciences, Graphic Era (Deemed to be University) Dehradun566/6, Bell Road, Society Area, Clement Town, Dehradun, Uttarakhand, India; **Minhaz Uddin Ahmed**, Associate Professor Chemical Science, Faculty of Science, Universiti Brunei Darussalam, Jalan Tungku Link, Gadong, India and **Katrina Campbell**, Professor, School of Biological Sciences Institute for Global Food Security, Queen's University Belfast, UK

ISBN: 9780323955867
PUB DATE: Dec 01, 2023
LIST PRICE: £115.00 / \$150.00 / €130.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 400

AUDIENCE: Research students, Master students, Faculty and scientists working in food security and food pathogenesis, Young researchers from different background in food-agriculture, chemical and health sectors, could be one of the major tools for basic and fundamental detail studies of biosensors in food sectors for different industrial R&D activities

BIC CODES: TDCT, MMFM

THEMA CLASSIFICATION: THEMAMKFM; THEMATDCT

Covers the current technological advancements in applied Interdisciplinary biosensing approaches for food safety measurements

KEY FEATURES

- Explores biosensing in the detection of food pathogens, from basic introduction to advanced approaches
- Covers advancements in electrochemical impedance spectroscopy (EIS) based biosensors because of its enhanced sensitivity and specificity
- Brings the role of nanotechnology in biosensing

DESCRIPTION

Biosensors for Foodborne Pathogens Detection: A Rapid Detection Approach covers rapid and accurate measurement for biosensing analysis. This book is organized in a systematic way, covering basic introduction and advanced approaches in biosensing and their use in the detection of food pathogens. This compilation includes chapters such as Methods, techniques and latest developments in the detection of foodborne pathogens; Basic principles in Biosensors and bioelectronics for the foodborne pathogens; Various bio-recognition receptors used in the biosensors; Nanomaterials and signal amplification in biosensors for foodborne pathogens; electrochemical biosensors for foodborne pathogens; Optical biosensors for foodborne pathogens, and more.

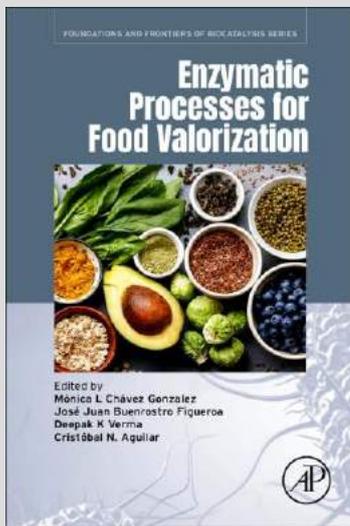
This book act as a comprehensive resource for researchers or scientists working in food safety, especially in microbial food spoilage detection using biosensors.



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FOOD SCIENCE, TECHNOLOGY & NUTRITION
<https://virtuale.elsevier.com>, www.elsevier.com



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; **Cristóbal Noé Aguilar**, Professor, Food Research Department, School of Chemistry, Autonomous University of Coahuila, Mexico Director of Research and Postgraduate Studies, Autonomous University of Coahuila, Mexico and **Deepak K. Verma**, Department of Agricultural and Food Engineering, Indian Institute of Technology, West Bengal, India

ISBN: 9780323959964
PUB DATE: Mar 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 340
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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FOOD SCIENCE, TECHNOLOGY & NUTRITION
<https://virtuale.elsevier.com>, www.elsevier.com

COVER IMAGE
FORTHCOMING

Emerging Contaminants

Sustainable Agriculture and the Environment

Edited by : **Arpna Kumari**, JSPS Postdoc Fellow, Laboratory of Plant Nutrition and Fertilizers, Department of Applied Biological Chemistry, Graduate School of Agricultural and Life Sciences, The University of Tokyo, Japan.; **Vishnu D. Rajput**, Researcher, Academy of Biology and Biotechnology, Southern Federal University, Russia; **Saglara S. Mandzhieva**, Researcher and Head, "Monitoring of Biosphere" Laboratory of Southern Federal University, Russia; **Tatiana Minkina**, Head of Soil Science and Land Evaluation, Department of Southern Federal University, Russia and **Eric van Hullebusch**, Professor, Biogeochemistry of Engineered Ecosystems, Institut de Physique du Globe de Paris, Equipe Biogeochimie a l'Anthropocene des Elements et Contaminants, Emergents (ACE), Paris, France

ISBN: 9780443189852
PUB DATE: Mar 01, 2024
LIST PRICE: £115.00 / \$150.00 /
€130.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 340

AUDIENCE: Students and researchers in sustainable agricultural sciences, Regulators and policy makers, corporate regulatory compliance officers

BIC CODES: TVK, TV, RN, RBGB

THEMA CLASSIFICATION:

THEMATVK; THEMATVB;

THEMARBGB; THEMATQ; THEMATV

Helps readers understand the impacts of ECs on sustainable agricultural production

KEY FEATURES

- Focuses on the extensive emission of ECs raising concerns of toxicity in crop plants, in the environment, and also to human beings via the food chain
- Includes examples and real-world insights
- Highlights interaction of different categories of ECs with crop plants their toxicity and fate in the environment

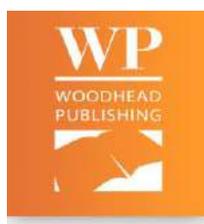
DESCRIPTION

Emerging Contaminants: Sustainable Agriculture and the Environment provides a thorough, comprehensive, and interdisciplinary overview of the many categories of emerging pollutants, including pharmaceuticals, insecticides, personal care items, and industrial chemicals that are currently impacting the environment. With insights into the exposure associated consequences on crops and edible plants, the book is designed to enable foundational understanding as the basis for future research, as well as practical application in current environments. Following an introduction to environmental contaminants, the book goes on to discuss their fate in soils, the most up-to-date analytical methods for detecting them in different environmental matrices, and current regulatory restrictions.

Finally, the book comes to a close with the last chapter dedicated to conclusions and future perspectives. *Emerging Contaminants* is an ideal resource for researchers and professionals from a variety of sciences.



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FOOD SCIENCE, TECHNOLOGY & NUTRITION
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Early Continent Evolution of the North China Craton



Edited by
Mingguo Zhai, Peng Peng,
Yanyan Zhou and Lei Zhao

Early Continent Evolution of the North China Craton

Edited by : **Mingguo Zhai**, Professor, State Key Laboratory of Lithospheric Evolution, Institute of Geology and Geophysics, University of Chinese Academy of Sciences, Beijing, China; **Peng Peng**, Professor, China-Brazil Joint Geoscience Research Center, Institute of Geology and Geophysics, University of Chinese Academy of Sciences, Beijing, China; **Yanyan Zhou**, Associate Professor, State Key Laboratory of Lithospheric Evolution, Institute of Geology and Geophysics, University of Chinese Academy of Sciences, Beijing, China and **Lei Zhao**, Associate Professor, State Key Laboratory of Lithospheric Evolution, Institute of Geology and Geophysics, University of Chinese Academy of Sciences, Beijing, China

ISBN: 9780443138898
PUB DATE: May 01, 2024
LIST PRICE: £111.00 / \$145.00 /
€126.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 237
AUDIENCE: Academics, upper-level
students and researchers in Geology
including Precambrian Geology,
Geochronology, and Geophysics
BIC CODES: RBGF, RBG, RBX
THEMA CLASSIFICATION:
THEMARBG; THEMARBX

Discusses the tectono-thermal regimes of the early continental crust in the North China Craton (NCC), from the Hadean to the early Paleoproterozoic

KEY FEATURES

- Completely covers all key issues and research frontiers of the early continental evolution of the North China Craton (NCC), from the Hadean to the early Paleoproterozoic
- Systematically summarizes the Neoproterozoic metamorphism of the NCC and discusses the implications for tectonic models
- Includes discussion on controversial views on tectonic regimes of the NCC during the Archean to early Paleoproterozoic, with objective conclusions

DESCRIPTION

Early Continent Evolution of the North China Craton discusses the tectono-thermal regimes of the early continental crust in the North China Craton (NCC), from the Hadean to the early Paleoproterozoic, reconstructing the evolutionary framework and facilitating comprehensive understanding of the early continent evolution of the NCC. The book systematically summarizes the Neoproterozoic metamorphism of the NCC and discusses the implications for the tectonic models of the NCC through compiling evolutionary information of the Hadean to the early Paleoproterozoic sequences in the NCC.

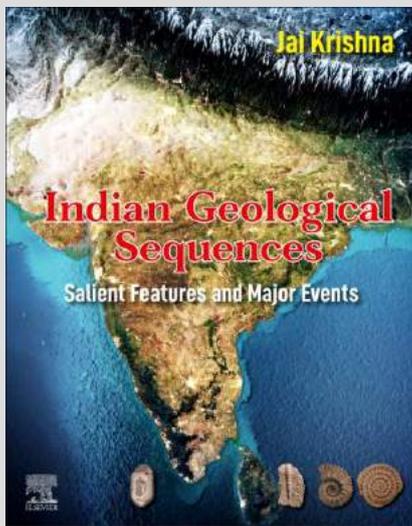
Researchers, academics, and students in geology (especially Precambrian Geology), geomorphology, geophysics, and geological engineering will benefit from using this book in applying tectonic models to other cratonic blocks globally, and will understand evolutionary information of the largest and oldest cratonic block in China.



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EARTH & ENVIRONMENT Geology
<https://virtuale.elsevier.com>, www.elsevier.com



Indian Geological Sequences

Salient Features and Major Events

Jai Krishna, Independent Petroleum Geology Consultant, Former Professor and Head, Centre of Advanced Studies in Geology, Banaras Hindu University, Varanasi, Uttar Pradesh, India

ISBN: 9780128212707
PUB DATE: Oct 27, 2023
LIST PRICE: £145.00 / \$185.00 / €162.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 325
ILLUSTRATIONS: 100 illustrations (25 in full color)
AUDIENCE: Students, researchers and professionals in earth science
BIC CODES: RBG
THEMA CLASSIFICATION: THEMARBG

A holistic, integrative, innovative record of the geological evolution of India and surrounding countries as told through precisely dated isochronous sequence timelines

KEY FEATURES

- Relates multi-dimensional geological events of one region to another in a vast supra-region through precisely dated sequence timelines
- Links macro- and micro-evolutionary advent and extinction events to macro- and micro-geological events
- Includes multidisciplinary data sources, from sedimentological, geochemical, and geophysical records

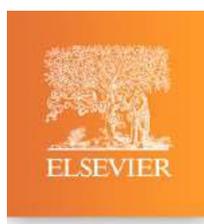
DESCRIPTION

Indian Geological Sequences: Salient Features and Major Events focuses on the first ever differentiation of the entire Indian record into a five tier hierarchical succession of geological sequences – five giga to 12 mega to 25 1st order to 68 2nd order to over 100 3rd order ones as its basic skeleton. Using the developed grid of sequence timelines, the diverse inter-disciplinary geological manifestations on the broad tectono-stratigraphically homogeneous supra-region of GTM (Gondwanian Tethyan Margin from Arabia to Australia) have been mutually integrated towards chronicling of events with precision never ever realized earlier. The giga-sequences GS-I to GS-IV comprising eight mega-sequences MS-I to MS-VIII deal with the Precambrian in brief.

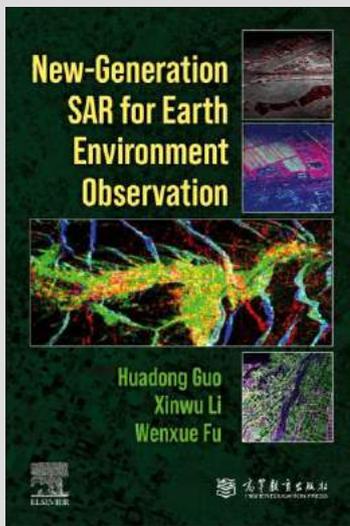
GS-V (~ 635 ma onward) MS-IX (~ 635-444 ma) and MS-XII (~ 61.6 onward) include orogenies while MS-X (~ 444-259 ma) and MS-XI (~ 259-61.6 ma) are dominated by dismemberment tectonics. The prime focus is on the correlation of events across scores of sedimentary basins from outcrop to subsurface, onshore to offshore, marine to non-marine, shallow to deep water, plant to animal, micro to macro-fossils, and Proto-Paleo-Neotethys to Indian Ocean.



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EARTH & ENVIRONMENT Geology
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New Generation Synthetic Aperture Radar (SAR) for Earth Environment Observation

Huadong Guo, Director General, International Research Center of Big Data for Sustainable Development Goals (CBAS), Professor, Aerospace Information Research Institute (AIR), Chinese Academy of Sciences (CAS); **Xinwu Li**, Aerospace Information Research Institute, Chinese Academy of Science, China and **Wenxue Fu**, Hefei University of Technology, China

ISBN: 9780443153112
PUB DATE: Mar 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 298

AUDIENCE: SAR remote sensing researchers, teachers, and students of remote sensing, and the related technicians and field officers As a reference for scientists engaged in SAR earth observation methods and techniques, remote sensing of environmental change and earth system science applications, teachers and students of relevant majors and staff of remote sensing application departments

BIC CODES: PHVG

THEMA CLASSIFICATION:
THEMAPHVG

Summarizes significant achievements on concepts, models, methods and applications of new generation SAR remote sensing for Earth environmental observation over the last 10 years

KEY FEATURES

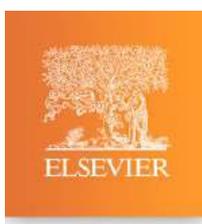
- Key issues of new generation SAR remote sensing which are discussed in this book
- The latest research status and development trend, the basic theories and methods of new generation SAR are discussed comprehensively
- The new or original concepts, methods and typical applications of new generation SAR information processing and parameter inversion are systematically developed and created, it is the most advanced research achievement in the field of new generation SAR in the recent years
- A new idea of SAR information integration processing and environmental parameter inversion is proposed, it represent a new SAR science application mode that has the capability to improve the SAR remote-sensing quantitative application level and promote the development of new theories and methodologies

DESCRIPTION

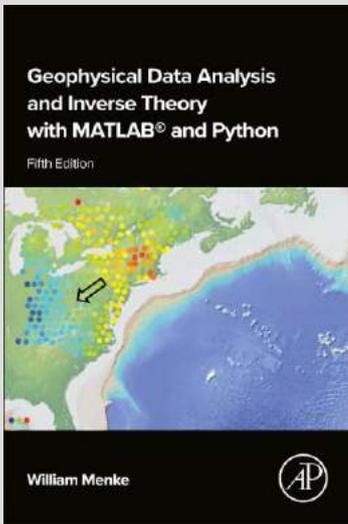
How to reveal and fully use the information of "band, amplitude, polarization and phase" of electromagnetic wave is the key science and technology issues for SAR imaging mechanisms - information processing - parameter inversion - environmental change cognition, especially for new generation SAR with its capabilities of full polarimetric and interferometric information retrieval, 3D / 4D reconstruction, multi-based synergistic observation and ultra-high resolution data acquisition. Based on above key issues, three aspects of new generation SAR remote sensing are discussed in this book (1) The latest research status and development trend, the basic theories and methods of new generation SAR are discussed comprehensively (2) The new or original concepts, methods and typical applications of new generation SAR information processing and parameter inversion are systematically developed and created, it is the most advanced research achievement in the field of new generation SAR in the recent years (3) A new idea of SAR information integration processing and environmental parameter inversion is proposed, it represent a new SAR science application mode that has the capability to improve the SAR remote-sensing quantitative application level and promote the development of new theories and methodologies.



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EARTH & ENVIRONMENT Geology
<https://virtuale.elsevier.com>, www.elsevier.com



Geophysical Data Analysis and Inverse Theory with MATLAB® and Python, 5e

William Menke, Professor of Earth and Environmental Sciences, Columbia University

ISBN: 9780443137945
PREVIOUS ISBN: 9780128135556
PUB DATE: Mar 01, 2024
LIST PRICE: £95.95 / \$125.00 / €109.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 0

AUDIENCE: Seismologists, geophysicists, volcanologists, geodesists, geodynamicists, tectonophysicists, rock physicists, and geochemists. Environmental scientists and engineers, reservoir engineers, acousticians, hydrologists, oceanographers, atmospheric scientists, and remote sensing experts

BIC CODES: PHVG

THEMA CLASSIFICATION:

THEMAPHVG

An in-depth review of inverse theory and tomography as it is practiced by geophysicists featuring Python and MATLAB problem sets

KEY FEATURES

- Includes material on probability, including Bayesian inference, probability density function, and metropolis algorithm
- Offers detailed discussion of the application of inverse theory to seismological, gravitational, and tectonic studies
- Provides numerous examples, color figures, and end-of-chapter problems to help explore and further understand the presented ideas
- Includes both MATLAB and Python examples and problem sets

DESCRIPTION

Geophysical Data Analysis and Inverse Theory with MATLAB or Python, Fifth Edition, is a revised and expanded introduction to inverse theory and tomography as it is practiced by geophysicists. It demonstrates the methods needed to analyze a broad spectrum of geophysical datasets, with special attention to those methods that generate images of the earth.

Data analysis can be a mathematically complex activity, but the treatment in this volume is carefully designed to emphasize those mathematical techniques that readers will find the most familiar and to systematically introduce less-familiar ones. A series of "crib sheets," offer step-by-step summaries of methods presented.

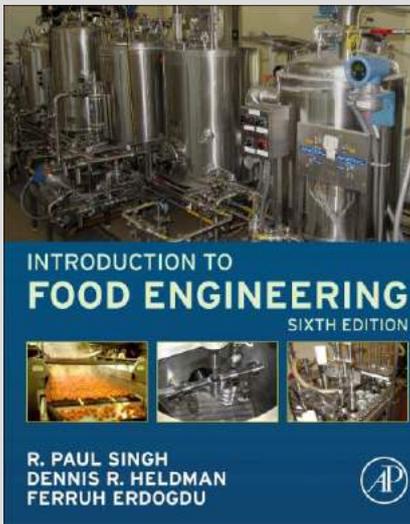
Utilizing problems and case studies along with MATLAB and Python computer code and summaries of methods, the book provides professional geophysicists, students, data scientists and engineers in geophysics with the tools necessary to understand and apply mathematical techniques and inverse theory.



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EARTH & ENVIRONMENT Geophysics
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Introduction to Food Engineering, 6e

R. Paul Singh, professor of food engineering at the University of California, Davis; **Dennis R. Heldman**, Professor of Food Engineering at The Ohio State University. He is also an Adjunct Professor at the University of California-Davis and Professor Emeritus at the University of Missouri. and **Ferruh Erdogdu**, Professor, Department of Food Processing, Ankara University, Golbasi-Ankara, Turkey

ISBN: 9780128231296
PREVIOUS ISBN: 9780123985309
PUB DATE: Mar 28, 2024
LIST PRICE: £101.00 / \$125.00 / €118.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 25
ILLUSTRATIONS: Approx. 600 illustrations (600 in full color)
AUDIENCE: Undergraduate and graduate students of food science/food process engineering, professionals in food and process engineering (particularly food manufacturing and ingredients, individuals involved in food safety, food manufacturing standards, and regulatory bodies)
BIC CODES: TCB, TDCT, TGBN1
THEMA CLASSIFICATION: THEMATCB; THEMATDCT; THEMATGB

Presents a practical, unique and challenging blend of principles and applications for comprehensive learning in the food engineering area

A Volume in the *Food Science and Technology* Series

KEY FEATURES

- Numerical examples are reworked using the latest data on fluid properties obtained from the National Institute of Standards and Technology
- Quantitative examples describe the use of earth-friendly refrigerants in the cold chain
- Design procedures relevant to emerging electrotechnologies in food processing
- New content on resource sustainability for designing future food processing systems that support circular bioeconomy
- Description of quantitative approaches to food processing to assist practicing professionals in the food industry

DESCRIPTION

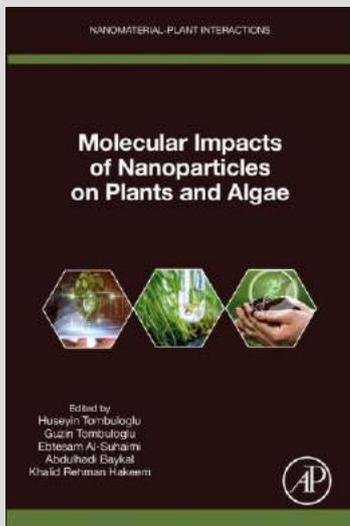
The sixth edition of *Introduction to Food Engineering*, with revised and updated content, aims to enhance the learning of quantitative approaches to designing food processing operations. The book, translated into six languages, is widely acclaimed in teaching and learning food engineering by many generations of students worldwide. It is notable for blending engineering principles based on fundamental physics applied to commonly used and emerging food processing technologies. The chapters are written to facilitate the instructors in presenting lectures in an organized sequence for effective teaching. Numerous solved examples, detailed steps, and end-of-chapter problems of industrial relevance are included to help students learn underlying concepts and their applications. Many illustrations, with companion web-based animations, aim to improve the subject's comprehension. A new chapter introduces quantitative aspects of cleaning and sanitation in food operations to enhance food safety. Quantitative aspects of emerging electrotechnologies for food processing are explained. Spreadsheet-based problem-solving techniques are included for designing unit operations with "what-if" analysis. Practicing professionals in the industry will find an extensive collection of reference data helpful in the design and operation of industrial food processes.



