

Health & Science

# New Books Preview

## August 2024



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

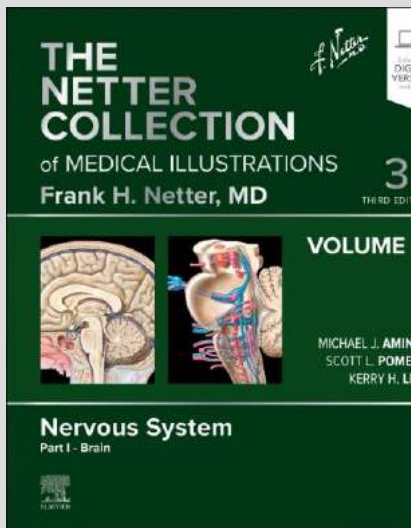
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## Support for ebook access issues

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+



# The Netter Collection of Medical Illustrations: Nervous System, Volume 7, Part I - Brain, 3e

Edited by : **Michael J. Aminoff**, MD, DSc, FRCP, Distinguished Professor Emeritus in Neurology; University of California San Francisco; **Scott Pomeroy**, MD, PhD, Bronson Crothers Professor, Department of Neurology, Harvard Medical School; Consultant, Pediatric Oncology, Dana-Farber Cancer Institute; Neurologist-in-Chief, Department of Neurology, Boston Children's Hospital, Boston, Massachusetts and **Kerry H. Levin**, MD, Chair, Department of Neurology, Director of the Neuromuscular Center at the Neurological Institute, Cleveland Clinic, Cleveland, OH, USA

**ISBN:** 9780323880848  
**PREVIOUS ISBN:** 9781416063872  
**PUB DATE:** May 08, 2024  
**LIST PRICE:** £63.99 / \$99.99 / €74.99  
**DISCOUNT:** Reference  
**FORMAT:** Hardback  
**TRIM:** 9.5 x 11.5  
**PAGES:** c. 404  
**ILLUSTRATIONS:** 343 illustrations (343 in full color)  
**AUDIENCE:** Diverse worldwide market; both practitioners and trainees across medical and health professions; institutions For the series: medical schools with a systems-based curriculum (students, instructors, staff, library); clinical practitioners at all levels (especially nonspecialists and specialists interested in areas outside of their specialty); Netter fans and gift-buyers for Netter fans. For the book/volume: offices/depts/individuals in orthopaedics, physical therapy, rheumatology, and other musculoskeletal specialties. Much of the content will be superficial for their daily practice purposes, but it will be appreciated for its artistic depictions of the field and something to be used with patients, staff, and students/trainees.  
**BIC CODES:** MFC  
**THEMA CLASSIFICATION:** THEMAMFC



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

A Volume in the *Netter Green Book Collection Series*

## KEY FEATURES

- Provides a **highly visual guide to this complex organ**, from basic neurodevelopment, neuroanatomy, neurophysiology, and cognition to a full range of disorders, including epilepsy, disorders of consciousness and sleep, movement disorders, stroke, multiple sclerosis, neurologic infections, neuro-oncology, headaches, and brain trauma.
- Offers **expanded coverage of timely topics** like acute flaccid paralysis; neurological complications of COVID-19, ependymomas, genetics of epilepsy, and more.
- Provides a **concise overview of complex information** by seamlessly integrating anatomical and physiological concepts using practical clinical scenarios.

## DESCRIPTION

Offering a **concise, highly visual approach** to the basic science and clinical pathology of the nervous system, this updated volume in *The Netter Collection of Medical Illustrations* (the CIBA "Green Books") contains unparalleled didactic illustrations reflecting the latest medical knowledge. Revised by Drs. Michael J. Aminoff, Scott L. Pomeroy, and Kerry H. Levin, *Brain, Part 1 of the Nervous System, Volume 7, integrates core concepts of anatomy, physiology, and other basic sciences with common clinical correlates* across health, medical, and surgical disciplines. **Classic Netter art, updated and new illustrations, and modern imaging** continue to bring medical concepts to life and make this timeless work an essential resource for students, clinicians, and educators.

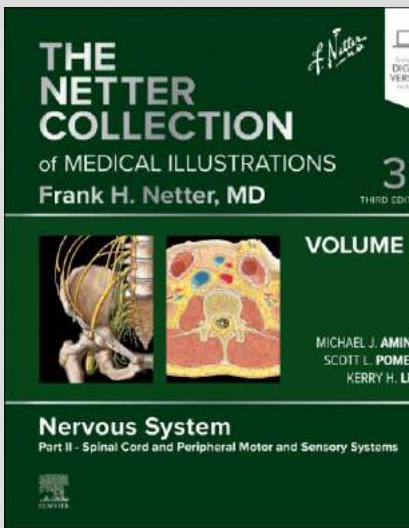
Medical Education    Anatomy

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)

Also includes resources via:







# The Netter Collection of Medical Illustrations: Nervous System, Volume 7, Part II - Spinal Cord and Peripheral Motor and Sensory Systems, 3e

Edited by : **Michael J. Aminoff**, MD, DSc, FRCP, Distinguished Professor Emeritus in Neurology; University of California San Francisco; **Scott Pomeroy**, MD, PhD, Bronson Crothers Professor, Department of Neurology, Harvard Medical School; Consultant, Pediatric Oncology, Dana-Farber Cancer Institute; Neurologist-in-Chief, Department of Neurology, Boston Children's Hospital, Boston, Massachusetts

**ISBN:** 9780323880855  
**PREVIOUS ISBN:** 9781416063865  
**PUB DATE:** May 08, 2024  
**LIST PRICE:** £63.99 / \$99.99 / €74.99  
**DISCOUNT:** Reference  
**FORMAT:** Hardback  
**TRIM:** 9.5 x 11.5  
**PAGES:** c. 302  
**ILLUSTRATIONS:** 268 illustrations (268 in full color)  
**AUDIENCE:** Diverse worldwide market; both practitioners and trainees across medical and health professions; institutions For the series: medical schools with a systems-based curriculum (students, instructors, staff, library); clinical practitioners at all levels (especially nonspecialists and specialists interested in areas outside of their specialty); Netter fans and gift-buyers for Netter fans. For the book/volume: offices/depts/individuals in neurology; neuroscience research; rehabilitation medicine  
**BIC CODES:** MFC  
**THEMA CLASSIFICATION:** THEMAMKSH



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

A Volume in the *Netter Green Book Collection* Series

## KEY FEATURES

- Provides a **highly visual overview** of the anatomy, pathology, and major clinical syndromes of the nervous system, from cranial nerves and neuro-ophthalmology to spinal cord, neuropathies, autonomic nervous system, pain physiology, and neuromuscular disorders.
- Provides a **concise overview of complex information** by integrating anatomical and physiological concepts with clinical scenarios.
- Shares the **experience and knowledge** of Drs. Michael J. Aminoff, Scott L. Pomeroy, and Kerry H. Levin, and other experts at leading neurology centers.
- Compiles **Dr. Frank H. Netter's master medical artistry**—an aesthetic tribute and source of inspiration for medical professionals for over half a century—along with new art in the Netter tradition for each of the major body systems, making this volume a powerful and memorable tool for building foundational knowledge and educating patients or staff.
- **NEW! An eBook version is included with purchase.** The eBook allows you to access all of the text, figures, and references, with the ability to search, make notes and highlights, and have content read aloud.

## DESCRIPTION

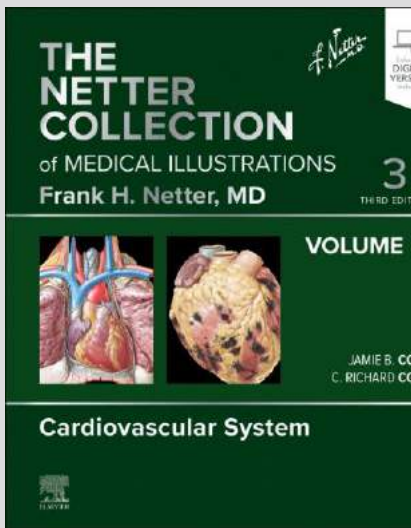
Offering a **concise, highly visual approach** to the basic science and clinical pathology of the nervous system, this updated volume in *The Netter Collection of Medical Illustrations* (the CIBA "Green Books") contains unparalleled didactic illustrations reflecting the latest medical knowledge. Revised by Drs. Michael J. Aminoff, Scott L. Pomeroy, and Kerry H. Levin, *Spinal Cord and Peripheral Motor and Sensory Systems, Part 2 of the Nervous System, Volume 7, integrates core concepts of anatomy, physiology, and other basic sciences with common clinical correlates across health, medical, and surgical disciplines. **Classic Netter art, updated and new illustrations, and modern imaging** continue to bring medical concepts to life and make this timeless work an essential resource for students, clinicians, and educators.*

Medical Education    Anatomy

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# The Netter Collection of Medical Illustrations: Cardiovascular System, Volume 8, 3e

Jamie B. Conti, MD, Professor and Chair, Department of Medicine, University of Florida College of Medicine, Miami, Florida and C. Richard Conti, MD, Professor Emeritus, University of Florida College of Medicine Miami, FL

ISBN: 9780323881296

PREVIOUS ISBN: 9781455742295

PUB DATE: May 08, 2024

LIST PRICE: £69.99 / \$107.99 /

€80.99

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 9.5 x 11.5

PAGES: c. 316

ILLUSTRATIONS: 282 illustrations  
(282 in full color)

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

BIC CODES: MFC

THEMA CLASSIFICATION:  
THEMAMFC



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

A Volume in the *Netter Green Book Collection* Series

## KEY FEATURES

Offering a **concise, highly visual approach** to the basic science and clinical pathology of the cardiovascular system, this updated volume in *The Netter Collection of Medical Illustrations* (the CIBA "Green Books") contains unparalleled didactic illustrations reflecting the latest medical knowledge. Revised by Drs. Jamie B. Conti and C. Richard Conti, *Cardiovascular System, Volume 8 integrates core concepts of anatomy, physiology, and other basic sciences with common clinical correlates across health, medical, and surgical disciplines. **Classic Netter art, updated and new illustrations, and modern imaging** continue to bring medical concepts to life and make this timeless work an essential resource for students, clinicians, and educators.*

- Provides a **highly visual guide to the heart and blood vessels**, from basic science, anatomy, and physiology to pathology and injury.
- Covers **new diagnostics and therapeutics**, including timely topics like intracardiac echocardiography, optical coherence tomography, radiation dose concerns, and coronary artery spasm.
- Provides a **concise overview of complex information** by integrating anatomical and physiological concepts with clinical scenarios.

## DESCRIPTION

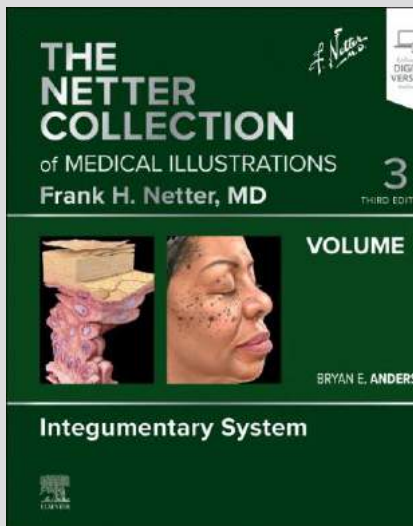
Offering a **concise, highly visual approach** to the basic science and clinical pathology of the cardiovascular system, this updated volume in *The Netter Collection of Medical Illustrations* (the CIBA "Green Books") contains unparalleled didactic illustrations reflecting the latest medical knowledge. Revised by Drs. Jamie B. Conti and C. Richard Conti, *Cardiovascular System, Volume 8 integrates core concepts of anatomy, physiology, and other basic sciences with common clinical correlates across health, medical, and surgical disciplines. **Classic Netter art, updated and new illustrations, and modern imaging** continue to bring medical concepts to life and make this timeless work an essential resource for students, clinicians, and educators.*

Medical Education    Anatomy

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)

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# The Netter Collection of Medical Illustrations: Integumentary System, Volume 4, 3e

Bryan E. Anderson, MD, Professor and Medical Director, Dermatology, Penn State Cancer Institute, The Pennsylvania State University, Hershey, Pennsylvania

**ISBN:** 9780323880893  
**PREVIOUS ISBN:** 9781437756548  
**PUB DATE:** May 01, 2024  
**LIST PRICE:** £63.99 / \$99.99 / €74.99  
**DISCOUNT:** Reference  
**FORMAT:** Hardback  
**TRIM:** 9.5 x 11.5  
**PAGES:** c. 260  
**ILLUSTRATIONS:** 228 illustrations (228 in full color)  
**AUDIENCE:** Diverse worldwide market; both practitioners and trainees across medical and health professions; institutions For the series: medical schools with a systems-based curriculum (students, instructors, staff, library); clinical practitioners at all levels (especially nonspecialists and specialists interested in areas outside of their specialty); Netter fans and gift-buyers for Netter fans. For the book/volume: offices/depts/individuals in dermatology.  
**BIC CODES:** MJ  
**THEMA CLASSIFICATION:** THEMAMJ

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

A Volume in the *Netter Green Book Collection Series*

## KEY FEATURES

- Provides a **highly visual guide to the skin, hair, and nails**, from normal anatomy and histology to pathology, dermatology, and common issues in plastic surgery and wound healing.
- Covers **new topics throughout**, including infantile hemangiomas, COVID-19, porphyria cutanea tarda, and Muir-Torre syndrome.
- Provides a **concise overview of complex information** by integrating anatomical and physiological concepts with clinical scenarios.
- Compiles **Dr. Frank H. Netter's master medical artistry**—an aesthetic tribute and source of inspiration for medical professionals for over half a century—along with new art in the Netter tradition for each of the major body systems, making this volume a powerful and memorable tool for building foundational knowledge and educating patients or staff.
- **NEW! An eBook version is included with purchase.** The eBook allows you to access all of the text, figures, and references, with the ability to search, make notes and highlights, and have content read aloud.

## DESCRIPTION

Offering a **concise, highly visual approach** to the basic science and clinical pathology of the integumentary system, this updated volume in *The Netter Collection of Medical Illustrations* (the CIBA "Green Books") contains unparalleled didactic illustrations reflecting the latest medical knowledge. Revised by Dr. Bryan E. Anderson, *Integumentary System, Volume 4 integrates core concepts of anatomy, physiology, and other basic sciences with common clinical correlates* across health, medical, and surgical disciplines. **Classic Netter art, updated and new illustrations, and modern imaging** continue to bring medical concepts to life and make this timeless work an essential resource for students, clinicians, and educators.



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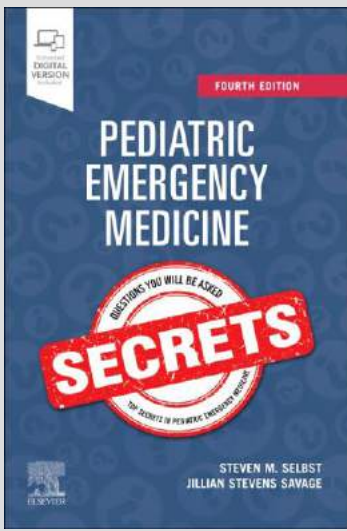


Medical Education    Anatomy

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# Pediatric Emergency Medicine Secrets, 4e

Edited by : **Steven M. Selbst**, MD, FAAP, FACEP, Professor, Department of Pediatrics, Vice Chair for Education, Director, Pediatric Residency Program, Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia, Pennsylvania, Attending Physician, Division of Emergency Medicine, Nemours/Alfred I. duPont Hospital for Children, Wilmington Delaware and **Jillian S. Savage DO FAAP**, DO, FAAP, Nemours Childrens Health, Wilmington, Delaware

**ISBN:** 9780323930338  
**PREVIOUS ISBN:** 9780323262842  
**PUB DATE:** Jun 07, 2024  
**LIST PRICE:** £49.99 / \$62.99 / €55.99  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 620  
**AUDIENCE:** Medical students;  
Pediatric residents; Emergency  
Medicine residents; Pediatric  
Emergency Medicine (PEM) fellows  
**BIC CODES:** MJW  
**THEMA CLASSIFICATION:**  
THEMAMKD

Get the answers you need for successful patient care

A Volume in the *Secrets Series*

## KEY FEATURES

- The **proven Secrets Series® format** gives you **the most return for your time** – succinct, easy to read, engaging, and highly effective.
- **Fully revised and updated throughout**, making it an excellent resource for understanding both common and unusual pediatric emergency conditions.
- **New chapters** on High Altitude Illness; Disaster Preparedness; Risk Management and Legal Issues; and Point-of-Care Ultrasound.
- **Top 100 Secrets** and **Key Points boxes** provide a fast overview of the secrets you must know for success in practice and in your coursework.
- Bulleted lists, mnemonics, practical tips from global leaders in the field – all providing a **concise overview of important content**.
- **Portable size** makes it easy to carry with you for quick reference or review anywhere, anytime.
- **An eBook version is included with purchase.** The eBook allows you to access all of the text, figures, and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud.

## DESCRIPTION

For more than 30 years, the highly regarded Secrets Series® has provided students and practitioners in all areas of health care with **concise, focused, and engaging resources for quick reference and review**. *Pediatric Emergency Medicine Secrets, 4th Edition*, offers practical, up-to-date coverage of the full range of essential topics in this dynamic field. This highly regarded resource features the Secrets' **popular question-and-answer format** that also includes lists, tables, pearls, memory aids, and an easy-to-read style – making inquiry, reference, and review quick, easy, and enjoyable.



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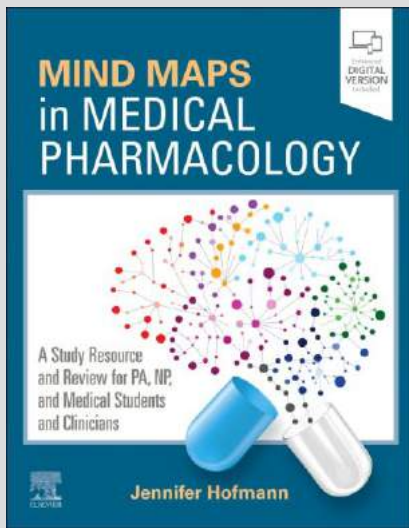
Medical Education Clinical Student -  
Pediatrics

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# Mind Maps in Medical Pharmacology

A Study Resource and Review for PA, NP, and Medical Students and Clinicians

**Jennifer Hofmann**, DMSc., MS, PA-C, Clinical Associate Professor, Director of Didactic Education, College of Health Professions, Physician Assistant Program and Pace University-Lenox Hill Hospital New York, New York

**ISBN:** 9780323934633  
**PUB DATE:** Mar 27, 2024  
**LIST PRICE:** £40.99 / \$49.99 / €47.99  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 8.50w x 10.875h  
**PAGES:** c. 192  
**AUDIENCE:** Physician Assistant students  
**BIC CODES:** MBD  
**THEMA CLASSIFICATION:** THEMAMBD

**Master key information in pharmacology with easy-to-use, highly visual Mind Maps—including 39 animations online**

## KEY FEATURES

- Provides **comprehensive coverage** of essential pharmacology information in a **concise, visual, easy-to-remember format**.
- Each Mind Map includes brief explanatory text further describing the clinical relevance, indications, mechanism of action, significant drug interaction, adverse effects, black box warnings, contraindications, and monitoring parameters.
- Includes **animated versions of each of the 39 Mind Maps** in the eBook.
- **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

The study of pharmacology requires memorization, association, and application of knowledge about hundreds of medications—a daunting task for even the most dedicated student. *Mind Maps in Medical Pharmacology* helps physician assistant, nurse practitioner, and medical students master the understanding of pharmacology through **easy-to-understand, visual Mind Maps**. These **user-friendly, multi-sensory tools** condense large amounts of information, **helping you organize, integrate, and retain what you've learned** in the vast and complex field of pharmacology.



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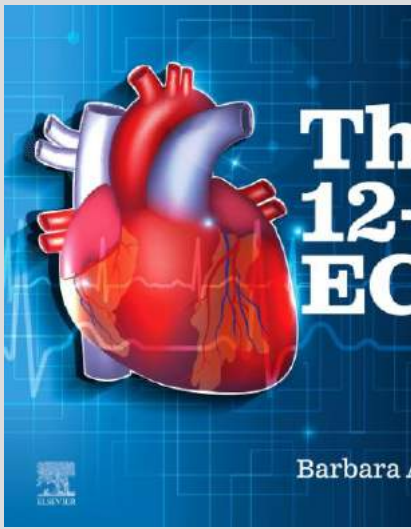


Medical Education Physician  
Assisting

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# The 12-Lead ECG in Acute Coronary Syndromes, 5e

Barbara J Aehlert, MEd, BSPA, RN, Southwest EMS Education, Inc. and Tim Phalen

ISBN: 9780443122088

PREVIOUS ISBN: 9780323497893

PUB DATE: Aug 27, 2024

LIST PRICE: £57.99 / \$70.99 / €66.99

DISCOUNT: Textbook

FORMAT: Spiral bound

TRIM: [ x ] 229 x 305

PAGES: c. 217

BIC CODES: MQF

THEMA CLASSIFICATION:

THEMAMQF

Learn to accurately interpret 12-lead ECGs with this easy-to-understand guide

## KEY FEATURES

- **More than 300 colorful illustrations** depict concepts and skills.
- **Landscape view** presents 12-lead ECGs in their actual size for more realistic 12-lead ECG Interpretation.
- **More than 100 practice ECGs** help you apply your knowledge and master 12-lead ECG interpretation.
- **Case studies** promote recognition and treatment of patient complaints.
- **Consider This boxes** highlight important tips, and **Quick Review questions** with answers and rationales reinforce key content.
- **Learning objectives** in each chapter emphasize the knowledge you should gain, and **key terms** are bolded upon first mention for easier learning.
- **Spiral binding** makes it easier to lay the book flat for study or for use while on the job.

## DESCRIPTION

Learn to accurately interpret 12-lead ECGs with this easy-to-understand guide! **The 12-Lead ECG in Acute Coronary Syndromes, 5th Edition** describes how to accurately interpret 12-lead ECGs for effective recognition and treatment of patients experiencing ACS. The book's streamlined format uses hundreds of illustrations, summary tables, and ECG examples to help you quickly master the material. You'll learn to identify ST-elevation myocardial infarction (STEMI), non-ST-elevation myocardial infarction (NSTEMI), and other causes of ST elevation. Designed for use as a clinical reference or in a continuing education class, this book reflects current science related to emergency cardiovascular care.



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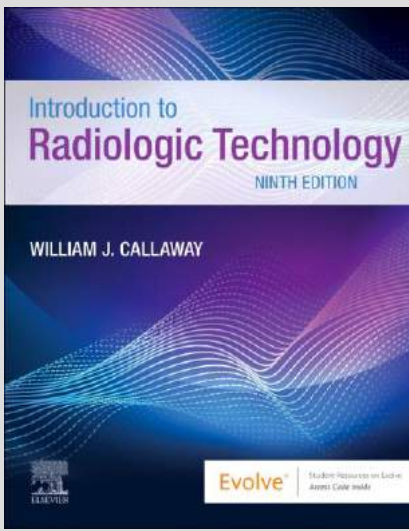


Health Professions II (HP2)  
Emergency Medical Services

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)

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# Introduction to Radiologic Technology, 9e

William J. Callaway, MA, RT(R), Radiography Educator, Author, Speaker

**ISBN:** 9780443117268  
**PREVIOUS ISBN:** 9780323643399  
**PUB DATE:** Aug 12, 2024  
**LIST PRICE:** £63.99 / \$78.99 / €74.99  
**DISCOUNT:** Textbook  
**FORMAT:** Paperback  
**TRIM:** 7.50w x 9.25h  
**PAGES:** c. 206  
**BIC CODES:** MQH, MMP  
**THEMA CLASSIFICATION:**  
THEMAMQH; THEMAMKS;  
THEMAMKSF

**Prepare for success in your radiography program from day one!**

## DESCRIPTION

Get an introduction to the radiologic technology profession with this solid text! Covering everything a beginning radiography student needs to know, **Introduction to Radiologic Technology, 9<sup>th</sup> Edition** lays the groundwork for a successful career. It includes coverage of the coursework required, basic learning skills, a historical perspective on radiology, and insight into key topics such as the language of medicine, digital imaging, patient care, and radiation safety. This book also includes the latest changes in the registry exam and a discussion of the radiographer's role in the practice setting and opportunities for advancement.



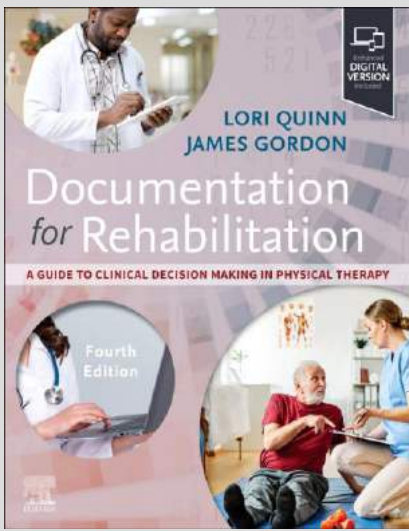
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Health Professions II (HP2)  
Rad/Imaging Technology  
<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)

Also includes resources via:





# Documentation for Rehabilitation, 4e

## A Guide to Clinical Decision Making in Physical Therapy

**Lori Quinn**, EdD, PT, Associate Professor of Movement Science and Kinesiology Director, Neurorehabilitation Research Lab Teachers College, Columbia University and **James Gordon**, EdD, PT, FAPTA, Professor and Associate Dean Division of Biokinesiology and Physical Therapy at the Herman Ostrow School of Dentistry University of Southern California

**ISBN:** 9780323694308  
**PREVIOUS ISBN:** 9780323312332  
**PUB DATE:** Aug 05, 2024  
**LIST PRICE:** £49.99 / \$61.99 / €58.99  
**DISCOUNT:** Textbook  
**FORMAT:** Paperback  
**TRIM:** 8.50w x 10.875h  
**PAGES:** c. 290  
**BIC CODES:** MQS  
**THEMA CLASSIFICATION:**  
THEMAMQS

**Learn a unique framework for documentation — and improve your clinical reasoning skills**

### KEY FEATURES

- **Workbook/textbook** format with examples and exercises in each chapter helps reinforce understanding of concepts.
- **Coverage of practice settings** includes documentation examples in acute care, rehabilitation, outpatient, home care, nursing homes, pediatrics, school, and community settings.
- **Case examples for a multitude of documentation types** include initial evaluations, progress notes, daily notes, letters to insurance companies, Medicare documentation, and documentation in specialized settings.

### DESCRIPTION

Better patient management starts with better documentation! **Documentation for Rehabilitation, 4<sup>th</sup> Edition** demonstrates how to accurately document treatment progress and patient outcomes using a framework for clinical reasoning based on the International Classification for Functioning, Disability, and Health (ICF) model adopted by the American Physical Therapy Association (APTA). The documentation guidelines in this practical resource are easily adaptable to different practice settings and patient populations in physical therapy and physical therapy assisting. Realistic examples and practice exercises reinforce the understanding and application of concepts, improving skills in both documentation and clinical reasoning.



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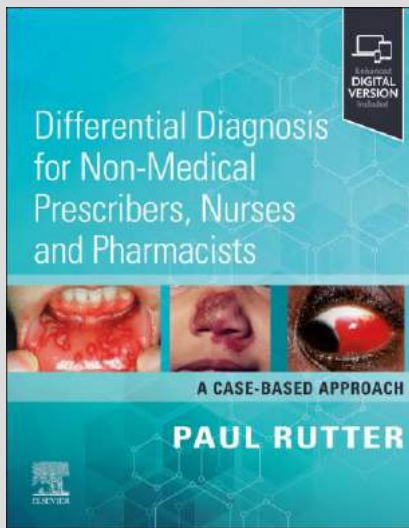
**Health Professions I (HP1) Physical Therapy**

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)

Also includes resources via:







# Differential Diagnosis for Non-medical Prescribers, Nurses and Pharmacists: A Case-Based Approach

Paul Rutter, PhD, Professor of Pharmacy Practice, School of Pharmacy and Biomedical Sciences, University of Portsmouth, UK

**ISBN:** 9780443116049  
**PUB DATE:** Aug 12, 2024  
**LIST PRICE:** £32.99 / \$40.99 / €37.99  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 7.50w x 9.25h  
**PAGES:** c. 0  
**AUDIENCE:** Undergraduate nurse and pharmacy programmes  
Non-medical prescribing programmes  
**BIC CODES:**

## Guide to clinical reasoning and effective decision making

### KEY FEATURES

- Case studies contextualise knowledge into clinical cases
- Easily digestible information based on common symptoms seen in clinical practice
- Uses clinical reasoning techniques to provide examples of how to make a diagnosis
- Provides summaries of conditions that need to be considered in the diagnostic process
- Aligned to content in the fifth edition of *Community Pharmacy; Symptoms, Diagnosis and Treatment*
- An enhanced eBook version is included with purchase. The eBook allows you to access all the text, figures and references, with the ability to search, customise your content, make notes and highlights, and have content read aloud

### DESCRIPTION

As pharmacists and nurses are asked to take on greater responsibilities and extend the scope of their practice, this new book will support you to triage and manage patients using a clinical decision-making approach.

Unlike existing textbooks that cover symptoms management or provide a checklist format, *Differential Diagnosis for Non-medical Prescribers, Nurses and Pharmacists* provides case studies of common presentations with examples of associated clinical reasoning techniques to help you make a differential diagnosis.

The book covers a broad range of symptoms and is ideal for exam revision as well as for practising health professionals who wish to improve their experience and exposure to common patient situations.



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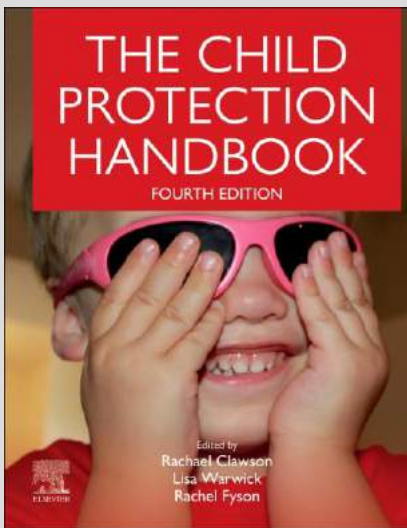


Medical Education UKNL Pharmacy  
Medical Education

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)

Also includes resources via:





# The Child Protection Handbook, 4e

Edited by : **Rachael Clawson**, Associate Professor of Social Work, University of Nottingham, UK; **Lisa Warwick**, Associate Professor of Social Work, University of Nottingham, UK and **Rachel Fyson**, Professor of Social Work, University of Nottingham, UK

**ISBN:** 9780702079771

**PREVIOUS ISBN:** 9780702028298

**PUB DATE:** May 20, 2024

**LIST PRICE:** £38.99 / \$48.99 / €45.99

**DISCOUNT:** Textbook

**FORMAT:** Paperback

**TRIM:** 8.50w x 10.875h

**PAGES:** c. 520

**AUDIENCE:** Students and practitioners in safeguarding roles, including those working in social care, health, criminal justice, education, sport and leisure.

**BIC CODES:** MQCX, MMH, MQC, MQCL3

**THEMA CLASSIFICATION:**

THEMAMQCX; THEMAMQCL3

**Comprehensive, up-to-date guide to safeguarding children and young people**

## KEY FEATURES

- Fully updated since the last edition in 2007 – perfect for all those working with children and young people
- Easy to navigate and locate information – suitable as a reference book for busy practitioners
- Illustrative boxes in each chapter, drawing on practice case examples to highlight current issues and dilemmas
- All concepts explained in straightforward, jargon-free language
- Reflective points to encourage the reader to think about their own practice and apply new knowledge
- Key questions for students and teachers to check understanding and to explore concepts further
- Links to resources and further reading

## DESCRIPTION

The *Child Protection Handbook* explains how to recognise abuse and protect at-risk children for those working with children and young people aged under 18, including in social care, education, health services, and sport and leisure settings.

The book has been fully updated to incorporate the impact of new technology as well as current legal and policy frameworks that govern statutory child protection intervention in the UK. It considers all aspects of child protection, including organisational issues, children's rights, the needs of those from diverse backgrounds, and the impacts of the Covid-19 pandemic on child protection work.

With accessible, up-to-date information presented in an easy-to-navigate format, the *Handbook* is ideal for all busy practitioners wanting to improve outcomes for children, young people and their families.



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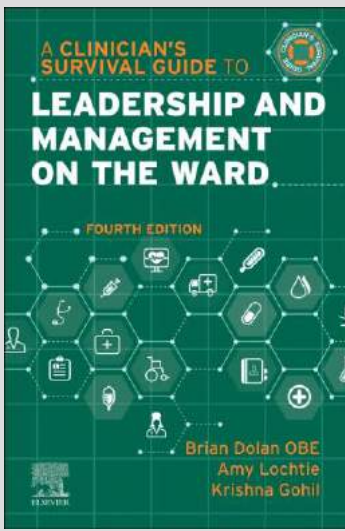


**Nursing UK Post - Registration**

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)

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# A Clinician's Survival Guide to Leadership and Management on the Ward, 4e

**Brian Dolan**, OBE, FFMRCSE, FRSA, MSc (Oxon), MSc (Nurs), RMN, RGN, Director, Health Service 360; Honorary Professor, Leadership in Healthcare, Salford University, Manchester; Honorary President, AGILE - the Professional Network for Physiotherapists working with Older People; Honorary Adjunct Professor of Innovation in Healthcare, Bond University, SE Queensland; Professor, Coventry University; **Amy Lochtie**, FRSA, RGN, FSBP, West Yorkshire Innovation Hub Director, Health Innovation Yorkshire & Humber; West Yorkshire Integrated Care Board; NHS Assembly member Northwest Clinical Senate member; NIHR Expert Reviewer; **Krishna Gohil**, MSc, FHEA, PgCert, BSc (Hons) Podiatry, FRCPod, FFPM, RCPS (Glasg)

**ISBN:** 9780443245213

**PREVIOUS ISBN:** 9780702076626

**PUB DATE:** Aug 07, 2024

**LIST PRICE:** £27.99 / \$34.99 / €32.99

**DISCOUNT:** Textbook

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 328

**AUDIENCE:** Qualified nurses and allied health professionals who are in the roles of managers or team leaders, or are likely to be so.

**BIC CODES:** MQC

**THEMA CLASSIFICATION:**  
THEMAMQC

A Volume in the *A Nurse's Survival Guide* Series

## KEY FEATURES

- Focuses on *both* nursing and allied health professionals who are in the role of ward managers, unit managers or team leaders, or aspire to be so
- Significantly builds on how to understand your role, work with different generations in the workplace and manage difficult situations
- Includes greater emphasis on self-care and self-compassion for leaders and managers
- Covers leading teams in the context of enduring financial and staffing constraints

## DESCRIPTION

When you become a ward or unit manager or allied health professionals team leader, your responsibilities change and you need a very different set of skills compared with your previous roles. You are now required to manage a team of staff with a set budget and are responsible for maintaining an environment in which people can work together efficiently and effectively. This new fourth edition of the *Survival Guide to Leadership and Management on the Ward* welcomes AHP Krishna Gohil to the author team of nurses Brian Dolan and Amy Lochtie, and thereby extends its guidance on these crucial skills to both nurses and allied health professionals.

## This book will help you to

- Identify your responsibilities and best approaches as a manager to provide patients with a high standard of care through your staff
- Become an even better leader through highly practical examples, suggestions and tips
- Manage your staff, time and budget
- Create a positive work environment
- Familiarize yourself with the new Nursing and Midwifery Council and Health and Care Professions Council standards



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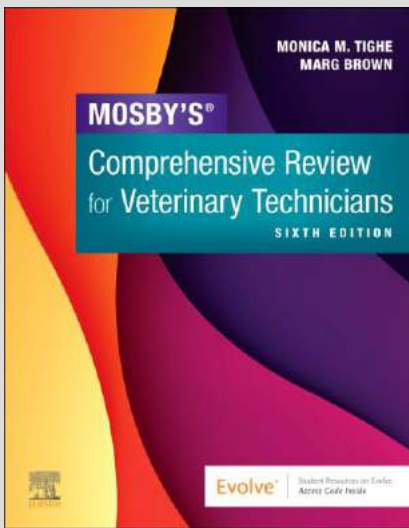


Nursing UK Nursing

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)

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# Mosby's Comprehensive Review for Veterinary Technicians, 6e

Monica M. Tighe, RVT, BA, MEd and Marg Brown, RVT, BEd Ad Ed, Penn Foster College, Scranton, Pennsylvania, Active Member, Ontario Association of Veterinary Technicians and Association of Veterinary Technician Educators

ISBN: 9780443110238  
PREVIOUS ISBN: 9780323596152  
PUB DATE: Aug 20, 2024  
LIST PRICE: £65.99 / \$88.99 / €73.99  
DISCOUNT: Textbook  
FORMAT: Paperback  
TRIM: 8.50w x 10.875h  
PAGES: c. 806  
BIC CODES: MZ  
THEMA CLASSIFICATION:  
THEMAMZ

Prepare to pass your courses and certification exams with this complete review

## KEY FEATURES

- **Review of all areas of the veterinary technology curriculum** is mapped to VTNE® domains, tasks, and knowledge statements.
- **Streamlined outline format** makes content easy to read and simplifies the classification and grouping of the material.
- **Comprehensive, full-color coverage** includes all areas of veterinary technology, such as A&P, clinical sciences, diagnostics, restraint and handling, animal nutrition, pharmacology and anesthesia, and professional and practice management skills.
- **Comprehensive 350-question test in the book** includes an answer key and provides a solid review of the vet tech curriculum and the information you need to know to pass the VTNE.
- **Coverage of dogs, cats, large animals, birds, reptiles, and laboratory animals** ensures you are prepared for all aspects of the national board examination.
- **Learning features** include chapter outlines, key terms, learning objectives, a glossary, summary boxes and tables, and end-of-chapter review questions.

## DESCRIPTION

Use this study tool to prepare for success in your courses and certification exams! Written by and for veterinary technicians, **Mosby's Comprehensive Review for Veterinary Technicians, 6th Edition** provides complete preparation for the Veterinary Technician National Exam (VTNE®) as well as other state/provincial examinations in veterinary technology. An easy-to-read outline format breaks down and simplifies important information, and hundreds of review questions in the book and on the Evolve website help you assess your understanding of the material. Realistic practice exams help you polish your test-taking skills. From experienced educators Monica Tighe and Marg Brown, this book is also ideal for vet tech graduates who need a quick, everyday reference.



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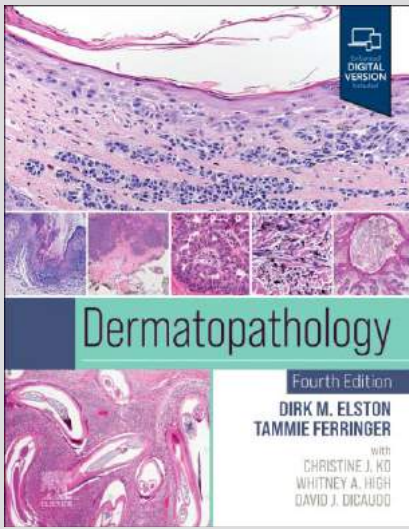


Health Professions I (HP1)  
Veterinary Technology  
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# Dermatopathology, 4e

**Dirk M. Elston**, MD, Professor and Chairman, Department of Dermatology and Dermatologic Surgery, Medical University of South Carolina, Charleston, SC, USA; **Tammie Ferringer**, MD, Dept of Dermatology, Geisinger Medical Center, Danville, PA, USA; **Christine Ko**, MD, Professor of Dermatology and Pathology, Yale Medical School, New Haven, CT, USA; **Whitney A. High**, MD, JD, MEng, Associate Professor, Dermatology and Pathology, Director of Dermatopathology (Dermatology), University of Colorado School of Medicine, Aurora, Colorado and **David J. DiCaudo**, MD, Department of Dermatology, Mayo Clinic Arizona, Scottsdale, AZ, USA

**ISBN:** 9780323930598  
**PREVIOUS ISBN:** 9780702072802  
**PUB DATE:** Aug 30, 2024  
**LIST PRICE:** £126.99 / \$157.99 / €148.99  
**DISCOUNT:** Reference  
**FORMAT:** Hardback  
**TRIM:** 8.50w x 10.875h  
**PAGES:** c. 592  
**AUDIENCE:** Dermatopathology, dermatology  
**BIC CODES:** MJK  
**THEMA CLASSIFICATION:** THEMAMJK

**Master the complexities of this challenging and fast-changing subspecialty**

## KEY FEATURES

- Uses an **outline atlas format** with ample visuals, key points, and pearls.
- Includes abundant **high-resolution histopathology examples** with labels and pointers highlighting key aspects of each slide, providing additional clarity.
- Features **27 lectures**—more than 8 hours of targeted teaching that take you through the must-know elements of each topic in a dynamic, engaging manner.
- Contains **expanded coverage** of soft tissue tumors, and **new entities** such as acantholytic dyskeratoma, borreliosis, acute generalized exanthematous pustulosis (AGEP), acral erythema of chemotherapy, epithelioid histiocytoma, cellular digital fibroma, nuchal type fibroma, elephantiasis nostras verrucosa, ganglion, ossifying fibromyxoid tumor of soft parts, aggressive angiomyxoma, alveolar soft part sarcoma, and much more.
- Offers **extensive, visually stunning images** in print with bonus materials online, including 2,500 virtual infectious disease slides, a soft tissue tumor atlas with 300 images, a lymphoma atlas, and more; print atlas includes more than 1,300 images (300 new to this edition).

## DESCRIPTION

Using an enjoyable, easy-to-understand approach, *Dermatopathology, 4th Edition*, combines **online lectures and vast labeled image collections** both in print and online to provide a uniquely effective learning package in this challenging subspecialty. Dr. Dirk M. Elston, Dr. Tammie Ferringer and colleagues walk you through the “must-know” points of each topic, making dermatopathology easier to understand. It’s an ideal resource for **exam and board preparation** and for mastering **efficient, accurate diagnoses** of the most important common dermatologic findings seen in practice.



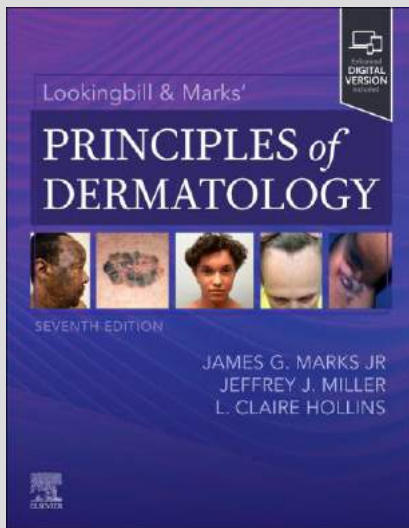
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Also includes resources via:





# Lookingbill & Marks' Principles of Dermatology, 7e

**James G. Marks**, MD, Professor, Department of Dermatology, Pennsylvania State University College of Medicine, Penn State Health, Hershey, PA; **Jeffrey J. Miller**, MD, Associate Dean of Administration, Chair of Dermatology, Professor, Department of Dermatology, Pennsylvania State University College of Medicine, Penn State Health, Hershey, PA and **L. Claire Hollins**, MD, Vice Chair of Diversity, Equity & Inclusion, Assistant Professor, Department of Dermatology, Pennsylvania State University College of Medicine, Penn State Health, Hershey, PA

**ISBN:** 9780323934244  
**PREVIOUS ISBN:** 9780323430401  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £72.99 / \$89.99 / €84.99  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 8.50w x 10.875h  
**PAGES:** c. 0  
**AUDIENCE:** Dermatology first-year residents, medical students  
**BIC CODES:** MJK  
**THEMA CLASSIFICATION:** THEMAMJK

**An authoritative, user-friendly introduction to the basics of skin disease, diagnosis, and therapy**

## KEY FEATURES

- Provides **therapy options** in highlighted boxes, additional photos of **uncommon presentations** at the end of each chapter, and **algorithms** showing classification of disease at the start of each chapter.
- Incorporates **case study multiple-choice questions** into relevant chapters to reinforce learning and for easier self-assessment and review.
- Includes **more visual elements** and a **more diverse range of skin color** patient images throughout.
- Helps you arrive at an accurate differential diagnosis with **numerous tables** that rank skin diseases according to frequency of incidence and highlight clinical features.
- Updates you on the **latest therapies for the most common skin disorders** that can be hard to treat, including acne, psoriasis, eczema, and new coverage of common drug eruptions.
- Features **evidence-based treatment tables** to keep you up to date with fast-changing treatments in dermatology and guide you toward the best treatments for your patients.

## DESCRIPTION

Perfect for medical students, dermatology first-year residents, dermatology nurses, physician assistants, nurse practitioners, and other primary care physicians, *Lookingbill & Marks' Principles of Dermatology* is a **concise, abundantly illustrated, everyday reference** for dermatologic diagnosis and therapy. This text is a true primer: it **assumes no prior knowledge** and is intuitively organized by morphology (appearance) rather than etiology (cause). A reader favorite through six outstanding editions, this updated 7th Edition follows a **consistent, templated approach** with key points, clinical pearls, differential diagnosis, and tables of first- and second-line treatments—making it easy to read and understand. **Superb clinical photographs**, full-color histopathology images, and corresponding cross-sectional line diagrams provide an easy-to-understand framework for categorizing skin conditions.



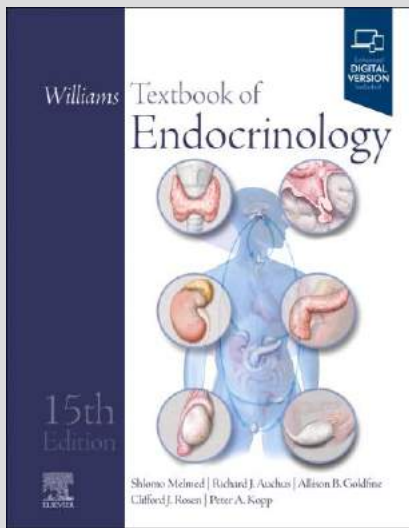
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# Williams Textbook of Endocrinology, 15e

Edited by : **Shlomo Melmed**, Professor of Medicine, Dean of the Medical Faculty, Cedars Sinai Health System, USA; **Richard J. Auchus**, MD, PhD, Professor, Departments of Pharmacology and Internal Medicine, Division of Metabolism, Endocrinology, and Diabetes, University of Michigan, Endocrinology Service Chief, Ann Arbor VA Healthcare System, Ann Arbor, Michigan; **Allison B. Goldfine**, MD, Associate Physician, Division of Endocrinology, Diabetes, and Hypertension, Brigham and Women's Hospital; Lecturer, Part-Time, Harvard Medical School, Boston, Massachusetts, Director, Translational Medicine Cardiometabolic Disease, Novartis Institute of Biomedical Research, Cambridge, Massachusetts; **Clifford J. Rosen**, MD, Professor of Medicine, Tufts University School of Medicine, Boston, Massachusetts; **Peter A. Kopp**, Professor of Medicine, Division of Endocrinology, Diabetology, and Metabolism, University of Lausanne, Lausanne

ISBN: 9780323932301

PREVIOUS ISBN: 9780323555968

PUB DATE: Aug 08, 2024

LIST PRICE: £195.99 / \$241.99 / €228.99

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 1846

AUDIENCE: Endocrinologists, endocrine surgeons, gynecologists, fellows

BIC CODES: MJG

THEMA CLASSIFICATION: THEMAMJG

International Edition Available!

ISBN: 9780808900085

LIST PRICE: £116.00 / \$139.00 / €157.00

This edition is not for sale in Only HS IE Reference (Excluding Caribbean & Latin America)

The worldwide gold standard textbook in endocrinology

## KEY FEATURES

- Presents current information in a **highly illustrated, user-friendly format** for quick reference.
- Includes **new chapters** on Skeletal Regulation of Metabolism, Digitized Approaches to Diabetes Therapeutics, and MODY and Atypical Diabetes.
- Reflects updated approaches to transgender medicine as well as new coverage of viral infections, including COVID-19.
- Covers **hot topics** such as personalized medicine; the latest methodologies and trends regarding cancer genomics, precision oncology, and cell biology; and updates in key areas such as adrenal dysfunction and diabetes.
- Provides **state-of-the-art coverage** of diabetes, metabolic syndrome, metabolic bone disorders, obesity and thyroid disease, as well as pituitary, gonadal, and adrenal disorders, and much more—all designed to help you provide optimal care to every patient.
- Features **contributions from today's thought leaders** in endocrinology.
- Contains a selected reading list and highlighted key references nominated by the editors.
- **An eBook version is included with purchase.** The eBook allows you to access all of the text, figures, and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud. Additional digital ancillary content may publish up to 6 weeks following the publication date.

## DESCRIPTION

Now fully revised and updated, *Williams Textbook of Endocrinology, 15th Edition*, remains your go-to reference for authoritative content on the full spectrum of adult and pediatric endocrine system disorders. **World-renowned authors and editors** expertly bridge the gap between **basic science and clinical information**, keeping you up to date with recent advances in medications, therapies, clinical trials, and more. This essential reference is a **must-have resource** for endocrinologists, endocrine surgeons, gynecologists, internists, pediatricians, and other clinicians who need current, comprehensive coverage of this multifaceted field.



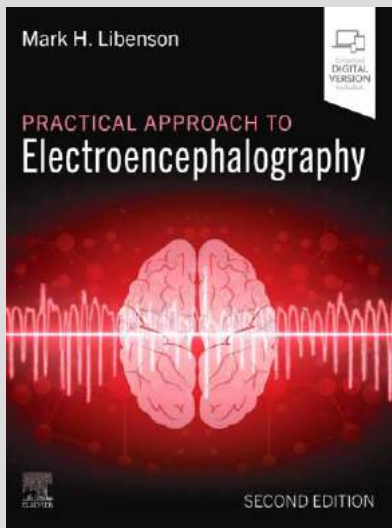
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# Practical Approach to Electroencephalography, 2e

**Mark H. Libenson, MD**, Director, EEG Laboratory, Boston Children's Hospital, Assistant Professor of Neurology, Department of Neurology, Harvard Medical School, Boston, Massachusetts

**ISBN:** 9780443348365  
**PREVIOUS ISBN:** 9780750674782  
**PUB DATE:** Aug 30, 2024  
**LIST PRICE:** £96.99 / \$119.99 / €111.99  
**DISCOUNT:** Reference  
**FORMAT:** Hardback  
**TRIM:**  
**PAGES:** c. 0  
**ILLUSTRATIONS:** Approx. 410 illustrations  
**AUDIENCE:** Neurology residents, clinical neurophysiology/epilepsy fellows  
**BIC CODES:** MJN  
**THEMA CLASSIFICATION:** THEMAMKJ; THEMAPAN

**Understandable, user-friendly instruction on EEGs as only Dr. Mark Libenson can provide**

## KEY FEATURES

- Goes beyond the technical aspects of performing EEGs by discussing the **link between the EEG findings and the neurologic disorders and conditions** in which they occur.
- Uses **numerous EEG examples with abundant labels, arrows, and annotations** to help you recognize normal and abnormal EEGs in all situations. Illustrations have been carefully reviewed for clarity and optimal usefulness.
- Contains **new self-assessment questions** that allow you to check your understanding.
- Provides **expert pearls from Dr. Libenson** that guide you in best practices in EEG testing.
- Features a **user-friendly writing style** from a single author that makes learning easy.
- Includes a new introduction to the **interpretation of invasive EEG monitoring**.
- Equips you to handle a **wide variety of EEG situations**, including the strategies used to distinguish **EEG artifacts** from true brain waves.
  
- **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

Using a **highly readable, conversational writing style**, *Practical Approach to Electroencephalography, 2nd Edition*, makes a complex and critically important subject easier to understand. It provides **just the right amount of guidance** you need, explaining EEG waveforms **starting with the basics**, then bringing you to a **sophisticated level** in interpreting EEG tracings—explaining what to do, what not to do, what to look for, and what the results mean. Emphasizing **pattern recognition and also why the patterns look the way they do**, Dr. Libenson's approachable text focuses on the types of EEG tracings you are likely to encounter in your EEG laboratory, both in the outpatient lab and in the ICU, concentrating at first on the questions and problems encountered by the beginner and non-expert, but bringing you up to the level of an expert.



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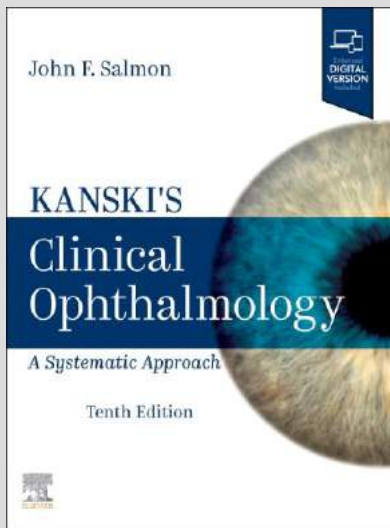
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Medicine

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# Kanski's Clinical Ophthalmology, 10e

## A Systematic Approach

John F. Salmon, MD, FRCS, FRCOphth, Consultant Ophthalmic Surgeon, Oxford Eye Hospital, Oxford, UK

ISBN: 9780443110993

PREVIOUS ISBN: 9780702077111

PUB DATE: Aug 01, 2024

LIST PRICE: £178.99 / \$221.99 / €209.99

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 956

ILLUSTRATIONS: 2600

AUDIENCE: Ophthalmology residents, practicing ophthalmologists, optometry students

BIC CODES: MJQ, MQR

THEMA CLASSIFICATION: THEMAMJQ

### International Edition Available!

ISBN: 9780080450094

LIST PRICE: £69.00 / \$96.99 / €73.99

This edition is not for sale in Only EMEA IE territories

### The gold standard reference in general ophthalmology

#### KEY FEATURES

- Uses **targeted text, bulleted lists, tables and visual aids** to highlight salient points across all ophthalmology subspecialties.
- Features **more than 2,800 high-quality illustrations**, including over 2,000 images depicting both common and rare conditions, with arrows to show the exact pathology.
- Includes the **latest developments** in cataract and refractive surgery, glaucoma, diabetes, macular degeneration, retinal vascular disease, pachychoroid disease, posterior uveitis, inflammatory eye disease, multiple sclerosis, thyroid eye disease, tumors, immunotherapy and genetics.
- Contains **new, detailed illustrations** of eye anatomy; improved **case examples**; and **expanded sections** on headache, seventh nerve palsy, cerebral visual impairment and Parkinson disease.
- Uses **state-of-the-art imaging modalities** such as OCT, OCT-A, fundus autofluorescence and ICG angiography to demonstrate subtle choroidal and retinal pathology.

#### DESCRIPTION

Filled with **stunning images and in-depth information** on both common and rare ophthalmic diseases and disorders, *Kanski's Clinical Ophthalmology: A Systematic Approach, 10th Edition*, is both a foundational knowledge source for trainees and a valuable reference for experienced practitioners. Dr. John Salmon, from the University of Oxford, has meticulously revised this classic text, retaining Dr. Kanski's **highly effective format of succinct text and visually dynamic presentation**. Extremely well organized and comprehensive in scope, it provides **authoritative, focused guidance on diagnosis and management**, facilitating quick comprehension to enhance learning, aid exam preparation, and guide clinical practice.



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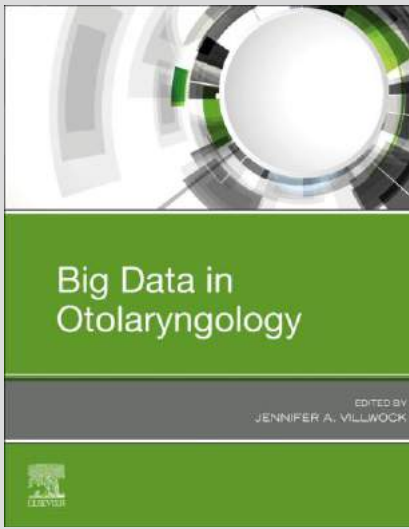


Speciality Medicine Ophthalmology  
Surgery

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# Big Data in Otolaryngology

Edited by : **Jennifer A. Villwock**, MD, Associate Professor, Otolaryngology-Head and Neck Surgery, The University of Kansas Medical Center, Kansas City, Kansas

**ISBN:** 9780443105203  
**PUB DATE:** Sep 06, 2024  
**LIST PRICE:** £74.99 / \$94.99 / €82.99  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 7.50w x 9.25h  
**PAGES:** c. 230  
**AUDIENCE:** Otolaryngologists in practice  
**BIC CODES:** MJP  
**THEMA CLASSIFICATION:** THEMAMJP

**Gain a comprehensive view of big data's impact on the practice of otolaryngology**

## KEY FEATURES

- Covers the clinical relevance of big data in otolaryngology, lessons and limitations of large administrative datasets, biologic big data, and much more.
- Discusses artificial intelligence (AI) in otolaryngology and its clinical application.
- Presents a patient perspective on big data in otolaryngology and its use in clinical care, as well as a glimpse into the future of big data.
- Compiles the knowledge and expertise of leading experts in the field who have assembled the most up-to-date recommendations for managing big data in otolaryngology.
- Consolidates today's available information on this timely topic into a single, convenient resource.

## DESCRIPTION

Big data plays an increasingly important role in today's practice of otolaryngology and in all of healthcare. In *Big Data in Otolaryngology*, Dr. Jennifer Villwock leads a team of expert authors who provide a comprehensive view of many key impacts of big data in otolaryngology—including understanding what big data is and what we can and cannot learn from it; best practices regarding analysis; translating findings to clinical care and associated cautions; ethical issues; and future directions.



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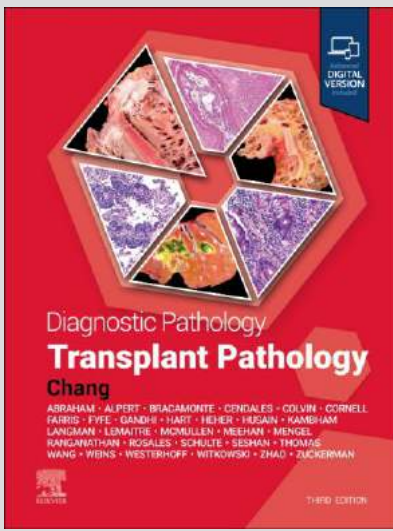


Speciality Medicine    Otolaryngology  
Surgery

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# Diagnostic Pathology: Transplant Pathology, 3e

**Anthony Chang, MD**, Director, UChicago Medical Laboratories, Director, Renal Pathology and Renal Pathology Fellowship, Associate Director, Pathology Residency Program, University of Chicago, Chicago, Illinois

**ISBN:** 9780443250088  
**PREVIOUS ISBN:** 9780323553575  
**PUB DATE:** Aug 09, 2024  
**LIST PRICE:** £189.99 / \$262.99 / €220.99  
**DISCOUNT:** Reference  
**FORMAT:** Hardback  
**TRIM:** 8.50w x 10.875h  
**PAGES:** c. 554  
**ILLUSTRATIONS:** Approx. 1576 illustrations (1576 in full color)  
**AUDIENCE:** Surgical pathologists and transplant pathologists who encounter transplant specimens in daily practice  
**BIC CODES:** MMF  
**THEMA CLASSIFICATION:** THEMAMKF

**Expert, up-to-date coverage of transplant pathology in a visually stunning, easy-to-read format**

A Volume in the *Diagnostic Pathology* Series

## KEY FEATURES

- Covers **all areas of transplant pathology**, incorporating the collective knowledge and experience from a team of transplant pathology experts with the latest updates from the **2022 Banff classification**
- Groups content by **specific organ transplant**, including kidney, liver, heart, lung, intestine, pancreas, and vascularized composite allotransplantation
- Features sweeping updates throughout, including **new chapters on transplant immunology** that cover chronic viral infections and the immune response, immune manipulation and accommodation, and graft-vs.-host disease
- Contains a new chapter on **islet cell transplantation** and new, detailed information on **xenotransplantation**—specifically kidney xenograft
- Covers advances in **vascularized composite allografts** (hands, face, uterus, phallus) transplantation
- Features **more than 1,500 superb images**, including histology, gross pathology, full-color illustrations, and radiologic images

## DESCRIPTION

This volume in the *Diagnostic Pathology* series is an **ideal point-of-care resource for practitioners at all levels of experience and training**. Covering the full range of solid organ transplantation (SOT) of the kidney, liver, heart, lung, pancreas, intestine, and more, it provides a current understanding of transplant immunology and pathology to help ensure accurate diagnosis for optimal clinical management. **Richly illustrated and easy to use**, *Diagnostic Pathology: Transplant Pathology*, third edition, is a visually stunning, one-stop reference for practicing pathologists, transplant practitioners, and students of organ transplantation.



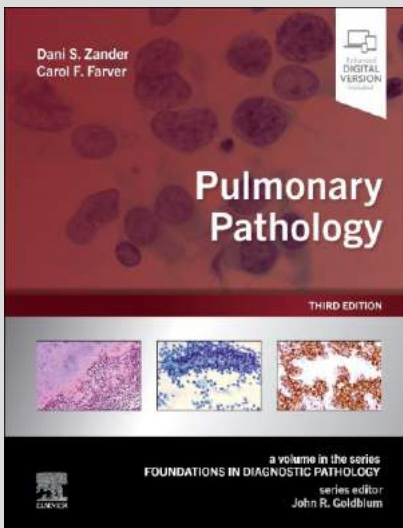
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# Pulmonary Pathology, 3e

Edited by : **Dani S. Zander**, MD, Chief of Pathology and Laboratory Medicine, University of Cincinnati Medical Center, Department of Pathology and Laboratory Medicine, UC Health University Hospital, Cincinnati, Ohio; **Carol F. Farver**, MD, Professor, Thoracic Pathology, Director, Division of Education Programs, Director, Thoracic Pathology, Department of Pathology, Michigan Medicine, University of Michigan; **John R. Goldblum**, MD, FCAP, FASCP, FACP, Chairman of Pathology, Cleveland Clinic and Professor of Pathology, Cleveland Clinic Lerner College of Medicine, Cleveland, Ohio

ISBN: 9780323935487

PREVIOUS ISBN: 9780323393089

PUB DATE: Oct 21, 2024

LIST PRICE: £181.99 / \$224.99 /

€212.99

DISCOUNT: Reference

FORMAT: Hardback

TRIM: 8.50w x 10.875h

PAGES: c. 730

AUDIENCE: Surgical Pathologists in training and in practice

BIC CODES: MMF

THEMA CLASSIFICATION:

THEMAMKF

**Essential, highly illustrated, easy-to-use coverage of pulmonary pathology**

A Volume in the *Foundations in Diagnostic Pathology* Series

## KEY FEATURES

- **Focuses primarily on diagnosis**, with correlations to clinical and radiographic characteristics.
- Summarizes clinical and pathologic features in **quick references boxes** throughout the text.
- Contains **hundreds of photomicrographs and gross photographs**—most in full color—that depict important pathologic features, enabling you to form a differential diagnosis and compare your findings with actual cases.
- Reflects **recent advances** in molecular genetics and personalized medicine, molecular technologies used for the diagnosis of infectious diseases, next generation sequencing, and the application of molecular technologies to cytopathology.
- Includes a **new chapter on COVID-19**.
- **An eBook version is included with purchase.** The eBook allows you to access all of the text, figures, and references, with the ability to search, customize your content, make notes and highlights, and have content read aloud. Additional digital ancillary content may publish up to 6 weeks following the publication date.

## DESCRIPTION

Covering both common and rare neoplastic and nonneoplastic diseases of the lung and pleura, *Pulmonary Pathology, 3rd Edition*, is an **essential foundation text** for pathologists. This popular volume in the Foundations in Diagnostic Pathology series **reflects recent advances in the field**, while retaining the **easy-to-use template format** for quick retrieval of information. Contributions from internationally recognized lung pathologists keep you up to date with the latest information in pathology and pulmonary medicine.



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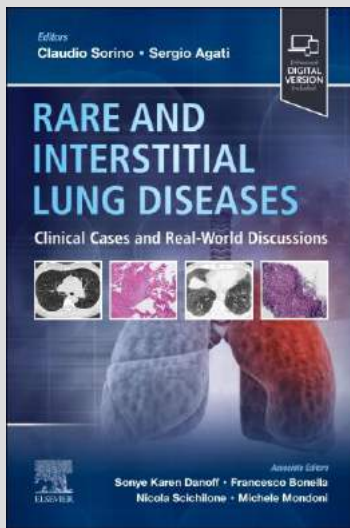
Speciality Medicine Pathology

<https://virtuale.elsevier.com>, [www.elsevier.com](http://www.elsevier.com)

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# Rare and Interstitial Lung Diseases

## Clinical Cases and Real-World Discussions

Edited by : **Claudio Sorino**, MD, PhD, Professor of Medicine and Associate Medical Director, Respiratory Pathophysiology Unit, Department of Pulmonary and Critical Care Medicine, Sant'Anna Hospital, Como, Italy and **Sergio Agati**, MD, Medical Director, Department of Pulmonary and Critical Care Medicine, Sant'Anna Hospital, Como, Italy

ISBN: 9780323935227  
PUB DATE: Aug 25, 2024  
LIST PRICE: £84.99 / \$104.99 /  
€99.99

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 220

AUDIENCE: Pulmonologists, critical care, and internal medicine physicians – practitioners and fellows

BIC CODES: MJL

THEMA CLASSIFICATION:

THEMAMJL

Gain practical, real-world knowledge from this case-based, problem-solving approach to rare pulmonary diseases

### KEY FEATURES

- Reflects a **nuanced, multidisciplinary, evidence-based approach to diagnoses, treatment options, and follow-up** criteria for complex and rare pulmonary disorders such as idiopathic pulmonary fibrosis, interstitial lung disease related to connective tissue diseases, hypersensitivity pneumonitis, sarcoidosis, and pulmonary vascular disease.
- **Each case** includes onset of symptoms, diagnostic/therapeutic path, and discussions on the clinical choices made in accordance with evidence-based medical procedures.
- Describes each clinical and laboratory finding and **features 150 images**, including plain film, procedural photos, ultrasound images, CT scans, and histopathology specimens.
- Includes the most **recent updates to international guidelines** (ATS/ERS/JRS/ALAT) on idiopathic pulmonary fibrosis (IPF).

### DESCRIPTION

Written and edited by **global leaders** in this challenging field, *Rare and Interstitial Lung Diseases: Clinical Cases and Real-World Discussions* brings you up to date with the latest advances in complex or rare lung diseases managed on outpatient or inpatient respiratory or critical care units. Using a **unique, case-based approach**, a wide variety of cases are presented along with **perspectives from a multidisciplinary team of experts** who discuss therapeutic choices and rationales. This real-world approach **allows the reader to become a virtual attending physician**, simulating a realistic clinical reasoning process on the diagnosis, treatment, and follow-up of patients with rare and complex lung diseases.



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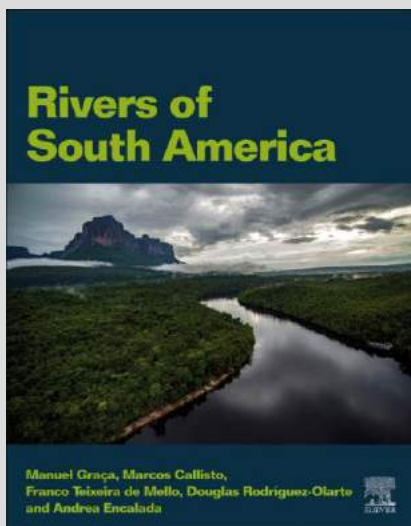


Speciality Medicine    Respiratory

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# Rivers of South America

Edited by : **Manuel A.S Graça**, Professor of Ecology, Department of Life Sciences, University of Coimbra, Portugal; **Marcos Callisto**, full Professor of Ecology at the Departamento de Genética, Ecologia e Evolução, Universidade Federal de Minas Gerais.; **Franco Teixeira de Mello**, Professor of Ecology and Environmental Management, Department of Ecology and Environmental Management, Centro Universitario Regional del Este, Universidad de la República, Uruguay and **Douglas Rodriguez Olarte**, Professor of Ecology, Department of Biology, Agronomy Faculty, Universidad Centro Occidental Lisandro Alvarado, Venezuela

**ISBN:** 9780128234297  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £182.99 / \$225.00 / €209.99

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 8.50w x 10.875h

**PAGES:** c. 744

**ILLUSTRATIONS:** Approx. 200 illustrations (200 in full color)

**AUDIENCE:** River ecologists/ biologists, Geographers, Hydrologists, Local, regional and governmental environmental, river & water resource managers, Conservationists

**BIC CODES:** RNC

**THEMA CLASSIFICATION:** THEMPSAF

**A comprehensive and foundational summary of ecological and environmental conservation information about the major river systems of South America**

## KEY FEATURES

- Presents boxed information in each chapter to provide clear and consistent highlights throughout
- Provides a single source of information for South America's major rivers
- Offers full-color photographs and topographical maps to demonstrate the beauty, major features, and uniqueness of each river system

## DESCRIPTION

*Rivers of South America* examines the physical, chemical, and biological environment of South American Rivers, and the people living in their basins. The book explores the main river basins, with information on each river's history, physiography, climate, hydrology, biodiversity, ecological processes, environmental problems, management, and conservation. The book identifies conservation hotspots for riverine environments, and is enriched with a large number of maps, photos, graphs, and tables. This reference is important for aquatic ecologists, environmental authorities, local and national governments, academics, NGOs, and those interested in the preservation and management of flowing waters.