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Molecular Impacts of Nanoparticles on Plants and Algae

Edited by : **Huseyin Tombuloglu**, Associate Professor, Department of Genetics, Institute for Research and Medical Consultations (IRMC), University of Dammam, Saudi Arabia; **Guzin Tombuloglu**, Imam Abdulrahman Bin Faisal University, Dammam, Saudi Arabia; **Ebtesam Al-Suhaimi**, Department of Biology, College of Science, Imam Abdulrahman Bin Faisal University, Saudi Arabia; **Abdulhadi Baykal**, Department of Biomedicine, Institute for Research and Medical Consultations (IRMC), University of Dammam, Saudi Arabia and **Khalid Rehman Hakeem**, Professor, Department of Biological Sciences, Faculty of Science, King Abdulaziz University, Jeddah, Makkah Province Kingdom of Saudi Arabia

ISBN: 9780323957212
PUB DATE: Feb 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 480

AUDIENCE: Researchers who study in nanoparticle-plant interaction, molecular biology of plants and algae, environmental toxicology, and biotechnology at universities, research centers.

BIC CODES: PSD, PSTL, PST, PSAK, TVS, PSTD, PSB, MMF, PSF, PSTP

THEMA CLASSIFICATION:

THEMAPST; THEM APSAK;
THEMATVS; THEM APSB;
THEMAPSF; THEMAMKF;
THEMAPSD

Focuses on molecular response mechanisms at genome, transcriptome, proteome and metabolome levels in plants and algae

KEY FEATURES

- Presents genome, transcriptome, proteome, and metabolome responses in plants/algae, along with cellular uptake and translocation mechanisms
- Illustrates nano-particle-plant/algae interactions
- Covers both simple and higher organisms, addressing both algae and plant

DESCRIPTION

Molecular Impacts of Nanoparticles on Plants and Algae covers molecular mechanisms of plants/algae related to cellular uptake, translocation of nanoparticles, and genome, transcriptome, proteome, and metabolome responses against it. The book introduces readers to state-of-the-art developments and trends of nanoparticles and plants/algae including interactions of nanoparticles with biological compounds in vitro. Nanoscience and nanotechnology have rapidly been developed in the last few decades, and they have a wide range of applications in industry, medicine, food, and agriculture. In agriculture, nanoparticles (NPs) have successfully been used for growth regulation, crop protection and improvement. This book presents the most recent findings on nanoparticle and plant/algae interaction by focusing on molecular response mechanisms at genome, transcriptome, proteome and metabolome levels. In addition, uptake and translocation mechanism of nanoparticles are assessed both in plant and algae. Throughout this book, the latest developments and discoveries are highlighted, along with open problems and future challenges in molecular mechanisms of plants/algae as a response of nanoparticles.

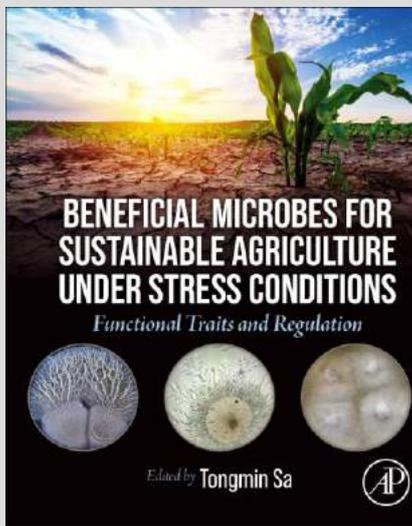


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LIFE SCIENCES Botany

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Beneficial Microbes for Sustainable Agriculture under Stress Conditions

Functional Traits and Regulation

Edited by : **Tongmin Sa**, Department of Environmental & Biological Chemistry, College of Agriculture, Life & Environmental Sciences, Chungbuk National University.

ISBN: 9780443131936
PUB DATE: Mar 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 465

AUDIENCE: Researchers and academics working agriculture, agronomy and plant science
Advanced level students in agriculture, agronomy and plant science

BIC CODES: TV, RN, TVK, PSG

THEMA CLASSIFICATION:

THEMATQ; THEMATV; THEMAPSG; THEMATVK

Helps readers understand, utilize, and maximize functional traits and regulatory mechanisms uniquely emerging under plant-bacteria-stress tripartite interactions

KEY FEATURES

- Highlights the vast potential for microbe-mediated stress phytolerance improvement
- Focuses on bacterial strains and groups that are proving to be most effective in promoting stress tolerance
- Explores opportunities toward improvement of sustainable agriculture and resulting food security

DESCRIPTION

Beneficial Microbes for Sustainable Agriculture under Stress Conditions: Functional Traits and Regulation highlights the potential for microbe-mediated stress phytolerance improvement by presenting multiple scenarios of application and results. In most research and studies, abiotic stress is applied singularly to specific plants inoculated with a bioinoculum or a bacterial consortium to isolate specific plant-microbe responses. However, in reality, plants are continually exposed to a multitude of different stresses simultaneously occurring. This book presents bacteria functional traits and bacteria-mediated plant responses under both specific or combined stress conditions.

Collectively, it provides insights into bacterial functional traits and bacteria-mediated plant responses in a wide range of conditions, providing foundational understanding of their potential benefits, and inspiring further research. The book centers on specific bacterial strains and groups which have been shown to effectively promote stress tolerance, and which could be utilized to boost agricultural production under stress conditions. Their potential utilization in stress affected lands not just improves crop production but could also be in line with sustainable agriculture.

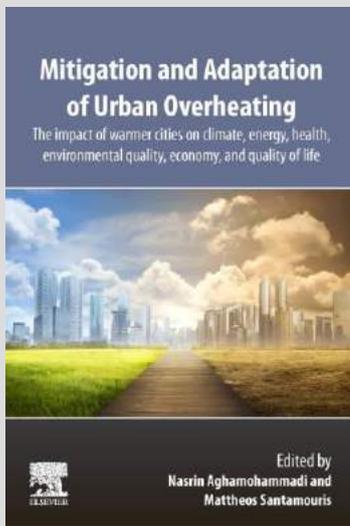


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LIFE SCIENCES Botany

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



Mitigation and Adaptation of Urban Overheating

The Impact of Warmer Cities on Climate, Energy, Health, Environmental Quality, Economy, and Quality of Life

Edited by : **Nasrin Aghamohammadi**, University of Malaya, Malaysia and **Mattheos Santamouris**, Anita Lawrence Professor of High Performance Architecture, School of Built Environment, University of New South Wales, Australia

ISBN: 9780443135026
PUB DATE: Mar 01, 2024
LIST PRICE: £99.95 / \$130.00 / €113.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 354
AUDIENCE: Environmental scientists, environmental engineers, climatologists, energy scientists, postgraduate students, researchers, architects and policymakers
BIC CODES: RN, RNPG, RBP, MBNH2
THEMA CLASSIFICATION: THEMATQ; THEMARNPG; THEMARBP; THEMAMBN

Comprehensive analysis of the impact of urban overheating, mitigation and adaptation on energy, health and environmental quality, and survivability

KEY FEATURES

- Provides quantitative and qualitative information to overcome and bridge the existing gap of knowledge regarding the impact of urban overheating, mitigation, and adaptation
- Includes the latest developments on the evaluation of urban climatic change on energy, health, environment, society, and economy
- Explains the impact of urban climatic change, mitigation technologies, and adaptation technologies on built environment

DESCRIPTION

Mitigation and Adaptation of Urban Overheating: The Impact of Warmer Cities on Climate, Energy, Health, Environmental Quality, Economy, and Quality of Life analyzes and presents all existing relative studies to investigate the global magnitude and characteristics of the ambient temperature drop and the reduction of the heat burden resulting from modified climate conditions due to the implementation of urban mitigation and adaptation technologies and policies. Sections discuss urban overheating, urban heat mitigation, governance, anthropogenic heat emissions, adaptation and adaptation technologies and their impacts on urban environmental quality, urban health, energy supply and demand, low-income and aged populations, the economy of cities.

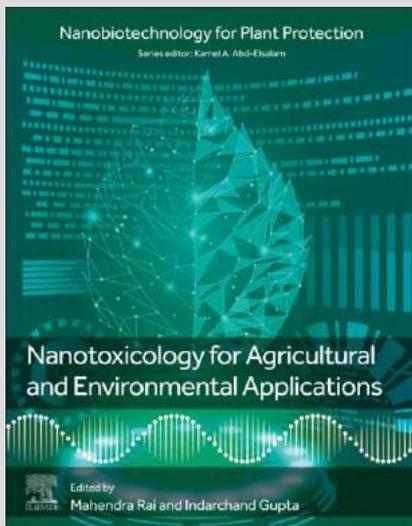
Additional sections incorporate recent developments on urban climatology, urban overheating, mitigation and adaptation technologies.



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EARTH & ENVIRONMENT Atmosphere/climate
<https://virtuale.elsevier.com>, www.elsevier.com



Nanotoxicology for Agricultural and Environmental Applications

Edited by : **Mahendra Rai**, PhD, Nicolaus Copernicus University and **Indarchand Gupta**, Assistant Professor, Government Institute of Science, Aurangabad, India

ISBN: 9780443155703
PUB DATE: Mar 01, 2024
LIST PRICE: £155.00 / \$200.00 / €175.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 358
AUDIENCE: Students, practitioners, and researchers working in plant science, agricultural science, nanoscience, and environmental chemistry
BIC CODES: TGM
THEMA CLASSIFICATION: THEMATGM

Presents the causes of nanotoxicity and ways to avoid and reduce nanotoxicity to support the development of green nanotechnology

A Volume in the *Nanobiotechnology for Plant Protection* Series

KEY FEATURES

- Highlights the factors contributing to toxic effects of nanoparticles, including shape, size, structure, surface charge, and dose
- Explores the mode of action and entry of nanoparticles, methods of toxicity evaluation, and the challenges associated with them
- Reviews the recent developments on nanotoxicity to agriculture, food, and the environment by describing the nanotoxicity to soil ecosystems, crop plants, and food systems
- Emphasizes the impact of nanoparticles and their detoxification by plants on the nutritional quality of food and plants
- Discusses the toxicity of nanoparticles released in air, soil, and water with a special emphasis on nanotoxicity to humans and the methods to reduce nanotoxicity effects

DESCRIPTION

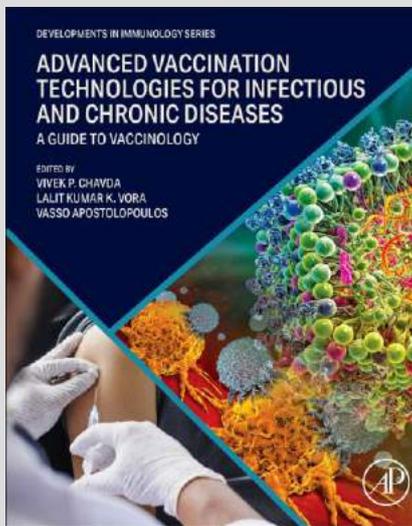
Nanotoxicology for Agricultural and Environmental Applications *Nanobiotechnology for Plant Protection*, a new release in Elsevier's *Nanobiotechnology for Plant Protection* series, provides an introduction to nanotechnology and its applications in agriculture and the environment. Divided into five parts, this book addresses nanotechnology and regulations; nanotoxicity; nanotoxicity to agriculture and food; nanotoxicity to the environment; and risk management measures to avoid exposure. Students, practitioners, and researchers working in plant science, agricultural science, nanoscience, and environmental chemistry alike will benefit from this necessary reference.



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LIFE SCIENCES Botany
<https://virtuale.elsevier.com>, www.elsevier.com



Advanced Vaccination Technologies for Infectious and Chronic Diseases

A guide to Vaccinology

Edited by : **Vasso Apostolopoulos**, Professor and Vice Chancellor, Research Partnerships; Program Leader – Mechanisms and Interventions in Health and Disease, Victoria University, Melbourne, Australia; **Lalitkumar Vora**, Postdoctoral research fellow at the School of Pharmacy and **Vivek P. Chavda**, PhD, Assistant Professor, Department of Pharmaceutics and Pharmaceutical Technology, Gujarat Medical University

ISBN: 9780443185649
PUB DATE: Mar 01, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 330
AUDIENCE: Graduates, post-graduates, researchers, scientists in the field of immunology, drug delivery, biology, engineering, medicine, pharmaceuticals technology, medical professionals and other interdisciplinary fields of science and technology involved in developing vaccines
BIC CODES: MJCM, MBN
THEMA CLASSIFICATION: THEMAMJCM; THEMAMBN

Presents a deeper resource for understanding the design, development, and commercialization of advanced vaccine technologies

A Volume in the *Developments in Immunology Series*

KEY FEATURES

- Offers comprehensive coverage of different vaccine platforms and their development
- Includes information surrounding the regulatory perspective of vaccine development
- Describes different delivery approaches for vaccinology
- Explains the clinical development of vaccines, along with novel platforms
- Covers recent development of vaccine production technologies, new types of vaccines, and ongoing research that could prevent any future pandemics, like COVID-19

DESCRIPTION

Advanced Vaccination Technologies for Infectious and Chronic Diseases: A Guide to Vaccinology is a valuable reference for occupational health professionals whose role involves the supervision of immunization programs. The role of vaccines is emerging and even critical to ending infectious and chronic diseases and pandemics alike, hence the design and development of new vaccines could lead to improved health. This book discusses these new developments and introduces the reader to the current state-of-the-science and the outlook going forward, from the discovery of vaccines to the clinical trials of personalized vaccines.



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LIFE SCIENCES Immunology
<https://virtuale.elsevier.com>, www.elsevier.com

COVER IMAGE
FORTHCOMING

On Epigenetics and Evolution

Edited by : **Carlos M. Guerrero-Bosagna**, Assistant Professor, IFM Biology unit, Linköping University Linköping, Sweden

ISBN: 9780443190513
PUB DATE: Mar 01, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 460
AUDIENCE: Researchers and students in genetics, genomics, molecular biology, developmental biology, evolutionary biology, pharmaceutical science, nutrition, toxicology, physiology, and clinical therapy, Clinicians
BIC CODES: PSAK, PSAK1
THEMA CLASSIFICATION: THEMPSAK

Unites key themes in epigenetic and evolutionary biology research, with a focus on recent findings, evolving applications, and societal impact

A Volume in the *Translational Epigenetics* Series

KEY FEATURES

- Introduces and examines the role of epigenetic modifications in regulating genomic variability, and thus evolutionary biology, across species
- Draws together key themes across epigenetic evolution in plants, invertebrates, and vertebrates, and the role of epigenetics in human evolution
- Includes bulleted chapter summaries and key points lists, terms and definitions, and rich use of illustrations where possible to reinforce understanding and actionability of the content
- Features chapter contributions from international leaders in the field

DESCRIPTION

On Epigenetics and Evolution, a new volume in the *Translational Epigenetics* series, introduces key themes from current epigenetic evolution research with contributions from leading scientists around the world that investigate the role of epigenetic mechanisms in evolution from a variety of different angles, with each contribution combining theory, current research overviews, and applications. This book gives researchers, students, and clinicians a better understanding of the origin of genotypic and phenotypic variability, the role of epigenetics in development and inheritance, how epigenetics may affect speciation and geographic distribution, and the evolution of epigenetic mechanisms in different taxa. Other modalities and subtopics explored include epigenetics in neutral evolution; epigenetics and cellular physiology; Paleo-epigenetics; Archeo-epigenetics; epigenetics and pathogen evolution; epigenetics in unicellular organisms; epigenetic evolution in plants, invertebrates, and vertebrates; and the role of epigenetics in human evolution and its societal impact.

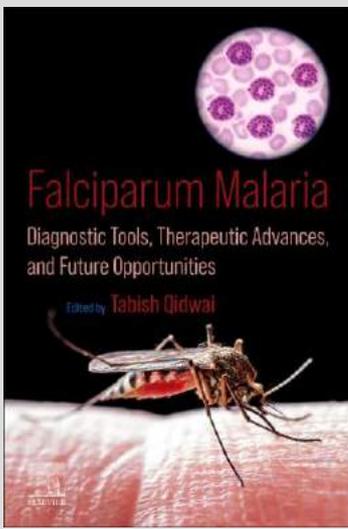


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LIFE SCIENCES Genetics

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



Falciparum Malaria

Diagnostic Tools, Therapeutic Advances, and Future Opportunities

Edited by : **Tabish Qidwai**, Associate Professor and part of the Faculty of Biotechnology, IBST, Shriramswaroop Memorial University, Lucknow, India

ISBN: 9780323953283

PUB DATE: Mar 01, 2024

LIST PRICE: £115.00 / \$150.00 /

€131.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 230

AUDIENCE: Academics and Researchers in parasitology engaged in malaria studies, Advanced undergraduate, post graduate and

medical students, Physicians, Biotechnologists, Professionals in pharmaceuticals and global health

BIC CODES: MMFP

THEMA CLASSIFICATION:

THEMAMKFP

Useful resource that examines diagnostic tools and therapeutic approaches in the treatment, prevention, and control of falciparum malaria

KEY FEATURES

- Reviews current therapeutic strategies of falciparum malaria
- Covers antimalarial drugs, peptides, vaccines and RNAi approaches against malaria
- Explores antimalarial drug targets in parasites
- Discusses biomarkers and new diagnostic tools

DESCRIPTION

Falciparum Malaria: Diagnostic Tools, Therapeutic Advances, and Future Opportunities discusses the current state of therapeutic options for malaria, antimalarial drugs and drug targets. The book also covers recent progress in the development of vaccines and other approaches for malaria treatment, prevention and control and explores diagnostic tools and biomarkers. Sections examine potential biomarkers and their applications, molecular diagnostic tools, multi-omic approaches for the characterization of therapeutic action of potential new antimalarials, therapeutic advances in falciparum malaria, antimalarial drugs, targeting parasite apicoplast for antimalarial drug discovery, cellular and adjunctive therapies for malaria treatment, and future opportunities.

With contributions from experts in the field, this book is an ideal resource for academics, researchers, graduates and industry engaged in malaria research, its diagnosis, and treatment.

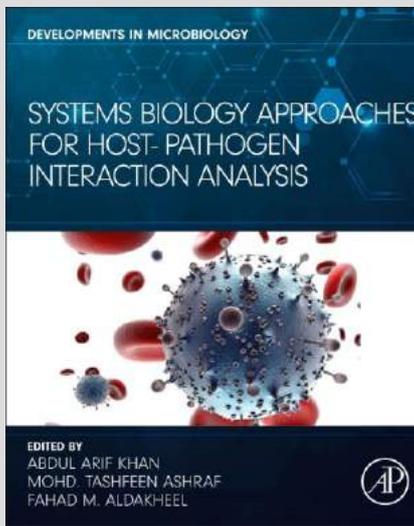


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LIFE SCIENCES Microbiology

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Systems Biology Approaches for Host-Pathogen Interaction Analysis

Edited by : **Mohd. Tashfeen Ashraf**, Assistant Professor in School of Biotechnology, Gautam Buddha University; **Abdul Arif Khan**, PhD, MNASc, FRSPH, College of Pharmacy, King Saud University, Saudi Arabia and **Fahad M. Aldakheel**, Department of Clinical Laboratory Sciences, College of Applied Medical Sciences, King Saud University, Saudi Arabia

ISBN: 9780323958905
PUB DATE: Mar 01, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 280
AUDIENCE: Microbiology students and researchers, Biological Data Scientists, Bioinformaticians and Computational Biologists, Pharmaceutical companies dealing with microbes, Libraries of academic institutes dealing with biotechnology, healthcare, data science and bioinformatics
BIC CODES: PSG
THEMA CLASSIFICATION: THEMAPSG

Covers network biology approaches to decipher complex multiple host-pathogen interactions

A Volume in the *Developments in Microbiology Series*

KEY FEATURES

- Covers network biology approaches to decipher complex multiple host-pathogen interactions
- Gives the biological researcher insights into artificial intelligence, providing an additional competitive edge
- Provides a new paradigm for understanding the consequences of interactions in biological networks

DESCRIPTION

Systems Biology Approaches for Host-Pathogen Interaction Analysis aids biological researchers in expanding their research scope using piled up data generated through recent technological advancements. In addition, it opens avenues for bioinformatics and computer science researchers to utilize their expertise in biologically meaningful ways. Other areas covered include network biology approaches to decipher complex multiple host-pathogen interactions in addition to valuable coverage of artificial intelligence. This book bridges these gaps through a new paradigm of understanding the consequences of interactions in biological networks.