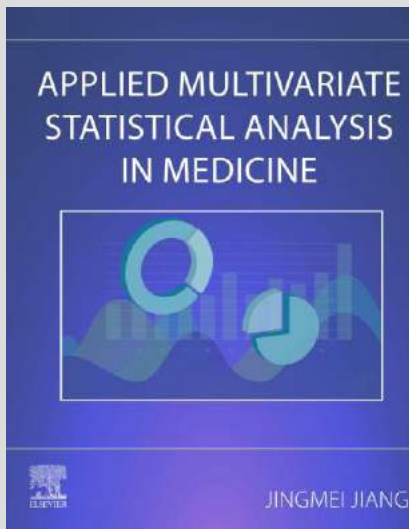
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# Applied Multivariate Statistical Analysis in Medicine

**Jingmei Jiang**, Professor of Biostatistics, Department of Epidemiology and Biostatistics, Institute of Basic Medical Research, Chinese Academy of Medical Sciences and School of Basic Medical Research, Peking Union Medical College, Beijing, China

**ISBN:** 9780443235870  
**PUB DATE:** Aug 28, 2024  
**LIST PRICE:** £134.00 / \$165.00 / €160.00  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 7.50w x 9.25h  
**PAGES:** c. 511  
**AUDIENCE:** Researchers and students in biostatistics clinicians, medical researchers, and other researchers across medical and biomedical disciplines  
**BIC CODES:** MBF  
**THEMA CLASSIFICATION:** THEMAPSAX

**Covers the main topics of multivariate analysis methods widely used in health science research**

## KEY FEATURES

- Gives understanding and mastering of the multivariate analysis techniques in the medical sciences
- Maintains a balance between the introduction of statistical analysis theory and the cultivation of practical skills
- Exposes a variety of well-designed real-life cases that integrate concepts and analytical techniques
- Includes substantive exercises, online coding sources, and case discussions to solidify a conceptual understanding

## DESCRIPTION

*Applied Multivariate Statistical Analysis in Medicine* provides a multivariate conceptual framework that allows readers to understand the interconnectivity and interrelations among variables, which maintains the intrinsic precision of statistical theories. With a strong focus on the fundamental concepts of multivariate statistical analysis, the book also gives insight into the applications of multivariate distribution in biomedical fields.

In 14 chapters, *Applied Multivariate Statistical Analysis in Medicine* covers the main topics of multivariate analysis methods widely used in health science research. The content is organized progressively from fundamental concepts to sophisticated methods. It begins with basic descriptive statistics in multivariate analysis and follows with parameter estimation, in addition to the hypothesis testing of a multivariate normal distribution, which has heavy applications in biomedical fields where the relationships among approximately normal variables are of great interest. Keeping mathematics to a minimum, considerable emphasis is placed on explanations and real-world applications of core principles to maintain a good balance between introducing theory and cultivating problem-solving skills. This book is a very valuable reference text for clinicians, medical researchers, and other researchers across medical and biomedical disciplines, all of whom confront increasingly complex statistical methods during the analysis and presentation of their results.



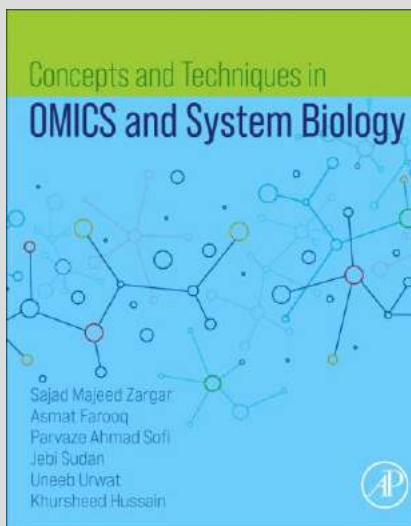
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# Concepts and Techniques in OMICS and System Biology

**Asmat Farooq**, Division of Biochemistry, Faculty of Basic Sciences, Sher e Kashmir University Sciences and Technology, Chatha, Jammu, J&K, India; **Sajad Majeed Zargar**, Ph.D., Proteomics Laboratory, Division of Biotechnology, Sher-e-Kashmir University of Sciences and Technology, J&K, India; **Parvaze Ahmad Sofi**, Sher-e-Kashmir University of Sciences & Technology, Department of Genetics, India; **Jebi Sudan**, M.Sc., Ph.D., Division of Biotechnology, Sher-e-Kashmir University of Sciences & Technology, Proteomics Laboratory, India; **UneeB Urwat**, Proteomics Laboratory, Division of Biotechnology, Sher-e-Kashmir University of Sciences & Technology, India and **Khurshheed Hussain**, PhD, Assistant Professor, Division of Vegetable Science, Sher-e-Kashmir University of Sciences & Technology, India

**ISBN:** 9780443219238  
**PUB DATE:** Aug 23, 2024  
**LIST PRICE:** £134.00 / \$165.00 / €160.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 325

**AUDIENCE:** Master's students in life science subjects like System Biology, Biotechnology, Genetics, Botany, Zoology, Biochemistry, Microbiology and almost all the applied fields of life sciences Researchers in the field of Biotechnology, Genetics, Zoology, Botany and Microbiology. Ph.D. students and postdocs in the concerned field

**BIC CODES:** MBF

**THEMA CLASSIFICATION:** THEMAPSAX

**A one-stop solution to advance genomic and proteomic techniques as well as their fundamental and applied aspects**

## KEY FEATURES

- Provides an in-depth explanation of fundamental principles regarding the understanding of metabolomics, ionomics and system biology.
- Gives updated account on technical aspects of omics and system biology.
- Includes unique content in its theoretical background, technical approaches and advancements made in omics and systems biology

## DESCRIPTION

*Concepts and Techniques in OMICS and Systems Biology* provides a concise and lucid account on the technical aspects of omics, system biology and their application in fields of different life science.

With a strong focus on the fundamental principles understanding of metabolomics, ionomics and system biology, the book also gives an updated account on technical aspects of omics and system biology. Since both omics and systems biology fields are fast advancing filed of biological sciences, its significance and applications need to be understood from the baseline.

In 10 chapters *Concepts and Techniques in OMICS and Systems Biology* introduces the reader to both Proteomics, Metabolomics and Ionomics, and System Biology, the technical applications, describes both the software in for proteomics as metabolomic enumeration and preludes Omics technologies and their applications.

The chapters are designed in a well-defined chronology such that readers will understand the concepts and techniques involved in omics and system biology. This compilation will be ideal reading material for students, researchers and people working in the industries related to biological sciences.



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## ENZYME BIOTECHNOLOGY FOR ENVIRONMENTAL SUSTAINABILITY



Edited by  
Praveen Dahiya  
Joginder Singh  
Ajay Kumar



# Enzyme Biotechnology for Environmental Sustainability

Edited by : **Praveen Dahiya**, Associate Professor, Centre for Biotechnology and Biochemical Engineering, Amity Institute of Biotechnology, Amity University, Noida, Uttar Pradesh, India; **Joginder Singh Panwar**, Ph.D., Professor, Department of Botany, Nagaland University, Nagaland, India and **Ajay Kumar**, Ph.D., Amity Institute of Biotechnology

ISBN: 9780443220722  
PUB DATE: Aug 15, 2024  
LIST PRICE: £142.00 / \$175.00 / €170.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 191 x 235

PAGES: c. 511

AUDIENCE: Researchers, graduates, post-graduates and doctoral level students, biotechnologists, industrial microbiologists, biochemists, environmental scientists, fermentation engineers, and industry professionals working in enzyme technology and their biomedical, environmental, and industrial applications

BIC CODES: TCB, PSG

THEMA CLASSIFICATION:

THEMATCB; THEMAPSG

**Up-to-date information on biotechnological advances in microbial enzymology and its role in industrial and environmental sustainability**

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

### KEY FEATURES

- Includes new-methods and up-to-date information on modern methods with respect to its application in pharmaceuticals, textiles, food fermentation, and many other related fields
- Provides in-depth information about the recent applications of enzyme biotechnology in different industrial sectors
- Focuses on the rapid developments and biotechnological advances in microbial enzymology to enhance industrial and environmental sustainability

### DESCRIPTION

*Enzyme Biotechnology for Environmental Sustainability* discusses recent applications of enzyme biotechnology in various industrial sectors and state-of-the-art information on novel microbial enzyme technologies for a sustainable environment.

The book describes in detail the latest developments and modern methods in microbial enzyme biotechnology for wider application in bioremediation, cleaner technology for industries and waste management, green chemistry and pharmaceutical biotechnology, sustainable textiles, food production and biodegradation, and other industries. The chapters cover topics such as genetic engineering, protein engineering, nanotechnological advances of microbial enzymes, computational tools for engineering enzymes, and health risk assessment of enzymes in different sectors. With contributors from an array of experts in the field, *Enzyme Biotechnology for Environmental Sustainability* is an informative reference for researchers, biotechnologists, microbiologists, environmental scientists, graduate and post-graduate students working in the area of enzyme technology and their biomedical, environmental, and industrial applications.



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# Metaverse Technologies in Healthcare

Edited by : **Rajesh Kumar Dhanaraj**, PhD, Professor, Symbiosis Institute of Computer Studies and Research (SICSR), Symbiosis International (Deemed University), Pune, Maharashtra, India; **Sristhi Vashishtha**, Assistant Professor, Department of CSE, Bharati Vidhyapeeth's College of Engineering, GGSIPU, Delhi, India; **Malathy Sathyamoorthy**, PhD, Assistant Professor, Dept. of Information Technology, KPR Institute of Engineering and Technology, Coimbatore, Tamil Nadu, India; **Balamurugan Balusamy**, PhD, Shiv Nadar University, Delhi-NCR, India and **Korhan Cengiz**, PhD, University Research Committee Chair, University of Fujairah, United Arab Emirates

**ISBN:** 9780443135651  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £130.00 / \$170.00 / €148.00  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 7.50w x 9.25h  
**PAGES:** c. 219  
**AUDIENCE:** Researchers and graduate students on bioinformatics, Researchers in AI, virtual reality, telemedicine and healthcare industries  
**BIC CODES:** MBNH, KNDH1  
**THEMA CLASSIFICATION:** THEMAMF; THEMATCB

**Explores the use of AI, virtual reality, and deep learning models in the field of healthcare**

## KEY FEATURES

- Shows the potential of digital experiences on the healthcare sector
- Focuses on the leading channels fueling the digital health space, such as Telemedicine, Digital Twins, Block chain, Internet of Things, and Robotics, providing new directions in this sector
- Provides guidance to healthcare companies on how to augment their Digital Roadmaps with personalized care

## DESCRIPTION

*Metaverse Technologies in Healthcare* focuses on data analysis, utilizing the possibilities of data to increase the effectiveness of healthcare organizations. As healthcare services aim to maintain the physical, mental, social and emotional well-being of human lives while the Metaverse is a blend of technological trends- Artificial Intelligence (AI), Augmented Reality (AR) and Virtual Reality (VR), collectively, they can deliver treatments and medicines, lower costs, and substantially enhance patient outcomes. The book redefines the digital health experience and describes the advantages of the Metaverse-based NFT technology in the healthcare sector, facilitating NFT avatars to interact with targeted audiences, and more.



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FORTHCOMING

# Sustainable Process Intensification for Biocatalysis

## Applications in Enzymology and Biotechnology

Edited by : **Ganapati D. Yadav**, Emeritus Professor of Eminence, J.C. Bose National Fellow (Govt. of India); Adjunct Professor, University of Saskatchewan, Canada and Conjoint Professor, University of New Castle, Australia

**ISBN:** 9780443191527  
**PUB DATE:** Jun 01, 2025  
**LIST PRICE:** £134.00 / \$175.00 /  
€155.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 439

**AUDIENCE:** Biochemists,  
biotechnologists, biochemical  
engineers, green chemists, chemical  
engineers, Students

**BIC CODES:** PSBZ, PSD, PSB,  
PHVN, TCB

**THEMA CLASSIFICATION:**  
THEMAPSB; THEMAPHVN;  
THEMATCB; THEMAPSD

**Provides a thorough overview and instruction in biocatalytic process intensification principles, for use in enzymology and biotechnology applications**

A Volume in the *Foundations and Frontiers in Enzymology Series*

### KEY FEATURES

- Supports researchers and practitioners in improving the activity, stability, and reusability of enzymes across various research disciplines and industries
- Considers a wide range of process intensification techniques, including microwave, ultrasound, hydrodynamic cavitation, and combination chemical and biological catalysis approaches
- Features chapter contributions from international leaders in the field

### DESCRIPTION

*Sustainable Process Intensification for Biocatalysis: Applications in Enzymology and Biotechnology*, a new volume in the Foundations and Frontiers of Enzymology series, offers applied instruction in process intensification principles for applications in enzymology and biotechnology, helping researchers and practitioners implement these techniques across various uses and industries, from healthcare to food and biofuel. Here, leaders in the field discuss a full range of approaches and enabling technologies, from microwave to ultrasound, hydrodynamic cavitation, and combination chemical and biological catalysis techniques, such as multiphase reactors, microreactors, scale-bioprocesses, and enzyme cascades. Later chapters examine ongoing advances and their implementation across different industries, including pharmaceuticals, perfumes, polymers, and agrochemicals, with a final chapter discussing next steps in research and future directions. Throughout the book, and across applied examples, emphasis is placed on driving sustainable research approaches and manufacturing.



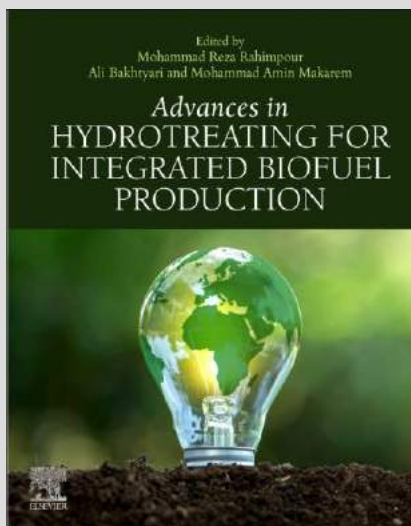
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# Advances in Hydrotreating for Integrated Biofuel Production

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

**ISBN:** 9780443190766  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £185.00 / \$235.00 / €205.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 670

**AUDIENCE:** Academic professors, students, researchers and professionals in chemical engineering, oil and gas engineering, and mechanical engineering. Refinery and petrochemical engineers, energy production utilities, power generation plants, petrochemical industry

**BIC CODES:** TDCB

**THEMA CLASSIFICATION:** THEMATDC

**Introduces the benefits of hydrotreating processes for the production of biofuels, including detailed process descriptions**

## KEY FEATURES

- Includes detailed descriptions of hydrotreating catalysts
- Discusses the technical requirements for developing hydrotreating process
- Illustrates the necessity and importance of biomass resources

## DESCRIPTION

*Advances in Hydrotreating for Integrated Biofuel Production* covers the recent advances in the upgrading of biomass-obtained products into liquid fuels (also known as biofuels) by hydrotreating processes. Including introductory information, the book covers the identification of hydrotreating processes such as thermo-catalytic reactions in the presence of heterogeneous catalysts and hydrogen. Required materials for the development of the process are investigated with consideration of the characteristics of biomass, bio-oil production, upgrading alternatives, hydrotreating alternatives, hydrotreating of different biomass-based material, hydrodeoxygenation of separated bio-oil compounds, classification of the hydrotreating catalyst, life-cycle assessment and hydrogen production routes. Information to inform the further development of the process is collected together to encourage further progress toward a scalable process for biofuel production and the development of a large-scale hydrotreating strategy.



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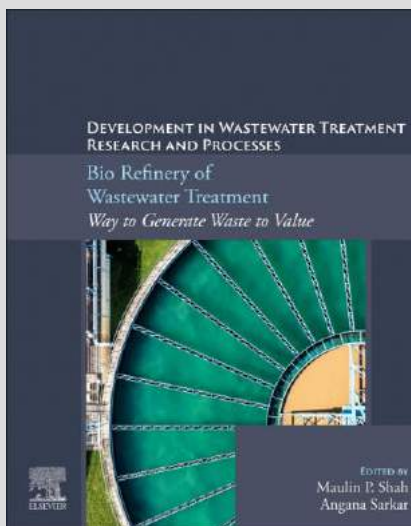


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# Bio Refinery of Wastewater Treatment

## Way to Generate Waste to Value

Edited by : **Maulin P. Shah**, Chief Scientist and Head, Industrial Waste Water Research Lab, Division of Applied and Environmental Microbiology Lab at Enviro Technology Ltd., Ankleshwar, Gujarat, India and **Angana Sarkar**, Assistant Professor, Department of Biotechnology and MEdical Engineering, National Institute of Technology, Rourkela, India

**ISBN:** 9780323956703  
**PUB DATE:** Aug 23, 2024  
**LIST PRICE:** £180.00 / \$230.00 / €200.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 465

**AUDIENCE:** Researchers in academia and industry, and postgraduate students working on remediation of toxic contaminants Environmentalists, Microbiologists, Biotechnologists, Bioprocess Engineers, Bioenergy Sectors Environmental Engineers, Waste Treatment Engineers and Managers, Environmental Health and Risk Scientists, Environmental Chemists and Scientists, Environmental Science Managers, Agriculture sectors, Administrators, and Policy Makers, Environmental Consultants, Industry Persons

**BIC CODES:** TC, TCB, TDCB, TQSW1, PSG

**THEMA CLASSIFICATION:** THEMATDC; THEMATCB; THEMAPSG; THEMATQSW



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**Comprehensive source of inspiration for commercialization of microbe-based bio-refinery for wastewater management for sustainable development**

### KEY FEATURES

- Provides natural and eco-friendly solutions to deal with the problem of pollution aiming value generation
- Details underlying mechanisms of biorefinery approach associated microbes for simultaneous value generation and removal of emerging contaminants
- Illustrates numerous successful field studies on the application of bio-refinery approach for eco-restoration of contaminated sites
- Presents recent advances and challenges in biorefinery research and applications for sustainable development

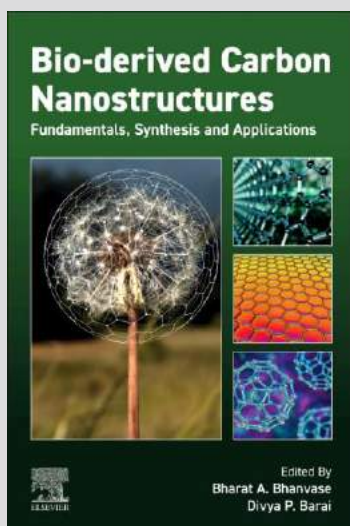
### DESCRIPTION

*Bio Refinery of Wastewater Treatment: Way to Generate Waste to Value* focuses on the exploitation of various waste water treatment technologies and their associated process (microbial/chemical/physical) as a tool to simultaneous value generation during treatment process of degradation/detoxification/stabilization toxic and hazardous contaminants and restore contaminated sites. The book encompasses advanced and updated information as well as future directions for young researchers and scientists who are working in the field of effluent treatment plants/biodegradation of environmental contaminants for environmental protection and sustainable development.

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# Bio-derived Carbon Nanostructures

## Fundamentals, Synthesis and Applications

Edited by : **Bharat Apparao Bhanvase**, Professor and Head, Chemical Engineering Department, Laxminarayan Institute of Technology, Rashtrasant Tukadoji Maharaj Nagpur University, Nagpur, India. and **Divya Prakash Barai**, Chemical Engineering Department, Laxminarayan Institute of Technology, Rashtrasant Tukadoji Maharaj Nagpur University, Opposite to Bharat nagar, Amravati Road, Nagpur, Maharashtra, India.

**ISBN:** 9780443135798  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £175.00 / \$225.00 / €200.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 558

**AUDIENCE:** Students and researchers in Chemistry, Chemical Engineering, Material Science and Technology and those with an interest in Nanotechnology, Heat Transfer, Energy Sources, and Mass Transfer as well as those in manufacturing industries and consultants dealing with material processing and process intensification

**BIC CODES:** TC, TGM

**THEMA CLASSIFICATION:**

THEMATDC; THEMATGM

**Focuses on the synthesis, preparation, and application of carbon nanostructures derived from bio-based materials**

### KEY FEATURES

- Presents the art of crafting bio-derived carbon nanostructures, their applications, and scale up issues
- Unveils the secrets behind various fabrication techniques and provides background for manufacturing.
- Embarks on a journey through the fundamentals of process-property relationships and cutting-edge characterization methods
- Explores and compares diverse preparation and characterization techniques, unveiling their remarkable outcomes

### DESCRIPTION

*Bio-derived Carbon Nanostructures: Fundamentals, Synthesis and Applications* explores the entire journey, from selecting the right source materials to crafting them into precisely engineered carbon nanostructures with a purpose.

Opening with an exploration of raw materials and their structural intricacies, offering readers a profound insight into the transformation of bio-based resources into highly functional carbon nanostructures. These remarkable materials find applications that span energy, environmental solutions, catalysis, and innovative additives. Unveiling the latest technological advancements, this book delves into the exciting realm of emerging applications and the challenges of scaling up these technologies for widespread use. These novel materials originate from nature, promising a sustainable future.

Ideal for students, researchers and those in industry focusing on materials science and biomass utilization, and chemical engineers, this book is the key to unlocking the potential of novel carbon-based nanomaterials for a sustainable tomorrow.



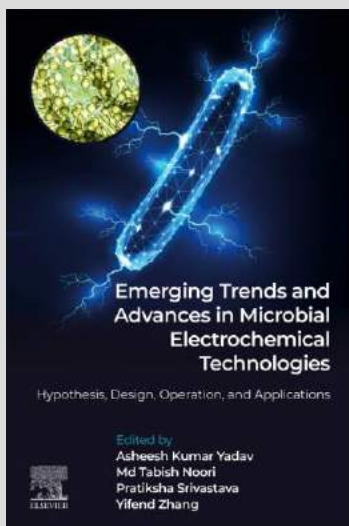
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# Emerging Trends and Advances in Microbial Electrochemical Technologies

Hypothesis, Design, Operation, and Applications

Edited by : **Asheesh Kumar Yadav**, Principal Scientist and Associate Professor, CSIR-Institute of Minerals and Materials Technology, Bhubaneswar, India; **Pratiksha Srivastava**, Mckenzie Research Fellow, Chemical Engineering Department, The University of Melbourne, VIC, Australia; **Md Tabish Noori**, UKRI Postdoctoral Research Fellow, Department of Chemical Engineering, Imperial College London, United Kingdom

**ISBN:** 9780443155574  
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**LIST PRICE:** £195.00 / \$250.00 / €220.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 178 x 254

**PAGES:** c. 860

**AUDIENCE:** Environmental Engineers, Biotechnologists, Chemical Engineers, Material Scientists, Microbiologists, Wastewater Technologists, Environmental Treatment Plant Operators

**BIC CODES:** TDCB

**THEMA CLASSIFICATION:** THEMATDC

**Illustrates the emerging trends and advances in the hypothesis, design, operation, and applications of microbial electrochemical technologies**

## KEY FEATURES

- Introduces advanced applications, design, processes, and materials in microbial electrochemical technologies
- Explores how to translate research into real-world applications
- Provides a roadmap for the specific direction of realistic research, including commercialization possibilities

## DESCRIPTION

*Emerging Trends and Advances in Microbial Electrochemical Technologies: Hypothesis, Design, Operation and Applications* provides a lab to field approach involved in the progress of microbial electrochemical technologies. Focusing on recent trends and advances in this rapidly growing field, the book provides comprehensive information on the basics while also explaining new approaches to microbial electrochemical technologies for environmental applications, including wastewater and waste treatment, bioremediation of contaminated sites, resource recovery, usable electricity generation, greenhouse gas emissions reduction and bio-sensing.

Explaining current trends and advances in practice, and elaborating on realistic technological areas and commercialization possibilities and large-scale applications, this book provides new insights into the design of microbial electrochemical technologies and future directions.



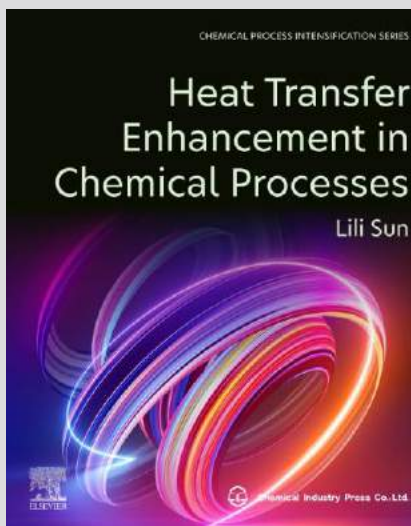
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# Heat Transfer Enhancement in Chemical Processes

Lili Sun, Sinopec Engineering (Group) Co., Ltd. China

**ISBN:** 9780443185601  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £138.00 / \$180.00 / €160.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 444

**AUDIENCE:** Scholars, engineers, students and technicians in oil refining, petrochemical, fine chemical, coal chemical, chemical and biochemical pharmacy, food processing, waste gas and wastewater treatment

**BIC CODES:** TDCB, PHH

**THEMA CLASSIFICATION:** THEMATDC; THEMAPHH

**Practical reference putting theory into practice and integrating process technologies with process intensification**

## KEY FEATURES

- Puts theory into practice, providing guidance for the application of scientific research achievements
- Integrates process technologies with process intensification, providing guidance for process flow enhancement
- Combines process with equipment, introducing heat transfer enhancement technologies suitable for different processes
- Covers the oil refining unit, aromatics unit, the ethylene plant and its downstream units

## DESCRIPTION

*Heat Transfer Enhancement in Chemical Processes* combines process technologies with heat exchange equipment to study heat transfer enhancement. The book provides guidance for the progress of process technologies and the application of enhanced heat transfer equipment. It analyzes the basic principles of heat transfer and summarizes the theories and methods of heat transfer enhancement, while also focusing on three representative processes in petrochemical industry, including oil refining, aromatics, and ethylene production. The book summarizes in a systematical way the practical application of heat transfer enhancement in the petrochemical industry, from the equipment components, the processes, and the whole plant.



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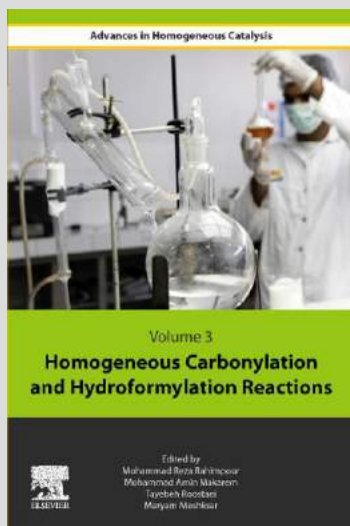


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# Homogeneous Carbonylation and Hydroformylation Reactions

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; **Tayebeh Roostaie**, Department of Chemical Engineering Shiraz University, Shiraz, Iran and **Maryam Meshksar**, Department of Chemical Engineering Shiraz University, Shiraz, Iran

**ISBN:** 9780443155604  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £185.00 / \$235.00 / €205.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 558

**AUDIENCE:** Researchers, students and industry professionals, chemical engineers, refinery, chemical and petrochemistry chemists and engineers, process engineers, oil and gas engineers

**BIC CODES:** TC, TDCB

**THEMA CLASSIFICATION:** THEMATDC

**Introduces carbonylation and hydroformylation systems and processes using homogeneous catalysts**

## KEY FEATURES

- Includes fundamentals, reactor design, and process description of carbonylation and hydroformylation homogeneous reactions
- Describes various carbonylation and hydroformylation homogeneous reactions
- Explains carbonylation and hydroformylation economic and environmental challenges

## DESCRIPTION

*Homogeneous Carbonylation and Hydroformylation Reactions*, a volume in the *Advances in Homogeneous Catalysis* series, is split into two sections. The first covers the homogeneous carbonylation of various chemicals, such as methanol, methyl acetate, esters, and ethers. In addition, some common carbonylation homogeneous processes such as water-gas shift and Fischer–Tropsch reactions are included. The second part describes hydroformylation processes like cobalt and rhodium based reactions. Both parts cover the design of catalytic reactors, industrial applications, economic assessment and environmental impacts, providing detailed discussions of the subject from both a chemistry and engineering perspective.



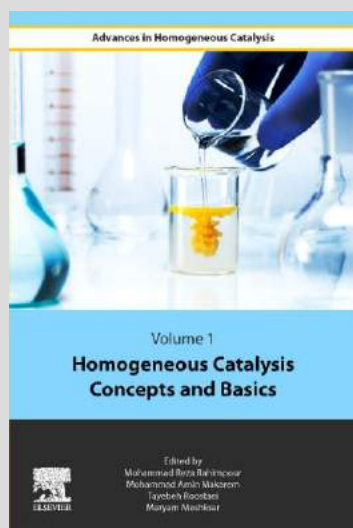
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# Homogeneous Catalysis Concepts and Basics

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; **Tayebeh Roostaie**, Department of Chemical Engineering Shiraz University, Shiraz, Iran and **Maryam Meshksar**, Department of Chemical Engineering Shiraz University, Shiraz, Iran

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**LIST PRICE:** £185.00 / \$235.00 / €205.00  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 511  
**AUDIENCE:** Researchers, students and industry professionals, chemical engineers, refinery, chemical and petrochemistry chemists and engineers, process engineers, oil and gas engineers  
**BIC CODES:** TC, TDCB  
**THEMA CLASSIFICATION:** THEMATDC

**Introduces hydrogenation and metathesis reactions systems and processes using homogeneous catalysts**

## KEY FEATURES

- Includes thermodynamic and kinetic studies of homogeneous catalysts
- Describes transition metal, ligand and solvent role in homogeneous catalysts
- Explains preparation, characterization, deactivation and regeneration of homogeneous catalysts
- Presents homogeneous catalysts by clusters, carbenes, fixed metal-complexes, and liquid-liquid multiphase catalysts

## DESCRIPTION

*Homogeneous Catalysis Concepts and Basics*, a volume in the *Advances in Homogeneous Catalysis* series, covers hydrogenation and metathesis reactions in two separate sections. The first section is devoted to homogeneous hydrogenation reactions and related processes, including hydrogenation of alkenes, esters, olefins, etc. In the second section, the metathesis reactions of olefins, alkenes, and alkynes are presented. In addition, the industrial application of homogeneous metathesis reactions is investigated.



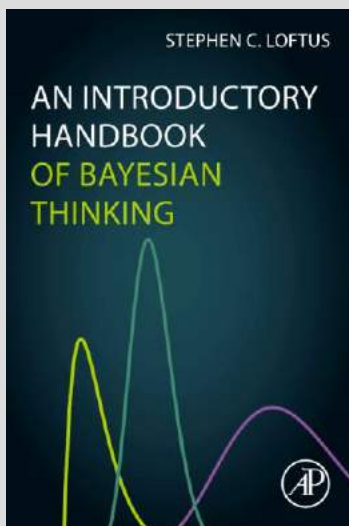
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# An Introductory Handbook of Bayesian Thinking

Stephen C. Loftus, Analyst, Research & Development, Atlanta Braves Baseball Club

**ISBN:** 9780323954594  
**PUB DATE:** Aug 12, 2024  
**LIST PRICE:** £56.95 / \$74.95 / €64.95  
**DISCOUNT:** Textbook  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 325  
**AUDIENCE:** Students in undergraduate programs learning about Bayesian Statistics  
Professionals / researchers / academics applying Bayesian principles in research and applied settings, who require an introduction or refresher to the subject  
**BIC CODES:** PBT  
**THEMA CLASSIFICATION:** THEMABPT

**Accessible introduction to Bayesian ideas for application of these valuable methods across fields**

## KEY FEATURES

- Utilizes real datasets to illustrate Bayesian models and their results
- Guides readers on coding Bayesian models using the statistical software R, including a helpful introduction and supporting online resource
- Appropriate for an undergraduate statistics course, as well as for non-statisticians with sufficient mathematical background (integral and differential Calculus and an introductory Statistics course)
- Covers any more advanced topics which readers may not be familiar with—such as the basic idea of vectors and matrices—as much as needed in order to foster understanding of core concepts

## DESCRIPTION

As Bayesian techniques become more common across a variety of fields, it becomes important for experts in those fields to understand those methods. *An Introductory Handbook of Bayesian Thinking* brings Bayesian thinking and methods to a wide audience beyond the mathematical sciences. Appropriate for students with some background in calculus and introductory statistics, particularly for nonstatisticians with a sufficient mathematical background, the text provides a gentle introduction to Bayesian ideas with a wide array of supporting examples from a variety of fields.



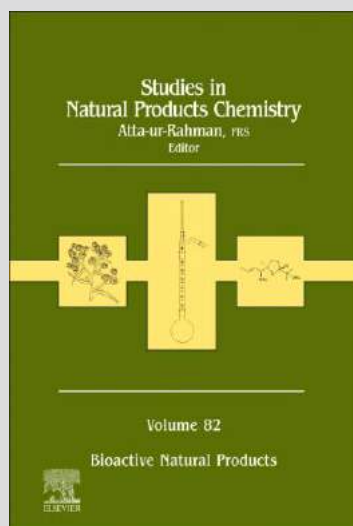
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# Studies in Natural Products Chemistry, Vol 82

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

**ISBN:** 9780443157561  
**PUB DATE:** Aug 01, 2024  
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**DISCOUNT:** Reference  
**FORMAT:** Hardback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 465  
**AUDIENCE:** Natural product chemists, medicinal chemists, pharmacologists as well as academic and industry researchers  
**BIC CODES:** PNN  
**THEMA CLASSIFICATION:** THEMAPPN

**An essential resource for researchers and engineers working in natural products and medicinal chemistry, this series presents current frontiers and future guidelines for research based on important discoveries made in the field of bioactive natural products**

## KEY FEATURES

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

## DESCRIPTION

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.

*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.



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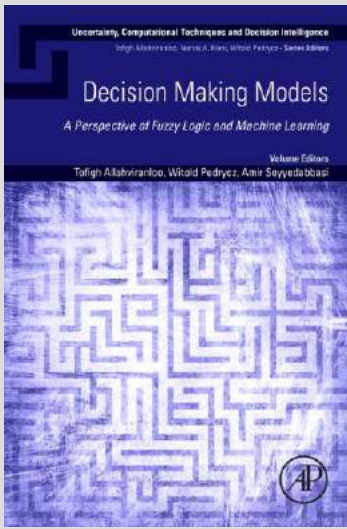


CHEMISTRY Organic Chemistry

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# Decision Making Models

## A Perspective of Fuzzy Logic and Machine Learning

Edited by : **Tofiq Allahviranloo**, Full Professor, Istinye University, Istanbul, Turkey; **Witold Pedrycz**, Ph.D., Professor, Department of Electrical and Computer Engineering, University of Alberta, Canada and **Amir Seyyedabbasi**, Assistant Professor, Istinye University, Istanbul, Turkey

**ISBN:** 9780443161476

**PUB DATE:** Aug 01, 2024

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

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 279

**AUDIENCE:** Graduate students, researchers, professors, and professionals working in the fields of computer science, software engineering, artificial intelligence, and applied mathematics

**BIC CODES:** UY, PBW, UMB, UYQM, UYQE, UYQ, U, UYZF, PBD

**THEMA CLASSIFICATION:**

THEMAUMB; THEMABPD;  
THEMAUYQ; THEMAUYQE;  
THEMAUNA; THEMABPW;  
THEMAUYZF; THEMAUY;  
THEMAUYZM

### A compendium of machine learning models in the field of decision-making

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

#### KEY FEATURES

- Introduces mathematics of intelligent systems which provides the usage of mathematical rigor such as precise definitions, theorems, results, and proofs
- Provides extended and new comprehensive methods which can be used efficiently in a fuzzy environment as well as optimization problems and related fields
- Covers applications and elaborates on the usage of the developed methodology in various fields of industry such as software technologies, biomedicine, image processing, and communications

#### DESCRIPTION

*Decision Making Models: A Perspective of Fuzzy Logic and Machine Learning* presents the latest developments in the field of uncertain mathematics and decision science. The book aims to deliver a systematic exposure to soft computing techniques in fuzzy mathematics as well as artificial intelligence in the context of real-life problems and is designed to address recent techniques to solving uncertain problems encountered specifically in decision sciences. Researchers, professors, software engineers, and graduate students working in the fields of applied mathematics, software engineering, and artificial intelligence will find this book useful to acquire a solid foundation in fuzzy logic and fuzzy systems.

Other areas of note include optimization problems and artificial intelligence practices, as well as how to analyze IoT solutions with applications and develop decision-making mechanisms realized under uncertainty.



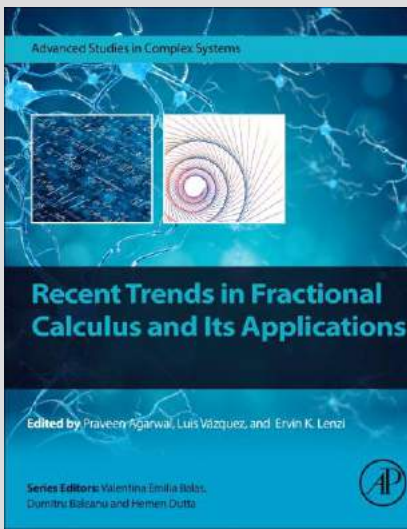
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# Recent Trends in Fractional Calculus and Its Applications

Edited by : **Praveen Agarwal**, Full Professor, Anand International College of Engineering, Jaipur India; Nonlinear Dynamics Research Center (NDRC), Ajman University, Ajman, UAE; Peoples Friendship University of Russia (RUDN University), Russian Federation; **Luis Vázquez Martínez**, Professor Emeritus of Applied Mathematics Departamento de Matemática Aplicada, Facultad de Informática, Universidad Complutense de Madrid, Spain and **Ervin K. Lenzi**, Associate Professor of Physics, Universidade Estadual de Ponta Grossa, Brazil

**ISBN:** 9780443185052  
**PUB DATE:** Jul 19, 2024  
**LIST PRICE:** £155.00 / \$200.00 / €175.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 298

**AUDIENCE:** Mathematicians, Computer Scientists, and researchers in computational modelling and computational biology, researchers and clinicians in Biomedical Engineering and medical imaging. Other interested audiences will be comprised of radiologists, neurologists, cardiologists, AI researchers, and designers of Machine Learning applications, Clinicians and researchers interested in a variety of Engineering and other scientific research applications

**BIC CODES:** MBF

**THEMA CLASSIFICATION:** THEMAPSAX

**Comprehensive look at the most current Biomedical Engineering, scientific, and clinical applications of Fractional Calculus**

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

## KEY FEATURES

- Provides the most recent and up-to-date developments in the Fractional Calculus and its application areas
- Presents pre-preparation ideas to help researchers/scientists/clinicians face the new challenges in the application of fractional differential equations
- Helps researchers and scientists understand the importance of the Fractional Calculus to solve many problems in Biomedical Engineering and applied sciences

## DESCRIPTION

*Recent Trends in Fractional Calculus and Its Applications* addresses the answer to this very basic question: "Why is Fractional Calculus important?" Until recent times, Fractional Calculus was considered as a rather esoteric mathematical theory without applications, but in the last few decades there has been an explosion of research activities on the application of Fractional Calculus to very diverse scientific fields ranging from the physics of diffusion and advection phenomena, to control systems to finance and economics. An important part of mathematical modelling of objects and processes is a description of their dynamics.

The term Fractional Calculus is more than 300 years old. It is a generalization of the ordinary differentiation and integration to noninteger (arbitrary) order. The subject is as old as the calculus of differentiation and goes back to times when Leibniz, Gauss, and Newton invented this kind of calculation. Several mathematicians contributed to this subject over the years. People like Liouville, Riemann, and Weyl made major contributions to the theory of Fractional Calculus. In recent decades the field of Fractional Calculus has attracted the interest of researchers in several areas, including mathematics, physics, chemistry, engineering, finance, and social sciences.



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# Recent Trends in Swarm Intelligence Enabled Research for Engineering Applications

Edited by : **Siddhartha Bhattacharyya**, PhD, VSB Technical University of Ostrava, Czech Republic; **Mario Köppen**, PhD, Kyushu Institute of Technology, Kawazu, Iizuka-shi, Fukuoka, Japan; **Debashis De**, PhD, Professor, Dept. of Computer Science and Engineering, Maulana Abul Kalam Azad University of Technology, Kolkata, India and **Bijaya Ketan Panigrahi**, Electrical Engineering Department, Indian Institute of Technology, Delhi, India

**ISBN:** 9780443155338  
**PUB DATE:** Jul 15, 2024  
**LIST PRICE:** £130.00 / \$170.00 / €148.00  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 360  
**AUDIENCE:** Researchers, engineers, developers, practitioners, and graduate students from academia and industry working in the major and interdisciplinary areas of computational intelligence, communication systems, computer networks, and soft computing  
**BIC CODES:** UMB, UYQE, UB, PBD, UY, UYQ  
**THEMA CLASSIFICATION:** THEMAUMB; THEMABPD; THEMAUNC; THEMAUY; THEMAUYQ; THEMAKJ; THEMAUFL; THEMAUYQE

**Explores recent trends and technologies in hybrid swarm intelligence techniques for deriving optimal solutions to data-intensive applications**

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

## KEY FEATURES

- Introduces the theory underpinning hybrid swarm intelligence-enabled research as well as the leading applications across the fields of communication, networking, and information engineering
- Presents a range of applications research, including signal processing, communication engineering, bioinformatics, controllers, federated learning systems, blockchain, and IoT
- Includes case studies and code snippets in applications chapters

## DESCRIPTION

*Recent Trends in Swarm Intelligence Enabled Research for Engineering Applications* focuses on recent, up-to-date technologies, combining other intelligent tools with swarm intelligence techniques to yield robust and failsafe solutions to real world problems. This book aims to provide audiences with a platform to learn and gain insights into the latest developments in hybrid swarm intelligence. It will be useful to researchers, engineers, developers, practitioners, and graduate students working in the major and interdisciplinary areas of computational intelligence, communication systems, computer networks, and soft computing.

With the advent of data-intensive applications, the elimination of redundancy in disseminated information has become a serious challenge for researchers who are on the lookout for evolving metaheuristic algorithms which can explore and exploit the information feature space to derive the optimal settings for specific applications. Swarm intelligence algorithms have developed as one of the most widely used metaheuristic techniques for addressing this challenge in an effective way. Inspired by the behavior of a swarm of bees, these swarm intelligence techniques emulate the corresponding natural instincts to derive optimal solutions for data-intensive applications.



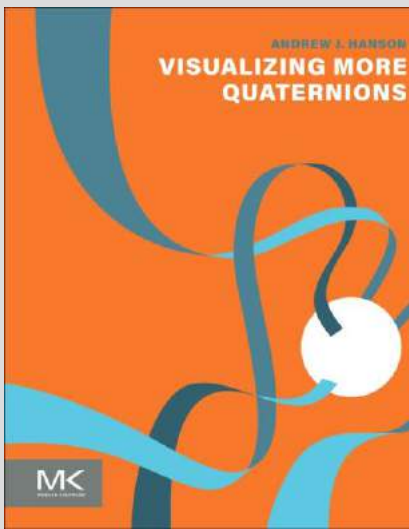
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# Visualizing More Quaternions

Andrew J. Hanson, Emeritus Professor of Computer Science, Indiana University, IN, USA

**ISBN:** 9780323992022

**PUB DATE:** Aug 01, 2024

**LIST PRICE:** £109.99 / \$135.00 / €126.99

**DISCOUNT:** Reference

**FORMAT:** Hardback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 582

**AUDIENCE:** Researchers, developers, and industry professionals in Computer Science, such as developers in the fields of computer graphics, shape modelling, and scientific data presentation and visualization, research scientists in a variety of fields will be interested in the book from the perspective of using quaternions to model complex systems, including the fields of Molecular Chemistry, Biochemistry, Biophysics, Electron Microscopy, Robotics, Mathematical Physics, Aerospace, Machine Vision, and Engineering

**BIC CODES:** PBW

**THEMA CLASSIFICATION:** THEMABW

**Presents a wide range of new scientific research applications for quaternions**

## KEY FEATURES

- Establishes basic principles for visual display of quaternions and their applications.
- Explores quaternion based approaches to the matching of point cloud pairs, including approaches to data from orthographic and perspective projections.
- Develops extensive applications of quaternion frames to protein orientation analysis.
- Analyzes the application of quaternion methods to physics problems ranging from quantum computing to special relativity and gravitational instantons.

## DESCRIPTION

*Visualizing More Quaternions* is a sequel to Dr. Andrew J. Hanson's first book, *Visualizing Quaternions*, which appeared in 2006. This new volume develops and extends concepts that have attracted the author's attention in the intervening 18 years, providing new insights into existing scholarship, and detailing results from Dr. Hanson's own published and unpublished investigations relating to quaternion applications. Among the topics covered are the introduction of new approaches to depicting quaternions and their properties, applications of quaternion methods to cloud matching, including both orthographic and perspective projection problems, and orientation feature analysis for proteomics and bioinformatics. The quaternion adjugate variables are introduced to embody the nontrivial quaternion topology on the three-sphere and incorporate it into machine learning tasks. Other subjects include quaternion applications to a wide variety of problems in physics, including quantum computing, complexified quaternions in special relativity, and a detailed study of the Kleinian "ADE"

discrete groups of the ordinary two-sphere. Quaternion geometry is also incorporated into the isometric embedding of the Eguchi–Hanson gravitational instanton corresponding to the  $k = 1$  Kleinian cyclic group. *Visualizing More Quaternions* endeavors to explore novel ways of thinking about challenging problems that are relevant to a broad audience involved in a wide variety of scientific disciplines.



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COVER IMAGE  
FORTHCOMING

# Computational Analysis of Transport Phenomena and Performance of PEMFC

**Bengt Sundén**, Department of Energy Sciences, Lund University, USA; **Shian Li**, Dalian Maritime University, Dalian, China and **Fereshteh Salimi Nanadegani**, Lund University, United States

**ISBN:** 9780443273209

**PUB DATE:** Aug 01, 2024

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

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 372

**AUDIENCE:** Graduate students and researchers involved in all aspects of fuel cells, emerging energy technologies, and propulsion systems for vehicles, ships, and aircraft, Professional engineers and scientists in companies and organizations working on fuel cells, emerging energy technologies, and propulsion systems for vehicles, ships, and aircraft

**BIC CODES:** THX

**THEMA CLASSIFICATION:** THEMATHV

**Presents the fundamentals, working principles and mechanisms of transport phenomena, electrochemical reactions, energy, charge conservation, and more**

## KEY FEATURES

- Explains modeling transport phenomena and performance at multiple levels
- Discusses the unique characteristics of modeling phenomena in the various layers (and at various scales) in PEM fuel cells, alongside formulations and necessary sub-models
- Highlights the limitations and opportunities for machine learning approaches, as well as exergy and energy analysis
- Provides numerically solved examples to illustrate modeling approaches

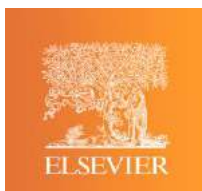
## DESCRIPTION

*Computational Analysis of Transport Phenomena and Performance of PEMFC* presents a practical guide to the mathematical modeling and simulation of PEMFCs for all transport processes of mass, momentum, energy, ions, and electrons. Tackling one of the most important aspects of next-generation PEMFC technologies, the book brings together the state-of-the-art to model and simulate phenomena and processes at various scales, including catalyst layers, electrodes, membranes, and bipolar plates of PEMFC unit cells and stacks.

Chapters introduce PEM fuel cells and explain the underlying electrochemical and thermodynamic concepts involved, present a detailed breakdown of the governing equations for overall mass, momentum, and energy conservation, charge (ions and electrons) conservation, water generation and its transport, heat generation, and heat transfer and cooling methods, offer an in-depth analysis of the various single and multi-dimensional modelling approaches and considerations, including lattice Boltzmann approach, artificial neural networks, exergy and energy analysis, estimation of fuel and oxidant consumption, the differences between cell-scale, stack-scale, and system-scale approaches, and more.



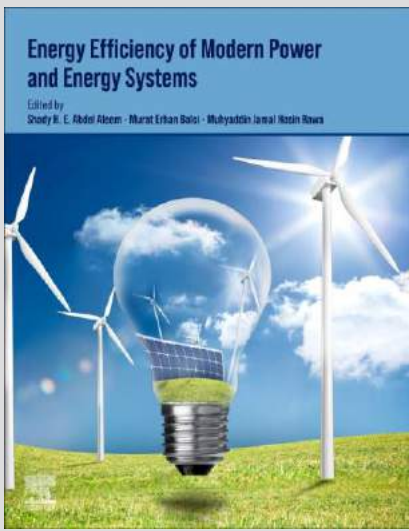
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# Energy Efficiency of Modern Power and Energy Systems

Edited by : **Shady H E Abdel Aleem**, Associate Professor, Department of Electrical Engineering, Institute of Aviation Engineering and Technology, Giza, Egypt; **Murat Erhan Balci**, Professor, Electrical and Electronics Engineering Department, Balikesir University, Turkey and **Muhyaddin Jamal Hosin Rawa**, Associate Professor, Department of Electrical and Computer Engineering, King Abdulaziz University, Jeddah, Saudi Arabia

**ISBN:** 9780443216442  
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**LIST PRICE:** £142.00 / \$185.00 / €165.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 588

**AUDIENCE:** Planners, analysts, designers, operators, electric utilities and power producers, electric energy customers/ independent producers, and engineers regarding planning and operation of the renewable-based power generation and energy efficiency improvement in power systems

**BIC CODES:** KNB

**THEMA CLASSIFICATION:**  
THEMAKNB

**A thorough examination of fundamental challenges and solutions for sustainable, efficient power systems**

## KEY FEATURES

- Provides a comprehensive reference with extensive guidance on deeper reading
- Develops understanding and solution design using case studies from a global range of geographies with differing power needs and resources
- Guides readers through the evaluation and analysis of the capabilities and limitations of a range of transmission and distribution technologies

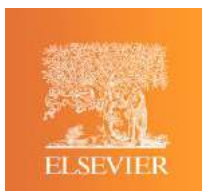
## DESCRIPTION

*Energy Efficiency of Modern Power and Energy Systems* introduces students and researchers to a broad range of power system management challenges, technologies, and solutions. The book begins with an analysis of system technology's current state, the most pressing problems, and the background to challenges in integrating renewable energy sources. Technologies including smart grids, green building, and worker requirements are covered. Subsequent chapters break down potential management solutions, including specific problem-solving for solar, wind, and hybrid systems. Finally, specific case studies from a global geographical range zero in on critical questions facing the present industry.

Providing meticulously researched literature reviews for guiding deeper reading, this book leads readers from contextual understanding to specific case studies and solutions for sustainable power systems.



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## Energy Transport Infrastructure for a Decarbonized Economy



Edited by  
Klaus Brun  
Karl Wiggant  
Rainer Kurz  
Tim Allison

# Energy Transport Infrastructure for a Decarbonized Economy

Edited by : **Klaus Brun**, Director of Research and Development, Elliott Group, Pennsylvania, USA; **Tim Allison**, Director, R&D, Machinery Dept., Southwest Research Institute, San Antonio, Texas, USA; **Rainer Kurz**, Manager, Systems Analysis at Solar Turbines Incorporated, San Diego, California, USA and **Karl Wiggant**, Senior Manager of Advanced Technology Programs, Elliott Group, New Houston, Texas, USA

**ISBN:** 9780443218934  
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**LIST PRICE:** £134.00 / \$175.00 / €155.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 465

**AUDIENCE:** Professionals working in the energy sector

**BIC CODES:** THFG, TH, THX, KNB, KCJ, KNAT, RND, AMCR, THF

**THEMA CLASSIFICATION:**  
THEMATHV; THEMAKNB;  
THEMATHF; THEMATH;  
THEMAAMCR; THEMAKCJ;  
THEMAKNA; THEMARND

**Energy Transport Infrastructure for a Decarbonized Economy critically evaluates the transportation of fluids required in a decarbonized energy economy and offers expert analysis on sustainable energy transport**

### KEY FEATURES

- Focuses on the energy transport required for a decarbonized energy economy
- Addresses challenges of pipeline transport of hydrogen and carbon dioxide as well as new infrastructure needs
- Provides details on the layout, specifications, and technical requirements of systems required for the transportation of hydrogen, natural gas, and carbon dioxide

### DESCRIPTION

*Energy Transport Infrastructure for a Decarbonized Economy* evaluates the transportation of fluids required in the decarbonized energy economy. The book will help researchers, design manufacturers, and those within government and academia to understand challenges and guide the design and development of systems, machinery, and infrastructure needed for a decarbonized energy economy. The book provides comprehensive insights on the implications of the energy transition for a critical aspect of commerce: the infrastructure central to energy transportation and the economy.

This practical book highlights the unique systems central to the efficient transport of various forms of energy. After outlining the need for transporting energy, types of fluids used to transport energy, and various means of transportation, the book covers the importance of understanding the energy marketplace, global perspectives, and then moves into the transport of natural gas, hydrogen, and carbon dioxide. The work concludes with coverage of technology gaps, research and development, future trends, and solutions. Led by professionals with decades of experience and collecting insights from expert contributors, this book begins with the essentials of energy transport, provides detailed coverage of modes of transport, considers critical questions of energy supply and economics, and looks at long-term environmentally sensitive, sustainable options for the transport thereof.



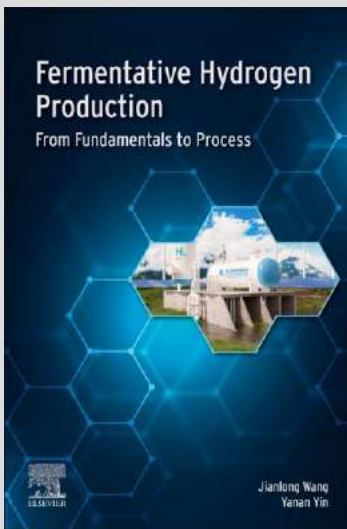
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# Fermentative Hydrogen Production

## From Fundamentals and Processes

**Yanan Yin**, Assistant researcher, Institute of Nuclear and New Energy Technology, Tsinghua University, China and **Jianlong Wang**, Faculty Member and Deputy President, Institute of Nuclear and New Energy Technology, Tsinghua University, China

**ISBN:** 9780443240126

**PUB DATE:** Aug 01, 2024

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€202.99

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 392

**AUDIENCE:** Students, researchers, and industry-based R&D engineers involved in hydrogen production, bioenergy production, or the hydrogen economy

**BIC CODES:** THX

**THEMA CLASSIFICATION:**  
THEMATHV

**Brings together the theoretical and practical aspects of dark fermentative production**

### KEY FEATURES

- Critically reviews the fundamentals and environmental impacts of biological hydrogen production technologies
- Evaluates and compares various feedstocks for biohydrogen production, including co-fermentation of different feedstocks
- Examines the use of pure and mixed cultures
- Provides case studies with real-world applications of the technologies discussed in the book

### DESCRIPTION

Fermentative Hydrogen Production: From Fundamentals and Processes is a comprehensive examination of the theoretical and operational aspects of dark fermentative production of hydrogen. The book presents the latest technological developments, analyzes advantages and challenges, and discusses the potential for the maturity of dark fermentation. Part One analyzes the various technologies for hydrogen production, purification, storage, applications, and safety. In Part Two, first to third generation feedstocks are reviewed, as well as co-fermentation and solid and liquid wastes. Part Three examines the typical hydrogen-producing microorganisms in both pure and mixed cultures, along with sequencing techniques, pretreatment considerations, and engineering options.

Part Four discusses influencing factors such as operational parameters, promoters, inhibitors, and has a dedicated section on the effects of Iron. Finally, Part Five directly compares dark hydrogen with other hydrogen production technologies through life cycle environmental impact assessments, highlighting bottlenecks and challenges in scaling up these technologies.



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COVER IMAGE  
FORTHCOMING

# Solar Chimney Power Plants

## From Theory to Practice

**Erdem Cuce**, Associate Professor, Division of Energy, Department of Mechanical Engineering, Faculty of Engineering, Recep Tayyip Erdogan University, Turkey and **Pinar Mert Cuce**, Recep Tayyip Erdogan University, Turkey

**ISBN:** 9780443248160  
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**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 279  
**AUDIENCE:** Graduate students, researchers, academics and faculty with an interest in solar chimney technology, renewable energy and energy conversion  
**BIC CODES:** THX, TH  
**THEMA CLASSIFICATION:** THEMATHV; THEMATH

**A comprehensive guide to solar chimney power plants, covering basic concepts, theoretical aspects, practical applications, and innovative technologies**

A Volume in the *Wind Energy Engineering Series*

### KEY FEATURES

- Provides extensive and comprehensive information on solar chimney power plants
- Describes the technology in terms of working principles, efficiency, and performance enhancing methods
- Presents current application examples and addresses challenges encountered

### DESCRIPTION

*Solar Chimney Power Plants: From Theory to Practice* offers detailed information in one place, covering working principles, efficiency, performance-enhancing methods, experimental and theoretical studies, current application examples, techno-economic analysis, and artificial intelligence, providing the reader with a thorough and up-to-date understanding of solar chimney power plants. The book covers basic theory and dynamics of solar chimney power plants, systematic coverage of the various parameters affecting performance, assessment by experimental studies, mathematical and theoretical models, the use of computer simulations and computation fluid dynamics, and innovative applications and hybrid approaches.

Finally, techno-economic analysis and the role of artificial intelligence are presented. This is an ideal resource for all those with an interest in solar chimney plants and energy conversion technologies, including graduate students, researchers, academics, faculty, engineers, R&D, scientists, policymakers and professionals in the renewable energy sector.



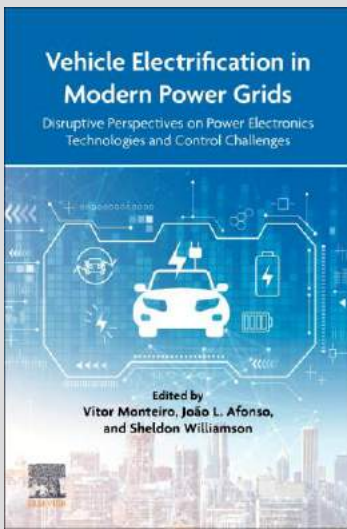
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# Vehicle Electrification in Modern Power Grids

## Disruptive Perspectives on Power Electronics Technologies and Control Challenges

Edited by : **Vitor Monteiro**, Assistant Professor, Department of Industrial Electronics, University of Minho, Portugal; **João L. Afonso**, Professor, Department of industrial Electronics, University of Minho, Portugal and **Sheldon Williamson**, Professor, Department of Electrical, Computer, and Software Engineering, Ontario Tech University, Canada

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**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 232  
**AUDIENCE:** Researchers and practitioners/professionals such as engineers and applied scientists; Graduate students in electric vehicles and power systems  
**BIC CODES:** THRM  
**THEMA CLASSIFICATION:** THEMATHY; THEMATHR

**An innovative volume providing disruptive perspectives on electric vehicle integration via innovative technologies**

### KEY FEATURES

- Reveals new, disruptive power electronics and modeling technologies to enable EV integration into the grid
- Collects guidance on mechanisms for digital control for EV charging and modes of operation, from V2G to G2H
- Provides legislation and grid codes needed by engineers working on vehicle electrification in power grids

### DESCRIPTION

*Vehicle Electrification in Modern Power Grids: Disruptive Perspectives on Power Electronics Technology and Control Challenges* collects the newest advances in technology for electric vehicle integration into one practical volume for professionals and advanced researchers. The book not only summarizes and clarifies legislation and grid codes for the area, but also outlines the modeling and analytical techniques needed, including predicting power converter reliability and its remaining useful life. Specializing in microgrid clusters, the book provides advanced power electronics device technology from wide-band-gap (WBG) to DSP-based digital control platforms and new materials for passive filters.

Blending cutting-edge research and practical technology, this book provides a centralized resource for advanced researchers and engineers looking to accelerate vehicle electrification in the power grid.



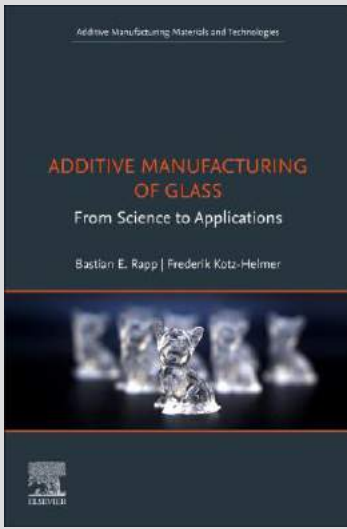
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# Additive Manufacturing of Glass

## From Science to Applications

Edited by : **Bastian E. Rapp**, Head of Group, Institute of Microstructure Technology (IMT), Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany and **Frederik Kotz-Helmer**, Laboratory of Process Technology, Department of Microsystems Engineering (IMTEK), University of Freiburg, Germany

**ISBN:** 9780323854887  
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**LIST PRICE:** £155.00 / \$200.00 / €175.00  
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**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 418  
**AUDIENCE:** Materials Scientists and Engineers, Mechanical Engineers in academia and R & D, Optical designers, architects, glass manufacturer, industrial designers, jewellery and decoration artists, artists in general  
**BIC CODES:** TGM  
**THEMA CLASSIFICATION:** THEMATGM

**This practical guide offers comprehensive insights on the use of additive manufacturing and 3D printing technologies to produce glass products**

A Volume in the *Additive Manufacturing Materials and Technologies Series*

### KEY FEATURES

- Offers comprehensive work on the use of additive manufacturing and 3D printing technologies to produce glass products
- Features content authored by experts within both academic research and industry
- Presents the basic science behind AM techniques as well as the commercialization of glass components

### DESCRIPTION

*Additive Manufacturing of Glass: From Science to Applications* presents a joint effort by the global glass 3D printing community, highlighting the current scientific, technological and application aspects of this exciting new field and its game changing potential for a wide array of industries in the coming decades. This text examines glass as the high-performance material of the 21st century—utilized in industries from high-performance computing to IT, architecture, labware and integrated optical devices for smart phones.



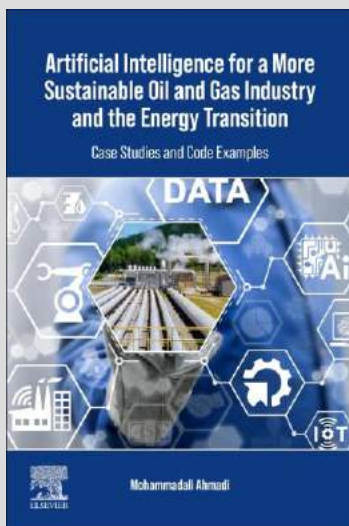
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# Artificial Intelligence for a More Sustainable Oil and Gas Industry and the Energy Transition

## Case Studies and Code Examples

**Mohammadali Ahmadi**, Vanier Scholar/Killam Laureate, Reservoir Simulation Research Group, Chemical and Petroleum Engineering Department, Schulich School of Engineering, University of Calgary, Canada

**ISBN:** 9780443240102  
**PUB DATE:** Aug 01, 2024  
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**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 418

**AUDIENCE:** Researchers, industry professionals, environmental scientists, academicians, and students in fields related to sustainable oil and gas industries and energy transition

**BIC CODES:** TQ, THX, RN, TH, THF, UYQ, TVF

**THEMA CLASSIFICATION:**

THEMATQ; THEMATVF; THEMATH;  
THEMAUYQ; THEMATHF;  
THEMATHV

**Provides practical, real-world examples of AI applications tied to sustainability and energy transition for the oil and gas industry**

### KEY FEATURES

- Reviews the use and applications of AI in energy transition of the oil and gas sectors
- Provides fundamental knowledge and academic background of artificial intelligence, including practical applications with real-world examples and coding flowcharts
- Showcases the successful implementation of AI in the industry (including geothermal energy)

### DESCRIPTION

*Artificial Intelligence for a More Sustainable Oil and Gas Industry and the Energy Transition: Case Studies and Code Examples* presents a package for academic researchers and industries working on water resources and carbon capture and storage. This book contains fundamental knowledge on artificial intelligence related to oil and gas sustainability and the industry's pivot to support the energy transition and provides practical applications through case studies and coding flowcharts, addressing gaps and questions raised by academic and industrial partners, including energy engineers, geologists, and environmental scientists. This timely publication provides fundamental and extensive information on advanced AI applications geared to support sustainability and the energy transition for the oil and gas industry.



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# Beam to Square Steel Tube Endplate Connection Using Thread-Fixed One-Side Bolts

## Analysis and Design

Peijun Wang, Professor, Shandong University, Jinan, Shandong Province, China; Yang You, Lecturer, School of Transportation and Civil Engineering, Shandong Jiaotong University, Shandong, China and Mei Liu, Civil Engineering College of Shandong University, China

ISBN: 9780443218385  
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DISCOUNT: Reference  
FORMAT: Paperback  
TRIM: 6.00w x 9.00h  
PAGES: c. 352  
AUDIENCE: Researchers, Graduates and Post Graduate Civil Engineering Students, Civil Engineering Designers  
BIC CODES: TNC  
THEMA CLASSIFICATION: THEMATNC

**Introduces design methods regarding failure modes and the design method of load carrying capacity of endplate connection using thread-fixed one-side bolts**

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

### KEY FEATURES

- Presents the first book on thread-fixed one-side bolts bolted beam to square tube column endplate connection
- Provides both experimental and theoretical analysis results on thread-fixed one-side bolts and bolted beam to square tube column endplate connections
- Covers a new method for connecting the connection with closed-section components, which is of considerable engineering importance

### DESCRIPTION

*Beam to Square Steel Tube Endplate Connection Using Thread-fixed One-side Bolts: Analysis and Design* provides research information on thread-fixed one-side bolt (TOB), which is anchored through screwed threads in the bolt hole. Although beam-column endplate connections have been studied by many researchers and been widely used in engineering applications, the standard high strength bolts are not convenient for the bolted beam to square tube column endplate connection. The one-side bolts, which can be installed and tightened from outside of the tube column, provide a solution for beam to closed section column bolted connections.

This book introduces the basic principles and design methods regarding the failure modes, and the design method of load carrying capacity of endplate connection using thread-fixed one-side bolts.



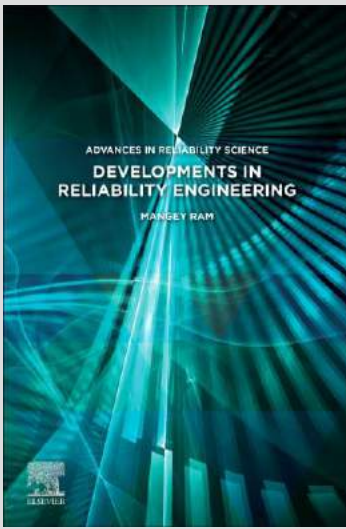
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# Developments in Reliability Engineering

Edited by : **Mangey Ram**, Department of Mathematics and Computer Science and Engineering, Research Professor, Graphic Era (Deemed to be University), Dehradun, India

**ISBN:** 9780443132421  
**PUB DATE:** Aug 01, 2024  
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**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 790

**AUDIENCE:** Academics and researchers, undergraduate and postgraduate students in the fields of mechanical engineering/mechatronics engineering/instrumentation engineering/manufacturing engineering/risk, maintenance optimization, and process safety engineering/systems, control, and product engineering/design quality and reliability engineering/industrial engineering/automation engineering/production technology/electronics/applied mathematics/robotics/computer science/actuarial science, Professional engineers and those working in industry interested in the integration of industry 4.0/5.0 technologies.