Host-pathogen interactions are generally considered as highly specific interactions leading to a variety of consequences. The utilization of data science approaches has revolutionized scientific research including host-pathogen interaction analyses. Data science approaches coupled with network biology has taken host-pathogen interaction analysis from specific interaction to a new paradigm of understanding consequences of these interaction in the biological network.



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LIFE SCIENCES Microbiology
<https://virtuale.elsevier.com>, www.elsevier.com

APPLICATIONS OF METAGENOMICS

AGRICULTURE, ENVIRONMENT, AND HEALTH



Edited by
Hrudayanath Thatoi
Sukanta Kumar Pradhan
Upendra Kumar



Applications of Metagenomics

Agriculture, Environment, and Health

Edited by : **Hrudayanath Thatoi**, Professor, Department of Biotechnology, North Orissa University, Baripada, Odisha, India; **Sukanta Kumar Pradhan**, Head, Department of Bioinformatics, Orissa University of Agriculture and Technology, Bhubaneswar, Odisha, India and **Upendra Kumar**, Scientist, National Rice Research Institute, Bidyadharpur, Cuttack, Odisha, India

ISBN: 9780323983945
PUB DATE: Mar 01, 2024
LIST PRICE: £135.00 / \$175.00 /
€155.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 464

AUDIENCE: Basic and translational researchers in genomics, genetics, biochemistry, molecular biology, microbiology, cellular biology, pathology, agriculture, and environmental science, life science researchers, biotechnologists, developmental biologists, Clinicians and graduate students in the biosciences

BIC CODES: PSAK, PSAK1

THEMA CLASSIFICATION:

THEMAPSAK

Offers a full overview and discussion of applications of metagenomics across the environment, agriculture and health-based research

KEY FEATURES

- Offers tools to apply evolving next generation sequencing technologies in the detection of disease pathogens, bacteria, viruses, fungi, and parasites across various environments, as well as host response
- Includes separate sections dedicated to topics and current studies in environmental science, agriculture production and health care
- Features chapter contributions from international experts in the field

DESCRIPTION

Applications of Metagenomics: Agriculture, Environment, and Health examines current metagenomics methods and their applications in soil, polluted environment sites, agriculture production, and health care, with separate sections dedicated to each application area. Special attention is paid to the biotechnological study of novel microbial resources for social welfare. Beyond applications, the book discusses evolving next generation technology and techniques used for carrying out metagenomics studies, and in doing so highlights the latest research and advances in the field, along with ways to adapt these approaches for different study types across the biological sciences. Chapter topics range from metagenomics for studying root microbial communities to microbial diversity of the rhizosphere, fungal diversity, microbial biodiversity in forest environments, the human microbiome, and disease epidemiology, with one chapter dedicated to Covid-19 metagenomics.

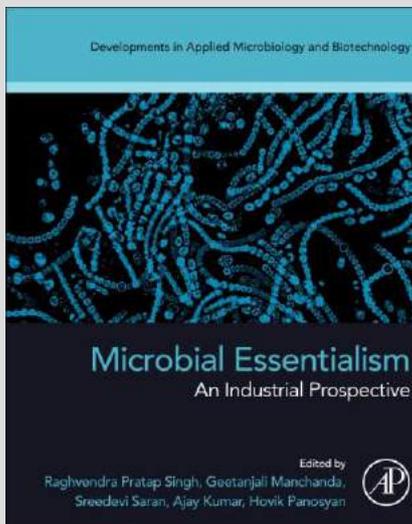


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LIFE SCIENCES Genetics

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



Microbial Essentialism

An Industrial Prospective

Edited by : **Raghendra Pratap Singh**, Assistant Professor, Department of Research and Development, Biotechnology, Uttarakhand University, Dehradun, India; **Geetanjali Manchanda**, Department of Botany and Environmental Studies, DAV University, Jalandhar, Punjab, India; **Sreedevi Saran**, Assistant Professor and Head, Department of Microbiology, St. Pious X Degree and PG College for Women, Hyderabad, India; **Ajay Kumar**, Associate Professor, Sam Higginbottom University of Agriculture, Technology and Sciences, Dept. of Industrial Microbiology, Jacob Institute of Biotechnology and Bioengineering, Sam Higginbottom University of Technology and Sciences, Prayagraj, Uttar Pradesh, India and **Hovik Panosyan**, Department of Biochemistry, Microbiology and Biotechnology, Yerevan State University, Yerevan, Armenia

ISBN: 9780443139321
PUB DATE: Mar 01, 2024
LIST PRICE: £134.00 / \$175.00 / €155.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 326

AUDIENCE: Researchers, academics, as well as industry professionals in the field of microbial biotechnology, applied microbiology, and biotechnology with keen interest in microbial-based product development and sustainable application, Graduate and post-graduates interested in the application of microbial properties to create products or by-products for agriculture, industrial, clinical, and commercial uses

BIC CODES: PSG

THEMA CLASSIFICATION:

THEMAPSG

Explores the latest techniques, technologies, approaches, options, and application of microorganisms in the manufacture of industrially important products

A Volume in the *Developments in Applied Microbiology and Biotechnology Series*

KEY FEATURES

- Covers key aspects of microbial physiology, exploring the versatility of microorganisms and their diverse metabolic activities and products
- Provides methods and various traditional and novel applications of microorganisms to industrial processes
- Contributed by a multidisciplinary group of experts who offer not only a thorough evaluation of the primary literature, but also invaluable first-hand experience in industrial microbiology and biotechnology

DESCRIPTION

Microbial Essentialism: An Industrial Prospective refers to properties specifically possessed by microbes, including the secretion of metabolites which make them unique. These microorganisms can be commercially exploited for beneficial purposes such as the production of whole microbial cells, for products for direct use, or as starting raw materials in the manufacture of other commercial products. The book reviews the newest techniques, approaches, and options in the use of microorganisms for the manufacture of industrially important products such as pharmaceuticals, industrial enzymes, chemicals, proteins, foods and beverages, and fuels. Additional sections cover fundamental principles of established and innovative industrial microbiology and biotechnology processes and products while also discussing industrial microorganisms and the technology required for large-scale cultivation and isolation of fermentation products.

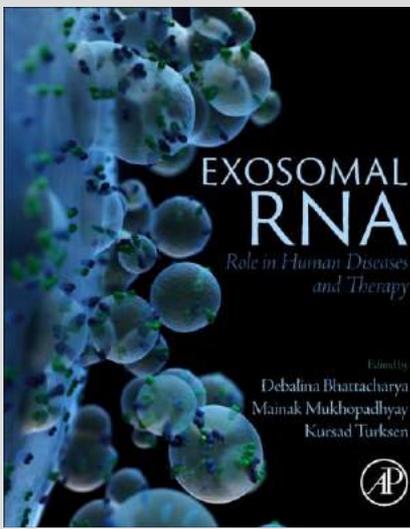


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LIFE SCIENCES Microbiology

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



Exosomal RNA

Role in Human Diseases and Therapy

Edited by : **Debalina Bhattacharya**, Assistant Professor, Department of Microbiology, Maulana Azad College, West Bengal, India; **Mainak Mukhopadhyay**, Associate Professor, Department of Biosciences, JIS University, Agarpara, Kolkata, India and **Kursad Turksen**, Senior Scientist, Ottawa Hospital Research Institute, Ottawa

ISBN: 9780443140082
PUB DATE: Mar 01, 2024
LIST PRICE: £126.00 / \$165.00 /
€143.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 270

AUDIENCE: Researchers and postgraduate students in the field of molecular biology, cell biology, therapeutics and related fields, Clinicians working with exosomes and exosomal RNA across different disease settings

BIC CODES: PSD

THEMA CLASSIFICATION:
THEMAPSD

An overview of the role of RNA found in exosomes, from biogenesis to therapeutic applications

KEY FEATURES

- Provides an introduction into exosomal RNA and their potential as predictive and diagnostic biomarkers for various conditions
- Considers exosomal RNA in a variety of human disorders, including metabolic diseases, inflammatory diseases, and cancer
- Discusses the role of exosomal RNA in preserving the cellular environment and its role in the autophagy process

DESCRIPTION

Exosomal RNA: Role in Human Diseases and Therapy provides an in-depth study of exosomes and their RNA in the context of a variety of diseases. The book explores the diagnostic and therapeutic potential of exosomal RNA as biomarkers across a range of different conditions, including cancer, type 2 diabetes, cardiovascular and renal disease, as well as bacterial infections and tissue repair. The link between exosomal RNA expression and neurodegenerative disease is also explored. The book goes on to share the significance of exosomal RNA in preserving cellular function, with special attention given to their role in the autophagy process.

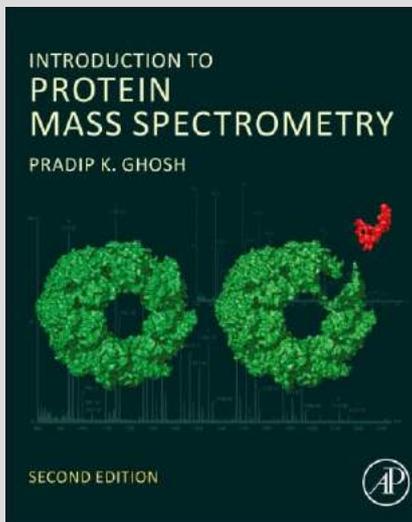
This book also gives an overview of the isolation, characterization, and potential applications of exosomal RNA, providing researchers with an understanding of how they can be manipulated and utilized for the treatment of various diseases and conditions. This is an ideal reference for researchers in the field of molecular biology, cell biology, and related fields, as well as those involved in the development of therapeutics and personalized medicine.



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LIFE SCIENCES Molecular Biology
<https://virtuale.elsevier.com>, www.elsevier.com



Introduction to Protein Mass Spectrometry, 2e

Pradip Kumar Ghosh, Former Professor of Chemistry, Indian Institute of Technology, Kanpur, India

ISBN: 9780443140150
PREVIOUS ISBN: 9780128021026, 9780128051238
PUB DATE: Feb 01, 2024
LIST PRICE: £126.00 / \$165.00 / €143.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 316
AUDIENCE: All scientists using Protein Mass Spectrometry, particularly analytical chemists, biochemists, drug discovery/medical chemists, biologists.
BIC CODES: PD, PSB, PHVN
THEMA CLASSIFICATION: THEMAPHVN; THEMADPM; THEMAPSB

An updated guide to the latest developments of protein mass spectrometry and its application in biochemistry, chemistry, and biology

KEY FEATURES

- Offers up-to-date, introductory information for scientists and researchers new to the field, as well as advanced insights into the critical assessment of computer-analyzed mass spectrometric results and their current limitations
- Provides examples of commonly used MS instruments from a range of key manufacturers/developers, including Bruker, Applied Biosystems, JEOL, Thermo Scientific/Thermo Fisher Scientific, IU, Waters and PNNL
- Includes biological applications and exploration of analytical tools and databases for bioinformatics
- Features definitions, case studies, and recent developments in protein mass spectrometry
- Includes sections new to this edition on SLIM (Structures for Lossless Ion Manipulation) and mass spectrometry applications in neuroscience, including synaptic biology and Alzheimer's disease

DESCRIPTION

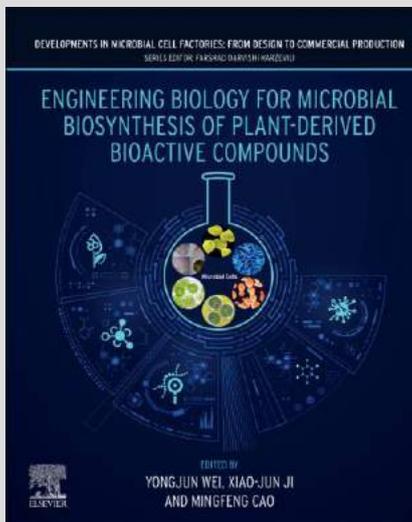
Introduction to Protein Mass Spectrometry, Second Edition provides a comprehensive overview of this increasingly important, yet complex, analytical technique. This book enables readers to understand how determinations about protein identity from mass spectrometric data are made. Coverage begins with the technical basics, including preparations, instruments, and spectrometric analysis of peptides and proteins, before exploring applied use in biological applications, bioinformatics, database, and software resources. This new edition is fully updated to include the latest developments in the field and will feature new content covering recent progress in the areas where there have been the most exciting advances. These include PNNL's multilevel-PCB-based SLIM realization, SLIM-Agilent QQQ field trials; employment of SLIM-IMS-cryo-IR combination in molecular structure determination; proximity-labelling mass spectrometry, and applications in neuroscience.



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LIFE SCIENCES Molecular Biology
<https://virtuale.elsevier.com>, www.elsevier.com



Engineering Biology for Microbial Biosynthesis of Plant-Derived Bioactive Compounds

Edited by : **Yongjun Wei**, PhD, Zhengzhou University; **Xiao-Jun Ji**, NanjingTech University, National Engineering Research Centre for Biotechnology , Nanjing, China and **Mingfeng Cao**, PhD, University of Illinois at Urbana–Champaign, Urbana, IL, USA

ISBN: 9780443155581
PUB DATE: Mar 01, 2024
LIST PRICE: £126.00 / \$165.00 / €143.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 280
AUDIENCE: students, scientists, and other academic researchers who work at the field of metabolic engineering and synthetic biology
BIC CODES: PSF
THEMA CLASSIFICATION: THEMPSF

Summarizes the development of engineering fundamentals for the microbial biosynthesis of plant-derived bioactive compounds using synthetic biology and systems biology

A Volume in the *DEVELOPMENTS IN MICROBIAL CELL FACTORIES: FROM DESIGN TO COMMERCIAL PRODUCTION* Series

KEY FEATURES

- Provides valuable information for engineers, scientists, and industrial researchers who want to obtain microbial strains with the ability of plant-derived bioactive compound production
- Guides microbial production of plant-derived bioactive compounds at the laboratory and industrial levels
- Ideal resource for anyone who works on the microbial production of plant-derived bioactive compounds

DESCRIPTION

Engineering Biology for Microbial Biosynthesis of Plant-Derived Bioactive Compounds will be of great interest to undergraduate and graduate students, scientists, researchers, and engineers who work on the microbial production of plant-derived bioactive compounds. As many plant-derived bioactive compounds are the foundation of effective drugs to cure diseases, it's important to understand the limits of their applications in drugs and other industries. With the development of synthetic biology and green biomanufacturing, the biosynthesis of complex bioactive compounds is possible. However, the engineering fundamentals for microbial biosynthesis of plant-derived bioactive compounds is vast.

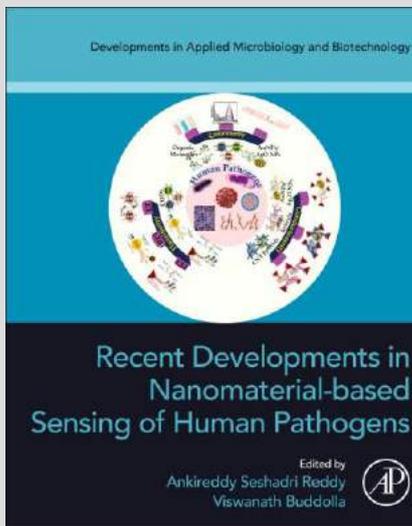
This book summarizes the engineering fundamental biotechnologies for microbial production of plant-derived bioactive compounds, allowing the content to be easily accessed. Coverage includes summaries of key achievements, identification of challenges, current approaches, tips and tricks, and helpful insights into critical bottlenecks.



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LIFE SCIENCES Molecular Biology
<https://virtuale.elsevier.com>, www.elsevier.com



Recent Developments in Nanomaterial-Based Sensing of Human Pathogens

Edited by : **Ankireddy Seshadri Reddy**, Department of Bionanotechnology, Gachon University, South Korea and **Viswanath Buddolla**, Professor in Microbiology, Gachon University, Department of BioNano Technology, Seongnam-si, South Korea

ISBN: 9780443185748
PUB DATE: Mar 01, 2024
LIST PRICE: £135.00 / \$175.00 / €155.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 180
AUDIENCE: Post-graduate students, researchers, and scientists working in the field of nanotechnology, nanotechnology-based application technologies, and applied microbiology Graduate, and Postgraduate students
BIC CODES: PSG
THEMA CLASSIFICATION: THEMAPSG

Provides an update on the use of nanomaterials for sensing human pathogens

A Volume in the *Developments in Applied Microbiology and Biotechnology Series*

KEY FEATURES

- Describes the use of pathogenic sensing and analytical techniques based on various principles
- Updates on the multidisciplinary aspects of pathogenic sensing
- Addresses the challenges associated with detection in the context of future development
- Provides an update on the use of nanomaterials for sensing human pathogens
- Covers the detection of most human pathogens in a single volume

DESCRIPTION

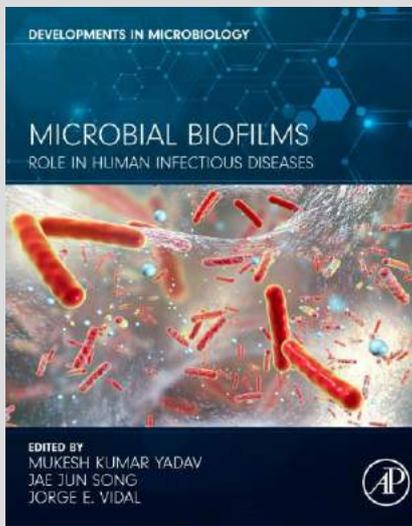
Recent Developments in Nanomaterial-Based Sensing of Human Pathogens gives insights into the alignment of recent developments in the field of nano-sensing of bacterial and viral pathogenic organisms. The book describes the role of biomarkers in the detection of fungal diseases and the importance of mycoplasmas in health and diseases that are naturally resistant to many common antibiotics, such as penicillin. Touching all areas of medical microbiology and analytical biochemistry, this book provides understanding to application-oriented microbial sensing concepts and updates knowledge with respect to recent advances on related aspects of pathogenic sensing.



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LIFE SCIENCES Microbiology
<https://virtuale.elsevier.com>, www.elsevier.com



Microbial Biofilms

Role in Human Infectious Diseases

Edited by : **Mukesh Kumar Yadav**, Assistant Professor, Department of Biotechnology, Mizoram University (A Central University), Pachhunga University College Campus, Mizoram, India; **Jae Jun Song**, Professor, Department of Otorhinolaryngology – Head and Neck Surgery, Korea University College of Medicine, South Korea and **Jorge E. Vidal**, Department of Microbiology and Immunology, University of Mississippi Medical Center, Jackson, USA

ISBN: 9780443192524
PUB DATE: Mar 01, 2024
LIST PRICE: £142.00 / \$175.00 / €170.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 330
AUDIENCE: Graduate students, Post-graduate students, along with researchers and PhD scholars working in the field of biotechnology, clinicians, scientists and industry personnel working on microbial biotechnology and medical microbiology, microbiology and immunology
BIC CODES: PSG, MJA
THEMA CLASSIFICATION: THEMAMJA; THEMAPSG

Provides concise, thorough, and up-to-date information about the important role of microbial biofilms in human diseases

A Volume in the *Developments in Microbiology Series*

KEY FEATURES

- Fulfils the knowledge gap in biofilm study
- Focuses on new and emerging concepts in microbial biofilm research
- Highlights the various anti-biofilm strategies
- Provides concise, thorough and up-to-date information about the important role of microbial biofilms in human diseases

DESCRIPTION

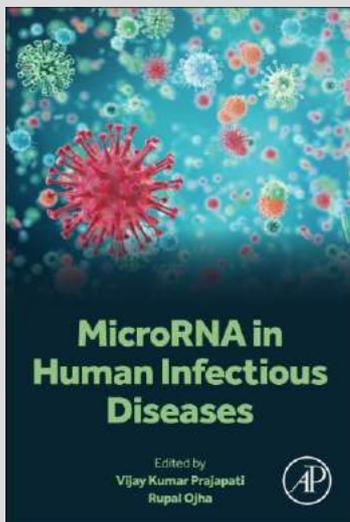
Microbial biofilms: Role in Human Infectious Diseases focuses on new and emerging concepts in microbial biofilm research, such as the mechanisms of biofilm formation, biofilm-induced pathogenesis, biofilm detection/and diagnosis, gene exchange within biofilms, strategies to control microbial biofilms and the burden of biofilm associated infections. In addition, it highlights the various anti-biofilm strategies such as surface coating, signal quenching, novel compounds that can be translated to curb biofilm-associated infections and the escalation of antimicrobial resistance determinants. Microbial biofilms can be a serious problem in medical settings as they are associated with significant mortality and morbidity. Infection related to biofilms increases recovery time and the cost of disease management. Biofilms are resistant to known antibiotics and human defense mechanism. In addition, due to close proximity of microbes within biofilms, increase genetic transformation has been detected results in increases frequency of antibiotic gene spread. With the advancement in science and technology, novel strategies have been proposed to combat the impact of biofilms on human health.