**BIC CODES:** TDP, KJMV5, KNXC, TTV, TGB, UL, KJMQ, UK

**THEMA CLASSIFICATION:**

THEMATD; THEMATGB;

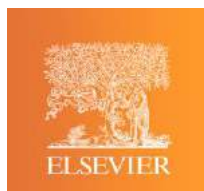
THEMAKJMV5; THEMAKJMQ;

THEMAUL; THEMAUK; THEMAKNX;

THEMAKND



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**Presents the latest original research and state-of-the-art advances in reliability engineering theories and methods**

A Volume in the *Advances in Reliability Science Series*

## KEY FEATURES

- Guides readers through reliability topics from an historical perspective to new research results, advancements, and latest developments
- Draws on the authors' experience of reliability analysis in a range of industries and disciplines, showing the need for reliability from the product design stage right through to aftercare
- Provides methods throughout, making this title a good source of actionable information

## DESCRIPTION

*Developments in Reliability Engineering* equips its audience with the necessary information to keep up with the latest original research and state-of-the-art advances in reliability engineering. The book offers an excursus from historical theories and methods to present-world, practical utility of these concepts, along with worked-out examples. Modern systems have become increasingly complex to design and build while the demand for reliability and cost-effective enhancement continues. Robust international competition has further intensified the need for all designers, managers, practitioners, scientists, and engineers to ensure a level of reliability of their products and processes before release at the lowest cost.

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# Handbook of Power Electronics in Autonomous and Electric Vehicles

Edited by Muhammad H. Rashid



# Handbook of Power Electronics in Autonomous and Electric Vehicles

Edited by : **Muhammad H. Rashid**, Professor of Electrical Engineering, Florida Polytechnic University, USA

**ISBN:** 9780323995450

**PUB DATE:** Aug 01, 2024

**LIST PRICE:** £155.00 / \$200.00 /  
€175.00

**DISCOUNT:** Reference

**FORMAT:** Hardback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 418

**AUDIENCE:** Practicing electrical engineers involved in the operation, design and analysis of electric vehicle power electronics equipment and motor drives or of power systems deployed for use in connected and autonomous vehicles, students in electrical and systems engineering, focused on power electronics, Power Engineers, Electrical Engineers, Mechanical Engineers, and Industrial Engineers, 1st year PhD students and similar early career researchers working on CASE applications in electrical and systems engineering, particularly power electronics and power processing related to vehicular applications

**BIC CODES:** PHH, KCN, RN

**THEMA CLASSIFICATION:**  
THEMAPHH; THEMAKCVG;  
THEMATQ



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**A comprehensive, technical resource and user reference on almost every modern power system within autonomous and electric vehicles**

## KEY FEATURES

- Presents core power systems and engineering applications relevant to autonomous and electric vehicles in characteristic depth and technical presentation
- Offers practical support and guidance with detailed examples and applications for laboratory vehicular test plans and automotive field experimentation
- Includes modern technical coverage of emergent fields, including sensors and radars, battery charging and monitoring, and vehicle cybersecurity

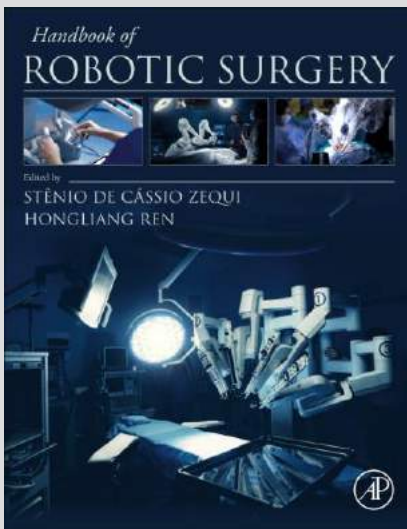
## DESCRIPTION

*Handbook of Power Electronics in Autonomous and Electric Vehicles* provides advanced knowledge on autonomous systems, electric propulsion in electric vehicles, radars and sensors for autonomous systems, and relevant aspects of energy storage and battery charging. The work is designed to provide clear technical presentation with a focus on commercial viability. It supports any and all aspects of a project requiring specialist design, analysis, installation, commissioning and maintenance services. With this book in hand, engineers will be able to execute design, analysis and evaluation of assigned projects using sound engineering principles and commercial requirements, policies, and product and program requirements.

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# Handbook of Robotic Surgery

Edited by : **Stênio de Cássio Zequi**, Chairman of the Urologic Department and Referral Center for Urological Tumors, Director, Reference Center in Urology and the Urology Center, A.C.Camargo Cancer Center, São Paulo, Brazil and **Hongliang Ren**, Assistant Professor, Biomedical Engineering Department, National University of Singapore (NUS), Singapore

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**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £170.00 / \$220.00 / €195.00

**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 8.50w x 10.875h  
**PAGES:** c. 465  
**AUDIENCE:** Biomedical Engineers, researchers in robotic engineering, surgeons and clinicians who consult with engineers in the design of surgical/medical robots  
**BIC CODES:** UYQ, TJFM1, TGB  
**THEMA CLASSIFICATION:** THEMATJFM1; THEMAUYQ; THEMATGB

**Comprehensive handbook covering all aspects of robotic surgery, as well as recent and future trends in clinical applications**

## KEY FEATURES

- Written by engineers and doctor, thus eliminating communication barriers and making it accessible for health and engineering professionals
- Provides initial literature offering a broad overview of all aspects of robotic surgery that will serve as a solid theoretical base for future developments in robotic subfields
- Analyzes cost-effectiveness of robotic surgery, discussing its use in developing countries, ethics, medical legal aspects, certification of professionals, and credentialing of robotic centers
- Contributed to by key opinion leaders from several nations and continents, taking into account different socioeconomic and cultural regional realities which can influence the widespread use of Robotic Surgery in the world

## DESCRIPTION

*Handbook of Robotic Surgery* serves as a primer covering the main areas of knowledge in robotic surgery. This comprehensive book provides essential information on all aspects related to robotic surgery, from the present up to the future. Sections range from the historical background of robotic surgery up to more recent and future technological innovations such as remote controls, surgically distant collaboration, simulators, modern surgical robotics, fluorescence guided surgery, and virtual reality. The book also contains sections dedicated to the safety conditions in surgery and patient protection, which will be suitable for surgeons, health professionals, biomedical engineering professionals, and students.



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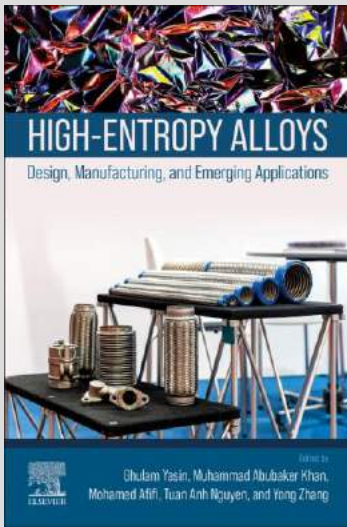


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# High-Entropy Alloys

## Design, Manufacturing, and Emerging Applications

Edited by : **Ghulam Yasin**, Researcher, School of Environment and Civil Engineering, Dongguan University of Technology, Guangdong, China; **Muhammad Abubaker Khan**, Beijing Advanced Innovation Center for Materials Genome Engineering, School of Materials Science and Engineering, University of Science and Technology Beijing, Beijing, China; **Mohamed Afifi**, Mechanical Engineering Program, School of Engineering and Applied Sciences, Nile University, Giza, Egypt; Smart Engineering Systems Research Center (SESC), Nile University, Giza, Egypt; **Tuan Anh Nguyen**, PhD, Senior Principal Research Scientist, Institute for Tropical Technology, Vietnam Academy of Science and Technology

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**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 558

**AUDIENCE:** Academic researchers, grad students, and industry professionals working with high entropy alloys across a range of disciplines and applications including aerospace, functional materials, catalyst materials, gas storage, sensing, super-conducting materials, biomedical, civil engineering, energy storage, and energy materials. Advanced undergrad students

**BIC CODES:** TGB, TG, TGM

**THEMA CLASSIFICATION:** THEMATGB; THEMATGM

**Covers the mechanics, manufacturing, and applications of functionally-oriented high-entropy alloys**

### KEY FEATURES

- Covers the mechanics, manufacturing, and applications of functionally-oriented high-entropy alloys (HEAs)
- Discusses the metallurgical composition of HEAs, their microstructural characterization, thermal stability, and how to manufacture them via powder metallurgy, additive manufacturing, and friction stir welding
- Reviews applications of HEAs such as for irradiation-resistant structural materials, in biomedical settings, as catalyst materials, for solid hydrogen storage, and more

### DESCRIPTION

*High-Entropy Alloys: Design, Manufacturing, and Emerging Applications* presents cutting-edge advances in the field of these materials, covering their mechanics, methods of manufacturing, and applications, all while emphasizing the link between their structure/microstructure and functional properties.

The book starts with a section on the fundamentals of high-entropy alloys (HEAs), with chapters discussing their thermodynamics, subgroups (transition metal; refractory; ceramics; metallic glasses and more), physical metallurgy, and microstructural characterization. The next section features chapters which look at manufacturing processes of HEAs, such as liquid metallurgy synthesis, in-situ synthesis, additive manufacturing, machine learning, friction stir welding, and fabrication of coatings for HEAs. The final section of the book covers applications of these materials, including their use as irradiation-resistant structural materials, catalyst materials, electrode materials, HEAs for solid hydrogen storage, and more. The book is a key resource for academic researchers, grad students, and industry professionals working with HEAs across a range of disciplines and applications including aerospace, functional materials, catalyst materials, gas storage, sensing, super-conducting materials, biomedical, civil engineering, energy storage, and energy materials.



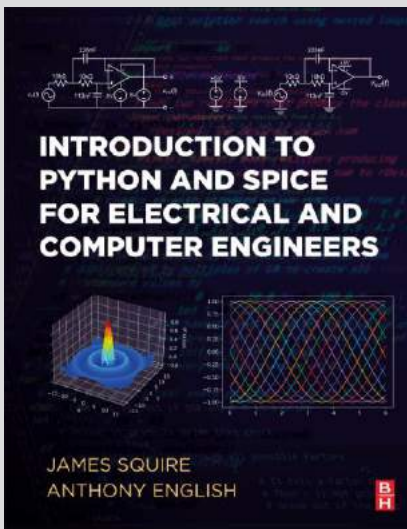
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# Introduction to Python and Spice for Electrical and Computer Engineers

James Squire, Ph.D., Department of Electrical Engineering, Virginia Military Institute, Lexington, VA, USA and Anthony English, Ph.D., Department of Biomedical Engineering, Western New England University, Springfield, MA, USA

**ISBN:** 9780443190070  
**PUB DATE:** Nov 01, 2024  
**LIST PRICE:** £68.95 / \$89.95 / €77.95  
**DISCOUNT:** Textbook  
**FORMAT:** Paperback  
**TRIM:** 7.50w x 9.25h  
**PAGES:** c. 325  
**AUDIENCE:** First and second year students taking an introductory Python course out of electrical or computer engineering  
**BIC CODES:** TB, UFL, THR  
**THEMA CLASSIFICATION:** THEMAKJT; THEMAUFL; THEMATHR

**Learn to program in Python and Spice through engaged, problem-based learning and dedicated Electrical and Computer Engineering content**

## KEY FEATURES

- Introduces Electrical and Computer Engineering-specific topics, such as phasor analysis and complex exponentials, that are not covered in generic engineering Python texts
- Pedagogically appropriate for freshmen and sophomores with little or no prior programming experience
- Teaches both scripts and functions but emphasizes the use of functions since scripts with nonscoped variables are less-commonly encountered after introductory courses
- Covers graphics before more abstract programming, supporting early student confidence
- Introduces Python commands as needed to solve progressively more complex EE/ECE-specific problems, and includes over 100 embedded, in-chapter questions to check comprehension in stages

## DESCRIPTION

*Introduction to Python and Spice for Electrical and Computer Engineers* introduces freshman and sophomore engineering students to programming in Python and Spice through engaged, problem-based learning and dedicated Electrical and Computer Engineering content. This book draws its problems and examples specifically from Electrical and Computer Engineering, covering such topics as matrix algebra, complex exponentials and plotting using examples drawn from circuit analysis, signal processing, and filter design. It teaches relevant computation techniques in the context of solving common problems in Electrical and Computer Engineering.

This book is unique among Python textbooks for its dual focus on introductory-level learning and discipline-specific content in Electrical and Computer Engineering. No other textbook on the market currently targets this audience with the same attention to discipline-specific content and engaged learning practices. Although it is primarily an introduction to programming in Python, the book also has a chapter on circuit simulation using Spice. It also includes materials helpful for ABET-accreditation, such information on professional development, ethics, and lifelong learning.



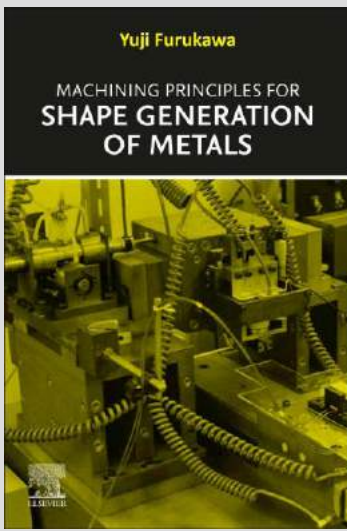
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# Machining Principles for Shape Generation of Metals

Yuji Furukawa, Professor Emeritus, Polytechnic University of Japan, Tokyo, Japan. Professor Emeritus, Tokyo University of Agriculture and Technology, Japan

**ISBN:** 9780443235382  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £190.00 / \$230.00 / €220.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 465

**AUDIENCE:** Researchers, professional engineers, machinists, and graduate students working on the development of machine tools, cutting tools, factory planning, Advanced undergraduate students

**BIC CODES:** TDM, PHF, TDP, TG, TGM, TGB

**THEMA CLASSIFICATION:**

THEMATDPM; THEMATD;

THEMATGB; THEMATGM;

THEMAPH

**Provides solutions to problems when shaping metals, with an emphasis on the application of the Laplace transformation and closed loop diagram**

## KEY FEATURES

- Provides solutions to commonly encountered problems when shaping metals
- Emphasizes application of the Laplace transformation and closed loop diagram
- Covers creation principles for planes, pseudo-cylinders, and pseudo-circular holes

## DESCRIPTION

*Machining Principles for Shape Generation of Metals* provides coverage of the fundamentals of machining technology and metal cutting before thoroughly explaining the Laplace transformation and how it can be applied to understand complex machining processes. The book provides an overview of all machining processes with an emphasis on machining with geometrically determinate cutting to produce superior components. Vibration control, turning, dynamics, thermal deformation, and numerical control principles of metal cutting are each discussed, as are the principles of cutting removal, forced vibration, and the physical properties of work and tool materials.



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# Materials and Structures in Cold Regions

## The Impact of Low Temperatures on Construction Materials and the Structural Behaviour of Structural Members

Jia-Bao Yan, Professor, Department of Civil Engineering, Tianjin University, China and Jian Xie, Professor, Department of Civil Engineering, Tianjin University, China

ISBN: 9780443219320  
PUB DATE: Aug 01, 2024  
LIST PRICE: £180.00 / \$225.00 / €215.00

DISCOUNT: Reference

FORMAT: Paperback

TRIM: 6.00w x 9.00h

PAGES: c. 516

AUDIENCE: Academic researchers studying the mechanical performance of constructional steel reinforcements, steel strands, concrete, mild steel and high strength steel at low temperatures, Structural design practitioners who are involved in the design of reinforced concrete structure, prestressed reinforced concrete structure, steel structure, and steel-concrete composite structures located in cold regions, or low-temperature related infrastructures

BIC CODES: TN

THEMA CLASSIFICATION: THEMATN

**Provides research on the influences of low temperatures on mechanical properties of constructional materials and structural behavior of structural members at low temperatures**

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

### KEY FEATURES

- Provides detailed experimental research on the influence of low temperatures on the mechanical properties of constructional materials, and structural behavior of typical structural members at low temperatures, e.g., beams, columns, and walls
- Covers fundamental development of concepts, with the practical specification of materials and structures at low temperatures
- Presents the latest research, undertaken at Tianjin University, P.R. China and the National University of Singapore, Singapore

### DESCRIPTION

*Materials and Structures in Cold Regions: The Impact of Low Temperatures on Construction Materials and the Structural Behaviour of Structural Members* is based on the latest research undertaken at Tianjin University, P.R. China and National University of Singapore. The book provides detailed experimental research on the influences of low temperatures on the mechanical properties of constructional materials and structural behavior of typical structural members at low temperatures, e.g., beams, columns, and walls. The theoretical and numerical models in the book on structural members at low temperatures simplifies and provides guidelines for structural engineers working on cold-region projects.

The book blends the fundamental development of concepts with the practical specification of materials and structures at low temperatures.



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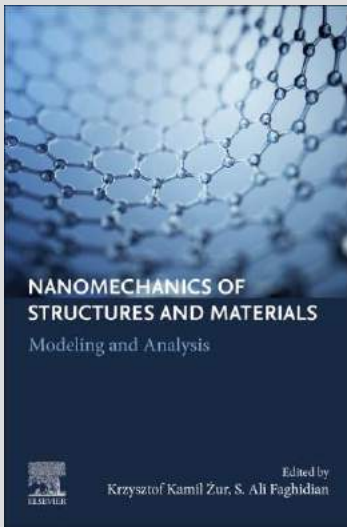


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# Nanomechanics of Structures and Materials

## Modeling and Analysis

Edited by : **Krzysztof Kamil Żur**, Researcher, Faculty of Mechanical Engineering, Bialystok University of Technology, Bialystok, Poland and **S Ali Faghidian**, Department of Mechanical Engineering, Science and Research Branch, Islamic Azad University, Tehran, Iran Science and Research Branch, Tehran, Iran

**ISBN:** 9780443219498  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £195.00 / \$240.00 / €230.00  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 381  
**AUDIENCE:** Researchers, graduate students in structural engineering and/or physical sciences Research and development managers in the working in the field of physical sciences  
**BIC CODES:** TGM, TN, MBF, UFL, TGB, TNC  
**THEMA CLASSIFICATION:** THEMATGB; THEMATGM; THEMATN; THEMAUFL; THEMAKJT; THEMATNC

**Collection and integration of pioneering researches on the size-dependent continuum theories**

### KEY FEATURES

#### Key Features

- Outlines the advantages and limitations of size-dependent continuum theories and modeling techniques when studying fundamental problems in the nanomechanics of structures and materials
- Discusses various analytical and numerical tools for identifying nanomechanical defects in structures
- Explores a diverse array of structures and materials, including graphene, shells, arches, nanobeams, carbon nanotubes, and porous materials

### DESCRIPTION

*Nanomechanics of Structures and Materials* highlights and compares the advantages and disadvantages of diverse modeling and analysis techniques across a wide spectrum of different nanostructures and nanomaterials. It focuses on the behavior of media with nanostructural features where the classic continuum theory ceases to hold and augmented continuum theories such as nonlocal theory, gradient theory of elasticity, and the surface elasticity model should be adopted. These generalized frameworks, tailored to address the intricate characteristics inherent at the nanoscale level, are discussed in depth, and their application to a variety of different materials and structures, including graphene, shells, arches, nanobeams, carbon nanotubes, porous materials, and more, is covered.



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FORTHCOMING

# Pressure Transient Analysis

## Pressure Derivative

**Djebbar Tiab**, Professor Emeritus, H-Index 26, Consultant and Senior Professor of Petroleum Engineering, University of Oklahoma

**ISBN:** 9780443264962

**PUB DATE:** Aug 01, 2024

**LIST PRICE:** £170.99 / \$210.00 / €199.99

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 930

**AUDIENCE:** Petroleum Engineering / Geosciences Students and Reservoir Engineers

**BIC CODES:** TH, TQ

**THEMA CLASSIFICATION:**

THEMATH; THEMATQ; THEMATHF

**A primer on the basic concepts of the pressure derivative in conjunction with, or before, using commercial well-test analysis software**

### KEY FEATURES

- Delivers an alternative technique to type-curve matching using the loglog analysis
- Introduces simple analytical equations used in the step-by-step procedure for analyzing pressure transient tests
- Presents common cases encountered by practicing engineers inspired by a robust literature review, boasting over 500 diverse, global sources
- Includes (75) solved simulated exercises and field cases, along with (81) unsolved problems (simulated and field cases) to reinforce learning
- Supports sustainability and the reduction of carbon emissions by addressing carbon footprints, emissions sources and decarbonizing strategies, carbon capture, storage, and CO<sub>2</sub> storage

### DESCRIPTION

*Pressure Transient Analysis: Pressure Derivative* provides focuses on applications of pressure and derivative data for interpretation of pressure transient tests, offering alternatives to costly commercial software. Building from basics, this practical text spans: wells near single and multi-boundary systems, hydraulically fractured wells, naturally fractured reservoirs, interpretation of interference and pulse tests, gas well test analysis (including sources of emissions and decarbonizing strategies, geological sequestration, CCS risks and stress on CCS), multiphase flow, injectivity and falloff tests, rate transient and multi-rate tests, partially penetrated / perforated vertical and slanted wells, and horizontal wells in conventional and unconventional reservoirs.

Many techniques and equations presented in this book can be found in the black box of commercial well-test analysis software packages – this practical text unlocks, unpacks, and makes critical, analytical tools accessible to core users.



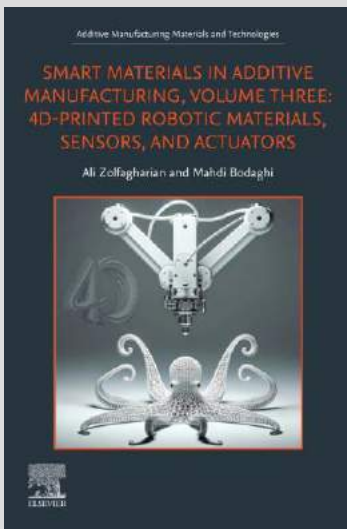
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# Smart Materials in Additive Manufacturing Volume 3

## 4D-Printed Robotic Materials, Sensors, and Actuators

Edited by : **Ali Zolfagharian**, BSc, MSc, PhD, ADPRF, GCHE, Senior Lecturer in the Faculty of Science, Engineering and Built Environment, School of Engineering at Deakin University, Australia. and **Mahdi Bodaghi**, BSc, MSc, PhD, PGCAP, FHEA, CEng, MIMechE, Senior Lecturer, Department of Engineering, School of Science and Technology, Nottingham Trent University, UK

**ISBN:** 9780443136733  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £240.00 / \$315.00 / €275.00

**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 420

**AUDIENCE:** Early-career academics, postgraduate research and engineering students, practicing engineers, material scientists  
Audiences from mechanical, polymer, electronics, and mechatronics engineering

**BIC CODES:** TDP  
**THEMA CLASSIFICATION:** THEMATD

**Covers the principles, applications, and advances in the cutting-edge field of 4D printed smart robotic materials, discussing their mechanics and manufacturing techniques**

A Volume in the *Additive Manufacturing Materials and Technologies Series*

### KEY FEATURES

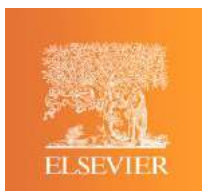
- Discusses the design, modeling, simulation, and manufacturing processes of various 4D-printed robotic materials
- Outlines modeling and control techniques to illustrate the use of smart robotic materials
- Provides case studies demonstrating real-world situations where the techniques, materials, and concepts discussed have been successfully deployed
- Covers applications including robotics, metamaterials, micromachines, sensors, bioprinting, and actuators

### DESCRIPTION

*Smart Materials in Additive Manufacturing, Volume Three: 4D-Printed Robotic Materials, Sensors, and Actuators* covers the principles, real-world use, and advances in the cutting-edge field of 4D printed smart robotic materials. It discusses the mechanics of these materials, techniques by which to manufacture them, and different applications. Detailed modeling and control techniques are outlined, illustrating their use in real-world settings. Shape memory polymers, hydrogels, shape memory alloys, biomaterials, natural fibers, dielectric elastomers, liquid crystal elastomers, electroactive polymers, and more materials are covered, featuring in-depth discussion of their responses to stimuli, fabrication, multi-physics modeling, control techniques, and applications.



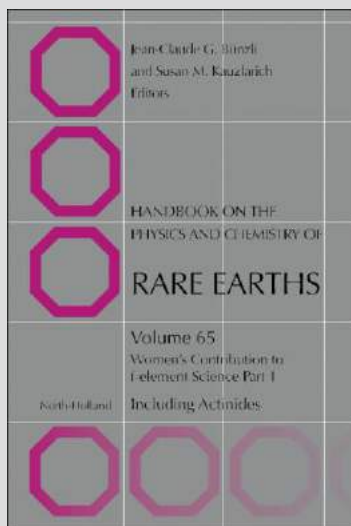
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# Women's Contribution to F-element Science, Vol 65

Jean-Claude G. Bunzli, Swiss Federal Institute of Technology Lausanne (EPFL), Switzerland and Susan M. Kauzlarich, University of California, Davis

**ISBN:** 9780443297724  
**PUB DATE:** Jun 19, 2024  
**LIST PRICE:** £261.99 / \$324.99 / €300.00  
**DISCOUNT:** Serial  
**FORMAT:** Hardback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 320  
**AUDIENCE:** Senior undergraduates, postdoctoral fellows, researchers, and faculty in science and engineering.  
**BIC CODES:** PNR, PNT  
**THEMA CLASSIFICATION:** THEMAPNR; THEMAPNT

**Presents the latest updates in the field of Women's Contributions to F-element Science**

A Volume in the *Handbook on the Physics and Chemistry of Rare Earths Series*

## KEY FEATURES

- Provides the latest information on Women's Contributions to F-element Science
- Offers outstanding and original reviews on a range of F-element Science research topics
- Serves as an indispensable reference for researchers and students

## DESCRIPTION

*Women's Contribution to F-element Science, Volume 65* in the *Handbook on the Physics and Chemistry of Rare Earths* series, highlights new advances in the field, with this new volume presenting interesting chapters on topics such as Rare-Earth Upconversion Luminescence and Its Applications: From Molecular, to Nano and Micro Scales, Control of 4f complexes luminescence and magnetism with (organic) photoswitches, Lanthanide-Based Responsive MRI Probes, Luminescent solar concentrators: current and future applications in smart cities, Lanthanide Chalcogenide Precursors: from luminescence to nanoparticle synthesis, Helical coordination complexes of rare earths and their luminescent properties, and much more.

Other chapters cover Environmental and molecular facets of uranyl(V) and uranium(V) chemistry, Uranium dendrites in molten salt electrorefining, Impact of synthesis routes on the optical performance of upconverting and NIR emitting lanthanide-doped nanoparticles, Lanthanide complexes for luminescence, therapy, and sensing, Versatile core/shell luminescent nanoparticles for biophotonic studies, and 4f-Metal ions in single molecule magnet systems.



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# Solid Waste Management for Resource-Efficient Systems

## Circularity in Action

Edited by : **Richa Singh**, Deputy Programme Manager, Municipal Solid Waste Division, Centre for Science and Environment, New Delhi, India; **Sanjeeb Mohapatra**, NUS Environmental Research Institute, National University of Singapore, Singapore and **Mui-Choo Jong**, Assistant Professor, Institute of Environment and Ecology, Tsinghua Shenzhen International Graduate School, Tsinghua University, Shenzhen, China

**ISBN:** 9780443237751  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £121.00 / \$150.00 / €142.00  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 191 x 235  
**PAGES:** c. 418  
**AUDIENCE:** Academicians, researchers, and professionals interested in waste, waste management, environmental studies, and environmental engineering, environment impact assessment and resource recovery, Policymakers  
**BIC CODES:** RN, TH, TQSR  
**THEMA CLASSIFICATION:** THEMATQ; THEMATH; THEMARNH; THEMATQSR

**Provides a circular economy perspective to solid waste management based on the principles of resource recovery**

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

### KEY FEATURES

- Provides insights for effective management practices with solid waste using case studies on sustainable waste management
- Covers not only the scientific and technical aspects but also environmental, legal and policy aspects of solid waste management with a particular focus on recycling potential for various gainful applications
- Contributes a platform for scientists and environmental researchers and planners to discuss environmental degradation and methodological approaches to sustainable management of recycled products

### DESCRIPTION

*Solid Waste Management for Resource-Efficient Systems: Circularity in Action* promotes innovation and shares best practices based on the principles of the circular economy and resource conservation on different aspects of sustainable solid waste management. The book also explains sources, impacts, and recycling potential of emerging wastes. It presents management strategies, including emerging green infrastructure and digitalization for recycling and gainful application of waste. In addition, sections highlight various environmental and health hazards while providing different management strategies based on the principle of resource recovery and circular economy that can help to minimize the environmental impacts.



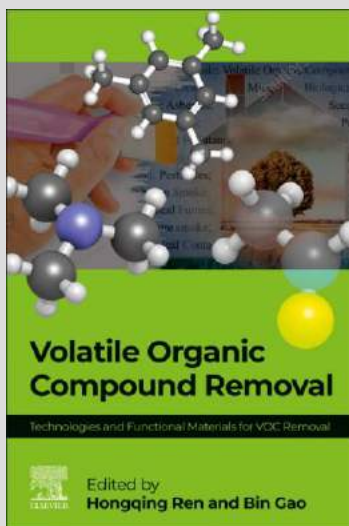
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# Volatile Organic Compound Removal

## Technologies and Functional Materials for VOC Removal

Edited by : **Hongqing Ren**, Nanjing University, China and **Bin Gao**, Kodak Chair Professor in the Department of Civil and Environmental Engineering at Rensselaer Polytechnic Institute

**ISBN:** 9780443156748  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £115.00 / \$150.00 / €130.00  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 298  
**AUDIENCE:** Students, educators, researchers, engineers, and other professionals in the fields of environmental science, environmental engineering, atmospheric science and air pollution control.  
**BIC CODES:** RN, TQK  
**THEMA CLASSIFICATION:** THEMAPANC; THEMATQK

**Comprehensively details the applications of various technologies and advanced functional materials in volatile organic compound abatement**

### KEY FEATURES

- Details both the technologies and the functional materials possible for use in VOC remediation
- Covers both sustainability-related issues and nanotechnology applications for VOC removal
- Includes detailed case studies in appropriate chapters

### DESCRIPTION

*Volatile Organic Compound Removal: Technologies and Functional Materials for VOC Removal* details technologies and materials for the removal of volatile organic compounds (VOCs) from polluted air, covering not only the fundamental mechanisms, processes, and designs of the latest VOC abatement technologies, but also the characteristics and applications of advanced functional materials for VOC removal. The first half of the book centers on VOC abatement technologies including adsorption, catalytic degradation, membrane separation, thermal oxidation, absorption, and condensation.

The second half focuses on the applications of functional materials especially novel nanomaterials in VOC removal. This book is unique in covering both the fundamental mechanisms and practical applications of VOC abatement technologies and focuses on the preparation, characterization, and application of novel functional materials for VOC removal.

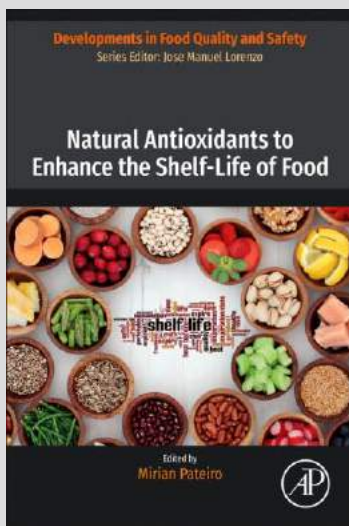


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# Natural Antioxidants to Enhance the Shelf-Life of Food

Edited by : **Mirian Pateiro**, Researcher, Centro Tecnológico de la Carne de Galicia, Ourense, Spain

**ISBN:** 9780443153860  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £121.00 / \$150.00 / €142.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 305

**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 it is not limited to), Microbiology, Chemistry, Physics, Biology, Engineering, and Consumer Science. Undergraduate, master, PhD and post-doctoral students as well as professionals, technicians, staff members and researchers in related areas with interest in develop professional, research, and lecturing activities related to Food Science and Technology and related knowledge presented in this Book

**BIC CODES:** MMFM, TDCT

**THEMA CLASSIFICATION:** THEMAMKFM; THEMATDCT

**Provides comprehensive knowledge about the recent methods of evaluation of antioxidant activity in food**

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

## KEY FEATURES

- Provides latest information on the use of natural antioxidants to enhance the food shelf-life
- Covers a wide variety of sources and compounds that naturally exert antioxidant activity
- Thoroughly explains the natural compounds' application in foods or their incorporation into packaging

## DESCRIPTION

*Natural Antioxidants to Enhance the Shelf-Life of Food, Volume Two* in the *Developments in Food Quality and Safety* series is the most up-to-date resource covering trending topics such as the analysis of toxic compounds and control of food poisoning, food fraud, traceability and authenticity, revalorization of agrifood industry, and natural antimicrobial compounds and their applications to improve the preservation of food, non-thermal processing technologies, nanotechnology in food production, and intelligent packaging and sensors for food applications. The book focuses on recent advances and strategies to use these compounds in the preservation of food.

Chapters explore advances in antioxidant activity analysis, electrochemical methods, food oxidative stability, and natural antioxidants from agro-industrial by-products. Natural antioxidants from marine sources and innovations in antioxidants films and coatings are also covered. 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.



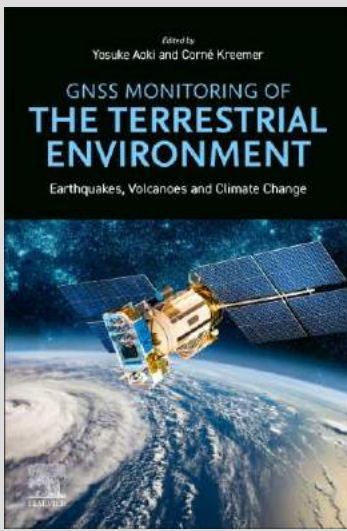
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# GNSS Monitoring of the Terrestrial Environment

## Earthquakes, Volcanoes, and Climate Change

Edited by : **Yosuke Aoki**, Faculty Position, Earthquake Research Institute, The University of Tokyo, Japan and **Corné Kreemer**, Academic Member, Nevada Geodetic Laboratory, Nevada Bureau of Mines and Geology, University of Nevada, Reno, USA

**ISBN:** 9780323955072

**PUB DATE:** Aug 01, 2024

**LIST PRICE:** £123.00 / \$160.00 / €139.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 270

**AUDIENCE:** Faculty at universities and research scientists at governmental institutions, private sectors of the related research field will find this book useful in updating the current knowledge and organizing teaching materials, Postdocs and graduate students will find this book useful in learning conventional and unconventional applications of GNSS Department of Geological Sciences, Civil Engineering, or Electrical Engineering of Universities  
**BIC CODES:** RGW  
**THEMA CLASSIFICATION:** THEMARGW

**Summarizes the current state-of-the-art of GNSS technology to monitor and understand natural hazards on the Earth**

### KEY FEATURES

- Provides a detailed focus on the utility of GNSS technologies for dealing with natural hazards
- Details theory and applications of GNSS to natural hazards, allowing readers to develop a thorough understanding on the theoretical background as well as practical applications
- Covers the latest developments in the field, along with future perspectives as GNSS technologies are expected to evolve

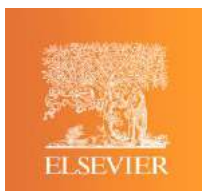
### DESCRIPTION

*GNSS Monitoring of the Terrestrial Environment: Earthquakes, Volcanoes, and Climate Change* presents the application of GNSS technologies to natural hazards on Earth. The book details the background theory of the GNSS techniques discussed and takes the reader through applications and implementation. Tables comparing GNSS with other geodetic techniques, such as SAR, VLBI, SLR, and conventional geodetic methods such as strainmeters, tiltmeters, and leveling surveys are also included. The book concludes with a chapter bridging both parts, discussing the relationship between earthquakes, volcanism, and climate change.

The book is aimed at academics, researchers, and advanced students working in the fields of remote sensing technologies or natural hazards. It is divided into two parts, with the first covering the monitoring of earthquakes, volcanoes, and applications of GNSS signals to better understand earthquakes and volcanism, while the second part covers monitoring climate change with GNSS.



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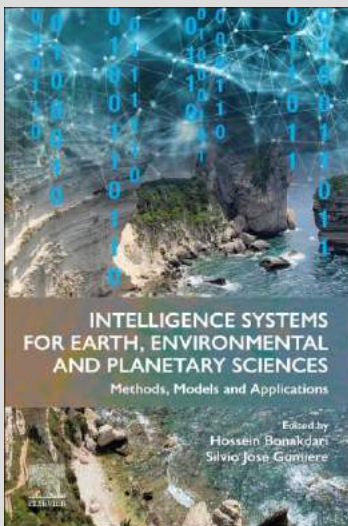


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# Intelligence Systems for Earth, Environmental and Planetary Sciences

## Methods, Models and Applications

Edited by : **Hossein Bonakdari**, Associate Professor, Department of Civil Engineering, Faculty of Engineering, University of Ottawa, Ottawa, Ontario, Canada and **Silvio José Gumiere**, Ph.D., Department of Soil Sciences, Laval University, Quebec City, Canada

**ISBN:** 9780443132933  
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**LIST PRICE:** £126.00 / \$165.00 / €143.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 270

**AUDIENCE:** Graduate students and post-graduate professionals in the field of applied sciences, earth, environmental and planetary sciences

**BIC CODES:** RB, UFL

**THEMA CLASSIFICATION:**

THEMAKJT; THEMAUFL; THEMARB

### A practical guide to implementing machine learning and neural networks in Earth and Environmental sciences

#### KEY FEATURES

- Facilitates the application of artificial intelligence and data science systems to create comprehensive methodologies for analyzing, processing, predicting and management strategies in the fields of Earth, environment, and planetary science
- Developed with an interdisciplinary framework, with an aim to promote artificial intelligence models for real-time Earth systems
- Includes a section on case studies of artificial intelligence and data science solutions to Earth, environmental, and planetary sciences problems, as well as future perspectives

#### DESCRIPTION

*Intelligence Systems for Earth, Environmental and Planetary Sciences: Methods, Models and Applications* provides cutting-edge theory and applications of modern-day artificial intelligence and data science in the Earth, environment, and planetary science fields. The book is divided into three parts: Methods, covering the fundamentals of intelligence systems, along with an introduction to the preparation of datasets. Models, covering model development, data assimilation, and techniques in each field. Applications, presenting case studies of artificial intelligence and data science solutions to Earth, environmental and planetary sciences problems, as well as future perspectives.

This book will be of interest to students, academics and post-graduate professionals in the field of applied sciences, earth, environmental, and planetary sciences, and would also serve as an excellent companion resource to courses studying artificial intelligence applications for theoretical and practical studies in Earth, environmental, and planetary sciences.



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COVER IMAGE  
FORTHCOMING

# Remote Sensing and GIS in Peri-Urban Research, Vol 11

Perspectives on Global Change, Sustainability and Resilience

Edited by : **Meheub Sahana**, The University of Manchester, Manchester, UK

**ISBN:** 9780443158322  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £115.00 / \$150.00 / €130.00  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 321  
**AUDIENCE:** Researchers and academics in the fields of remote sensing, GIS and spatial analysis, urban geography, urban studies and environmental sciences  
**BIC CODES:** RGV, RGW  
**THEMA CLASSIFICATION:** THEMARGV; THEMARGW

**Details mapping, remote sensing, and GIS applications to monitoring and modelling peri-urban areas across the world**

A Volume in the *Modern Cartography Series* Series

## KEY FEATURES

- Outlines applications of geospatial technologies for visualization of land use dynamics including spatial information about population distributions, built-up areas and degree of urbanization based on global and local datasets
- Provides methodology for identification of peri-urban interfaces using techniques to identify peri-urban space and dynamics using remote sensing and GIS techniques
- Includes worldwide case studies by experts from different countries increasing the understanding of the nature of global peri-urbanization and growth

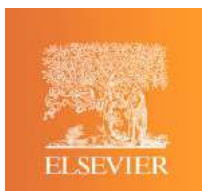
## DESCRIPTION

*Remote Sensing and GIS in Peri-Urban Research: Perspectives on Global Change, Sustainability and Resilience, Eleventh Edition* provides the most recent methods and techniques, incorporating geoinformatics-based practices to map, evaluate, and model urban landscape attributes and changes. The book provides theory, methodology, and future perspectives of remote sensing and GIS techniques applied to peri-urban modelling, analysis and sustainability through the use of spatio-temporal geospatial datasets. It also includes case studies of real-world data sets, with applicable algorithms, techniques and methods for study.

This will be a useful reference for researchers and academics in remote sensing, GIS, and spatial analysis, and environmental or urban scientists wanting to implement remote sensing technologies in their research.



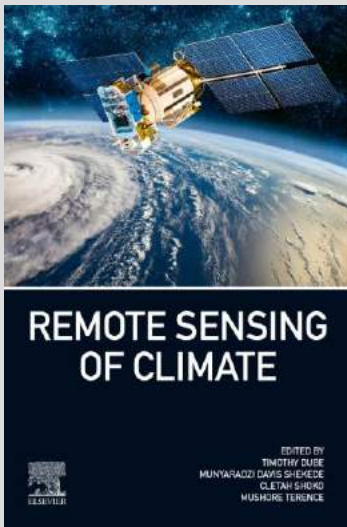
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# Remote Sensing of Climate

Edited by : **Timothy Dube**, Department of Earth Sciences, University of the Western Cape, Cape Town, South Africa; **Munyaradzi Davis Shekede**, Department of Geography Geospatial Sciences and Earth Observation, University of Zimbabwe, Harare, Zimbabwe; **Cletah Shoko**, Division of Geography School of Geography, Archaeology and Environmental Studies, University of Witwatersrand, Johannesburg, South Africa and **Terence Mushore**, Physics Department, Faculty of Science, University of Zimbabwe, Harare, Zimbabwe

**ISBN:** 9780443217319  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £115.00 / \$150.00 / €130.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 251

**AUDIENCE:** Researchers, technicians, professors and advanced postgraduate students working in the fields of remote sensing, GIScience, climate change, environmental science, geography and spatial planning

**BIC CODES:** RGW

**THEMA CLASSIFICATION:** THEMARGW

**Provides applications of remote sensing to measuring and modeling climate variability, including basic methodology and case study examples**

## KEY FEATURES

- Discusses advancements and future research directions in remote sensing for climate variability in a variety of environments
- Includes simplified and condensed methodologies and data analytics
- Provides case studies on remote sensing of climate variability, both of the Northern hemisphere temperate systems which are little affected by climate variability, and the greater-impacted global south

## DESCRIPTION

*Remote Sensing of Climate* provides cutting-edge techniques in remote sensing of climate variability and the environment. The book focuses on methods and data analytics, advancements in scientific research in the field, and further proffers recommendations on the possible knowledge gaps and future scientific research directions. It covers eight key themes of remote sensing and climate variability, including discussions on how the various aspects from each chapter of the themes interrelate. It also integrates several divergent perspectives on remote sensing and climate variability and the environment to show the interrelationships between the perspectives.

This is an important reference for those in education and research working on remote sensing and climate science who need methods, data analytics, case studies, research strides, and key knowledge gaps in the field.



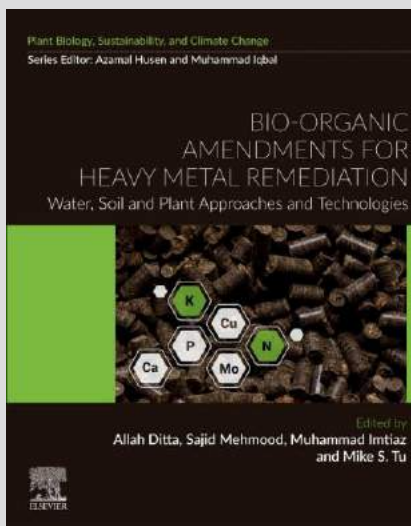
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# Bio-organic Amendments for Heavy Metal Remediation

## Water, Soil and Plant Approaches and Technologies

Edited by : **Allah Ditta**, Assistant Professor, Department of Environmental Sciences, Shaheed Benazir Bhutto University Sheringal, Karachi, Pakistan; **Sajid Mehmood**, Key Laboratory, Agro-Forestry Environmental Processes and Ecological Regulation, Hainan Province, Hainan University, Haikou, China; **Muhammad Imtiaz**, Senior Scientist, Soil and Environmental Biotechnology Division, National Institute for Biotechnology and Genetic Engineering, Faisalabad, Pakistan and **Mike S Tu**, Professor, Department of Environmental Sciences and Engineering

**ISBN:** 9780443216107  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £195.00 / \$250.00 / €220.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 549

**AUDIENCE:** Researchers and academicians performing research on remediation of heavy metals in water and soil-plant continuum using biological, and organic sources, Advanced students in environmental sciences, plant science, soil science, botany, plant biochemistry, biotechnology, public health, and other interdisciplinary subjects, Researchers involved in agriculture-related industries such as chemicals and fertilizers.

**BIC CODES:** RBGB, TVK, PSAF, PSTS, PST

**THEMA CLASSIFICATION:** THEMARBGB; THEMATVB; THEMATVK; THEMAMPST; THEMAPSFAF

**Presents the intrinsically linked mediums of plant, soil, and water for optimized insights and translational advancements**

A Volume in the *Plant Biology, sustainability and climate change Series*

### KEY FEATURES

- Highlights remediation techniques/approaches for heavy metals under water, soil and plant continuums
- Presents case-studies for real-world insights as well as current practices
- Includes regulatory aspects for ensuring safe implementation

### DESCRIPTION

*Bio-organic Amendments for Heavy Metal Remediation: Water, Soil and Plant Approaches and Technologies* focuses on these core continuum media to explore remediation options using microbial, organic, and combined approaches. This volume in the Plant Biology, Sustainability and Climate Change series offers a comprehensive view of techniques and approaches for addressing contamination by heavy metals. It provides a comprehensive view of the challenge, with a focus on the bioremediation of heavy metals contamination using ecotechnological approaches for protecting the soil, water, and plant continuum.

As anthropogenic activities increasingly negatively impact natural resources, there has been significant disturbance of the water, soil, and plant continuum due to the accumulation of heavy metals. The bioaccumulation of heavy metals in the food chain could pose life-threatening effects on plants as well as humans, and there is need to find effective and sustainable remediation options. The application of bio-organic amendments could serve as a sustainable solution to this problem.



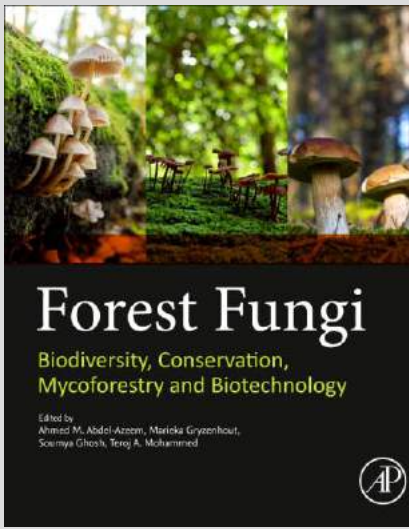
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# Forest Fungi

## Biodiversity, Conservation, Mycoforestry and Biotechnology

Edited by : **Ahmed M. Abdel Azeem**, Professor, Department of Botany and Microbiology, Faculty of Science, Suez Canal University, Ismailia, Egypt; **Mariëka Gryzenhout**, Department of Genetics, Faculty of Natural and Agricultural Sciences, University of the Free State, Bloemfontein, South Africa; **Soumya Ghosh**, Natural and Medical Sciences Research Center, University of Nizwa, Birkat Al Mouz, Nizwa, Sultanate of Oman, Post Box 33, PC 616 and **Teroj A. Mohammed**, Microbiologist, Basic Science Department, College of Dentistry, University of Duhok, Iraq

**ISBN:** 9780443188701  
**PUB DATE:** Sep 01, 2024  
**LIST PRICE:** £155.00 / \$200.00 / €175.00  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 7.50w x 9.25h  
**PAGES:** c. 511  
**AUDIENCE:** Academics and professionals in forest ecology, mycology and microbiology, resource management, remediation and biotechnology  
**BIC CODES:** KNAL  
**THEMA CLASSIFICATION:** THEMATVR

**Explores the importance and potential impact of forest fungal research as a sustainable resource for multiple purposes**

### KEY FEATURES

- Focuses on the biodiversity of forest fungi and their potential biotechnological application for sustainable development
- Includes high quality illustrations and figures for enhanced ease of understanding the process mechanism

### DESCRIPTION

*Forest Fungi: Biodiversity, Conservation, Mycoforestry and Biotechnology* explores sustainable option aspects of forest fungal research, from the selection of hosting plants, isolation, identification, fermentation, identification of secondary metabolites, omics-tools for better understanding the plant–fungus Interactions. Forests are the world's greatest repository of terrestrial biomass, soil carbon and biodiversity. They provide a variety of provisioning, supporting, regulatory and cultural ecosystem services, which are crucial for the survival of human beings. Fungi play key roles in forest ecosystems as mutualists, saprobes and pathogens.



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COVER IMAGE  
FORTHCOMING

# Recent Trends in Estuarine and Coastal Dynamics

## Observations and Modelling

Edited by : **Xiao Hua Wang**, PhD, Co-leader, The Sino-Australian Research Consortium for Coastal Management, School of Science, UNSW Canberra, Australia and **Lulu Qiao**, Department of Marine Geosciences, Ocean University of China, P.R.China

**ISBN:** 9780443217289  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £103.00 / \$135.00 / €117.00  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 400  
**AUDIENCE:** Students and researchers in the fields of Physical oceanography, ocean modelling, coastal management. Secondary audiences work in the area researchers of Coastal geomorphology, coastal engineering, coastal management  
**BIC CODES:** RNC  
**THEMA CLASSIFICATION:** THEMPSAF

**A comprehensive volume on recent trends in observation and modelling of estuarine and coastal dynamics**

A Volume in the *Estuarine and Coastal Sciences Series*

### KEY FEATURES

- Includes worldwide contributions from experts in the field of ocean modelling and coastal management
- Contains real-life case studies to guide students and researchers
- Covers the latest studies on recent developments in observing and modelling estuaries and coastal oceans

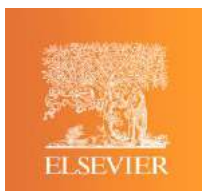
### DESCRIPTION

*Recent Trends in Estuarine and Coastal Dynamics: Observations and Modelling* is a thorough reference guide on the most recent trends and developments in observing and modelling of estuaries and coastal oceans. The coasts cover a diverse range of ecosystems within marine, estuarine, and freshwater environments. They are some of the most heavily populated and visited areas and are also some of the most threatened natural habitats. Human activities like sewage discharge, overfishing, navigation channel dredging, land reclamation, the construction of shipping ports and marine plastics are also responsible for coastal pollution and degradation.

This book focuses on current studies on sediment transport dynamics and hydrodynamics of these environments and presents thorough case studies that aim to help students and researchers working in the field.



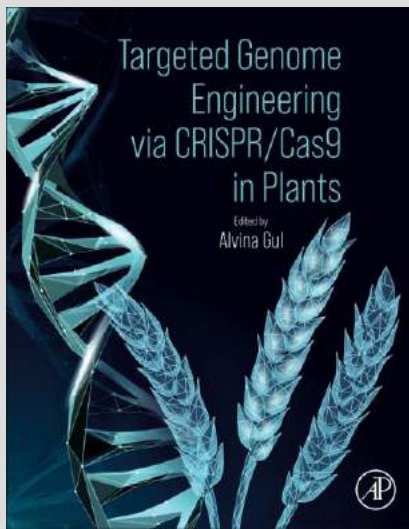
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# Targeted Genome Engineering via CRISPR/Cas9 in Plants

Edited by : **Alvina Gul**, Ph.D., Associate Professor, National University of Sciences and Technology (NUST), Islamabad, Pakistan

**ISBN:** 9780443266140  
**PUB DATE:** Aug 04, 2024  
**LIST PRICE:** £141.99 / \$175.00 / €163.99

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 437

**AUDIENCE:** Advanced students and scientists working in the fields of genome engineering, metabolic engineering, biomedical engineering, synthetic biology, and systems biology. Universities focusing on CRISPR/Cas9-mediated targeted mutagenesis. Also, beginners and undergraduate students interested in harnessing the potential of CRISPR/Cas9 gene-editing strategy

**BIC CODES:** PSAK1

**THEMA CLASSIFICATION:**  
THEMAPSAK

**A comprehensive resource covering the use of “CRISPR/Cas9” technology for precise plant genome editing**

## KEY FEATURES

- Explains basic mechanism and implementation of CRISPR/Cas9 technology in a wide range of plants.
- Provides practical guidance on the applications of CRISPR/Cas9 in different scientific disciplines of plant science.
- Discusses the risks and challenges of genome engineering.

## DESCRIPTION

*Targeted Genome Engineering via CRISPR/Cas9 in Plants* provides in-depth insights into the use of the emerging “CRISPR/Cas9” technology for precise genome editing. This technology has revolutionized plant science research particularly for crop improvement owing to its simplicity and efficiency. The book provides a wide range of CRISPR/Cas9 gene editing techniques for a variety of plants. Chapters include the latest applications of CRISPR/Cas9 system in connection with abiotic stresses, biotic stresses, biofortification, yield improvement, disease modelling and prognosis and molecular diagnosis. *Targeted Genome Engineering via CRISPR/Cas9 in Plants* also evaluates various regulatory and ethical aspects that must be considered when implementing the CRISPR/Cas9 approach.

This book is a valuable resource for professionals and researchers, as it provides effective CRISPR/Cas9-based strategies for sustainable agriculture and treatment of various diseases.



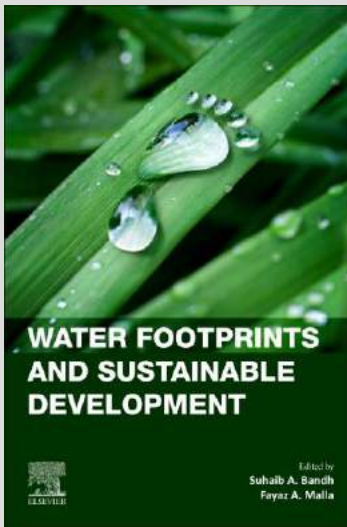
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# Water Footprints and Sustainable Development, Vol 8

Edited by : **Suhaib A. Bandh**, Assistant Professor Environmental Science, Higher Education Department, Government of Jammu and Kashmir, Srinagar, India and **Fayaz A. Malla**, Assistant Professor, Department of Environmental Science, Govt. Degree College Tral, Jammu and Kashmir, India

**ISBN:** 9780443236310  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £109.00 / \$135.00 / €128.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 288

**AUDIENCE:** Postgraduates, academics, and researchers in the field of environmental science, disaster management, and other related fields. Researchers working in the field of water resources, water footprints and Sustainable Environment throughout the world, plus the people working in policy planning for the energy sector

**BIC CODES:** RN, TQSW

**THEMA CLASSIFICATION:**

THEMATQ; THEMATQSW

**Water Footprints and Sustainable Development is a necessary guide to understanding water footprints thoroughly and introducing the reader to the latest techniques needed for a sustainable development**

A Volume in the *Current Directions in Water Scarcity Research Series*

## KEY FEATURES

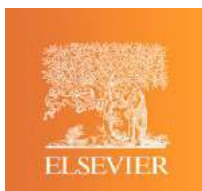
- Provides detailed coverage of the role of Water, Energy and Food Nexus with respect to sustainability
- Covers methods such as lifecycle assessment, sustainability assessment, multi-criteria decision-making, and multi-objective optimization modes
- Includes key techniques for water resources management and sustainable development

## DESCRIPTION

Water Footprints and Sustainable Development serves as the sole comprehensive volume of the role of waste management for sustainable development. It provides an overview of Global Scenario of water footprints in water smart cities and technologies and investigates the critical factors that enable the sustainable developments of various industries in respect to water resources management. The goal of this book is to introduce the reader to the current technologies used for reducing water footprints, and to offer the necessary information and tools for sustainable development.



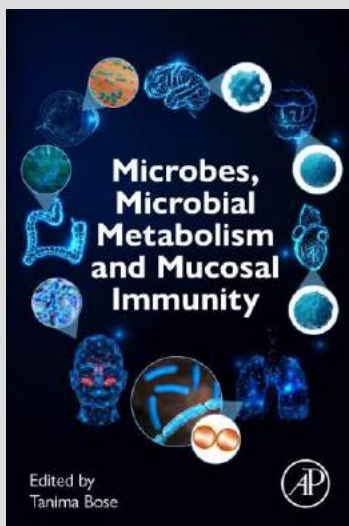
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# Microbes, Microbial Metabolism and Mucosal Immunity

## An Overview

Edited by : **Tanima Bose**, Institute for Stroke and Dementia (ISD), University of Munich, Germany

**ISBN:** 9780323901444  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £134.00 / \$175.00 / €155.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 214

**AUDIENCE:** Researchers, graduate students, and medical practitioners with an interest in microbes and immunity, including neurologists, infection specialists, rheumatologists, and immunologists, dieticians and medical doctors

**BIC CODES:** MJCM

**THEMA CLASSIFICATION:** THEMAMJCM

**A concise account of the study of microbiome and microbial metabolites based on the latest research**

### KEY FEATURES

- Offers a concise solution for the study of microbiome, microbial metabolism, and mucosal immunology
- Presents contemporary studies that incorporate the latest research methods
- Gives a broad and systematic accounting of most mucosal systems and diseases
- Looks at the functional aspects of changes to the microbiome as well as specific changes to microbiota
- Affords entry-level and advanced readers with the theory and knowledge needed for further research

### DESCRIPTION

*Microbes, Microbial Metabolism and Mucosal Immunity: An Overview* presents a concise and well-vetted treatise on the study of microbiome and microbial metabolites. This volume is up-to-date with the most recent developments from the last decade. It encompasses the interaction of immunity and microbes — and their metabolites — from different mucosal organs including eye, skin, gastrointestinal system, lung, intestine, and cervix. Along with the efficiency of the immune system in inhibiting the growth and proliferation of microbes, the volume discusses how the mediators of the immune system can be targeted to develop therapies.

This book presents the latest methods, gives broad and systematic coverage of most mucosal systems and diseases, and takes a fresh perspective that looks at the functional aspects of change in the microbiome. The study of microbiome and microbial metabolites and their roles in host mucosal immunology is a rapidly developing area of research. One major way in which the microbiome influences the host is through altered metabolism. Metabolites, readily available to the host, engender significant consequences. Microbial metabolites have been shown to impact the disease processes in both proximal and distal organs, including the brain in several neurocognitive disorders.



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COVER IMAGE  
FORTHCOMING

# The Immunology of the Cat

Ian R Tizard, BVMS, PhD, DSc (H), ACVM (H), Texas A & M University, College Station, Texas, USA

**ISBN:** 9780443291784

**PUB DATE:** Aug 01, 2024

**LIST PRICE:** £121.99 / \$150.00 / €140.99

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 434

**AUDIENCE:** Veterinary clinical researchers, with obvious application to small-animal veterinarians, especially feline specialists

**BIC CODES:** MJCM

**THEMA CLASSIFICATION:** THEMAMJCM

**An all-inclusive review of the feline immune system**

## KEY FEATURES

- Introduces the first comprehensive review of feline immunology
- Links recent basic science to important clinical issues
- Provides detailed and current information in one resource

## DESCRIPTION

*The Immunology of the Cat* makes available the first single-source, comprehensive review of the feline immune system, reporting on all immunologic aspects of diseases of the cat and its relatives and relating recent basic science to important clinical issues. The book opens with the evolution, domestication, and development of the cat then provides detailed information on immunity to infectious diseases, feline allergic diseases, the top feline autoimmune diseases, and feline immunodeficiencies. Content examines feline vaccines, hypersensitivity, cancer, nutrition, and the aged cat. Professionals in veterinary research and practice will appreciate complete information on all aspects of feline immunology in one essential resource.



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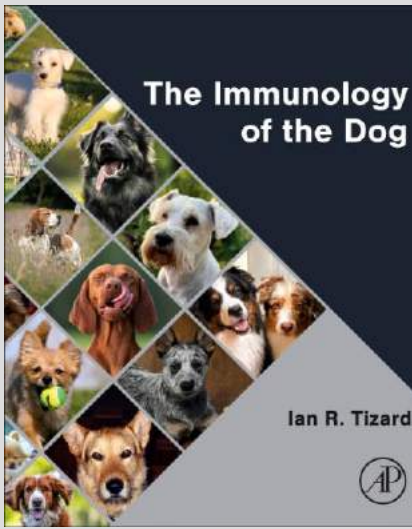


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# The Immunology of the Dog

Ian R Tizard, BVMS, PhD, DSc (H), ACVM (H), Texas A & M University, College Station, Texas, USA

**ISBN:** 9780443236815  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £142.00 / \$175.00 / €170.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 442

**AUDIENCE:** Veterinary clinical researchers, with obvious application to small-animal veterinarians, especially canine specialists. Comparative biologists, mammalian biologists, veterinary students, and academics. Perhaps even interested pet owners

**BIC CODES:** MJCM

**THEMA CLASSIFICATION:** THEMAMJCM

**A comprehensive review of the immune systems of dogs**

## KEY FEATURES

- Introduces the first comprehensive review of canine immunology
- Links recent basic science to important clinical issues
- Provides detailed and current information in one resource

## DESCRIPTION

*The Immunology of the Dog* is the first readily available, single-source, comprehensive review of the canine immune system. It covers all immunologic aspects of diseases of the dog and relates recent basic science to important clinical issues.

The book sets the foundation with the evolution and domestication of the dog then provides detailed information on immunity to infectious diseases, canine allergic diseases, the top canine autoimmune diseases, and canine immunodeficiencies. This book offers professionals in veterinary research and practice complete information on all aspects of canine immunology in one essential resource.



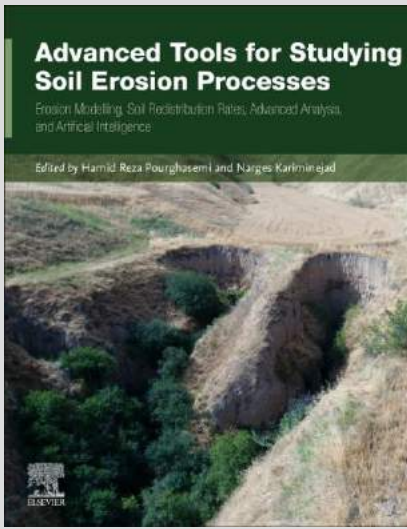
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# Advanced Tools for Studying Soil Erosion Processes

## Erosion Modelling, Soil Redistribution Rates, Advanced Analysis, and Artificial Intelligence

Edited by : **Hamid Reza Pourghasemi**, Professor, Department of Natural Resources and Environment Engineering, College of Agriculture, Shiraz University, Shiraz, Iran and **Narges Kariminejad**, PhD Researcher, Department of Natural Resources and Environment Engineering, College of Agriculture, Shiraz University, Shiraz, Iran

**ISBN:** 9780443222627  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £142.00 / \$175.00 / €170.00

**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 191 x 235  
**PAGES:** c. 604  
**AUDIENCE:** Researchers, academicians, graduate and undergraduate students, and professionals in the field of geology, specifically focused on geographic information systems and remote sensing  
**BIC CODES:** RN, RBG, RNR, JFFC  
**THEMA CLASSIFICATION:** THEMATQ; THEMARBG; THEMARNR; THEMAJBFF

**Presents recent technological improvements and knowledge on quantitative geomorphological assessment using geographic information systems, remote sensing, and machine learning**

### KEY FEATURES

- Provides an overview of soil erosion and its interaction with natural hazards (i.e., geological, hydrological, meteorological, and biological)
- Introduces advanced tools and technologies in soil erosion management
- Presents future soil erosion opportunities and challenges

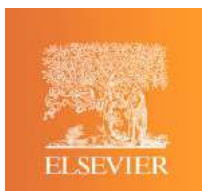
### DESCRIPTION

*Advanced Tools for Studying Soil Erosion Processes: Erosion Modelling, Soil Redistribution Rates, Advanced Analysis, and Artificial Intelligence* presents the most recent technologies and methods in quantifying soil erosion, focusing on quantitative geomorphological assessment, soil erosion interaction with natural and man-made hazards using new methods, and technologies that employ GIS, remote sensing (RS), spatial modeling, and machine learning tools as an effective plan for decision-makers and land users.

Organized into three parts: 1) Erosion processes and impacts, 2) Advanced computing techniques to quantify soil erosion, and 3) Methods of Soil Erosion, this book will be an invaluable source material for researchers, academicians, graduate and undergraduate students, and professionals in the field of geology, specifically focused on geographic information systems and remote sensing.



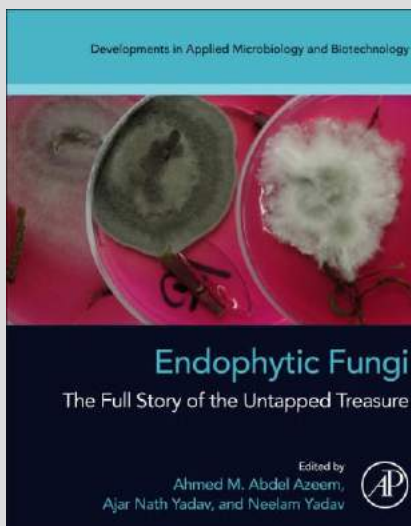
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# Endophytic Fungi

## The Full Story of the Untapped Treasure

Edited by : **Ahmed M. Abdel Azeem**, Professor, Department of Botany and Microbiology, Faculty of Science, Suez Canal University, Ismailia, Egypt; **Ajar Nath Yadav**, M.Sc., Ph.D., Assistant Professor, Department of Biotechnology, KSG Akal College of Basic Sciences, Eternal University, Himachal Pradesh, India and **Neelam Yadav**, Veer Bahadur Singh Purvanchal University, Uttar Pradesh, India

**ISBN:** 9780323993142  
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**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 186

**AUDIENCE:** Microbiologists, ecologists, physiologists, plant biologists, environmentalists, molecular biologists, plant scientists, pharmacologists, and related researchers; University researchers, academicians, graduates and post-graduates in microbiology, life sciences, agricultural sciences, biotechnology, molecular biology, and plant sciences.

**BIC CODES:** PSG

**THEMA CLASSIFICATION:** THEMAPSG

**Covers the developments in endophytic fungal research from beginning to the end by the eminent researchers involved in the field**

A Volume in the *Developments in Applied Microbiology and Biotechnology Series*

### KEY FEATURES

- Covers major concepts of plant-fungi interaction, biodiversity of endophytic fungi from diverse and biotechnological applications for sustainable development
- Is extensively illustrated and clearly written, using easy-to-understand language, sharing the latest developments and potential of fungal products for various applications
- Sheds light on the endophytic fungal current research, challenges, and future possibilities

### DESCRIPTION

*Endophytic Fungi: The Full Story of the Untapped Treasure* covers the developments in endophytic fungal research from beginning to the end by the eminent researchers involved in the field. It sheds light on the endophytic fungal current research, challenges, and future possibilities, the trending recent topics in the plant-fungal endophytes' biodynamics for sustainable development of bioproducts and its applications are supported in large-scale biosynthesis of industrially and pharmaceutical important biomolecules.

*Endophytic Fungi: The Full Story of the Untapped Treasure* highlights the bioprospecting and applied aspects of endophytic fungal communities from diverse hosts and discusses the practical applications of such endophytes in detail. It also reviews recent strategies on alternative sustainable sources of medicines such as secondary metabolites of fungi instead of over collection of plants under prohibiting of biodiversity conventions. The uniqueness of this book is the inclusion of updated bioinformatics-based strategies and its importance in bioactive molecules produced by endophytic fungi. The book addresses one of the most eminent issues in this field: how to translate the potential that endophytic fungi hold in stable practical application.