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LIFE SCIENCES Microbiology
<https://virtuale.elsevier.com>, www.elsevier.com



MicroRNA in Human Infectious Diseases

Edited by : **Vijay Kumar Prajapati**, Assistant Professor, Department of Biochemistry, School of Life Sciences, Central University of Rajasthan, Kishangarh, Ajmer, Rajasthan, India and **Rupal Ojha**, PhD candidate, Department of Biochemistry, School of Life Sciences, Central University of Rajasthan, Ajmer, Rajasthan, India.

ISBN: 9780323996617
PUB DATE: Mar 01, 2024
LIST PRICE: £126.00 / \$165.00 / €143.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 340

AUDIENCE: Researchers in molecular biology, biochemistry, molecular medicine, immunology, pharmacology and related fields, Graduate and PhD students studying RNA therapeutics and those in related fields

BIC CODES: PSD

THEMA CLASSIFICATION:
THEMAPSD

A detailed exploration of microRNA and its therapeutic and diagnostic potential in various diseases

KEY FEATURES

- Includes foundational knowledge on microRNAs and the fundamental aspects of its biogenesis
- Explores the potential role microRNAs can play in therapeutics and diagnostics to treat various infectious diseases, including sexually-transmitted diseases, bacterial diseases, viral infections and parasitic diseases
- Features a chapter dedicated to the role of microRNA for therapeutics in respiratory viral infections such as Covid-19
- Considers technologies used for manipulating and modifying microRNAs in preparation for applications to treat infectious diseases

DESCRIPTION

MicroRNA in Human Infectious Diseases offers an overview of the therapeutic and diagnostic role microRNAs can play in treating infectious diseases. Beginning with an introduction on microRNAs and their mechanisms, the book then delves into the therapeutic role of microRNAs in various categories of diseases: bacterial, viral, and parasitic. A wide range of diseases are explored, including STDs, typhoid, tuberculosis, Dengue fever, Ebola, Covid-19, Malaria, Leishmaniasis, and Lymphatic filariasis. The final section of the book covers microRNA-based system approaches, considering aspects such as web-based tools available for detecting and predicting microRNA targets and the latest technologies for modifying and manipulating microRNAs.

This volume explores microRNA across a multitude of conditions and is an ideal reference for those involved in the investigation and development of treatments in this area.



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LIFE SCIENCES Molecular Biology
<https://virtuale.elsevier.com>, www.elsevier.com

COVER IMAGE
FORTHCOMING

The Indian Ocean and its Role in the Global Climate System

Edited by : **Caroline Ummenhofer**, Department of Physical Oceanography, Woods Hole Oceanographic Institution, MA, USA and **Raleigh R. Hood**, Horn Point Laboratory, University of Maryland, Center for Environmental Science, Cambridge, MD, USA

ISBN: 9780128226988
PUB DATE: Mar 01, 2024
LIST PRICE: £138.00 / \$180.00 /
€160.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 400

AUDIENCE: Advanced undergraduate and graduate students in climate, earth, atmospheric, and marine sciences, as well as researchers and practitioners interested in a comprehensive overview of the Indian Ocean from an interdisciplinary perspective

BIC CODES: RBKC

THEMA CLASSIFICATION:
THEMARBKC

Presents an overview of our current understanding of the Indian Ocean, its variability and change, and impacts on regional and global climate

KEY FEATURES

- Provides interdisciplinary content with a comprehensive overview for students and practitioners from a wide range of disciplines as well as for stakeholders
- Presents a broad overview and background on the current state of knowledge of the variability, change, and regional impacts of the Indian Ocean
- Includes links to animations, slideshows, and other educational resources

DESCRIPTION

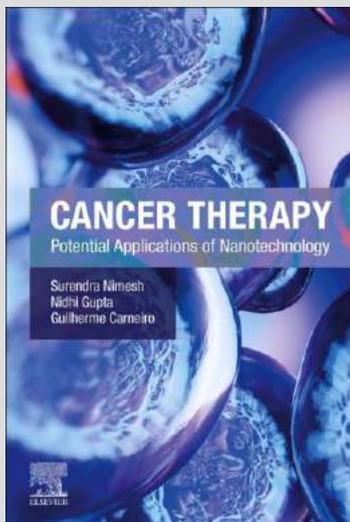
The Indian Ocean and its Role in the Global Climate System provides an overview of our contemporary understanding of the Indian Ocean (geology, atmosphere, ocean, hydrology, biogeochemistry) and its role in the climate system. It describes the monsoon systems, Indian Ocean circulation and connections with other ocean basins. Climatic phenomena in the Indian Ocean are detailed across a range of timescales (seasonal, interannual to multi-decadal). Biogeochemical and ecosystem variability is also described. The book will provide a summary of different tools (e.g., observations, modeling, paleoclimate records) that are used for understanding Indian Ocean variability and trends. Recent trends and future projections of the Indian Ocean, including warming, extreme events, ocean acidification and deoxygenation will be detailed. The Indian Ocean is unique and different from other tropical ocean basins due to its geography. It is traditionally under-observed and understudied, yet plays a fundamental role for regional and global climate. The vagaries of the Asian monsoon affect over a billion people and a third of the global population live in the vicinity of the Indian Ocean. It is also particularly vulnerable to climate change, with robust warming and trends in heat and freshwater observed in recent decades. Advances have recently been made in our understanding of the Indian Ocean's circulation, interactions with adjacent ocean basins, and its role in regional and global climate. Nonetheless, significant gaps remain in understanding, observing, modeling, and predicting Indian Ocean variability and change across a range of timescales. As such, this book is the perfect compendium to any researcher, student, teacher/lecturer in the fields of oceanography, atmospheric science, paleoclimate, environmental science, meteorology and geology, as well as policy managers and water resource managers.



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EARTH & ENVIRONMENT Ocean Science
<https://virtuale.elsevier.com>, www.elsevier.com



Cancer Therapy

Potential Applications of Nanotechnology

Surendra Nimesh, UGC Assistant Professor, Department of Biotechnology, School of Life Sciences, Central University of Rajasthan, India; **Nidhi Gupta**, The IIS University, India and **Guilherme Carneiro**, Department of Pharmacy, Federal University of Jequitin and Mucuri Valleys, Diamantina, Brazil

ISBN: 9780443154010

PUB DATE: Apr 01, 2024

LIST PRICE: £134.00 / \$175.00 /

€155.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 344

AUDIENCE: Researchers working in the field of nano-cancer therapeutics, Students and researchers working in nucleic acids delivery for gene therapy

BIC CODES: MMG

THEMA CLASSIFICATION:

THEMAMKG

Provides an exhaustive information source on polymeric nanoparticles and cancer

KEY FEATURES

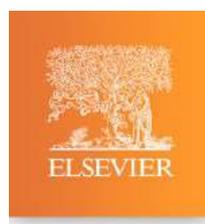
- Provides a complete overview of application of different polymeric nanoparticles in cancer therapeutics, right from characterization of nanoparticles to in vitro and in vivo studies
- Presents detailed descriptions on the delivery of therapeutic molecules with different polymers realized with nanomedicine in cancer therapeutics
- Discusses newly developed promising polymers in cancer
- Includes a description of polymeric nanoparticles and their role in theranostics pertaining to cancer
- Covers the clinical relevance of different polymeric formulations in the field of cancer

DESCRIPTION

Cancer Therapy: Potential Applications of Nanotechnology provides readers with a compendium of all the latest research work in cancer therapeutics, including an emphasis on work in nanotechnology and polymeric nanoparticles. While there have been a large number of ongoing research projects and publications on the treatment of cancer, there is a limited number of books related to nanotechnology, especially those with an emphasis on polymeric nanoparticles in cancer therapy. This title enlightens researchers and students and provides exhaustive knowledge on the topics covered.



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LIFE SCIENCES Pharmacology

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

COVER IMAGE
FORTHCOMING

Novel Formulations and Future Trends

Recent and Future Trends in Pharmaceutics, Volume 3

Edited by : **Amit Kumar Nayak**, Ph.D, Department of Pharmaceutics, School of Pharmaceutical Sciences, Siksha 'O' Anusandhan (Deemed to be University), Bhubaneswar, Odisha, India and **Kalyan Kumar Sen**, Department of Pharmaceutics, Principal of Gupta College of Technological Sciences, Asansol, W.B, India

ISBN: 9780323918169

PUB DATE: Mar 01, 2024

LIST PRICE: £155.00 / \$200.00 /

€175.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 535

AUDIENCE: Postgraduate pharmacy students, doctoral and postdoctoral research fellows, pharmaceutical formulators, scientists, researchers, and regulatory scientists, Researchers and postgraduate students in biotechnology, biomedical sciences and engineering, bioengineering sciences, chemical engineering

BIC CODES: MMG, TCB

THEMA CLASSIFICATION:

THEMAMKG; THEMAMF;

THEMATCB

Provides in-depth discussions on fundamental and developing areas of drug delivery

KEY FEATURES

- Explores the most recent technologies in drug delivery in detail
- Contains contributions from the leading experts from academia, research, industry and regulatory agencies
- Includes high quality illustrations, flow charts and tables for easy understanding of concepts
- Discusses practical examples and research case studies

DESCRIPTION

Novel Formulations and Future Trends, Volume Three in the *Recent and Future Trends in Pharmaceutics* series, explores aspects of pharmaceutics with an original approach focused on technology, novelties and future trends. It discusses the most important developments in drug delivery, including important and exciting areas such as mucosal, implantable, transdermal, gastroretentive, vaccine and targeted drug delivery systems. The field of pharmaceutics is highly dynamic and rapidly expanding day-by-day so it demands a variety of amplified efforts for designing and developing pharmaceutical processes and formulation strategies. This is an essential reference for researchers in academia and industry as well as advanced graduate students.

New technologies are also explored including 3D printing and computational pharmaceutics.



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LIFE SCIENCES Pharmacology

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Biocontamination Control for Pharmaceuticals and Healthcare, 2e

Tim Sandle, Head of Microbiology, Bio Products Laboratory, Elstree, UK Visiting Tutor, School of Pharmacy and Pharmaceutical Sciences, Manchester University, UK Committee Member of the Pharmaceutical Microbiology Interest Group (Pharmig)

ISBN: 9780443216008

PREVIOUS ISBN: 9780128149119

PUB DATE: Mar 01, 2024

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

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 372

AUDIENCE: Pharmaceutical microbiologists (Quality Control labs), Pharmaceutical QC lab managers and lab directors. Graduate and postgraduate students in pharmaceuticals and healthcare; Engineers, pharmacologists, Quality Assurance personnel; Medical professionals, medical device specialists

BIC CODES: KNDP, MMG, MQP, KJMV5

THEMA CLASSIFICATION:

THEMAKND; THEMAMKG;

THEMAKJMQ; THEMAMQP

A practical reference to help readers design and implement a biocontamination strategy for the pharma and healthcare industries

KEY FEATURES

- Includes the most current regulations
- Contains three new chapters, including Application of Quality Risk Management and its Application in Biocontamination Control, Designing an Environmental Monitoring Programme, and Synthesis: An Anatomy of a Contamination Control Strategy
- Offers practical guidance on building a complete biocontamination strategy

DESCRIPTION

Biocontamination Control for Pharmaceuticals and Healthcare, Second Edition outlines a biocontamination strategy that tracks bio-burden control and reduction at each transition in classified areas of a facility. The first edition of the book covers many of the aspects of the strategy, but the new official guidance signals that a roadmap is required to fully comply with its requirements. Completely updated with the newest version of the EU-GPM (EN17141), this new edition expands coverage of quality risk management and contains completely new examples to help professionals bridge the gap between regulation and implementation.

This book offers professionals in pharma quality control and related areas guidance on building a complete biocontamination strategy.



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LIFE SCIENCES Pharmacology

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COVER IMAGE
FORTHCOMING

Autonomic Expression of Emotion

Edited by : **Hari H. Subramanian**, Senior Research Fellow, Centre for Clinical Research,
Faculty of Medicine and Biomedical Sciences, University of Queensland, Australia

ISBN: 9780128132074
PUB DATE: Mar 01, 2029
LIST PRICE: £108.00 / \$150.00 /
€108.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 320

AUDIENCE: Researchers, clinicians,
and advanced students investigating
behavioral neuroscience, affective
neuroscience, autonomic
neuroscience, affective disorders,
neurophysiology, neuroendocrinology,
neuropsychiatry, and related
disciplines

BIC CODES: PSAN, JMM

THEMA CLASSIFICATION:
THEMAPSAN

Examines the interactions between the autonomic nervous system and the limbic system and their combined roles in producing and regulating emotional expression

KEY FEATURES

- Explores the relationships among the mind, brain, emotion, and autonomic function
- Considers the combined functions of the autonomic nervous system and the limbic system
- Presents a compendium of fundamental neurophysiological modulation of emotions

DESCRIPTION

Autonomic Expression of Emotion is the first book to form a functional definition of the mind-brain connection in relation to emotional expression. The body's expression of emotion—from laughing to crying to experiencing stress or anxiety—requires a response from the autonomic nervous system. Without modulation of respiration, vocalization, cardiovascular activity, pain receptors, and urinary responses, no emotional expression is possible. While emotional control is within the purview of the limbic system, autonomic control lies within the brainstem. Neuroscience research typically addresses these areas as two separate entities, rather than examining them in unison. *Autonomic Expression of Emotion* thoroughly examines this relationship, and provides comprehensive coverage of the neurons, circuits, and control mechanisms through which the limbic and autonomic systems interact to produce emotional expression.



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LIFE SCIENCES Neuroscience

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

COVER IMAGE
FORTHCOMING

Mindful Self-Care for Clinicians and Caregivers

A Group Facilitator's Guide

Martin Lumpkin; Robin B. Jarrett, Ph.D., ABPP, Professor of Psychiatry, Elizabeth H. Penn Professorship in Clinical Psychology, Board Certified Clinical Psychologist, Fellow, American Psychological Association, Fellow, Association for Behavioral and Cognitive Therapies, Founding Fellow, Academy of Cognitive and Behavioral Therapies, The University of Texas Southwestern Medical Center, Department of Psychiatry, USA. and **Marielle H. Collins**

ISBN: 9780443298219

PUB DATE: May 01, 2025

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

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 233

AUDIENCE: Clinicians in mental health and counselling including psychologist, psychiatrist, social workers, counselors, supervisors, and physicians

BIC CODES: JML, JM

THEMA CLASSIFICATION: THEMAMKMT5; THEMAJML

Practical guide to implementing mindfulness to combat clinical burnout

KEY FEATURES

- Reviews relevant research regarding mindfulness-based practices
- Presents guidance on how to develop group sessions including structure, cultural adaptations, and virtual options
- Includes participant handouts, audio, video, and visual resources to promote and deepen the group and individual practice of mindful practice

DESCRIPTION

Caregivers are at a higher risk of burnout than any other population. Mindfulness-based interventions has been shown to significantly reduce burnout, stress, and anxiety. Mindful Self-Care for Clinicians and Caregivers: A Group Facilitator's Guide provides caregivers with a practical and scholarly resource to facilitate mindful self-care groups. Developed by experts in the field of mental health, this guide includes session by session guides (visual aids, audios, and videos) to support facilitators. The book introduces readers to the theory and empirical foundations underlying mindfulness practices. The second section describes the development of the group intervention and presents a model for understanding the challenges of caregiving and emotional states related to this work. An online companion site containing audio and video files to help support facilitations in implementing this new model.

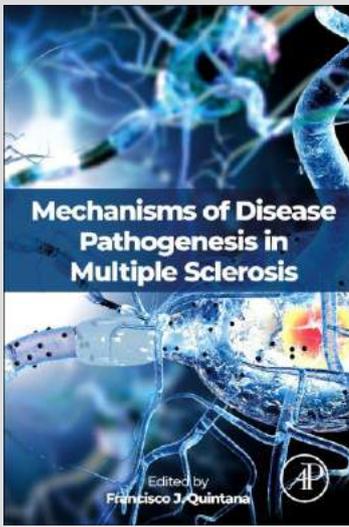


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LIFE SCIENCES Psychology

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Mechanisms of Disease Pathogenesis in Multiple Sclerosis

Edited by : **Francisco Javier Quintana**, Associate Scientist, Brigham and Women's Hospital;
Professor of Neurology, Harvard Medical School and Brigham and Women's Hospital

ISBN: 9780128238486
PUB DATE: Dec 01, 2023
LIST PRICE: £115.00 / \$150.00 /
€131.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 480
AUDIENCE: Neurologists,
neuroimmunologists and clinical,
translational and basic researchers
interested in mechanisms of
neurodegeneration
BIC CODES: MJCM, PSAN
THEMA CLASSIFICATION:
THEMAMJCM; THEMAPSAN

Comprehensive summary of mechanisms that drive disease pathogenesis in Multiple Sclerosis

KEY FEATURES

- Summarizes our current understanding of Multiple Sclerosis
- Discusses clinical features and available biomarker monitoring
- Focuses on mechanisms that drive disease pathogenesis

DESCRIPTION

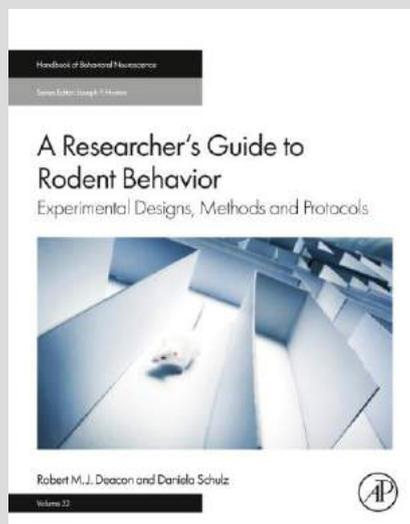
Mechanisms of Disease Pathogenesis in Multiple Sclerosis summarizes our current understanding on MS and its clinical features and monitoring with available biomarkers, focusing on mechanisms that drive disease pathogenesis and their control by genetic, environmental factors and novel therapies for disease management. The book is written for neurologists, neuroimmunologists and clinical, translational and basic researchers interested in mechanisms of neurodegeneration. Multiple Sclerosis (MS) is an autoimmune disease which targets the central nervous system (CNS). It is the most common cause of non-traumatic neurological disability in young adults with a prevalence of 1 in 1000 and increasing, hence the importance of this book.



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LIFE SCIENCES Neuroscience
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A Researcher's Guide to Rodent Behavior, Vol 32

Experimental Designs, Methods and Protocols

Robert M.J. Deacon, research lecturer, Department of Experimental Psychology, South Parks Road, University of Oxford, Oxford, UK and **Daniela Schulz**, Associate Professor, Boğaziçi University, Institute of Biomedical Engineering, Center for Life Sciences and Technologies, Kandilli Campus, Istanbul, Türkiye

ISBN: 9780128041277
PUB DATE: Sep 01, 2024
LIST PRICE: £115.00 / \$150.00 / €131.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 192

AUDIENCE: Researchers and advanced students in behavioral neuroscience, cognitive neuroscience, developmental neuroscience, pharmaceutical science, and related disciplines, as well as researchers in biomedical fields who need an introductory guide to animal behavioral testing

BIC CODES: MJN, PSAN

THEMA CLASSIFICATION: THEMAPSAN

An indispensable, step-by-step reference for researchers at all levels who are performing behavior investigations on mice, rats, and other rodents

A Volume in the *Handbook of Behavioral Neuroscience* Series

KEY FEATURES

- Provides comprehensive guidance for all phases of rodent-based research, from experimental design to ethics and drug-dosage calculations
- Presents a scientifically rigorous resource written in an engaging style that makes the content equally accessible to seasoned behavior researchers and those new to the field
- Contains 35 protocols for cognition, motor, sensory, affective and species-typical investigations
- Includes instructions and advice for designing and creating cost-effective apparatus used in conducting experiments

DESCRIPTION

A Researcher's Guide to Rodent Behavior: Experimental Designs, Methods and Protocols, Volume 32 provides a comprehensive guide to all forms of behavioral processes found in mice, rats and other rodents used in behavioral and cognitive research. Sections discuss basic skills necessary for successful rodent behavior research, including experimental design, animal selection, building any necessary apparatus, ethical considerations and interpretation of results. The book provides useful guidance for researchers at all stages of their careers, including a detailed description of how to perform stereotaxic surgery on the rat or mouse brain, advice on how to non-appetively motivate rodents, and more.