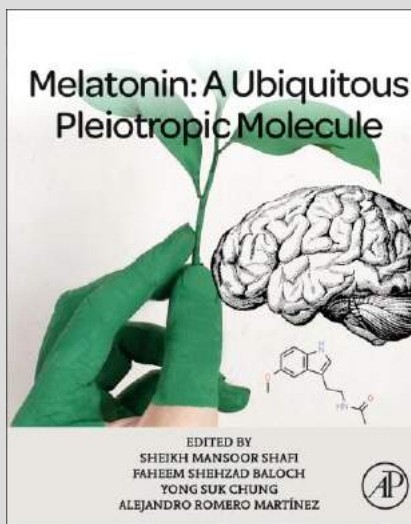
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# Melatonin

## A Ubiquitous Pleiotropic Molecule

Edited by : **Sheikh Mansoor Shafi**, PhD, Postdoctoral Researcher, Phenomics Laboratory, Department of Plant Resources and Environment, Jeju National University, South Korea; **Faheem Shehzad Baloch**, PhD, Professor, Plant Genetics and Breeding, Mersin University, Turkey; **Yong Suk Chung**, PhD, Associate Professor, Department of Plant Resources and Environment, Jeju National University, South Korea and **Alejandro Romero Martínez**, PhD, Professor, Department of Toxicology, Complutense University of Madrid, Madrid, Spain

**ISBN:** 9780443138140  
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**LIST PRICE:** £126.00 / \$165.00 / €143.00

**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 279

**AUDIENCE:** Scientists, researchers and students involved in the development and role of melatonin; those in plant molecular biology, biochemistry, plant science, agriculture, biotechnology and related fields, Related industries including plant growth regulators, food industries and pharmaceutical companies

**BIC CODES:** PST, PSD, PSTD, PSB, TVK

**THEMA CLASSIFICATION:**

THEMAPSD; THEMAPPST;  
THEMAPSB; THEMATVK

**Provides a detailed understanding of melatonin in the context of plants, from function to application**

### KEY FEATURES

- Explores the role of melatonin as a signaling agent in a range of biological responses in plants
- Provides an interdisciplinary study of melatonin and its potential uses, including disease treatment, nutraceutical development, and crop improvement
- Investigates the therapeutic potential of melatonin in clinical settings, including for Covid-19
- Includes metabolomic profiling techniques of melatonin

### DESCRIPTION

*Melatonin: A Ubiquitous Pleiotropic Molecule* equips researchers with an understanding of the molecular biology of melatonin in plants. The book explores the occurrence of melatonin in several plant species, covering key aspects, including its biosynthesis, physiological function in plant growth and development, and signaling pathways. It then discusses the benefits melatonin has for plant and agricultural development, as well as how it can be utilized as a therapeutic in the treatment of human diseases. The role it can play in the oxidative stress response and circadian rhythm modulation are covered, as well as its nutraceutical potential for human health.

The book also covers the importance of melatonin in a range of fields, including drug discovery and disease resistance, agriculture, botany, and biotechnology, and is an ideal reference for researchers across these disciplines.



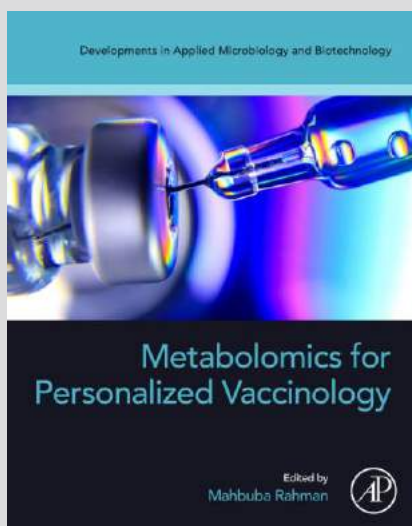
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# Metabolomics for Personalized Vaccinology

Mahbuba Rahman, McMaster University, Hamilton, Ontario, Canada

**ISBN:** 9780443155260  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £134.00 / \$175.00 / €155.00  
**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 7.50w x 9.25h  
**PAGES:** c. 465  
**AUDIENCE:** Academics, Clinicians, Researchers, and Post-graduate students in clinical and non-clinical studies, clinical microbiology, and systems biology; Industry professionals in biotechnology engaged in vaccine discovery  
**BIC CODES:** PSG  
**THEMA CLASSIFICATION:** THEMPSG

**Discusses personalized vaccines for different diseases with an emphasis on metabolomics as the closest phenotype and target associated with disease and treatments**

A Volume in the *Developments in Applied Microbiology and Biotechnology* Series

## KEY FEATURES

- Provides the principles of metabolomics and integration of other systems biology approach for personalized vaccine development
- Discusses vaccine manufacturing technologies and importance of metabolomics for personalized vaccine development
- Discusses the scope of personalized vaccine in relation to specific diseases
- Possible scope of metabolomics in biomarker identification and vaccine discovery

## DESCRIPTION

*Metabolomics for Personalized Vaccinology* provides insight into the importance of personalized vaccines in the clinical and research environments. It explores the development of personalized vaccines, which requires in-depth knowledge of the patient's health status, particularly the immune system, and on metabolomics, the closest indicator of the disease phenotype. Specifically, the book provides an understanding of how metabolomics might be employed in personalized vaccinology and how the metabolic pathway of the host's system is altered by vaccine administration.

Over the past few years, researchers have published articles on personalized vaccines, but these are sparse. Therefore, compiling information on this topic gives the reader an overview of the progress of the field, despite being at its infancy.

*Metabolomics for Personalized Vaccinology* is ideally suited for researchers and postgraduate students who are interested in clinical and nonclinical studies where metabolites are used for the identification of disease and therapeutic targets.



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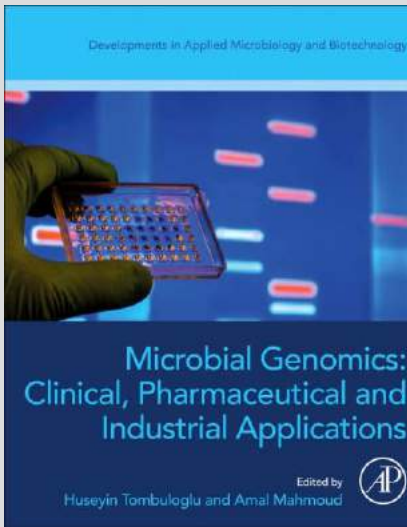


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# Microbial Genomics: Clinical, Pharmaceutical, and Industrial Applications

Edited by : **Huseyin Tombuloglu**, Associate Professor, Department of Genetics, Institute for Research and Medical Consultations (IRMC), University of Dammam, Saudi Arabia and **Amal Mahmoud**, Professor, Head of the Department of Bioinformatics, Genetic Engineering and Biotechnology Research Institute (GEBRI), University of Sadat City, Egypt

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**FORMAT:** Paperback  
**TRIM:** 7.50w x 9.25h  
**PAGES:** c. 325  
**AUDIENCE:** postgraduate students, and researchers in medicine, pharmacy, biology, biotechnology, microbiology, environmental sciences  
**BIC CODES:** PSG, PSAK  
**THEMA CLASSIFICATION:** THEMPSAK; THEMPSG

**Summarize recent developments in microbial genomics, emphasizing the role of next-generation sequencing in functional genomics (transcriptomics and proteomics), comparative genomics and metagenomics**

A Volume in the *Developments in Applied Microbiology and Biotechnology Series*

## KEY FEATURES

- Presents the recent genomic developments in the industrial applications of microorganisms
- Summarizes recent developments in microbial genomics, emphasizing the role of next-generation sequencing in functional genomics
- Focus on how transcriptomics can help better understand host responses to pathogen infection
- Describes applications of genomics in clinical microbiology

## DESCRIPTION

*Microbial Genomics: Clinical, Pharmaceutical and Industrial Applications* focuses on the various applications of microbial genomics in clinical, pharmaceutical, and industrial fields. The book consists of four parts devoted to bacterial, viral, and fungal genomics, as well as their applications in clinical, pharmaceutical, and industrial fields. Chapters are written by experts in their respective disciplines and are tightly organized with an introduction to detailed descriptions, available software implementation, applications, advanced topics, summaries, analytic questions, exercises, and suggested readings. Throughout this book, the latest genomics and biotechnological developments and discoveries as well as open problems and future challenges on microbial genomics are highlighted. Readers will be introduced to state-of-the-art developments and trends of microbial genomics, its clinical, pharmaceutical, and industrial applications.



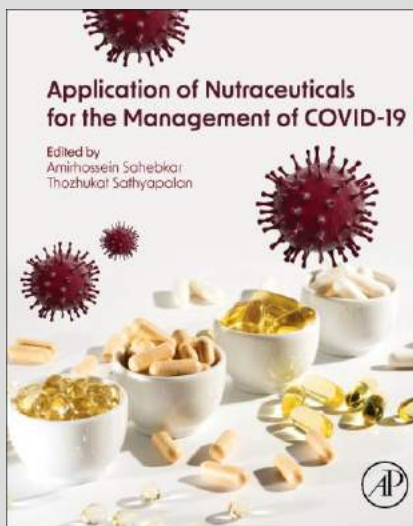
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# Application of Nutraceuticals for the Management of COVID-19

Edited by : **Amirhossein Sahebkar**, Biotechnologist and Associate Professor of Medical Biotechnology, Mashhad University of Medical Sciences, Iran and **Thozhukat Sathyapalan**, Academic Lead for diabetes, endocrinology, and metabolism research in the Clinical Sciences Centre, Hull York Medical School and Honorary Consultant, Endocrinologist, Hull and East Yorkshire Hospitals NHS Trust, UK

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**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 186

**AUDIENCE:** PhD students in pharmacy, medicinal chemistry, and natural plant research, Clinical Researchers and practicing physicians

**BIC CODES:** MMG, KNDP

**THEMA CLASSIFICATION:**

THEMAKND; THEMAMKG

**A scientific and evidence-based reference on the therapeutic role and mechanisms of phytochemicals for better decisions in the treatment of patients with Covid-19**

## KEY FEATURES

- Provides evidence-based findings regarding the role of natural products in the treatment of Covid-19
- Elucidates future research areas in the therapeutic role and mechanisms of the effects of nutraceuticals in the treatment of Covid-19
- Aids in better decisions for the treatment of patients with Covid-19

## DESCRIPTION

*Application of Nutraceuticals for the Management of COVID-19* provides evidence-based findings in the therapeutic role and mechanisms of phytochemicals for better prevention and treatment of patients with COVID-19. Coverage includes a scientific and evidence-based approach to a wide range of nutraceuticals that have been identified due to their anti-inflammatory and immune system-modulating properties. This is the perfect reference for pharmaceutical researchers with practical ideas for research on the effective therapeutic role of phytochemicals in COVID-19; as well as clinical experts looking to make better decisions in the use of effective supplements for the management of COVID-19.



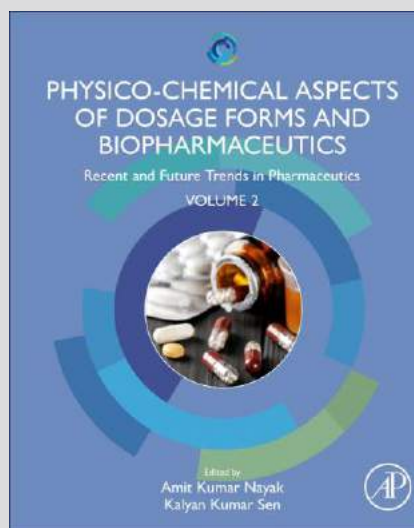
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# Physico-Chemical Aspects of Dosage Forms and Biopharmaceutics

## Recent and Future Trends in Pharmaceutics, Volume 2

Edited by : **Amit Kumar Nayak**, PhD, 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

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**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**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 an in-depth discussion on the fundamental and developing areas of biopharmaceutics and related chemical properties**

### KEY FEATURES

- Provides extensive details on the most recent developments in biopharmaceutics
- Contains contributions from leading experts from academia, research, industry and regulatory agencies
- Includes high quality illustrations, flow charts and tables for easier understanding of the concepts
- Discusses practical examples and research case studies

### DESCRIPTION

*Physico-Chemical Aspects of Dosage Forms and Biopharmaceutics: Recent and Future Trends in Pharmaceutics, Volume Two* explores aspects of pharmaceutics with an original approach that focuses on technology, novelties and future trends. 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. Readers will find practical information for conducting research in pharmaceutics that is ideal for researchers in academia and industry as well as advanced graduate students in pharmaceutics.

In addition, the book discusses the most recent developments in biopharmaceutics, including important and exciting areas such as solubility of drugs, pharmaceutical granulation, routes of drug administration, drug absorption, bioavailability and bioequivalence.



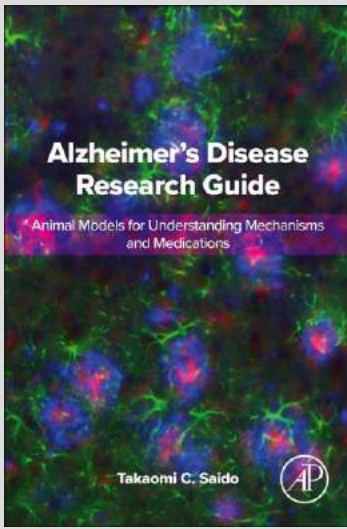
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# Alzheimer's Disease Research Guide

## Animal Models for Understanding Mechanisms and Medications

Takaomi C. Saido, Laboratory Head, RIKEN Center for Brain Science

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**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 279  
**AUDIENCE:** Student and Researchers in Neuroscience, Neurology and Alzheimer's Research  
**BIC CODES:** PSAN  
**THEMA CLASSIFICATION:** THEMAPSAN

**A comprehensive guide on developing animal models to help advance Alzheimer's disease treatment options**

### KEY FEATURES

- Reviews why familial Alzheimer's disease is vital to understanding sporadic Alzheimer's disease
- Describes the latest "game changer" animal models of Alzheimer's disease and frontotemporal dementia in detail
- Explains how various Alzheimer's disease medications have failed clinical trials
- Discusses pros and cons of therapeutic antibodies, lecanemab and donanemab, that were recently found to be effective in recent clinical trials
- Details the application of genome editing as a treatment for familial Alzheimer's disease
- Proposes publishing "*Journal of Negative Data*" for the days of generative AI-assisted publication, AI being unable to distinguish between reproducible and unreproducible data, particularly important in Alzheimer's research

### DESCRIPTION

*Alzheimer's Disease Research Guide: Animal Models for Understanding Mechanisms and Medications* provides researchers with a comprehensive guide, detailing every aspect of Alzheimer's Disease research, including chapters on neuroinflammation, immunotherapy, biomarkers, and animal modeling. This book begins with historical perspectives of both pathological chronology and pathological biochemistry in relation to Alzheimer's disease. Other chapters review Amyloidogenic AB and Non-Amyloidogenic tau and Metabolism of AB major components to the research and understanding of Alzheimer's research. The book concludes with specific treatment chapters including how to develop safe, effective, and inexpensive medications and the application of genome editing to the treatment of Familial Alzheimer's Disease.

Written by world renowned expert in Alzheimer's research, this book is a valuable resource for all researchers.



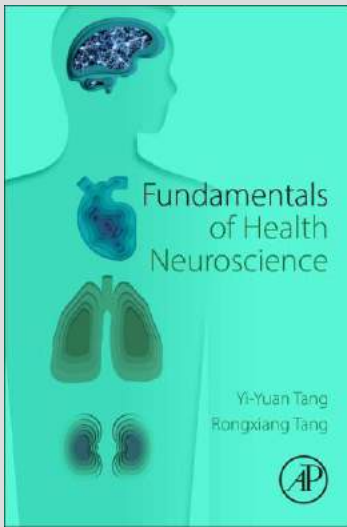
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# Fundamentals of Health Neuroscience

Yi-Yuan Tang, Professor of Health Neuroscience and Prevention Science, Arizona State University, USA and Rongxiang Tang, Department of Psychiatry, The University of California, San Diego, USA

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

**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 360

**AUDIENCE:** Graduate students and researchers in both neuroscience, psychology, prevention science and health sciences

**BIC CODES:** PSAN, PSAK, JMC, MFG

**THEMA CLASSIFICATION:** THEMAPSAN; THEMAPSAK; THEMAJMC; THEMAMKJ

## A new interdisciplinary text on the fundamentals of Health Neuroscience

### KEY FEATURES

- Introduces a new interdisciplinary field of Health Neuroscience including its basic and translational research and applications
- Reviews current research on biomarkers of brain health and aging
- Discusses brain-body connection and health behavior change

### DESCRIPTION

Health Neuroscience is a new interdisciplinary field encompassing research from cognitive, affective, and social neuroscience, health psychology, physical and mental health, and science of behavior change. This new field addresses the longstanding gap among neuroscience, health, and behavior change within the context of health promotion.

*Fundamentals of Health Neuroscience* explores key topics and research, including basic principles, psychological and neural processes, brain and body interactions, and gene x brain x environment interactions. This book also covers brain-based precision prevention and intervention strategies for health decisions and promotion across the lifespan. Chapters integrate the latest research findings and explores several key topics, such as: How does the brain serve both as a predictor and an outcome of health? How can people improve self-control and achieve physical and mental health effectively? What does brain plasticity and resilience tell us about optimal learning, performance, and development throughout our life? How is the sense of meaning in life affected by dopamine and reward systems in the brain?



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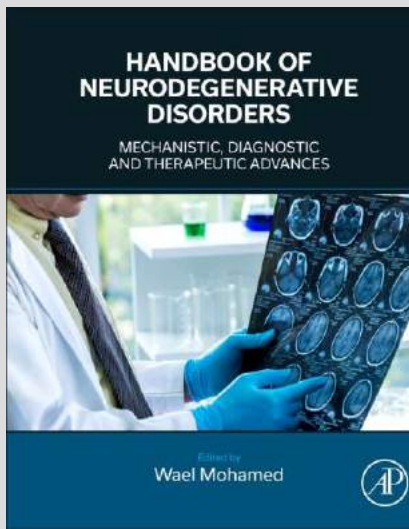


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# Handbook of Neurodegenerative Disorders

## Mechanistic, Diagnostic and Therapeutic Advances

Edited by : **Wael Mohamed**, MD, PhD, Assistant Professor, Basic Medical Science Dept., Medical School, International Islamic University Malaysia, Kuantan Campus, Pahang, Malaysia

**ISBN:** 9780443157028  
**PUB DATE:** Aug 26, 2024  
**LIST PRICE:** £202.99 / \$250.00 / €232.99

**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 7.50w x 9.25h  
**PAGES:** c. 511  
**AUDIENCE:** Student, Researchers and Clinician in Neuroscience, Neurology and Movement disorders  
**BIC CODES:** PSAN, MJN  
**THEMA CLASSIFICATION:** THEMAPSAN; THEMAMKJ

**A comprehensive reference covering current biomedical studies aimed at identifying the underlying causes of neurodegeneration in humans**

### KEY FEATURES

- Reviews big data and neurodegeneration disorders, including gene mapping
- Examines the structural basis of protein assembly into amyloid filaments in neurodegenerative disease
- Covers the progress and challenges of pharmacotherapy of neurodegenerative disorders

### DESCRIPTION

*Handbook of Neurodegenerative Disorders: Mechanism, Diagnostic and Therapeutic Advances* provides a comprehensive review on the current biomedical studies aimed at identifying the underlying causes of neurodegeneration. This book reviews the most recent developments in molecular and cellular processes altered during neurodegeneration. Divided into four parts, the first covers the mechanism of cell death in neurodegeneration. The second section reviews the recent progress in gene and gene products in neurodegeneration, including Huntington's disease, Parkinson's disease, Friedreich's ataxia, and spinal muscular atrophy. The final sections cover the current and future diagnostic techniques of neurodegenerative disorders along with therapeutic approaches.



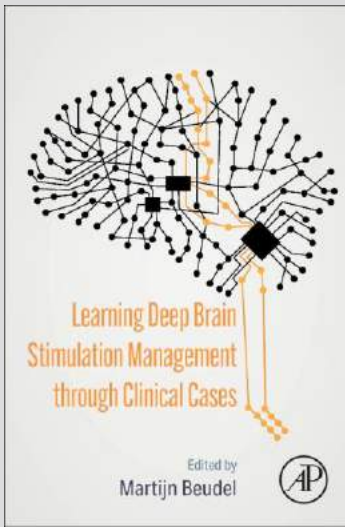
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# Learning Deep Brain Stimulation Management through Clinical Cases

Martijn Beudel, Amsterdam University Medical Centers

**ISBN:** 9780443189104  
**PUB DATE:** Aug 01, 2024  
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**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 418  
**AUDIENCE:** Neurosurgeons, neurologists, residents and medical students, neurosurgical outcomes researchers, clinical neurophysiologists, neuropsychologists and psychiatrists  
**BIC CODES:** MJN, PSAN  
**THEMA CLASSIFICATION:** THEMAMKJ; THEMAPSAN

**A unique, case-based approach review to deep brain stimulation**

## KEY FEATURES

- Discusses long-term problems after DBS, including gait
- Provides readers with clinical decision support systems (CDSS) depicted in detailed flowcharts
- Includes high quality neuro-anatomical illustrations in every chapter/case description using (open source) lead-DBS software

## DESCRIPTION

*Learning Deep Brain Stimulation Management through Clinical Cases* reviews the clinical practice of applying deep brain stimulation (DBS) to patients with movement disorders. The book explores the cardinal aspects of applying DBS in diverse movement disorders based on patient's needs. Every case answers all questions, providing case descriptions and step-by-step procedures for optimal replication. Every chapter includes a clinical decision support system (CDSS) depicted in flowcharts that can be used for reference. Deep Brain Stimulation (DBS) uses electrical stimulation to regulate electrical signals in neural circuits to and from identified areas in the brain to improve movement symptoms.

The management of DBS in a movement disorders can be challenging, optimizing patient journeys and grasping all clinical aspects of the highly technological therapy. Hence, this book provides the information necessary to embrace new breakthroughs.



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## Medical and Educational Needs for Autism



Michelle Hartley-McAndrew  
Kathy Ralabate Doody

# Medical and Educational Needs for Autism

**Michelle Hartley-McAndrew**, MD, State University of New York, Buffalo Jacobs School of Medicine and Biomedical Sciences, USA and **Kathy Ralabate Doody**, Assistant Professor, SUNY Buffalo State, Buffalo, NY, USA

**ISBN:** 9780443156823

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**TRIM:** 6.00w x 9.00h

**PAGES:** c. 256

**AUDIENCE:** clinical psychologists, Psychiatrists, ABA therapist, neurologist, students and researchers in Psychology, Neuroscience and Neurology (specifically related to autism)

**BIC CODES:** MMJT, JMC

**THEMA CLASSIFICATION:** THEMAJBSP1; THEMAJMC

**A complete informational guide for healthcare providers on the medical and educational needs of autistic patients**

### KEY FEATURES

- Includes case study examples in each chapter
- Features a bulleted list to summarize main points in each chapter
- Discusses toileting and GI concerns for patients with ASD
- Outlines communication strategies and how to develop language skills for patients with ASD

### DESCRIPTION

*Medical and Educational Needs for Autism* aims to provide understanding and assistance to clinicians interacting with ASD patients and their caregivers. This book is divided into two clear sections, first the medical coverage and second, an educational section. The first section includes chapters on sleep disorders, feeding/nutrition concerns, and medication. The second section focuses on the education component which includes IEP processes and activities for daily living.



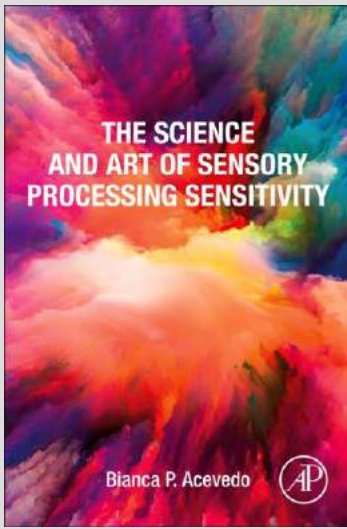
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# The Science and Art of Sensory Processing Sensitivity

Bianca P. Acevedo, PhD, Research Scientist, University of California, Santa Barbara (UCSB), Santa Barbara, CA, USA

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**TRIM:** 6.00w x 9.00h

**PAGES:** c. 186

**AUDIENCE:** Researchers, students, and clinicians in psychology, psychiatry, neuroscience, medicine, psychiatry, neurology

**BIC CODES:** TVH, PSV

**THEMA CLASSIFICATION:**

THEMAPSV; THEMATVH

**A concise reference on the neurobiology of sensory processing sensitivity and its relation to other disorders, personality features, outcomes, and techniques**

## KEY FEATURES

- Describes the mechanisms and neurobiology underlying sensory processing sensitivity
- Distinguishes SPS from seemingly related disorders including ADD, Autism Spectrum Disorder, schizophrenia, anxiety, burn-out, and depression
- Uniquely covers variations in SPS and the association of different combinations with personality traits and different outcomes
- Details the relationship of SPS with personality features including extraversion, sensation-seeking, empathy, and curiosity
- Provides techniques based in recent scientific advances to improve quality of life for individuals with SPS
- Features implications of SPS in the workforce, education, and in personal relationships

## DESCRIPTION

The Science and Art of Sensory Processing Sensitivity provides an up-to-date and novel scientific perspective on the biologically based Sensory Processing Sensitivity (SPS) trait— which is associated with enhanced awareness, depth of cognitive processing, and heightened responsiveness to the environment and other individuals. This second volume by B.P. Acevedo, following “The Highly Sensitive Brain,” takes a scientific perspective on its exploration of SPS, but adds to the existing body of literature on high sensitivity by including an enhanced discussion on the proposed mechanisms linking it with depression, anxiety, and burnout.

In addition, this second volume explores SPS’ relationship to other relevant personality traits, such as the Big Five, creativity, and sensation seeking; and sheds light on how their varying combinations give rise to different outcomes for highly sensitive persons (HSPs). A unique contribution of this volume is its detailed examination of the role of culture, gender, biology, aging, and the environment (including the workplace) on the expression (or repression) of high sensitivity.



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COVER IMAGE  
FORTHCOMING

# Advances in Agronomy, Vol 187

Donald L. Sparks, Director, Delaware Environmental Institute, University of Delaware, Newark, DE, USA

**ISBN:** 9780443295300

**PUB DATE:** Aug 01, 2024

**LIST PRICE:** £135.00 / \$193.00 / €138.00

**DISCOUNT:** Serial

**FORMAT:** Hardback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 275

**AUDIENCE:** Scientists and practitioners in academe, government, and industry and students in an array of fields including crop and soil sciences, agronomy, plant biology, and environmental sciences

**BIC CODES:** TV, PST, PSA, RNC, RN

**THEMA CLASSIFICATION:**

THEMATV; THEMAMPST; THEMAPS; THEMAPSFAF; THEMATQ

**Highly cited serial review that includes cutting-edge information on the crop and soil sciences and the latest agronomy research**

A Volume in the *Advances in Agronomy* Series

## KEY FEATURES

- Includes numerous, timely, state-of-the-art reviews on the latest advancements in agronomy
- Features distinguished, well recognized authors from around the world
- Builds upon this venerable and iconic review series
- Covers the extensive variety and breadth of subject matter in the crop and soil sciences

## DESCRIPTION

*Advances in Agronomy, Volume 187*, the latest release in this leading reference on agronomy, contains a variety of updates and highlights new advances in the field, each written by an international board of authors.



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# Advances in Clinical Chemistry, Vol 121

**Gregory S. Makowski**, Vice President and Chief Scientific Officer, Clinical Laboratory Partners,  
Newington, CT, USA

**ISBN:** 9780443297021

**PUB DATE:** May 30, 2024

**LIST PRICE:** £142.00 / \$205.00 /  
€147.00

**DISCOUNT:** Serial

**FORMAT:** Hardback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 378

**AUDIENCE:** Clinical Laboratory  
Professionals, Physicians and  
Research Scientists

**BIC CODES:** PSA, PSB, PHVN, PSD

**THEMA CLASSIFICATION:**  
THEMAPSD; THEMAPS;  
THEMAPSB; THEMAPHVN

**Publishes cutting-edge reviews in the field of clinical chemistry that include the expertise of international contributors**

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## KEY FEATURES

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- 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 121*, 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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Advances in  
Food and Nutrition  
Research

Volume  
110

Volume Editor  
Fidel Toldrá



# Advances in Food and Nutrition Research, Vol 110

Fidel Toldrá, Research Professor, Instituto de Agroquímica y Tecnología de Alimentos (CSIC), Spanish National Research Council, Paterna (Valencia), Spain

ISBN: 9780443294181  
PUB DATE: Jun 20, 2024  
LIST PRICE: £126.00 / \$182.00 /  
€130.00

DISCOUNT: Serial

FORMAT: Hardback

TRIM: 6.00w x 9.00h

PAGES: c. 438

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

**Provides the latest research advances on heterocyclic amines, natural toxins, high pressure inactivation of vegetative microorganisms, and more**

A Volume in the *Advances in Food and Nutrition Research Series*

## KEY FEATURES

- Contains contributions that have been carefully selected based on the vast experience and expertise of the authors 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

*Advances in Food and Nutrition Research, Volume 111* provides the latest on highly timely topics, including Understanding the Heterocyclic Aromatic Amine Research: An Overview and Recent Findings, Recent advances and challenges in the analysis of natural toxins, High Pressure Processing Plus Technologies: Enhancing the Inactivation of Vegetative Microorganisms, A discussion on A1-free milk: nuances and comments beyond implications to the health, Bioactive peptides as a novel strategy to prevent alcoholic liver injury, Hemp seed protein-derived short- and medium-chain peptides and their multifunctional properties, Condensed tannins – their content in plant foods, changes during processing, antioxidant and biological activities, and more.



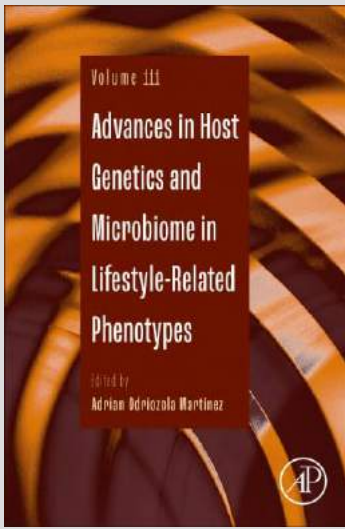
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# Advances in Host Genetics and microbiome in lifestyle-related phenotypes, Vol 111

Edited by : **Adrian Odriozola Martínez**, Professor of Genetics, University of the Basque Country (UPV/EHU), Spain

**ISBN:** 9780443222924  
**PUB DATE:** Jun 20, 2024  
**LIST PRICE:** £119.00 / \$171.00 / €122.00

**DISCOUNT:** Serial

**FORMAT:** Hardback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 536

**AUDIENCE:** Researchers, academics, and professionals in Genetics, Microbiome, Medicine, Nutrition, and Sports science

**BIC CODES:** PSF, PSAK, PSD, PSC

**THEMA CLASSIFICATION:**

THEMAPSD; THEMPSF;

THEMAPSC; THEMPSAK

**Explores advances in Host Genetics and Microbiome interaction with lifestyle regarding Evolution, precision Nutrition, Physical Activity, Circadian rhythms, and technical procedures**

A Volume in the *Advances in Genetics* Series

## KEY FEATURES

- Explores Host Genetics and Microbiome in Nutrition
- Delves into nutrition, physical activity, sports performance, circadian rhythm, sleep, and rest
- Covers the impact of evolution on lifestyle

## DESCRIPTION

*Advances in Host Genetics and Microbiome in Lifestyle-Related Phenotypes, Volume 111* explores the recent discoveries in the interaction between Host Genetics-Microbiome and lifestyle-related phenotypes regarding precision nutrition, physical activity, sports performance, circadian rhythm, sleep, and rest. Chapters in this release include Techniques, procedures, and applications in host Genetic analysis, Techniques, procedures, and applications in Microbiome analysis, Human adaptations to diet: biological and cultural coevolution, Impact of Evolution on Lifestyle in Microbiome, Nutrition and host Genetics: nutrigenetics, Nutrition and Microbiome: microbiome nutrition, Genomic predictors of physical activity and athletic performance, physical activity and Microbiome, Microbiome and Host Genetics in Circadian Rhythm, and more.



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FORTHCOMING

# Advances in Organometallic Chemistry, Vol 82

**Pedro J. Perez**, Professor in Inorganic Chemistry, Homogeneous Catalysis Laboratory, Center for Research in Sustainable Chemistry, Universidad de Huelva, Huelva, Spain

**ISBN:** 9780443294228

**PUB DATE:** Aug 01, 2024

**LIST PRICE:** £155.00 / \$222.00 / €159.00

**DISCOUNT:** Serial

**FORMAT:** Hardback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 180

**AUDIENCE:** Researchers in high performance computer areas, hardware manufacturers, educational programs in physics and scientific computation and in computer science

**BIC CODES:** PN, PNN

**THEMA CLASSIFICATION:**

THEMAPN; THEMAPNN

**Publishes cutting-edge reviews in the field of organometallic chemistry, covering topics in organometallic synthesis, reactions, mechanisms, homogeneous catalysis, and more**

A Volume in the *Advances in Organometallic Chemistry Series*

## KEY FEATURES

- Contains contributions from leading authorities in the field of organometallic chemistry
- Covers topics in organometallic synthesis, reactions, mechanisms, homogeneous catalysis, and more
- Informs and updates readers on the latest developments in the field
- Carefully edited to provide easy-to-read material

## DESCRIPTION

*Advances in Organometallic Chemistry, Volume 82*, the latest release in this longstanding serial, is known for its comprehensive coverage of topics in organometallic synthesis, reactions, mechanisms, homogeneous catalysis, and more. Chapters in this new release include Pd-catalysis: a useful tool in the field of polymer synthesis. Recent advances and applications, Modern Mechanistic Approaches for the Depolymerization of Commodity Plastics via Homogeneous Metal Catalysis, Functionalization of fullerenes by transition metal catalyzed cyclization reactions, and Synergistic Metal-Ligand Reactivity in Half-Sandwich Complexes of Fe, Co, and Ni for Bond Activation and Catalysis.