Most significantly, the book contains 35 proven, clearly defined protocols to aid readers in their research, making it one of the few books available that provides a collection of such protocols in a single publication. The cognitive, motor, sensory, affective, and species-typical protocols are profusely illustrated with full-color photographs from the author's own research, to help readers more fully understand the studies and methods discussed in the text and provide further instruction on the ideal ways to re-create research projects themselves.

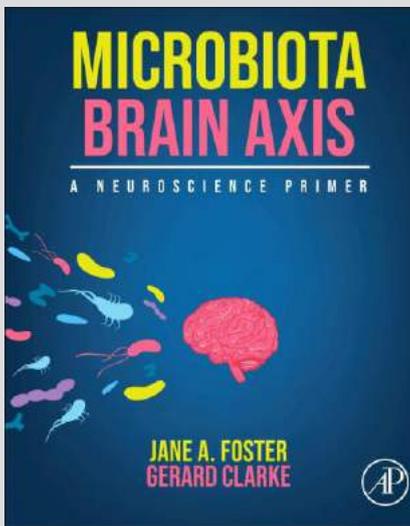


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LIFE SCIENCES Neuroscience

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Microbiota Brain Axis

A Neuroscience Primer

Jane A. Foster, Professor, Department of Psychiatry and Behavioural Neurosciences, McMaster University, Hamilton, Ontario, Canada and **Gerard Clarke**, Lecturer, Department of Psychiatry and Neurobehavioural Science and Principal Investigator, APC Microbiome Ireland, University College Cork, Cork, Ireland

ISBN: 9780128148006
PUB DATE: Mar 01, 2024
LIST PRICE: £97.99 / \$125.00 /
€110.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 480

AUDIENCE: Advanced students, basic researchers, and clinical researchers in behavioral neuroscience, neuroimmunology, biological psychiatry, developmental neuroscience, and related fields;

researchers in physiology, nutrition, immunology, and gastroenterology

BIC CODES: PSAN, MJCM, MJG, JMM

THEMA CLASSIFICATION:

THEMAMJCM; THEMAPSAN;

THEMAMFGM; THEMAMJG;

THEMAJMM

Provides a neuroscience framework for understanding the relationship among the gut, the brain and behavior

KEY FEATURES

- Reviews the many approaches to manipulating the microbiota in animal studies - including the use of germ-free animals, antibiotics and diet - and covers the strengths and limitations of each
- Outlines available microbiota research tools, such as 16S sequencing and shot-gun metagenomics
- Provides a comprehensive guide to analyzing microbiota-related data and the many choices for bioinformatics

DESCRIPTION

Microbiota Brain Axis: A Neuroscience Primer provides neuroscience researchers with a comprehensive guide on how to conduct effective microbiota-brain research, understand the appropriate methodologies, and collect and analyze microbiota data. The book begins with an introduction to the importance of the microbiota-brain communication in development and how microbiota impact neurodevelopmental disorders, mental health and neurodegeneration. In addition, the book discusses advances in microbiota analysis tools and techniques for neuroscience related research.

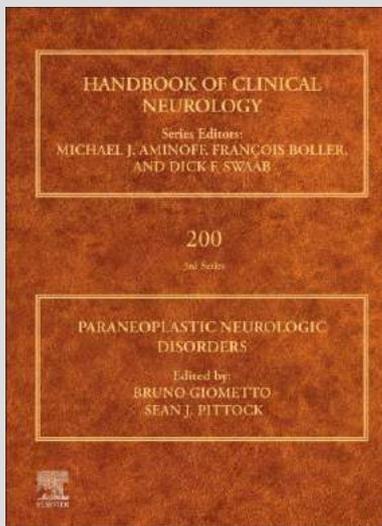


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LIFE SCIENCES Neuroscience

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Paraneoplastic Neurologic Disorders, Vol 200

Bruno Giometto, Head, Department of Neurology, Azienda Provinciale per I Servizi Sanitari (APSS) and University of Trento - Santa Chiara Hospital - 33100 TRENTO and **Sean J. Pittock**, Associate Professor of Neurology and Co-Director, Neuroimmunology Laboratory, Mayo Clinic, Rochester, MN, USA

ISBN: 9780128239124
PUB DATE: Mar 01, 2024
LIST PRICE: £215.00 / \$275.00 / €240.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 420
AUDIENCE: Clinical neurologists
BIC CODES: MJN, MBGR, MJG, PSAN
THEMA CLASSIFICATION:
THEMAMKJ; THEMAMBGR;
THEMAPSAN; THEMAMFGM;
THEMAMJG

Comprehensive book on research, diagnosis, and treatment of Paraneoplastic Neurological Disorders

A Volume in the *Handbook of Clinical Neurology* Series

KEY FEATURES

- Profiles paraneoplastic diseases by tumor type
- Identifies the pathogenetic mechanisms of PNS and provides epidemiological analysis
- Presents individual syndromes of the CNS, PNS, NMJ, and muscle
- Investigates the role of antibody markers
- Differentiates cytoplasmic, nuclear, and neuronal cell surface reactivities
- Discusses immune-oncological drugs causing diseases that are indistinguishable from PNS
- Reviews therapeutic strategies and clinical approach to PNS patients

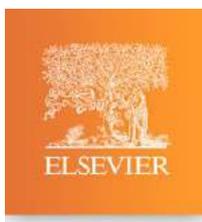
DESCRIPTION

Paraneoplastic Neurological Disorders, Volume 200 covers new, recent descriptions of autoantibodies against neuronal cell surface antigens (only partly associated with paraneoplastic disorders) and the introduction of new immuno-oncological drugs that can contribute to diseases that are pathogenetically indistinguishable from paraneoplastic syndromes. Besides investigating the pathogenetic mechanisms of these disorders, this book also explores what the introduction of new drugs used in immune checkpoint inhibitor cancer therapy are teaching us in terms of immunopathogenesis. Following sections present individual syndromes (phenotypical clinical manifestations) of the CNS, PNS, NMJ, and muscle.

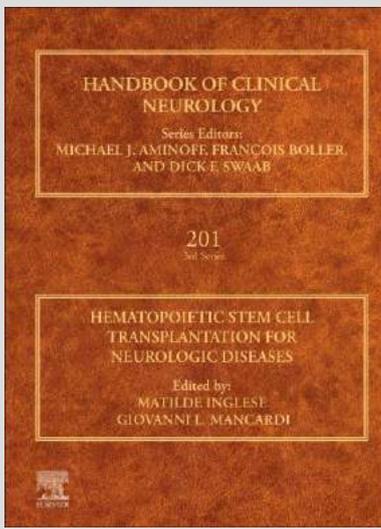
Finally, the book investigates the role of antibody markers that differentiate by cytoplasmic, nuclear, and neuronal cell surface reactivities. Side effects of the new immuno-oncological drugs increasingly used in cancer therapy are also covered.



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LIFE SCIENCES Neuroscience
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Hematopoietic Stem Cell Transplantation for Neurologic Diseases, Vol 201

Matilde Inglese, DINO GMI, University of Genoa, Italy; IRCCS Ospedale Policlinico San Martino, Genoa, Italy and **Giovanni L. Mancardi**, Università di Genova, DINO GMI, Genova, Italy

ISBN: 9780323902427
PUB DATE: May 01, 2024
LIST PRICE: £215.00 / \$275.00 / €240.00
DISCOUNT:
FORMAT: Hardback
TRIM:
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

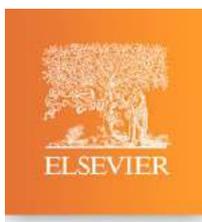
- Reviews immunological mechanisms of HSCT and CNS autoimmunity
- Identifies neurological diseases showing treatment efficacy with HSCT
- Includes MS, myasthenia gravis, neuromyelitis optica, and more
- Covers early and late side effects of HSCT

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.

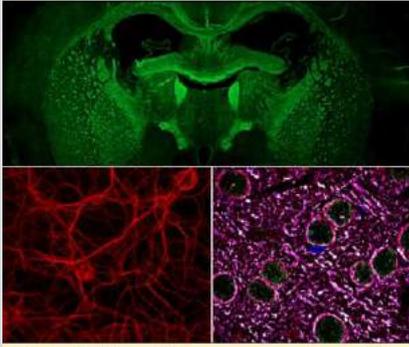


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HIV-Associated Neurocognitive Disorders



Guoku Hu, Huangui Xiong,
and Shilpa Buch



HIV-Associated Neurocognitive Disorders

Edited by : **Guoku Hu**, Associate Professor, Department of Pharmacology and Experimental Neuroscience, University of Nebraska Medical Center, USA; **Huangui Xiong**, Professor, Department of Pharmacology and Experimental Neuroscience, University of Nebraska Medical Center, USA Leader, University of Nebraska Medical Center Neurophysiology Laboratory, Center for Neurovirology and Neurodegenerative Disorders, USA and **Shilpa Buch**, Professor and Executive Vice-Chair, Department of Pharmacology and Experimental Neuroscience, University of Nebraska Medical Center, USA

ISBN: 9780323997447
PUB DATE: Mar 01, 2024
LIST PRICE: £195.00 / \$250.00 /
€220.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 500

AUDIENCE: Neuroscientists,
clinicians, neurologists, graduate
students in these areas

BIC CODES: PSAN, JMM

THEMA CLASSIFICATION:

THEMAPSAN; THEMAJMM

A comprehensive reference on HIV-associated neurocognitive disorders and comorbidities

KEY FEATURES

- Provides an in-depth exploration of the clinical manifestations of HAND and its comorbidities
- Includes detailed assessments of the molecular and cellular mechanisms underlying HAND symptoms
- Examines animal models for studying HAND, including macaque and rodent models
- Presents insights into epigenetic regulation and signaling pathways implicated in HAND
- Covers prevention, therapeutic strategies, and diagnostic approaches

DESCRIPTION

HIV-Associated Neurocognitive Disorders (HAND) presents a complex and evolving challenge in the context of HIV-1 infection and treatment. This comprehensive volume dives into the clinical manifestations, molecular and cellular mechanisms, and therapeutic strategies underlying HAND and its associated comorbidities. This book brings together cutting-edge research and clinical insights, making it an essential resource for researchers, clinicians, and students engaged in HIV-related studies and neurocognitive research. This resource also aims to advance our understanding of HAND to contribute to the development of novel diagnostic tools and therapeutic interventions for improved patient outcomes.

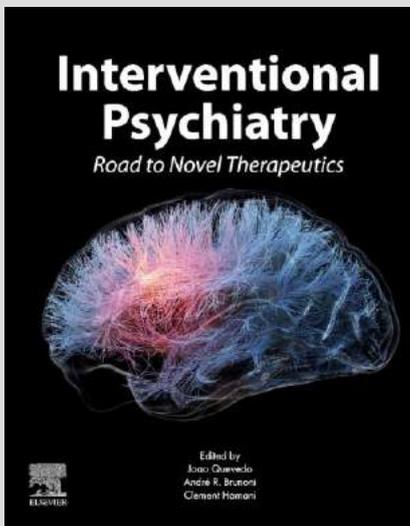


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Interventional Psychiatry

Road to Novel Therapeutics

Edited by : **Joao Quevedo**, Professor of Psychiatry at the McGovern Medical School, The University of Texas Health Science Center at Houston, TX, USA; **André R Brunoni**, University of São Paulo Brazil and **Clement Hamani**, Sunnybrook Research Institute, Toronto, Canada

ISBN: 9780443184963
PUB DATE: Mar 01, 2024
LIST PRICE: £165.00 / \$200.00 / €190.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 558
AUDIENCE: Psychiatrists, Psychologists, Neurologists and Neurosurgeons from both academic and private settings
BIC CODES: JMM, MMJ
THEMA CLASSIFICATION: THEMAJMM; THEMAJMR; THEMAMKM

A comprehensive reference to interventional therapeutics in psychiatry

KEY FEATURES

- Introduces an innovative approach combining both well-established and innovative methodologies
- Includes an in-depth description of putative mechanisms of action
- Features clinician-friendly presentation of indications, contraindications, and techniques
- Outlines guidelines to foster fellowships in Interventional Psychiatry

DESCRIPTION

Recent advances in pharmacology and brain stimulation have led to the development of novel treatments for psychiatric disorders. These new advances have led to the development of a new subspecialty, Interventional Psychiatry.

Interventional Psychiatry: Road to Novel Therapeutics reviews all specialized treatments including device-based interventions such as electroconvulsive therapy (ECT), repetitive transcranial magnetic stimulation (rTMS), and deep brain stimulation (DBS). This book discusses the procedure-based pharmacologic interventions including ketamine infusion therapy and psychedelic therapies. Internationally contributed, this book outlines the state of the field, as well as implications for training and the role of the interventional psychiatrist in treatment teams.



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LIFE SCIENCES Neuroscience

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COVER IMAGE
FORTHCOMING

Myeloid-Derived Suppressor Cells, Vol 184

Edited by : **Carlos Jiménez-Cortegana**, Radiation Oncology, Weill Cornell Medical College, New York, NY, USA; Department of Medical Biochemistry, Molecular Biology and Immunology, Faculty of Medicine, University of Seville, Seville, Spain and **Lorenzo Galluzzi**, Assistant Professor of Cell Biology in Radiation Oncology, Department of Radiation Oncology, Weill Cornell Medical College, NY, USA

ISBN: 9780443218071
PUB DATE: Mar 15, 2024
LIST PRICE: £139.00 / \$175.00 /
€160.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 300
AUDIENCE: Academic Researchers,
Biomedical Laboratories, Libraries and
Educational Institutions
BIC CODES: PSC, PSD
THEMA CLASSIFICATION:
THEMAPSC; THEMAPSD;
THEMAPSF

EMyeloid-derived suppressor cells are a heterogenous cell population with immunosuppressive abilities. Here we provide detail protocols to assess their critical role

KEY FEATURES

- Provides the authority and expertise of leading researchers in myeloid-derived suppressor cells
- Includes comprehensive and detailed protocols to assess the detrimental role of myeloid-derived suppressor cells
- Presents the latest release in the Methods in Cell Biology series

DESCRIPTION

Myeloid-Derived Suppressor Cells, Volume 184 in the *Methods in Cell Biology* series includes comprehensive and detailed protocols to assess the critical role of myeloid-derived suppressor cells (MDSCs), an immature, heterogenous cell population from the myeloid lineage with a potent immunosuppressive activity in a variety of diseases. This volume presents twelve interesting protocols that address the isolation of MDSCs in murine models, the detection of mouse and human MDSCs by flow cytometry, T-cell proliferation assays, isolation of MDSC-derived exosomes and their immunosuppressive function, characterization of lysosomal lipase in MDSCs, detection of MDSC-derived nitric oxide, and other *in vivo* and *ex vivo* assays.



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SERIALS Biochemistry, Genetics & Molecular Biology
<https://virtuale.elsevier.com>, www.elsevier.com

COVER IMAGE
FORTHCOMING

Heart Development and Disease, Vol 156

Edited by : **Nicole Dubois**, Icahn School of Medicine at Mount Sinai, NY, USA

ISBN: 9780128232972
PUB DATE: Jan 15, 2024
LIST PRICE: £128.00 / \$210.00 / €150.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 350
AUDIENCE: Scientists, researchers, and students
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

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 Heart Development Disease

DESCRIPTION

Heart Development Disease, Volume 156 in the Current Topics in Developmental Biology series, 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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SERIALS Biochemistry, Genetics & Molecular Biology
<https://virtuale.elsevier.com>, www.elsevier.com

COVER IMAGE
FORTHCOMING

Cell-based Cancer Immunotherapy, Vol 183

Edited by : **Abhishek Garg** and **Lorenzo Galluzzi**, Assistant Professor of Cell Biology in Radiation Oncology, Department of Radiation Oncology, Weill Cornell Medical College, NY, USA

ISBN: 9780443139956
PUB DATE: Mar 01, 2024
LIST PRICE: £139.00 / \$175.00 / €160.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 300
BIC CODES: PSC, PSD
THEMA CLASSIFICATION:
THEMAPSC; THEMAPSD;
THEMAPSF

DESCRIPTION

Cell-based Cancer Immunotherapy, Volume 183 provides the latest progress concerning research on anticancer cellular immunotherapies and their immunological, translation, or clinical aspects. Topics covered in this volume include Methods behind clinical DC vaccine products against glioblastoma, Fully closed and automated isolation of natural blood dendritic cells for cancer immunotherapy, Methods behind Oncolytic virus-based DC vaccines in cancer: towards a multiphase combined treatment strategy for Glioblastoma (GBM) patients, Identification of TCR repertoire patterns linked with anti-cancer immunotherapy, Training of epitope-TCR prediction models with healthy donor-derived cancer-specific T cells, Methods behind neoantigen predictions for anticancer vaccines, Methods behind CD137L-DC-EBV-VAX anticancer vaccine, and much more.

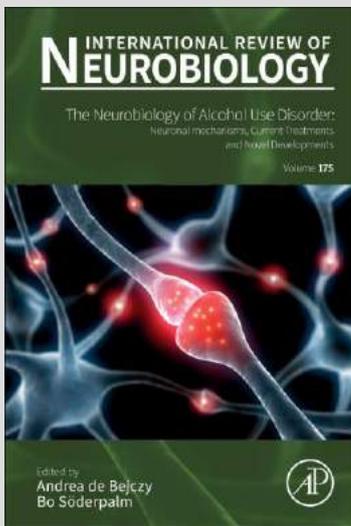
Additional sections cover Gold Standard Assessment of Immunogenic Cell Death Induced by Photodynamic Therapy: From In Vitro to Tumor Mouse Models and Anti-Cancer Vaccination Strategies, Methods behind TCR analyses for colorectal cancer-associated TILs, The use of xCELLigence, Incucyte, and/or Cr/LDH/maker-release assays, Humanized mouse models for anti-cancer therapy, In vitro re-challenge of CAR T cells, Methods behind adoptively transferred tumor draining lymphocytes? for anticancer immunotherapy, and A murine glioblastoma platform to test cellular therapies with the standard of care.



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SERIALS Biochemistry, Genetics & Molecular Biology
<https://virtuale.elsevier.com>, www.elsevier.com



The Neurobiology of Alcohol Abuse, Vol 175

the Mechanisms Behind Developing Dependence, Subgroups, and Novel Approaches to Treatment

Edited by : **Andrea de Bejczy**, Department of Psychiatry and Neurochemistry, University of Gothenburg, Sweden and **Bo Söderpalm**, Department of Psychiatry and Neurochemistry, University of Gothenburg, Sweden

ISBN: 9780443141645
PUB DATE: Jan 10, 2024
LIST PRICE: £145.00 / \$210.00 / €150.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 300
AUDIENCE: Undergraduates, graduates, academics, and researchers in the field of neurobiology of alcohol abuse
BIC CODES: MJN, PSAN
THEMA CLASSIFICATION: THEMAMKJ; THEMAPSAN

Edited by some of the best scientists in the field, this series presents the latest updates in the neurobiology of alcohol abuse

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in *International Review of Neurobiology* series
- Updated release includes the latest information on The Neurobiology of Alcohol Abuse

DESCRIPTION

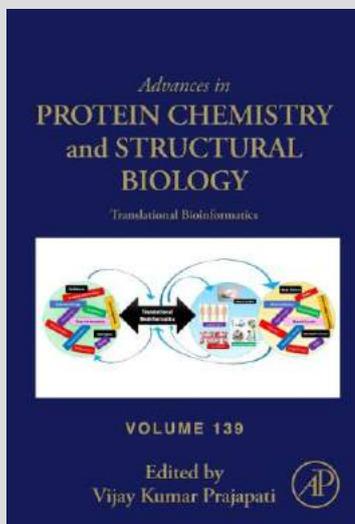
The Mechanisms Behind Developing Dependence, Sub-groups, and Novel Approaches to Treatment, Volume 174 in the *Neurobiology of Alcohol Abuse* series, highlights new advances in the field, with this new volume presenting interesting chapters on topics such as Substitution therapy in alcohol treatment, with a focus on mechanisms and possibilities, Designing and analyzing studies on treatments for alcohol dependence, The harm reduction approach for treatment of alcohol dependence, Current treatments for alcohol dependence, with a suggested focus on mechanisms and possibilities, Metabolomics in relation to alcohol dependence with focus on possibilities for precision medicine, and Repurposing drugs for treatment of alcohol dependence.



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SERIALS Neuroscience
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Translational Bioinformatics, Vol 139

Edited by : **Vijay Kumar Prajapati**, Assistant Professor, Department of Biochemistry, School of Life Sciences, Central University of Rajasthan, Kishangarh, Ajmer, Rajasthan, India and **Vijay Kumar Prajapati**, Assistant Professor, Department of Biochemistry, School of Life Sciences, Central University of Rajasthan, Kishangarh, Ajmer, Rajasthan, India

ISBN: 9780443193484
PUB DATE: Mar 01, 2024
LIST PRICE: £119.00 / \$171.00 / €122.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 476
AUDIENCE: Biochemists, biophysicists, cell biologists, protein chemists, structural geneticists, and structural biologists
BIC CODES: PNN, PSB
THEMA CLASSIFICATION: THEMAPPN; THEMAPPB

Translational Bioinformatics is an emerging field and providing the solution for biomedical research.

KEY FEATURES

- Translational Bioinformatics
- Health Informatics
- Multi-omics

DESCRIPTION

Translational Bioinformatics is an emerging field in the direction of biomedical research. High throughput technologies can be applied to the generated biological data to develop the vaccine and personalized medicine. This volume consists of the chapters from different stalwart of the field covering the topics such as drug development, vector engineering, vaccine development and translational genomics. Chapters covered in this volume discuss the translational research related with cancer, Alzheimer disease and cardiovascular diseases. This volume includes the chapter describing the importance of computational resources and chemoinformatics for the translational health research. How Omics studies are helping to translate the laboratory data into the development of tools which are beneficial in the clinics have been described. How translational bioinformatics helpful in plant genomics to improve the crops have also been included in this volume. This volume has a chapter which describes the secrets of resistance development and further how these resistance are associated with human infectious diseases. This volume will be useful to the early career researcher in the development of research idea and develop their methodologies in the direction of bioinformatics and it will also give the insight to translate their findings.



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SERIALS Biochemistry, Genetics & Molecular Biology
<https://virtuale.elsevier.com>, www.elsevier.com

COVER IMAGE
FORTHCOMING

Pharmacological Advances in Central Nervous System Stimulants, Vol 99

Edited by : **Margaret E Gnegy**, Department of Pharmacology, University of Michigan Medical School, MI, USA

ISBN: 9780443219337
PUB DATE: Mar 01, 2024
LIST PRICE: £177.00 / \$256.00 /
€183.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 300

AUDIENCE: Biomedical scientists and clinicians interested in structural and mechanistic aspects of stimulants from both therapeutic and drug abuse perspectives.

BIC CODES: MMG

THEMA CLASSIFICATION:
THEMAMKG

Provides a greater understanding of the molecular and behavioral effects of this wide class of drugs

KEY FEATURES

- Provides a diverse variety of stimulants, having different mechanisms of action and physiological effects
- Includes both therapeutic uses and abuse aspects of stimulants
- Covers both molecular mechanisms and behavioral effects of stimulants

DESCRIPTION

Pharmacological Advances in Central Nervous System Stimulants, Volume 99 in the *Mechanisms, Therapeutic Uses, and Abuse of Stimulants* series, showcases recent pharmacological progress investigating both therapeutic (ADHD, binge-eating and narcolepsy) and abuse aspects of a number of stimulants, some of which are long-standing (amphetamines, cocaine and nicotine) while others are emerging (cathinones). Specific chapters in this new release include Transgenerational Epigenetic Inheritance of Phenotypes Associated with Parental Exposure to Drugs of Abuse, Dysregulation Of Brain Cholesterol Homeostasis by Psychostimulants, Modeling Methamphetamine Use Disorder in Mammals: Sex Differences in Behavioral Consequences and Gene Expression, and much more.

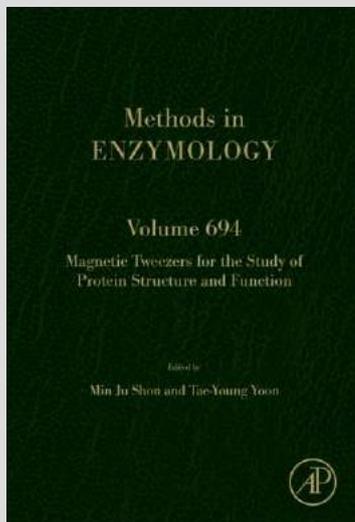
Additional sections focus on Second Generation Stimulants – Pharmacological and Clinical Advances in The Treatment of ADHD And Binge-eating disorder, Pharmacology Of Stimulant – Opioid Co-Use, Role Of Age and Sex in Determining the Risk For Adverse Consequences Following Exposure To Amphetamines, Modafinil, An Atypical CNS Stimulant, Modulators Of Nicotine Reward-Related and Reinforcement-Related Behaviors, Methamphetamine Effects on Peripheral Immune System, Post-Translational Mechanisms in Neurotransmitter Efflux, The Many Enigmas of Nicotine, Genetic Variation in The Neuregulin-ErbB Signaling Pathway And Substance Use Disorders, Pharmacology And Neurotoxicology of Synthetic Cathinones, and more.



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SERIALS Pharmacology, Toxicology & Pharmaceutical Science
<https://virtuale.elsevier.com>, www.elsevier.com



Magnetic Tweezers for the Study of Protein Structure and Function, Vol 694

Edited by : **Min Ju Shon**, Department of Physics, School of Interdisciplinary Bioscience and Bioengineering, Pohang University of Science and Technology, South Korea and **Tae-Young Yoon**, School of Biological Sciences, Institute for Molecular Biology and Genetics, Seoul National University, South Korea

ISBN: 9780443222290
PUB DATE: Mar 01, 2024
LIST PRICE: £138.00 / \$199.00 / €142.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 400

AUDIENCE: Biochemists, biophysicists, molecular biologists, analytical chemists, and physiologists

BIC CODES: PSD, PSB

THEMA CLASSIFICATION:

THEMAPSB; THEMAPSD

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

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in the *Methods in Enzymology* series
- Updated release includes the latest information on *Magnetic Tweezers for the Study of Protein Structure and Function*

DESCRIPTION

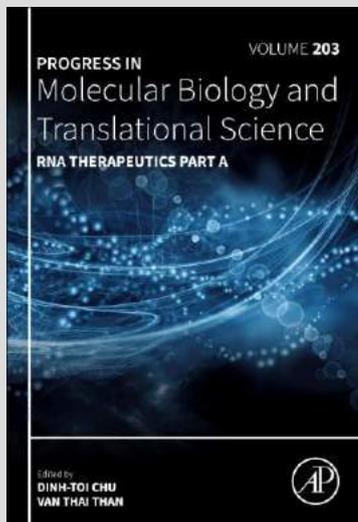
Magnetic Tweezers for the Study of Protein Structure and Function, Volume 694 in the *Methods in Enzymology* serial highlights new advances in the field, with this new volume presenting interesting chapters on a variety of topics, including Single membrane protein tethering for magnetic tweezer experiments, Membrane protein folding studies using a robust magnetic tweezer method, Magnetic tweezers in cell mechanics, and more.



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SERIALS **Methods in Enzymology**
<https://virtuale.elsevier.com>, www.elsevier.com



RNA Therapeutics Part A, Vol 203

Edited by : Dinh-Toi Chu and Van Thai Than

ISBN: 9780443223143
PUB DATE: Feb 01, 2024
LIST PRICE: £119.00 / \$171.00 / €122.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 280

AUDIENCE: Lecturers, learders and experts on molecular bioedicnes, and students in Biotechnology, Clinicians and Healthcare Professionals, Pharmaceutical, and anyone who are particularly interested in RNA therapeutics

BIC CODES: PSD, PSB

THEMA CLASSIFICATION:

THEMAPSB; THEMPSD

Provides that latest on RNA therapy, a future medical approach that can cure diseases from the genetic core

KEY FEATURES

- Discusses the history of RNA therapeutics, along with future perspectives
- Presents the processes of RNA therapeutical developments
- Covers recent applications of RNA therapeutics in clinics
- Provides the advantages and disadvantages of RNA therapeutics

DESCRIPTION

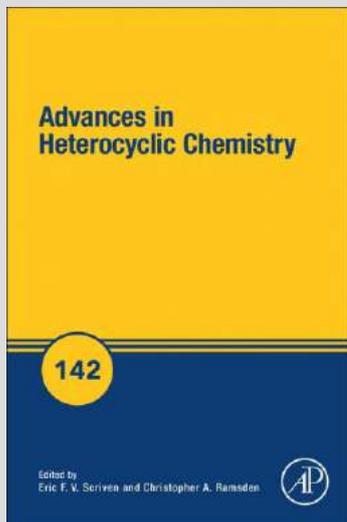
RNA Therapeutics, Part A, Volume 203 presents the latest on a new class of medication based on RNA molecules. The book includes timely chapters that focus on An introduction to RNA therapeutics and potentials, The development and technologies of RNA therapeutics, Types of RNA therapeutics, Molecular mechanisms of RNA therapeutics, IT, and AI applications in RNA therapeutics, The application of data sciences and bioinformatics in RNA therapeutics, RNA therapeutics history and future perspectives, Recent applications of RNA therapeutic in clinics, Advantages and disadvantages of RNA therapeutics, RNA therapeutics for neurological disease, RNA therapeutics for metabolic disorders, and RNA therapeutics for metabolic disorders.



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SERIALS Biochemistry, Genetics & Molecular Biology
<https://virtuale.elsevier.com>, www.elsevier.com



Advances in Heterocyclic Chemistry, Vol 142

Eric F.V. Scriven, Publishing Editor of Arkivoc, Department of Chemistry, University of Florida, Gainesville, USA and **Christopher A. Ramsden**, Professor of Organic Chemistry, Keele University, Staffordshire, UK

ISBN: 9780443237737
PUB DATE: Mar 01, 2024
LIST PRICE: £169.00 / \$245.00 / €175.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 300
AUDIENCE: Graduate students and research workers in academic and industrial laboratories, organic chemists, polymer chemists and biological scientists
BIC CODES: PN, PNN
THEMA CLASSIFICATION: THEMARN; THEMARN

Provides the latest, comprehensive reviews written by established, world-renowned authorities in heterocyclic chemistry

KEY FEATURES

- Considered the definitive serial in the field of heterocyclic chemistry
- Serves as the go-to reference for organic chemists, polymer chemists, and many biological scientists
- Provides the latest comprehensive reviews written by established authorities in the field
- Combines descriptive synthetic chemistry and mechanistic insights to enhance understanding on how chemistry drives the preparation and useful properties of heterocyclic compounds

DESCRIPTION

Advances in Heterocyclic Chemistry, Volume 142, the latest release in this definitive series, combines descriptive synthetic chemistry and mechanistic insight to yield an understanding of how chemistry drives the preparation and useful properties of heterocyclic compounds. Chapters in this new release include Recent advances in the Synthesis of Benzo[b]furans, Recent Advances in the Synthesis of 6-Membered Heterocycles via Domino and Multicomponent Reactions (from 2017-2022), Multi-component synthesis of isatin based bioactive heterocycles, Recent advances in the chemistry of pyrazolo[1,5-a]pyrimidines, The Literature of Heterocyclic Chemistry, Part XXI, 2021, and much more.

Additional sections present the latest Advances in applications of dihydropyridines in organic chemistry and Strategies for the annulation of five-membered sulfur-nitrogen rings to benzene and heterocycles.



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SERIALS Chemistry & Chemical Engineering
<https://virtuale.elsevier.com>, www.elsevier.com

COVER IMAGE
FORTHCOMING

Neurophysiology of Silence, Vol 284

Consciousness and Self Awareness

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: Mar 01, 2024

LIST PRICE: £199.95 / \$288.00 /
€206.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 350

AUDIENCE: Undergraduates,
graduates, academics, and
researchers in the field of neurology
and brain research

BIC CODES: PSAN, JMM

THEMA CLASSIFICATION:
THEMAPSAN; THEMAJMM

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

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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SERIALS Neuroscience

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

Profiles of
Drug Substances,
Excipients, and
Related Methodology
Volume 49



Profiles of Drug Substances, Excipients, and Related Methodology, Vol 49

Abdulrahman Al-Majed, Professor, Pharmaceutical Chemistry Department, College of Pharmacy, King Saud University, Saudi Arabia

ISBN: 9780443293269
PUB DATE: Mar 01, 2024
LIST PRICE: £198.99 / \$245.00 /
€232.99
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 446
AUDIENCE: Pharmacists,
Pharmaceutical, medicinal, and
analytical chemists, Pharmacologists,
physicians, Dentist
BIC CODES: PSB, PSD
THEMA CLASSIFICATION:
THEMAPSB; THEMAPSD

It is highly suggested for individual use or for scientific study groups in corporate, governmental, or academic libraries to use the PODSERM series, which offers thorough reviews covering all aspects of drug development and formulation of drugs. This important information is presented in no other comparable book series in such a timely and pertinent way

KEY FEATURES

- Offers a comprehensive review of the biological, chemical, and physical characteristics of certain commonly prescribed medications
- Provides synthesis and pathways of physical or biological degradation of selected drug substances
- Provides pharmacology of certain drug substances
- Describes nearly all analytical methods used to identify and quantify drug substances
- Provides a cumulative index for each volume in the series

DESCRIPTION

Physical or chemical data, synthesis or pathways of physical or biological degradation, various analytical techniques for identification and determinations, various methods of separations, and pharmacology of drug substances are essential to all phases of pharmaceutical development and of immeasurable value to field workers, but they are scattered throughout the scientific literature. The Analytical Profiles of Drug Substances and Excipients offers these details in a single location. There is no other analogous book series that provides such timely and pertinent information. Physical Profiles of Drug Substances and Excipients; Analytical Profiles of Drug Substances and Excipients; ADME Profiles of Drug Substances and Excipients; Methodology Related to the Characterization of Drug Substances and Excipients; and Methods of Chemical Synthesis are among the review articles and database compilations included in the Profiles series.

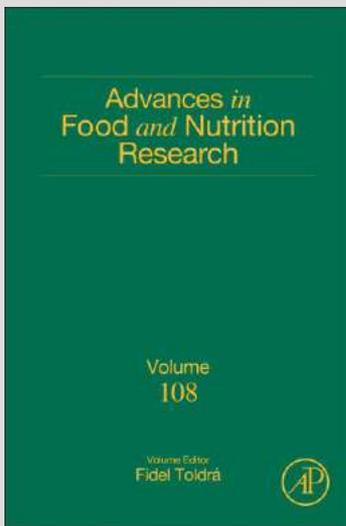
The 49th volume of *Profiles of Drug Substances, Excipients, and Related Methodology* includes comprehensive profiles of five drug compounds: Deferasirox, Duvelisib, Regorafenib, Ponatinib and Avanafil. Additionally, this book contains a chapter on Regulation and Standardization of Herbal Drugs: Current status, Limitation, Challenge's and Future Prospective.



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SERIALS Pharmacology, Toxicology & Pharmaceutical Science
<https://virtuale.elsevier.com>, www.elsevier.com



Advances in Food and Nutrition Research, Vol 108

Fidel Toldra, Research Professor, Instituto de Agroquímica y Tecnología de Alimentos (CSIC), Spanish National Research Council, Paterna (Valencia), Spain

ISBN: 9780443293924
PUB DATE: Mar 01, 2024
LIST PRICE: £126.00 / \$182.00 / €130.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 220
AUDIENCE: Scientists involved in R&D related with food science and nutrition but also with food quality and safety
BIC CODES: TDCT
THEMA CLASSIFICATION: THEMATDCT

This book provides the latest advances on the effects of food processing on flavonoids and off-flavor generation, and the use of bioinformatics to study peptides as well as recent developments on sustainable packages, use of edible insects in foods and control of pathogens in food processing.

KEY FEATURES

- Contains contributions that have been carefully selected based on their vast experience and expertise on the subject
- Includes updated, in-depth and critical discussions of available information, giving the reader a unique opportunity to learn
- Encompasses a broad view of the topics at hand

DESCRIPTION

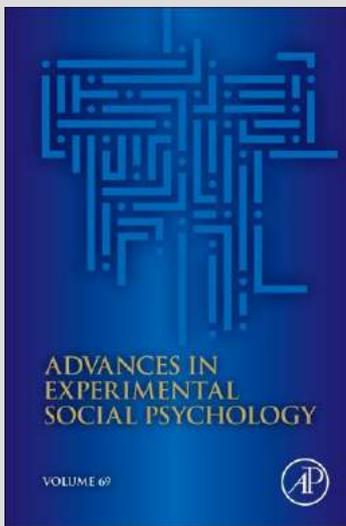
This book provides the latest advances on the impact of thermal processing on food flavonoids, the application of bioinformatics for studying food bioactive peptides, novel strategies for mitigating off-flavor perception, innovations in sustainable food packaging, the nutritional and safety aspects of edible insects in foods, the effect of novel food processing technologies on *Bacillus cereus* spores, and control of Salmonella in poultry production



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SERIALS Agricultural & Biological Sciences
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Advances in Experimental Social Psychology, Vol 69

Bertram Gawronski, Professor of Psychology, University of Texas at Austin, USA

ISBN: 9780443294266
PUB DATE: Mar 01, 2024
LIST PRICE: £82.50 / \$119.00 / €84.95

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 344

AUDIENCE: Researchers, librarians, and academics in social psychology and personality

BIC CODES: JM, JMH, JML

THEMA CLASSIFICATION:

THEMAJMH; THEMAJM; THEMAJML

Premier outlet for reviews of mature, high-impact research programs in social psychology

KEY FEATURES

- Provides one of the most cited series in the field of experimental social psychology
- Contains contributions of major empirical and theoretical interest
- Represents the best and brightest in new research, theory, and practice in social psychology

DESCRIPTION

Advances in Experimental Social Psychology, Volume 69, the latest release in this premier outlet for reviews of mature, high-impact research programs in social psychology, provides defining pieces of established research programs, reviewing and integrating thematically related findings by individual scholars or research groups. Topics discussed in Volume 69 include misinformation and inoculation, coherence of emotional response systems, environmental influences on behavior, human creativity, and social perception.

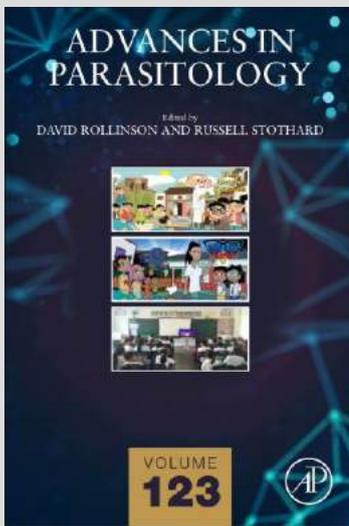


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SERIALS Psychology

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Advances in Parasitology, Vol 123

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: 9780443295102
PUB DATE: Mar 01, 2024
LIST PRICE: £160.00 / \$231.00 /
€165.00
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 280
AUDIENCE: PhD students,
professors, scientists, health workers,
government officers, and policy
makers at various levels
BIC CODES: MMFP
THEMA CLASSIFICATION:
THEMAMKFP

Seminal, comprehensive, up-to-date reference on all areas of interest in contemporary parasitology

KEY FEATURES

- Informs and updates on all the latest developments in the field of parasitology
- Includes medical studies of parasites of major influence
- Features reviews of more traditional areas, such as zoology, taxonomy and life history which help shape current thinking and applications

DESCRIPTION

Advances in Parasitology, Volume 123, the latest release in this ongoing series, includes medical studies of parasites of major influence, along with reviews of more traditional areas, such as zoology, taxonomy and life history.



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SERIALS Immunology & Microbiology
<https://virtuale.elsevier.com>, www.elsevier.com

COVER IMAGE
FORTHCOMING

Advances in Virus Research, Vol 118

Robin MacDiarmid; Benhur Lee and Martin Beer, Institute of Diagnostic Virology, Friedrich-Loeffler-Institut, Germany

ISBN: 9780443295126

PUB DATE: Mar 01, 2024

LIST PRICE: £138.99 / \$171.00 /
€162.99

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 250

AUDIENCE: Researchers, students,
and academics in the field of virus
research

BIC CODES: MJCJ, MBN, PSG,
PSG

THEMA CLASSIFICATION:
THEMAMBN; THEMAMJCJ

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

KEY FEATURES

- Provides the authority and expertise of leading contributors from an international board of authors
- Presents the latest release in Advances in Virus Research serials

DESCRIPTION

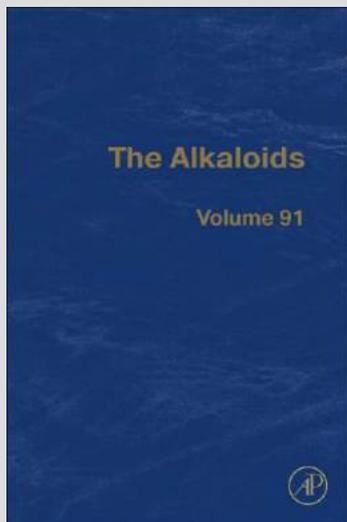
Advances in Virus Research serial, volume 118 highlights new advances in the field with this new volume presenting interesting chapters. Each chapter is written by an international board of authors.



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SERIALS Immunology & Microbiology
<https://virtuale.elsevier.com>, www.elsevier.com



The Alkaloids, Vol 91

Chemistry and Biology

Hans-Joachim Knolker, Department of Chemistry, Technical University of Dresden, Germany

ISBN: 9780443295546
PUB DATE: Mar 01, 2024
LIST PRICE: £169.00 / \$245.00 /
€175.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 340

AUDIENCE: Chemists, biologists and
biochemists working in research
institutions as well as in industry

BIC CODES: PN, PNN

THEMA CLASSIFICATION:

THEMAPN; THEMAPNN

Regularly updated publication series on the topic of alkaloids, covering their chemistry, biology, pharmacology and medical applications

KEY FEATURES

- Provides the latest information on the study of alkaloids
- Covers alkaloid chemistry, biology, pharmacology and medical applications
- Contains more than 80 published volumes in this interesting field of study

DESCRIPTION

The Alkaloids, Volume 91, the newest release in a series that has covered the topic for more than 60 years, discusses key aspects of alkaloid chemistry, biology and pharmacology. Sections in this release include chapters on Recent Progress in the Chemistry of Naphthylisoquinoline Alkaloids, The Biological Activities of Quinolizidine Alkaloids, and C NMR Spectral Data and Pharmacological Activities of Aporphine Alkaloids.



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SERIALS Chemistry & Chemical Engineering
<https://virtuale.elsevier.com>, www.elsevier.com

COVER IMAGE
FORTHCOMING

Advances in Clinical Chemistry, Vol 119

Gregory S. Makowski, Vice President and Chief Scientific Officer, Clinical Laboratory Partners,
Newington, CT, USA

ISBN: 9780443295805

PUB DATE: Mar 01, 2024

LIST PRICE: £142.00 / \$205.00 /
€147.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 222

AUDIENCE: Clinical Laboratory
Professionals, Physicians and
Research Scientists

BIC CODES: PSA, PSD, PSB, PHVN

THEMA CLASSIFICATION:

THEMAPSD; THEMAPS;

THEMAPSB; THEMAPHVN

Publishes cutting-edge reviews in the field of clinical chemistry that include the expertise of international contributors

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 119, the latest installment in this internationally acclaimed series, contains chapters authored by world-renowned clinical laboratory scientists, physicians and research scientists.



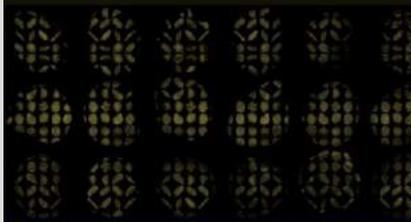
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SERIALS Chemistry & Chemical Engineering
<https://virtuale.elsevier.com>, www.elsevier.com

VEGETABLE OIL BASED POLYMERS AND THEIR SURFACE APPLICATIONS



Edited by
Eram Sharmin
Fahmina Zafar

Vegetable Oil-Based Polymers and Their Surface Applications

Edited by : **Eram Sharmin**, Assistant Professor, Department of Pharmaceutical Chemistry, College of Pharmacy, Umm Al-Qura University, Makkah, Saudi Arabia and **Fahmina Zafar**, Senior Researcher, Inorganic Materials Research Laboratory, Department of Chemistry, JMI, New Delhi, India

ISBN: 9780128221891
PUB DATE: Jan 22, 2024
LIST PRICE: £205.00 / \$250.00 /
€240.00

DISCOUNT:

FORMAT: Paperback

TRIM:

PAGES: c. 480

AUDIENCE: Academic: Researchers, scientists, and advanced students in polymer chemistry, surfaces and coatings, natural polymers, materials chemistry, chemical engineering and plastics engineering. Industry: R&D, scientists, and engineers interested in innovative biobased materials for a range of applications, including paints and coatings, packaging, cosmetics, pharmaceuticals, and more

BIC CODES: TGM, TDC, TDCP, PNR

THEMA CLASSIFICATION:

THEMATGM; THEMATDC;

THEMATDCP; THEMATDPF;

THEMATGMP

An innovative guide to the principles, preparation and surface applications of vegetable oil-based polymers

KEY FEATURES

- Provides in-depth information on the preparation of vegetable oil-based epoxies, alkyds, polyesteramides, polyetheramides and polyurethanes
- Explores cutting-edge surface applications of vegetable oil-based polymers in areas such as coatings, packaging, cosmetics and wound dressings
- Includes other key considerations, including cost benefit analysis, lifecycle assessment and future developments

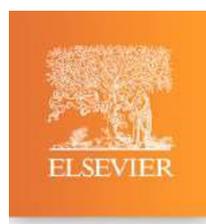
DESCRIPTION

Vegetable Oil Based Polymers and Their Surface Applications presents detailed coverage of principles, preparation methods and novel surface uses of vegetable oil based polymers. This comprehensive, state-of-the-art book follows the journey of vegetable oils from seeds to surfaces in a range of advanced applications. Opening chapters discuss theory, principles and characterization techniques while other sections present concepts on the preparation of different polymer types based on vegetable oil. The final section of the book provides extensive coverage of applications, enabling the preparation of vegetable oil based polymers for a range of products and industries.

This is a valuable resource for researchers, scientists, and advanced students in polymer chemistry, surfaces and coatings, natural polymers, materials chemistry, chemical engineering and plastics engineering. In an industrial setting, this book supports R&D professionals, scientists, and engineers interested in developing innovative biobased materials for a range of applications, including automotive and aerospace, packaging, cosmetics, pharmaceuticals, biomedicine and consumer goods.

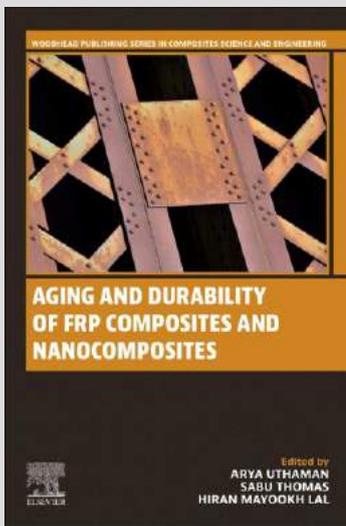


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ENGINEERING Materials

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



Aging and Durability of FRP Composites and Nanocomposites

Edited by : **Arya Uthaman**, School of Civil Engineering Harbin Institute of Technology China; **Sabu Thomas**, Vice Chancellor, Mahatma Gandhi University, Kerala, India and **Hiran Mayookh Lal**, School of Civil Engineering Harbin Institute of Technology China

ISBN: 9780443155451
PUB DATE: Mar 01, 2024
LIST PRICE: £205.00 / \$340.00 / €295.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 830
AUDIENCE: Materials scientists and engineers, academic and industrial researchers working in the field of composite materials for structural and civil engineering applications, Postgraduate students
BIC CODES: TDCP, TDCQ
THEMA CLASSIFICATION: THEMATDPF; THEMATGM; THEMATGMP

Covers the long-term service life and durability behavior of composites and nanocomposites

A Volume in the *Woodhead Publishing Series in Composites Science and Engineering Series*

KEY FEATURES

- Discusses composites and polymer nanocomposites
- Reviews different types of aging processes and degradation mechanisms in composites
- Covers different types of accelerated aging tests
- Presents theory, modeling, and simulation studies of aged composites and nanocomposites
- Looks at recent trends and future possibilities

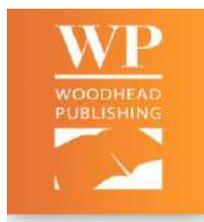
DESCRIPTION

Aging and Durability of FRP Composites and Nanocomposites focuses on the latest developments in durability and long-term aging studies of composite materials, especially those used in civil and structural engineering applications. The book will be a valuable reference resource for materials scientists and engineers who want to learn more about the long-term service life and durability behavior of composites under different environmental conditions. The usage of composites is a broad and growing area of scientific research, especially in developed and developing countries. These materials are used in a broad range of applications in both structural and civil engineering sectors.

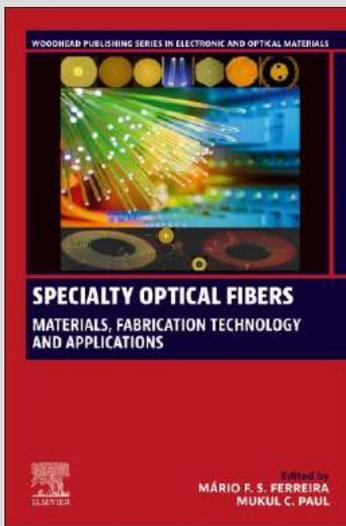
In many of these applications, FRPs are exposed to one or more environmental influences, so they need to be designed to meet durability requirements to withstand even the harshest of environments.



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Specialty Optical Fibers

Materials, Fabrication Technology and Applications

Edited by : **Mário Fernando Santos Ferreira**, Department of Physics, University of Aveiro, Aveiro, Portugal and **Mukul Chandra Paul**, Fibre Optics and Photonics Division, CSIR-Central Glass and Ceramic Research Institute, Kolkata, India

ISBN: 9780443184956
PUB DATE: Mar 01, 2024
LIST PRICE: £190.00 / \$250.00 / €220.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 530
AUDIENCE: Materials Scientists and Engineers, Electrical Engineers, Practitioners in Fiber Optics Industry/R&D
BIC CODES: TGM, TJFD
THEMA CLASSIFICATION: THEMATGM; THEMATJF

Comprehensive reference book on the current research directions in specialty optical fiber materials, designs, fabrication, and applications

A Volume in the *Woodhead Publishing Series in Electronic and Optical Materials* Series

KEY FEATURES

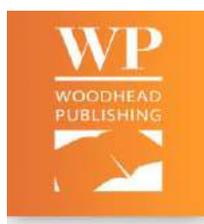
- Includes an overview of specialty optical fiber materials design and fabrication technologies
- Reviews fundamentals of the most relevant optical fiber materials, including their physics, chemistry, and optoelectronics principles
- Explores current research directions and future opportunities and challenges of utilization of optical fibers for a wide range of diverse applications

DESCRIPTION

Specialty Optical Fibers: Materials, Fabrication Technology and Applications reviews theoretical and experimental photonic research relevant to the synthesis, processing, characterization, modeling, physical features, and applications of Specialty Optical Fibers (SOFs) with significant technological impact potential. All fiber-based advanced photonics device components rely on specialty optical fibers, which have either a unique waveguide structure or a novel material composition. High power optical amplifiers, high power fiber, and novel fabrication techniques for optical fiber design have enabled significant technological advances. The book provides discussion on these applications, including current research directions, future opportunities, and remaining challenges. It is suitable for researchers in academia and practitioners in R&D working in materials science, electrical engineering, and fiber optics.



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Advances in Biocomposites and their Applications

Edited by : Niranjan Karak, Tezpur University, India

ISBN: 9780443190742
PUB DATE: Mar 01, 2024
LIST PRICE: £175.00 / \$250.00 / €220.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 460
AUDIENCE: Academic and industrial researchers, materials scientists and engineers, chemists and those working in the fields of polymer science, composite materials, and biocomposites
BIC CODES: TDCP, TDCQ
THEMA CLASSIFICATION: THEMATDPF; THEMATGM; THEMATGMP

Presents the latest progress in biocomposites, their fabrication methods, properties, and applications

A Volume in the *Woodhead Publishing Series in Composites Science and Engineering Series*

KEY FEATURES

- Presents the latest progress in biocomposites and their fabrication, properties, and applications
- Includes naturally obtained and bio-derived, renewable resource-based polymers and reinforcing agents
- Discusses several major natural fiber-based composite materials
- Covers aerospace, automotive, packaging, and other lightweight applications

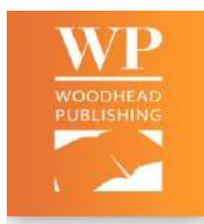
DESCRIPTION

Advances in Biocomposites and their Applications presents a detailed review of the latest progress in this important research field. The book covers various types of reinforcing agents that are used for fabricating biocomposites. Processing and fabrication methods are then discussed, along with their important mechanical, thermal, chemical, and biological properties. The book goes on to discuss various mechanisms used to improve these properties as well as various fields of application, including those in automotive, aerospace, marine, building materials, biomaterials, electrical, and electronic engineering sectors. The economic impact, safety, toxicity, and future directions for these materials are also discussed in detail.

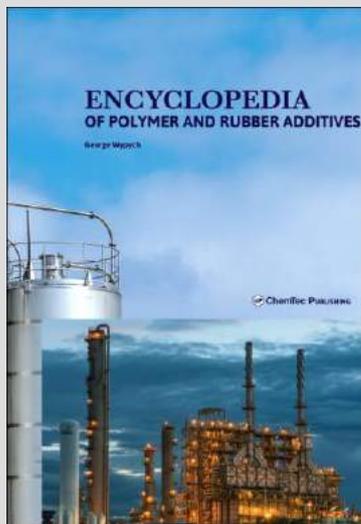
The book will be a valuable reference resource for academic and industrial researchers, materials scientists, engineers, and all those working in the fields of polymer science, composite materials, and biocomposites.



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Encyclopedia of Polymer and Rubber Additives

George Wypych, ChemTec Publishing, Ontario, Canada

ISBN: 9781774670286

PUB DATE: Mar 01, 2024

LIST PRICE: £363.99 / \$450.00 /

€425.99

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 560

AUDIENCE: Academic researchers, professional engineers, material scientists, chemists, Grad/upper level undergrad students

BIC CODES: TDCP, TGM

THEMA CLASSIFICATION:

THEMATDCP; THEMATGMP;

THEMATDPF

Provides a complete set of tables, classifications, and information related to a wide variety of commercially used additives for polymers and rubbers, detailing the characteristics that can improve performance of physical properties, stability, and storage life, provide colorants, reduce costs, enhance purity, and minimize environmental impact

KEY FEATURES

- Provides a complete set of tables, classifications, and information related to a wide variety of commercially used additives for polymers and rubbers
- Details the characteristics of hundreds of additives that can improve performance of physical properties, stability, and storage life, provide colorants, reduce costs, enhance purity, and minimize environmental impact
- Each group of additives is covered to facilitate information retrieval and comparison, discussing mechanisms of action, suitable features, modifications, evidence of performance from experimental studies, and more

DESCRIPTION

Encyclopedia of Polymer and Rubber Additives documents how polymer properties and performance can be improved through the use of additives, resulting in enhanced physical properties, stability, improved process and assembly, extended shelf life, enhanced purity, and minimized environmental impact. 88 groups of additives used by all segments of the polymer and rubber industries are included, with each group discussed in a systematic manner in order to facilitate easy information retrieval and comparison. Typical chemical structures, mechanisms of action, influences and interferences in complex formulations, and evidence of performance from experimental studies are each featured, with frequent references to monographic sources for even more in-depth knowledge of the subject.

The companion volume, Databook of the Most Important Polymer and Rubber Additives is also available. It contains robust technical data on the most essential additives currently in use, and the two books are must-have references for anyone working with rubbers and plastics.

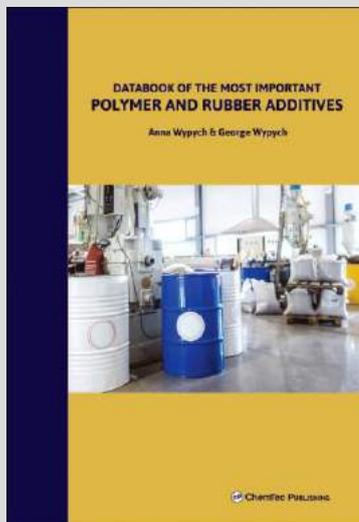


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Databook of the Most Important Polymer and Rubber Additives

Anna Wypych, Chemtec Publishing, Toronto, Canada and George Wypych, ChemTec Publishing, Ontario, Canada

ISBN: 9781774670309
PUB DATE: Mar 01, 2024
LIST PRICE: £323.99 / \$400.00 / €378.99
DISCOUNT:
FORMAT: Hardback
TRIM:
PAGES: c. 610
AUDIENCE: Academic researchers, professional engineers, material scientists, chemists, Grad/upper level undergrad students
BIC CODES: TDCP, TGM
THEMA CLASSIFICATION: THEMATDCP; THEMATGMP; THEMATDPF

Provides key information on the properties of the most widely used additives that can be utilized to alter the physical, chemical, and mechanical properties of rubbers and plastics, covering General Information, Physical Properties, Health and Safety Considerations, Ecological Impact, and Use and Applications for each additive featured

KEY FEATURES

- Provides information on the properties of key additives that can be used to alter the physical, chemical, and mechanical properties of rubbers and plastics
- Covers general information, physical properties, health and safety considerations, ecological impact, and use and applications
- Presents additives by their main chemical component, discussing anticaking agents, antidegradants, antifogging agents, curatives, crosslinkers, defoaming agents, fillers, nucleating agents, pigments, solvents, stabilizers, vulcanizing agents, and more

DESCRIPTION

Databook of the Most Important Polymer and Rubber Additives is a vital reference for anyone working with polymers and rubbers. It provides key information on the properties of the most widely used additives that can be used to alter the physical, chemical, and mechanical properties of rubbers and plastics. Additives are presented by their main chemical component, with information for each additive provided in the form of a table divided into 5 sections, covering General Information, Physical Properties, Health and Safety Considerations, Ecological Impact, and Use and Applications. Data provided includes CAS#, acid/base properties, odor, various cloud points, volatility data, surface tension, thermal conductivity, explosion limits, carcinogenicity, oxygen demands, biodegradation probability, air pollution data, applications in different polymers and products, processing requirements and doses, food approvals, substitutes, and more.

The companion book, The Encyclopedia of Polymer and Rubber Additives, contains information on the mechanisms of action of each group of additives, their suitable features and modifications, their effect and interferences in complex formulations, and it is illustrated with numerous experimental examples highlighting their performance.

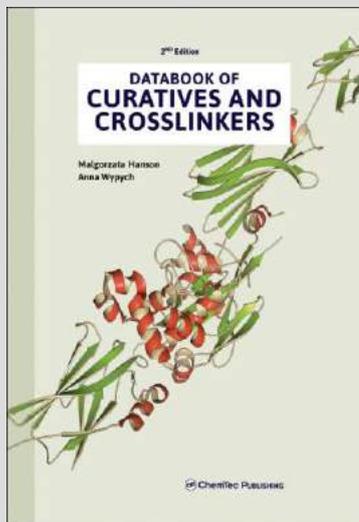


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Databook of Curatives and Crosslinkers, 2e

Malgorzata Hanson, Teaching Associate, Department of Mathematics, Ohio University, Ohio, USA and Anna Wypych, Chemtec Publishing, Toronto, Canada

ISBN: 9781774670323

PREVIOUS ISBN: 9781927885499

PUB DATE: Mar 01, 2024

LIST PRICE: £285.00 / \$350.00 /

€335.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 610

AUDIENCE: Academic researchers, professional engineers, material scientists, chemists, Grad/upper level undergrad students

BIC CODES: TDCB, PNR

THEMA CLASSIFICATION:

THEMATDC; THEMARNR

Provides the latest product data for over forty groups of curatives and crosslinkers, including detailed reviews and evaluations

KEY FEATURES

- Provides general information, physical properties, health and safety considerations, ecological properties, and use and performance details on approximately 400 curatives and crosslinkers in use today
- Includes examples of a broad array of applications
- Covers active matter, amine value and equivalent, odor, color, boiling point, chronic health effects, first aid, aquatic toxicity, biodegradation probability, recommended applications, processing methods, and more

DESCRIPTION

Databook of Curatives and Crosslinkers, Second Edition provides expanded coverage of the latest curative and crosslinker product data, including detailed reviews and evaluations of these product categories with key considerations, benefits, and applications highlighted. Forty groups of curatives and crosslinkers are included in the book, including the following chemical groups of additives: acids, acrylamides, aldehydes, amides, amidoamines, amines, anhydrides, aziridines, borates, epoxy-functionalized polymers, carbamides, carbodiimides, chitosan derivatives, cyanamides, diols, glutarates, glycols, graphene oxide derivatives, hydantoin glycols, hydrazides, hydroxides, hydroxyl-containing moieties, imidazoles, isocyanates, isocyanurates, ketimines, maleimides, melamines, novolacs, peroxides, peroxyketals, phenols, polyols, salts, silanes, siloxanes, thiols, titanates, and zirconium derivatives.

The additives discussed in the handbook have been suggested for use in over 60 polymers and rubbers, as well as in close to 100 groups of products. Information on each additive is divided into 5 sections: General Information which covers name, CAS #, active matter, amine nitrogen, chemical class, cure schedule, and more; Physical Properties which covers odor, color, density, freezing point, gel time, particle size, thin film set time, and more; Health and Safety covering autoignition temperature, dermal LD50, exposure limits, flash point, and more; Ecological Properties covering toxicity to algae, bacteria, and fish, sewage treatment, and more; and lastly, Use and Performance which offers information on manufacturers, outstanding properties, and more.

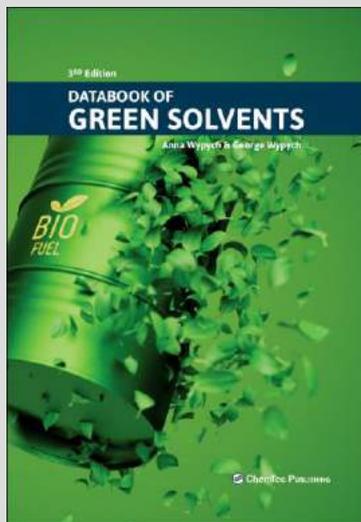


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Databook of Green Solvents, 3e

George Wypych, ChemTec Publishing, Ontario, Canada

ISBN: 9781774670347

PREVIOUS ISBN: 9781927885437

PUB DATE: Mar 01, 2024

LIST PRICE: £255.00 / \$315.00 /

€300.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 567

AUDIENCE: Academic researchers, professional engineers, material scientists, chemists, Grad/upper level undergrad students

BIC CODES: TGM

THEMA CLASSIFICATION:

THEMATGM

Contains critical health, safety, and environmental data on more than 300 green solvents

KEY FEATURES

- Covers more than 300 green solvents, from biodegradable and biorenewable, to siloxanes and perfluorocarbons
- Provides practical information for use in the lab and in the field, including recommended processing methods, recommended dosages, and potential substitutes
- Details critical health, safety, and environmental data to help production chemists and engineers select the correct solvent

DESCRIPTION

Databook of Green Solvents Third Edition includes data and information that is divided into five separate sections: General, Physical, Health, Environmental, and Use. Emphasis is given to safer and more efficient alternatives to more toxic solvents, with forty-five solvents included in the previous edition replaced in this edition by about seventy new ones. Readers interested in this subject should note two related volumes, *Handbook of Solvents, Volume One: Properties*, and *Handbook of Solvents, Volume Two: Use, Health, and Environment*. Together, these books provide the most comprehensive information on the subject matter.

These books represent the most authoritative sources of knowledge, with information updates from the most recent literature and developments occurring in the field of solvents.

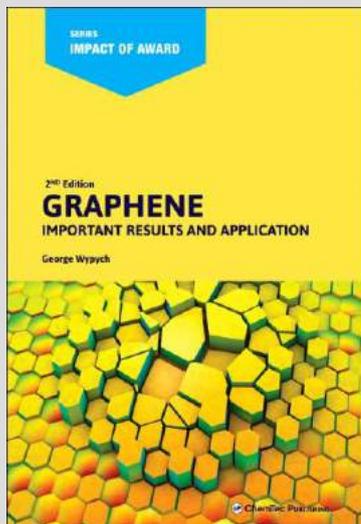


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Graphene, 2e

Important Results and Applications

George Wypych, ChemTec Publishing, Ontario, Canada

ISBN: 9781774670361

PREVIOUS ISBN: 9781927885512

PUB DATE: Mar 01, 2024

LIST PRICE: £303.99 / \$375.00 /

€354.99

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 349

AUDIENCE: Academic researchers, professional engineers, material scientists, chemists, Grad/upper level undergrad students

BIC CODES: TGM

THEMA CLASSIFICATION:

THEMATGM

Provides a succinct overview of graphene, its history and development, production methods, property data, applications, future prospects, and challenges

KEY FEATURES

- Provides an extensive account of the latest research in methods of production of graphene and its derivatives
- Covers commercial manufacture, research results, property data, and cutting-edge applications
- Discusses methods of incorporation in graphene products, chemical modifications, and projected future uses

DESCRIPTION

This new edition of Graphene: Important Results and Applications provides a succinct overview of this innovative material, its history and development, applications, future prospects, and challenges. This 2nd edition has been updated and expanded to include all the latest developments. It covers production of graphene and its derivatives, commercial manufacture of graphene, research results and data on its properties, graphene dispersion, chemical modification, and cutting-edge applications. Eleven groups of production methods of graphene and its derivatives are discussed at length, providing how-to-do and what-to-expect analysis and comparison of potential properties of the resultant products. Also included are ideas for new product development and possible improvement of existing products, as is insight into the unique nature of graphene and its types, including morphology and thickness, mechanical properties, electrical conductivity, elastic properties of 2D and 3D structures, and more.

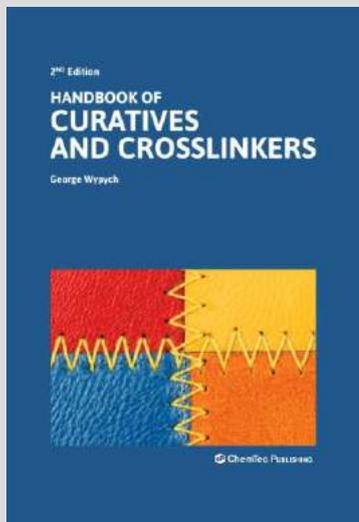


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Handbook of Curatives and Crosslinkers, 2e

Edited by : **George Wypych**, ChemTec Publishing, Ontario, Canada

ISBN: 9781774670385

PREVIOUS ISBN: 9781927885475

PUB DATE: Mar 01, 2024

LIST PRICE: £285.00 / \$350.00 /

€335.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 279

AUDIENCE: Academic researchers, professional engineers, material scientists, chemists, Grad/upper level undergrad students

BIC CODES: PNR

THEMA CLASSIFICATION:

THEMAPNR

Presents the mechanisms of action, methods of use, their effects on the properties of transformed products, and the applications of various curatives and crosslinkers

KEY FEATURES

- Covers the use of curatives in emerging products such as optoelectronics, light-emitting diodes, liquid crystal displays, self-healing materials, and in shape-memory materials
- Presents emerging applications, such as drug release, artificial muscles in microdevices, autonomous shape-memory actuators, hygienic textiles, membranes, scaffolds, recycling, sensors, tissue adhesives, wound dressing, and more
- Discusses the selection, chemical and physical properties, mechanics, and the effects of crosslinkers and curatives

DESCRIPTION

Handbook of Curatives and Crosslinkers, Second Edition presents the mechanisms of action of these additives, methods of their use, their effects on the properties of transformed products, as well as their applications. The book outlines the most-recent information on additives that convert soluble monomers, prepolymers, or polymers to insoluble polymer networks commonly known as thermosetting polymers. Chapters cover the common use of curatives in many industrial products manufactured in large scale, such as adhesives, sealants, coatings, inks, explosives, propellants and foams, and in emerging products such as optoelectronics, light-emitting diodes, shape memory polymers, and more.

In addition, crosslinkers used in typical industrial processing methods, such as solar cells, vulcanization, adhesives, foams, and roofing are covered. Each section presents the effect of the additive, including an evaluation of its chemical and physical properties. Also available is the complementary Databook of Curatives and Crosslinkers, Second Edition, which provides information on both the commercial and generic chemical products used as curatives and crosslinkers.

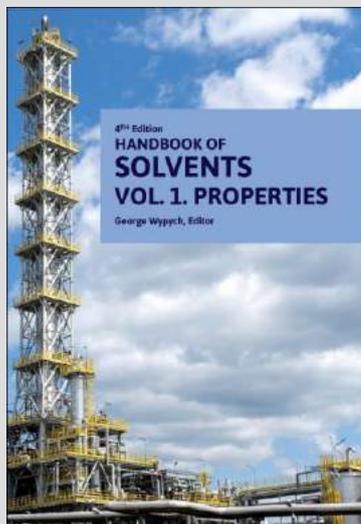


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Handbook of Solvents, Volume 1, 4e

Volume 1: Properties

Edited by : **George Wypych**, ChemTec Publishing, Ontario, Canada

ISBN: 9781774670408

PREVIOUS ISBN: 9781927885383

PUB DATE: Mar 01, 2024

LIST PRICE: £265.00 / \$325.00 /

€310.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 750

AUDIENCE: Academic researchers, professional engineers, material scientists, chemists; Grad/upper level undergrad students

BIC CODES: TGM

THEMA CLASSIFICATION:

THEMATGM

Covers all aspects of solvent behavior, including the physical and chemical properties of the most relevant solvent systems

KEY FEATURES

- Provides key insights that will help engineers and scientists select the best solvent for the job
- Includes practical information and ideas on how to improve existing processes involving solvents
- Presents the latest advances in solvent technology and their applications

DESCRIPTION

Handbook of Solvents, Fourth Edition, Volume One provides a comprehensive survey of the science of solvents and their properties, covering all aspects of solvent behavior relevant to chemical and related industries, including agricultural and technical processes, inorganic synthesis, materials chemistry, and more. Divided into two volumes that cover high-level information on the physical chemical properties of the most relevant solvent systems, sections focus on a specific aspect of solvent properties that determine selection, such as the effect on properties of solutes and solutions, properties of different groups of solvents, and the summary of their applications' effect on health and the environment.

With insights from specialists in a broad array of different areas and written with an interdisciplinary audience in mind, this thoroughly revised edition provides readers with a complete overview of all the organic solvents available for industrial applications today.

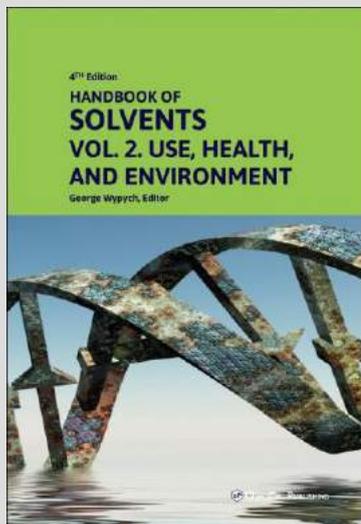


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Handbook of Solvents, Volume 2, 4e

Use, Health, and Environment

Edited by : **George Wypych**, ChemTec Publishing, Ontario, Canada

ISBN: 9781774670422

PREVIOUS ISBN: 9781927885413

PUB DATE: Mar 01, 2024

LIST PRICE: £262.99 / \$325.00 /

€307.99

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 763

AUDIENCE: Academic researchers, professional engineers, material scientists, chemists, Grad/upper level undergrad students

BIC CODES: TGM

THEMA CLASSIFICATION:

THEMATGM

Provides the most comprehensive information ever published on solvents alongside an extensive analysis of the principles of solvent selection and use

KEY FEATURES

- Assists in solvent selection by providing key information and insight on environmental and safety issues
- Provides essential best practice guidance for human health consideration
- Discusses the latest advances and trends in solvent technology, including modern methods of cleaning contaminated soils, selection of gloves, suits, and respirators

DESCRIPTION

This *Fourth Edition of Handbook of Solvents, Volume 2*, contains the most comprehensive information ever published on solvents as well as an extensive analysis of the principles of solvent selection and use. The book begins with a discussion of solvents used in over 30 industries which are the main consumers of solvents. The analysis is conducted based on the available data and contains information on the types (and frequently amounts) of solvents used and potential problems and solutions. Picking up where *Handbook of Solvents, Volume 1* leaves off, *Handbook of Solvents Volume 2* provides information on the methods of analysis of solvents and materials containing solvents, with 2 sections containing standard and special methods of solvent analysis, followed by a discussion of residual solvents left in the final products. The environmental impact of solvents, such as their fate and movement in the water, soil, and air, fate-based management of solvent-containing wastes, and ecotoxicological effects are discussed as are solvents' impact on tropospheric air pollution. The next 2 chapters are devoted to the toxicology of solvents and regulations aiming to keep solvent toxicity under control. The analysis of the concentration of solvents in more than 15 industries, specific issues related to the paint industry, and characteristics of the environment in automotive collision repair shops are followed by a thorough discussion of regulations in the USA and Europe. Following chapters show examples of solvent substitution by safer materials, with an emphasis on supercritical solvents, ionic liquids, deep eutectic solvents, and agriculture-based products, such as ethyl lactate. Discussion of solvent recycling, removal, and degradation includes absorptive solvent recovery, comparison of results of recovery and incineration, and application of solar photocatalytic oxidation. The book concludes with an evaluation of methods of natural attenuation of various solvents in soils and modern methods of cleaning contaminated soils.

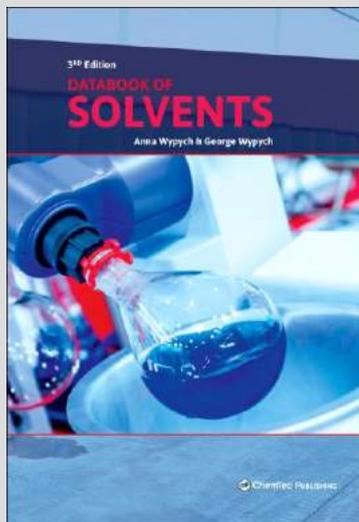


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Databook of Solvents, 3e

George Wypych, ChemTec Publishing, Ontario, Canada

ISBN: 9781774670446

PREVIOUS ISBN: 9781927885451

PUB DATE: Mar 01, 2024

LIST PRICE: £285.00 / \$350.00 /

€335.00

DISCOUNT:

FORMAT: Hardback

TRIM:

PAGES: c. 753

AUDIENCE: Academic researchers, professional engineers, material scientists, chemists, Grad/upper level undergrad students

BIC CODES: TGM

THEMA CLASSIFICATION:

THEMATGM

Provides practical information on more than 280 of the most essential solvents

KEY FEATURES

- Covers more than 280 of the most essential solvents
- Provides practical information for use in the lab and the field, including recommended processing methods, dosages, and potential substitutes
- Presents environmental considerations, thus enabling practitioners to find more efficient replacements for toxic solvents

DESCRIPTION

Databook of Solvents, Third Edition covers high-production solvents, including a large dataset for each, with information divided into General; Physical; Health; Environmental; and Use. The General section covers data such as name, CAS number, empirical formula, mixture, moisture contents, properties, EC number, and more. The Physical section includes data dielectric constant, boiling temperature, color, corrosivity, electrical conductivity, heat of combustion, odor, surface tension, and more. The Health section covers carcinogenicity, packaging group, explosion limits, flammability, reactivity, ingestion, skin and eye irritation, and more. The Environmental section covers biodegradation probability, chemical oxygen demand, global warming potential, soil absorption constant, UV absorption, and more.

Finally, the Use section features data on manufacturer, outstanding properties, potential substitutes, processing methods, and more. Further information which may help in the replacement of these solvents can be found in the complementary *Databook of Green Solvents*, and readers interested in the subject should note that two volumes of fundamental treatment of all essential areas of solvent use have also been published, *Handbook of Solvents Volume 1: Properties*, and *Handbook of Solvents Volume 2: Use, Health, and Environment*. Together these four books provide the most wide-ranging and authoritative information on the subject of solvents.

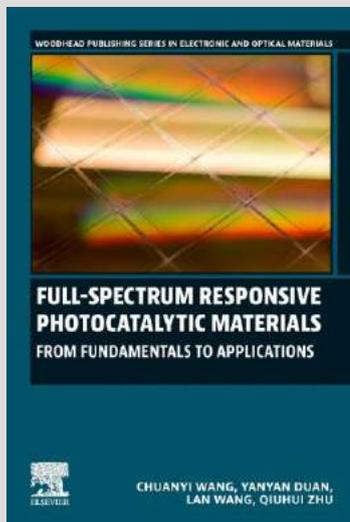


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Full-Spectrum Responsive Photocatalytic Materials

From Fundamentals to Applications

Chuanyi Wang, School of Environmental Science and Engineering, Shaanxi University of Science and Technology, Weiyang District, Xi'an, Shaanxi, P.R.China; **Yanyan Duan**, IMDEA Materials Institute, Getafe, Spain; **Lan Wang**, School of Environmental Science and Engineering, Shaanxi University of Science and Technology, Weiyang District, Xi'an, Shaanxi, P.R. China and **Qihui Zhu**, School of Environmental Science and Engineering, Shaanxi University of Science and Technology, China

ISBN: 9780443136313
PUB DATE: Mar 01, 2024
LIST PRICE: £165.00 / \$200.00 / €190.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 260
AUDIENCE: Material science students and researchers in the field of semiconductors and photocatalysis, Chemists, chemical engineers, and Research & Development scientists, etc.
BIC CODES: THX, TDCB, TJ, TGM, PNRH
THEMA CLASSIFICATION: THEMATDC; THEMATHV; THEMATJF; THEMATGM; THEMAMPNR

Describes the latest developments in fabrication strategies, synthesis and characterization techniques of full-spectrum photocatalysts

A Volume in the *Woodhead Publishing Series in Electronic and Optical Materials Series*

KEY FEATURES

- Provides new insights into full-spectrum (UV-VIS-NIR) responsive photocatalysts and successful approaches for developing these materials
- Assists readers working to develop more efficient catalysts and establish a solid structure–activity correlation
- Suggests possibilities for the alteration of conventional photocatalysts to utilize the full spectrum of solar light

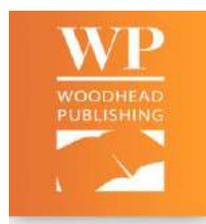
DESCRIPTION

Full-Spectrum Responsive Photocatalytic Materials: From Fundamentals to Applications provides a comprehensive overview on the design, synthesis concepts, mechanisms, characterization techniques, and advances and limitations in applications of full-spectrum responsive photocatalytic materials. The book starts with the fundamentals of full-spectrum responsive materials. It then discusses the problems of most semiconductors that are not active in the whole solar spectrum and explains the benefits of utilizing full-spectrum responsive photocatalysts. Other sections describe examples of full-spectrum responsive photocatalysts classified by material types and provide the design principles and characterization protocols for these promising materials.

Photocatalysis technology based on semiconductor materials holds great promise in various fields due to its potential advantages in energy-saving, cost and environmental impact. Maximizing the utilization of solar energy is always the target of pursuits in the areas of photocatalysis, and understanding and constructing appropriate full-spectrum (UV-VIS-NIR) responsive photocatalytic materials offer ways to better realize the practical utilization of photocatalysis.



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Advances in Plasma Treatment of Textile Surfaces

Edited by : **Shahid Ul Islam**, Fulbright Fellow, University of California, Davis, USA and **Aminoddin Haji**, Textile Chemistry and Fiber Science Textile Engineering Department, Yazd University, Iran

ISBN: 9780443190797
PUB DATE: Mar 01, 2024
LIST PRICE: £310.00 / \$405.00 / €355.00
DISCOUNT:
FORMAT: Paperback
TRIM:
PAGES: c. 630
AUDIENCE: Researchers in academia and industry interested in textile processing, Sustainability consultants in the textiles industry
BIC CODES: TDP
THEMA CLASSIFICATION: THEMATD

Provides a detailed overview of the use of plasma in natural and synthetic textiles

A Volume in the *The Textile Institute Book Series* Series

KEY FEATURES

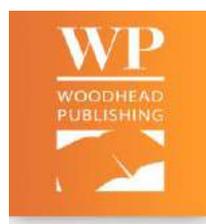
- Provides detailed technical descriptions of cutting-edge applications of plasma in nanotechnology, biotechnology, and other fields
- Describes the different kinds of plasma treatment equipment and compares their use for different effects
- Starts with overviews of basic information such as how to determine surface properties

DESCRIPTION

Advances in Plasma Treatment of Textile Surfaces offers a detailed overview on the use of plasma in natural and synthetic textiles and explores applications in technical textiles, including composites, ballistic performance, functionalization, and textile wastewater treatment. This promising technology can alter the surface properties of textiles without having a significant effect on their bulk properties, leading to potential improvements to the scouring, de-sizing, dyeing, finishing, printing, and laminating processes among others. Drawing on an international team of contributors from industry as well as academia, this important book brings these innovative sustainable plasma treatments to textile and polymer scientists working in textile functionalization.



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