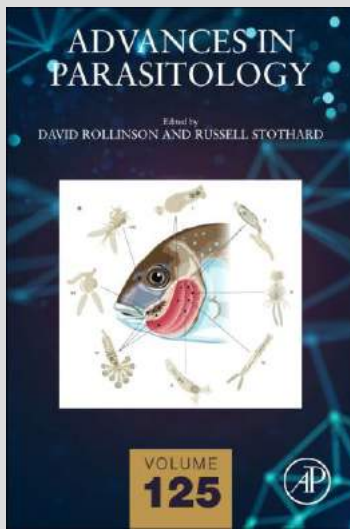
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# Advances in Parasitology, Vol 125

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:** 9780443295164  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £160.00 / \$231.00 /  
€165.00  
**DISCOUNT:** Serial  
**FORMAT:** Hardback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 279  
**AUDIENCE:** Academic, government  
and industrial sectors  
**BIC CODES:** MMFP  
**THEMA CLASSIFICATION:**  
THEMAMKFP

**Edited by one of the best scientists in the field, this series presents the latest updates in the field of parasitology**

A Volume in the *Advances in Parasitology* Series

## KEY FEATURES

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

## DESCRIPTION

*Advances in Parasitology, Volume 125* provides detailed and comprehensive reviews written by experts covering all aspects of parasitology. Chapters in this new release include New directions for malaria vector control using geography and geospatial analysis, PfEMP1 – Still of key importance in *Plasmodium falciparum* malaria immunity and pathogenesis, and Fish Ectoparasite Detection, Collection and Curation.



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# African Plant-Based Products as a Source of Potent Drugs to Overcome Cancers and their Chemoresistance, Vol 112

## Part 2. Potent Botanicals to Overcome Cancers and their Chemoresistance

Edited by : **Jean-Pierre Jacquot**, Universite Henri Poincare, Membre de L'Institut Universitaire de France, Nancy University, France and **Victor Kuete**, PhD, Department of Biochemistry, Faculty of Science, University of Dschang, Cameroon

**ISBN:** 9780443293368  
**PUB DATE:** Jun 19, 2024  
**LIST PRICE:** £148.00 / \$214.00 / €153.00  
**DISCOUNT:** Serial  
**FORMAT:** Hardback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 490  
**AUDIENCE:** Research scientists, Students, Herbalists, Pharmaceutical industries, General public, University libraries  
**BIC CODES:** PSA  
**THEMA CLASSIFICATION:** THEMAPS

**A unique tool that compiles and discusses the most promising cytotoxic botanicals from the flora of Africa**

A Volume in the *Advances in Botanical Research* Series

### KEY FEATURES

- Provides a unique tool compiling the best of African plants with amazing potential toward various cancer cell lines, including the multidrug-resistant phenotypes
- Discusses in highlights the geographic distribution of the best cytotoxic African plants
- Compiles the ethnomedicinal, pharmacological, and phytochemistry information of the best antiproliferative African plants

### DESCRIPTION

*African Plant-Based Products as a Source of Potent Drugs to Overcome Cancers and their Chemoresistance: Part Two: Potent Botanicals to Overcome Cancers and their Chemoresistance* offers detailed information on the best African medicinal plants that could be useful for the development of efficient herbal drugs, as well as the best phytochemicals that could be explored as potential pharmaceuticals to efficiently overcome cancers and their drug resistance. The book identifies and comments on the best cytotoxic African medicinal plants. The book also provides knowledge on ethnomedicinal uses of the identified plants, their pharmacological potency, and their phytochemistry.

An overview of the relationship between cancer and other human diseases healed in the traditional health system with the plants documented is also highlighted. The book appears a unique tool for Scientists to have state-of-the-art of the best cytotoxic plants from the African flora.



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COVER IMAGE  
FORTHCOMING

# Animal Models of Disease Part B, Vol 188

Edited by : **Lorenzo Galluzzi**, Assistant Professor of Cell Biology in Radiation Oncology, Department of Radiation Oncology, Weill Cornell Medical College, NY, USA; **Fernando Aranda Vega**, Fernando Aranda Vega, CIMA Universidad de Navarra, Program of Immunology and Immunotherapy, Spain; **Aitziber Buque Martinez**, Postdoctoral Associate in Radiation Oncology, Radiation Oncology, Weill Cornell Medical College, NY, USA and **Jose Manuel Bravo-San Pedro**, Departamento de Fisiología, Facultad de Medicina, Universidad Complutense de Madrid, Madrid, Spain

**ISBN:** 9780443222405  
**PUB DATE:** Jun 14, 2024  
**LIST PRICE:** £139.00 / \$175.00 /  
€160.00

**DISCOUNT:** Serial

**FORMAT:** Hardback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 254

**AUDIENCE:** Researchers, Academic  
Institutions, Medical and Healthcare  
Professionals

**BIC CODES:** PSF, PSC, PSD

**THEMA CLASSIFICATION:**

THEMAPSF; THEMAPSC;

THEMAPSD

**Edited by one of the best scientists in the field, this series presents the latest updates in the field of cell biology**

A Volume in the *Methods in Cell Biology* Series

## KEY FEATURES

- Provides the latest information on cancer research
- Offers outstanding and original reviews on a range of cancer research topics
- Serves as an indispensable reference for researchers and students alike

## DESCRIPTION

*Animal Models of Disease, Part B, Volume 188* in the *Methods in Cell Biology* series, highlights advances in the field, with this new volume presenting interesting chapters on a variety of timely topics, including Using *C. Elegans* as a model for Neurodegenerative disease: Methodology and Evaluation, Modelo Animal de Esclerosis Multiple: Encefalomiélitis Autoimmune Experimental (EAE, New mouse model to study aneurysm development, Spinal Nerve Ligation: An Experimental Neuropathic Pain Model in Rats and Mice, Identifying therapeutic compounds for Autosomal Dominant Optic Atrophy (ADOA) through screening in the nematode *C. elegans*, Eμ-TCL1 adoptive transfer mouse model of chronic lymphocytic leukemia, and much more.

Other chapters cover Purification and characterization of kidney-infiltrating leukocytes in a mouse model of lupus nephritis, Differences in intratumor innate lymphoid cell composition between orthotopic and spontaneous pancreatic mouse models, Assessing motor development and function in mouse models of neurodevelopmental disorders, Analysis of Gut Microbiota profile targeted to multi hypervariable regions of 16S rRNA in hypertensive heart failure rat model, and more.



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# Artificial Intelligence in Microbiology: Scope and Challenges Volume 1, Vol 55

Edited by : **Akanksha Srivastava**, PhD, Research Scientist, Department of Microbiology, Institute of Medical Science, Banaras Hindu University, Varanasi, India and **Vaibhav Mishra**, PhD, Assistant Professor, Institute of Microbial Technology, Amity University, U. P. India

**ISBN:** 9780443296246  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £115.00 / \$185.00 / €132.00  
**DISCOUNT:** Serial  
**FORMAT:** Hardback  
**TRIM:**  
**PAGES:** c. 201  
**AUDIENCE:** Research students, academicians, Industry personnel and scientists in the area of environmental, microbiology and biotechnology  
**BIC CODES:** PSD, PSG, PSQ, RN  
**THEMA CLASSIFICATION:** THEM APSD; THEM APSG; THEM APSQ; THEM ATQ

**Unlock the future of microbiology with AI and explore the new frontiers and challenges they bring**

A Volume in the *Methods in Microbiology* Series

## KEY FEATURES

- Uncovering extended functions of AI in Microbiology.
- Production and development of novel drug targets through AI.
- Challenges for using and selecting appropriate AI tools in health, agriculture and food sector

## DESCRIPTION

Nowadays, the field of microbiology is undergoing a revolutionary change due to the emergence of Artificial Intelligence (AI). AI is being used to analyze massive data in a predictable form, about the behavior of microorganisms, to solve microbial classification-related problems, exploring the interaction between microorganisms and the surrounding environment. It also helps to extract novel microbial metabolites which have been used in various fields like medical, food and agricultural industries. As the pace of innovation in Microbiology is accelerating, the use of AI in these industries will be beneficial. AI will not only show its extraordinary potential in expanding the market of antibiotics, food, and agriculture but also offer an eco-friendly, safer, and profitable solution to the respective industries. It would be challenging to search out specific features and discuss future research on AI in microbiology with a wide perspective.



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# Biophysical Approaches for the Study of Membrane Structure Part A, Vol 700

Edited by : **Anna Maria Pyle; Tobias Baumgart; David Christianson**, University of Pennsylvania and **Markusu Deserno**

**ISBN:** 9780443293047  
**PUB DATE:** Aug 01, 2024  
**LIST PRICE:** £138.00 / \$199.00 / €142.00  
**DISCOUNT:** Serial  
**FORMAT:** Hardback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 508  
**AUDIENCE:** Scientists—from PhD students to research group leaders—eager to start their own research on biomembrane asymmetry.  
**BIC CODES:** PSB, PSD  
**THEMA CLASSIFICATION:** THEMPSB; THEMPSD

**Provides hands-on guidance on how to become an active researcher on biomembrane asymmetry and lateral inhomogeneity**

A Volume in the *Methods in Enzymology* Series

## KEY FEATURES

- Explore the state-of-the-art of lipid membrane asymmetry
- Covers experimental, theoretical, and computational techniques to create and characterize asymmetric lipid membranes
- Teaches how these kinds of approaches create and characterize laterally inhomogeneous membranes

## DESCRIPTION

*Biophysical Approaches for the Study of Membrane Structure, Part A, Volume 700* explores lipid membrane asymmetry and lateral heterogeneity. A burst of recent research has shown that bilayers whose leaflets differ in their physical properties—such as composition, phase state, or lateral stress—exhibit many fascinating new characteristics, but also pose a host of new challenges related to their creation, characterization, simulation, and theoretical description. Chapters in this new release include Evaluation of functional transbilayer coupling in live cells by controlled lipid exchange and imaging FCS, Effects of lateral and hydrostatic pressure on membrane structure and properties, and much more.

Other sections cover Using the yeast vacuole as a system to test the lipid drivers of membrane heterogeneity in living cells, Direct quantification of cellular membrane lipids using ratiometric fluorescence sensors, The spectral phasor approach to resolving membrane order with environmentally sensitive dyes, The use of hemifusion to create asymmetric giant unilamellar vesicles: Insights on induced order domains, Advanced microscopy methods to study membrane pores, Use of cryo-EM to study membrane phase separation, and much more.



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FORTHCOMING

# Biophysical Approaches for the Study of Membrane Structure Part B, Vol 701

Edited by : Markusu Deserno and Tobias Baumgart

**ISBN:** 9780443295669  
**PUB DATE:** Aug 15, 2024  
**LIST PRICE:** £138.00 / \$199.00 / €142.00  
**DISCOUNT:** Serial  
**FORMAT:** Hardback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 383  
**AUDIENCE:** Scientists—from PhD students to research group leaders—eager to start their own research on biomembrane asymmetry.  
**BIC CODES:** PSD, PSB  
**THEMA CLASSIFICATION:** THEM APSD; THEM APSB

**Provides hands-on guidance on how to become an active researcher on biomembrane asymmetry and lateral inhomogeneity**

A Volume in the *Methods in Enzymology* Series

## KEY FEATURES

- Explore the state-of-the-art of lipid membrane asymmetry
- Covers experimental, theoretical, and computational techniques to create and characterize asymmetric lipid membranes
- Teaches how these kinds of approaches create and characterize laterally inhomogeneous membranes

## DESCRIPTION

*Biophysical Approaches for the Study of Membrane Structure, Part B, Volume 701* explores lipid membrane asymmetry and lateral heterogeneity. A burst of recent research has shown that bilayers whose leaflets differ in their physical properties—such as composition, phase state, or lateral stress—exhibit many fascinating new characteristics, but also pose a host of challenges related to their creation, characterization, simulation, and theoretical description. Chapters in this new release include Characterization of domain formation in complex membranes: Analyzing the bending modulus from simulations of complex membranes, The density-threshold affinity: Calculating lipid binding affinities from unbiased Coarse-Grain Molecular Dynamics simulations, and much more.

Additional sections cover Uncertainty quantification for trans-membrane stresses and moments from simulation, Using molecular dynamics simulations to generate small-angle scattering curves and cryo-EM images of proteoliposomes, Binary Bilayer Simulations for Partitioning Within Membranes, Modeling Asymmetric Cell Membranes at All-atom Resolution, Multiscale remodeling of biomembranes and vesicles, Building complex membranes with Martini 3, Predicting lipid sorting in curved bilayer membranes, Simulating asymmetric membranes using P21 periodic boundary conditions, and many other interesting topics.



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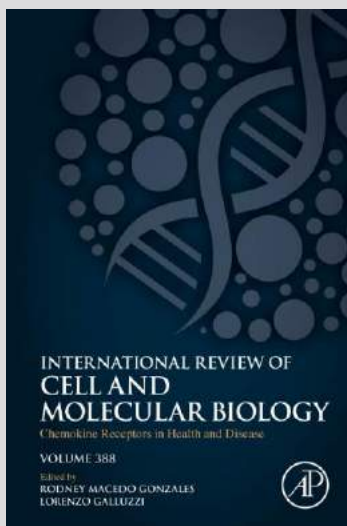


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# Chemokine Receptors in Health and Disease, Vol 388

Edited by : **Rodney Macedo Gonzales** and **Lorenzo Galluzzi**, Assistant Professor of Cell Biology in Radiation Oncology, Department of Radiation Oncology, Weill Cornell Medical College, NY, USA

**ISBN:** 9780443221729  
**PUB DATE:** Sep 01, 2024  
**LIST PRICE:** £165.00 / \$239.00 / €171.00

**DISCOUNT:** Serial  
**FORMAT:** Hardback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 260  
**AUDIENCE:** Scientists and Medical Doctors and other health workers.  
**BIC CODES:** PSF, PSD, KCH  
**THEMA CLASSIFICATION:** THEMPSF; THEMAKCH; THEMPSD

**Chemokine receptors are critical players in the course of illness.**

A Volume in the *International Review of Cell and Molecular Biology Series*

## KEY FEATURES

- Chemokine receptors in the era of single cell gene and protein analysis
- Chemokine receptor's role in COVID-19
- Update in the role of chemokine receptors in health and disease

## DESCRIPTION

This volume reviews the current research in Chemokine Receptors and their role in physiological processes in the body, as well as their role in different pathological conditions. Chemokine Receptors are important for the migration of different types of cells, including immune cells to lymphoid organs and non-lymphoid organs thanks to the interaction with chemokines. The presence of different chemokine receptors on the cells' surface was studied in normal states and diseases, some of them correlating with migration of subsets that play pro-disease roles or other help controlling the condition. Currently, state-of-the-art technology is helping researchers to better identify gene and protein expression of chemokine receptors at the single cell level. This large new data reveals the complexity of co-expression of various markers in the same cells and as well among different types of cells. Moreover, chemokine receptors are also helpful to identify different stages among subsets, and their correlation with better or worst responses in disease. Finally, treatments designed to inhibit or to block chemokine receptors are designed and tested at the preclinical and clinical level with different results. Here, we focus on the main chemokine receptors described in the current literature that play a role in health and diseases such as infections, autoimmune disorders, and cancer.



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# Nanolithography and Surface Microscopy with Electron Beams, Vol 231

**Peter W. Hawkes**, Founder-President of the European Microscopy Society and Fellow, Microscopy and Optical Societies of America; member of the editorial boards of several microscopy journals and Serial Editor, *Advances in Electron Optics*, France and **Martin Hýtch**, Senior Scientist, French National Centre for Research (CNRS), Toulouse, France

**ISBN:** 9780443314629

**PUB DATE:** Aug 01, 2024

**LIST PRICE:** £169.00 / \$245.00 /  
€175.00

**DISCOUNT:** Serial

**FORMAT:** Hardback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 216

**AUDIENCE:** Physicists, electrical engineers, applied mathematicians in all branches of image processing and microscopy as well as electron physics in general

**BIC CODES:** TGB, UYS, TJFD, TTB, TGM, PHK

**THEMA CLASSIFICATION:**

THEMATJF; THEMATGB;

THEMAUYS; THEMATTB;

THEMATGM; THEMAPHK

**Presents cutting-edge articles on the latest developments in all areas of microscopy, image science, and related subjects in electron physics**

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## KEY FEATURES

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## DESCRIPTION

*Nanolithography and Surface Microscopy with Electron Beams, Volume 231* merges two long-running serials, *Advances in Electronics and Electron Physics* and *Advances in Optical and Electron Microscopy*. The series features articles on the physics of electron devices (especially semiconductor devices), particle optics at high and low energies, microlithography, image science, digital image processing, electromagnetic wave propagation, electron microscopy, and the computing methods used in all these domains. Specific chapters cover Introduction to inverse problems in electron microscopy, Directional sinogram inpainting for limited angle tomography, Strain tomography of crystals, FISTA with adaptive discretization, Total variation discretization, and Reconstruction with a Gaussian Dictionary.



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# Redox Signaling, Vol 162

Edited by : **Paul B. Fisher**, Department of Human and Molecular Genetics, VCU Institute of Molecular Medicine, VCU Massey Cancer Center, Virginia Commonwealth University, School of Medicine, Virginia, USA; **Danyelle Townsend**, Pharmaceutical and Biomedical Sciences, Medical University of South Carolina, USA; **Kenneth D. Tew**, Professor and Chairman, Department of Cell and Molecular Pharmacology John C. West Chair of Cancer Research, Medical University of South Carolina, USA and **Ed Schmidt**

**ISBN:** 9780443294440  
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**AUDIENCE:** Basic, translational, and clinical pancreatic cancer researchers, pancreatic cancer oncologists, molecular biologists, and immunologists, postdoctoral fellows, residents and fellows, and PhD and MD/PhD graduate students pursuing basic and translational pancreatic cancer research

**BIC CODES:** PSAK, PSF, MJCM

**THEMA CLASSIFICATION:**  
THEMAPSAK; THEMPSF;  
THEMAMJCM; THEMPSG

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# Siderophore and Related Natural Products Biosynthesis, Vol 702

Edited by : Timothy Wencewicz

**ISBN:** 9780443296789

**PUB DATE:** Aug 20, 2024

**LIST PRICE:** £138.00 / \$199.00 /  
€142.00

**DISCOUNT:** Serial

**FORMAT:** Hardback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 383

**AUDIENCE:** Academic, government  
and industrial sectors

**BIC CODES:** PSD, PSB

**THEMA CLASSIFICATION:**  
THEMAPSD; THEMPSB

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- *Methods in Enzymology Volume 702* highlights new advances in the field, with this new volume presenting interesting topics on *Siderophore and related natural products biosynthesis*



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# Space Geodesy for Environmental Monitoring Volume, Vol 65

Edited by : **Cedric Schmelzbach**, Senior Scientist, ETH Zurich, Switzerland and **Roland Hohensinn**

**ISBN:** 9780443314605

**PUB DATE:** Aug 01, 2024

**LIST PRICE:** £155.00 / \$222.00 / €159.00

**DISCOUNT:** Serial

**FORMAT:** Hardback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 216

**AUDIENCE:** Academic, government and industrial sectors

**BIC CODES:** RN, RBG, PHVG

**THEMA CLASSIFICATION:**

THEMAPNC; THEMARBG;

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## DESCRIPTION

*Space Geodesy for Environmental Monitoring Volume, Volume 65* in the *Advances in Geophysics* series, highlights new advances in the field, with this new volume presenting interesting chapters written by an international board of authors and covering topics such as GNSS for natural hazard mitigation, Space & Earth Data for Global Sea level change monitoring: Current Approaches, Challenges, and Future Prospects, and Crowdsourcing GNSS for geophysical applications.



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# The Discovery of New Medicines in Academia, Vol 100

Edited by : **Diane Peters**, Assistant Professor, Pharmacology and Molecular Sciences, Baltimore, MD, USA and **Barbara S. Slusher**, PhD, MAS, Professor of Neurology, Pharmacology, Psychiatry, Neuroscience, Medicine, and Oncology Director, Johns Hopkins Drug Discovery Vice Director, Pederson Brain Science Institute Johns Hopkins School of Medicine, MD, USA

**ISBN:** 9780443293245  
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**DISCOUNT:** Serial  
**FORMAT:** Hardback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 300  
**AUDIENCE:** biopharma, academic medical centers with drug discovery groups, scientists with an interest in translational medicine  
**BIC CODES:** MMG  
**THEMA CLASSIFICATION:** THEMAMKG

## Bridging the “Valley of Death” - Examples of Successfully Translated Academic Drug Discoveries

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### KEY FEATURES

- Provides recent examples of successful academic drug discovery projects in multiple disease areas, including oncology, immunology, neurology, and infectious diseases
- Presents diverse examples, including small molecule, biologic, and nanomedicine-based therapeutics
- Discusses innovative artificial intelligence platforms utilized in academic drug discovery efforts

### DESCRIPTION

*The Discovery of New Medicines in Academia, Volume 100* highlight examples of discoveries originating in academia that have been successfully translated into promising therapeutics that have advanced into clinical trials. Chapters in this release cover Design and Discovery of Itaconate prodrugs for Alopecia Areata, Hydroxyl-Dendrimer Delivery System for Neurological Disease, Development of allosteric modulators of G protein-coupled receptors for Psychiatric Disease, Targeting the constitutively active ERK1/2 signaling kinase for cancer, mRNA reprogramming of myeloid cells for tumor immunotherapy, Development of novel drugs targeting protein-protein interactions, and much more.

Additional sections cover Neuro-steroids and analogs for the treatment of epilepsy, Development of inhibitors of eukaryotic translation, Discovery/development of antiviral, anticancer and/or anti-inflammatory agents, Discovery of novel anti-infective agents, Targeting proliferating cell nuclear antigen (PCNA) for cancer, and Implementation and Evolution of Quantitative Systems Pharmacology to Patient Digital Twins and Biomimetic Twins.



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# The Hidden World of Protein Aggregation, Vol 206

Edited by : **David B. Teplow**, Department of Neurology, David Geffen School of Medicine, UCLA, Los Angeles, CA, USA; **Bahareh Dabirmanesh**, Department of Biochemistry, Faculty of Biological Sciences, Tarbiat Modares University, Tehran-Iran and **Vladimir N. Uversky**, Professor, Department of Molecular Medicine and USF Health Byrd Alzheimer's Research Institute, Morsani College of Medicine, University of South Florida, Tampa, Florida, USA

**ISBN:** 9780443293405

**PUB DATE:** Jun 06, 2024

**LIST PRICE:** £119.00 / \$171.00 / €122.00

**DISCOUNT:** Serial

**FORMAT:** Hardback

**TRIM:** 6.00w x 9.00h

**PAGES:** c. 510

**AUDIENCE:** Researchers interested in problems related to amyloid formation and protein folding/mis-folding. Scientist in the field of biochemistry, biophysics, molecular medicine, biotechnology, pharmacology. Pharmaceutical companies which engage in R&D activities related to drug design.

**BIC CODES:** PSB, PSD

**THEMA CLASSIFICATION:** THEM APSB; THEM APSD

**The book delivers in-depth descriptions surrounding the hidden world of protein aggregation.**

A Volume in the *Progress in Molecular Biology and Translational Science Series*

## KEY FEATURES

- Provides an introduction to the folding of protein and associated conditions leading to aggregation and linked pathology
- Discusses structural biology and computational methodologies for analysis of protein (mis)folding and aggregation
- Describes functional amyloids and their biotechnological applications

## DESCRIPTION

*The Hidden World of Protein Aggregation, Volume 206* provides a comprehensive exploration of protein aggregation, uncovering the factors behind the formation of amorphous aggregates and ordered structures called amyloid fibrils. It delves into the advantages and disadvantages of protein aggregates, addressing topics such as cytotoxicity and disorders linked to misfolding. Specific chapters in this release include Protein Aggregation: An Overview, Pathways of Amyloid Fibril Formation and Aggregation, Factors Influencing Amyloid Fibril Formation, Morphological Features and Types of Aggregated Structures, Each big journey starts with a first step: Importance of Oligomerization, Liquid-Liquid Phase Separation as Triggering Factor of Fibril Formation, and more.

Additional sections cover Experimental Techniques for Detecting and Evaluating the Amyloid Fibrils, Prediction of Protein Aggregation, Amyloid Fibril Cytotoxicity and Associated Disorders, Inhibitors of Amyloid Fibril Formation, Therapeutic Approaches in Proteinopathies, Functional Amyloids, Biotechnological Applications of Amyloid Fibrils, and The Hidden World of Protein Aggregation.



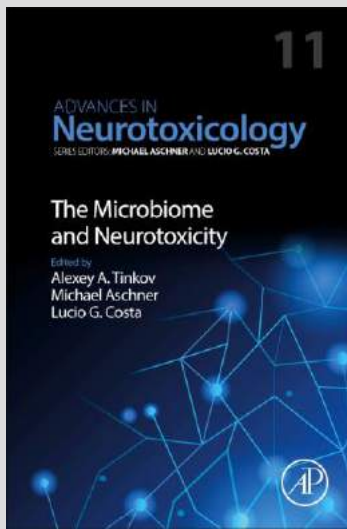
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# The Microbiome and Neurotoxicity, Vol 11

Edited by : **Michael Aschner**, Professor, Department of Molecular Pharmacology, Albert Einstein College of Medicine, NY, USA; **Lucio G. Costa**, Professor of Toxicology, University of Washington, Seattle, WA, USA and **Alexey Tinkov**

**ISBN:** 9780443215605  
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€155.00  
**DISCOUNT:** Serial  
**FORMAT:** Hardback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 210  
**AUDIENCE:** Scientists working in  
Neurotoxicology  
**BIC CODES:** PSAN, JMM  
**THEMA CLASSIFICATION:**  
THEMAPSAN; THEMAJMM

**Edited by one of the best scientists in the field, this series presents the latest updates in the field of neurotoxicology**

A Volume in the *Advances in Neurotoxicology* Series

## KEY FEATURES

- Provides the latest information on Neurotoxicology
- Offers outstanding and original reviews on Neurotoxicology
- Serves as an indispensable reference for researchers and students alike

## DESCRIPTION

*Advances in Neurotoxicology, Volume 11* presents interesting chapters written by an international board of authors. Chapters in this new release include Gut microbiota as a mediator on the neurotoxicity of mercury, Relationships between lead-induced learning and memory impairments and gut microbiota disturbance in mice, Utility of zebrafish-based models in understanding molecular mechanisms of neurotoxicity mediated by the gut-brain axis, Alterations of gut microbiota linking environmental exposures to neurotoxicity, Iron Toxicity, Ferroptosis and Microbiota in Parkinson's Disease: Implications for Novel Targets, and Modulation of gut microbiota with probiotics as a strategy to counteract endogenous and exogenous neurotoxicity.



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# Advanced Nanocarbon Polymer Biocomposites

## Sustainability Towards Zero Biowaste

Edited by : **Md Rezaur Rahman**, Department of Chemical Engineering, Faculty of Engineering, University Malaysia Sarawak, Kota Samarahan, Sarawak, Malaysia and **Muhammad Khusairy Bin Bakri**, Composite Materials and Engineering Center, Washington State University, Pullman, Washington State, USA

**ISBN:** 9780443139819  
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**DISCOUNT:** Reference  
**FORMAT:** Paperback  
**TRIM:** 6.00w x 9.00h  
**PAGES:** c. 325

**AUDIENCE:** Academic and industrial researchers working in the development of sustainable polymers, biocomposites and advanced nanocarbon polymer composites, Postgraduate students working in materials science and engineering  
**BIC CODES:** TDCP, TDCQ  
**THEMA CLASSIFICATION:** THEMATDPF; THEMATGM; THEMATGMP

**Covers the latest research findings on nanocarbon polymer biocomposites, their properties, and their manufacturing as well as possible ways to reduce waste and improve their sustainability**

A Volume in the *Woodhead Publishing in Materials Series*

### KEY FEATURES

- Emphasis on nanoscale fillers and their improvement on compatibility
- Evaluates the impact of polymer production through life cycle analysis of both single and hybrid polymers and nanocomposites
- A strong focus on sustainability and green chemistry perspectives

### DESCRIPTION

Nanocarbon polymer biocomposites have gained increased attention from both researchers and manufacturers due to the significant improvement in their physico-mechanical, thermal and barrier properties when compared to conventional materials. Their dimensions, biodegradable character, cost-effectiveness, and sustainability are among the main drivers for increasing demand.

However, it is difficult to achieve uniform dispersion between the carbon filler and matrix as it easily forms agglomerations. Production of nanocarbon polymer biocomposites with high mechanical and thermal properties is also limited, but there has been rapid progress in processing possibilities to produce nanocomposites based on various biodegradable fillers.

*Advanced Nanocarbon Polymer Biocomposites: Sustainability Towards Zero Biowaste* collects all these novel scientific findings in one place. It discusses in detail their physical, chemical, and electrical properties and presents the latest research findings on nanocarbon polymer biocomposites with filler loadings and their improvement on compatibility. The book will be of great interest for those researchers who are concerned with the production and use of nanocarbon polymer biocomposites as a new innovative advanced material.



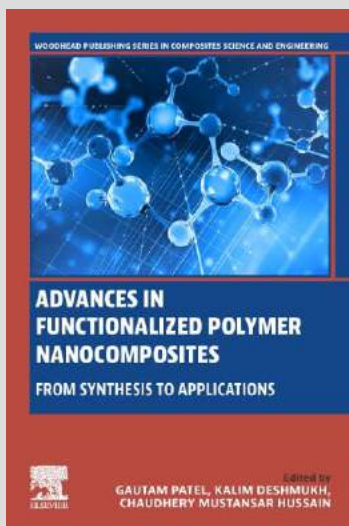
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# Advances in Functionalized Polymer Nanocomposites

## From Synthesis to Applications

Edited by : **Gautam Patel**, Head and Associate Professor, Parul University, India; **Kalim Deshmukh**, Senior Researcher, New Technologies - Research Centre, University of West Bohemia, Czech Republic and **Chaudhery Mustansar Hussain**, PhD, New Jersey Institute of Technology, Newark, NJ, USA

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**AUDIENCE:** Academic and industrial researchers, materials scientists and engineers and manufacturers working in the research and development of polymer nanocomposites  
**BIC CODES:** TDCP, TDCQ  
**THEMA CLASSIFICATION:** THEMATDPF; THEMATGM; THEMATGMP

**Focused on functionalized polymer nanocomposites, their synthesis, characterization, and applications**

A Volume in the *Woodhead Publishing Series in Composites Science and Engineering Series*

### KEY FEATURES

- Covers fabrication, processing, characterization, and properties of various functionalized polymer nanocomposites
- Explores usage in energy storage systems, biomedical fields, environmental remediation, catalysis, gas sensing, biosensing, and electromagnetic interference (EMI) shielding
- Provides information on lifecycle assessment and environmental and health impacts of these materials

### DESCRIPTION

*Advances in Functionalized Polymer Nanocomposites: From Synthesis to Applications* presents a detailed review on the synthesis, fundamental chemistry, properties, and applications of these high-performance materials. The book's introductory chapter provides a brief overview of the various types of organic and inorganic nanofillers used for the synthesis of polymer nanocomposites. Emphasis is placed on their fundamental chemistry, processing methods, functionalization, and/or surface modification strategies. The dispersion state and their specific interaction with polymer matrices is also discussed in detail, as well as characterization techniques for functionalized nanofillers and functionalized polymer nanocomposites, and their properties, and applications.

The book will be a valuable reference source for scientists, engineers, and postgraduate students working in the field of polymer science and technology, materials science and engineering, composites, and nanocomposites.



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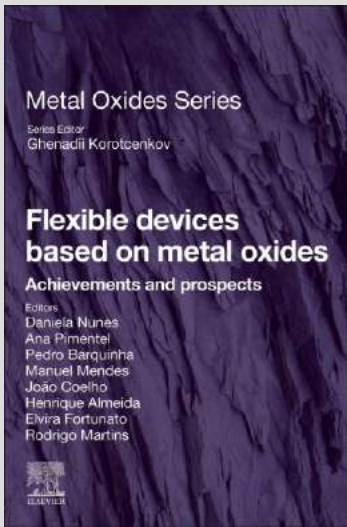
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# Flexible Devices Based on Metal Oxides

## Achievements and Prospects

**Daniela Nunes**, Assistant Professor, Materials Science Department of FCT-UNL; **Ana Pimentel**, Post.Doc on the synthesis of ZnO nanoparticles to be used in nanoelectronics; **Pedro Barquinha**, Assistant Professor, Materials Science Department of FCT-UNL; **M.J. Mendes**, Nova School of Science and Technology, Nova University Of Lisbon; **J. Coelho**, Nova School of Science and Technology, Nova University Of Lisbon; **Elvira Fortunato**, CENIMAT/I3N, Departamento de Ciências dos Materiais, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Portugal; **Rodrigo Martins**, CENIMAT/I3N, Departamento de Ciências dos Materiais, Faculdade de Ciências e Tecnologia, Universidade Nova de Lisboa, Portugal and **Henrique Vazão de Almeida**, CENIMAT/I3N



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**PAGES:** c. 576

**AUDIENCE:** Academics and industry professionals in flexible and wearable devices in the fields of electronics, sensing, energy conversion and storage, and environmental remediation, Researchers interested in sustainable and low-cost methods to produce metal oxides

**BIC CODES:** TJ, THRH, TDCP, TQK, TGM

**THEMA CLASSIFICATION:**

THEMATJF; THEMATGM; THEMATH;  
THEMATDCP; THEMATGMP;  
THEMATQK; THEMATDPF

**Focuses on electronic applications integrated into substrates that are flexible, inexpensive, recyclable, abundant, and lightweight**

A Volume in the *Metal Oxides Series*

### KEY FEATURES

- Provides a comprehensive guide to flexibility in next-generation devices and applications
- Emphasizes green technologies and sustainability in production, including substrates
- Considers current and future problems for the continued development of flexible devices and applications

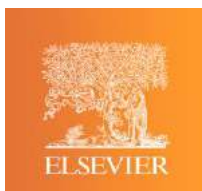
### DESCRIPTION

*Flexible devices based on metal oxides: Achievements and prospects* focuses on the integration of flexibility in electronic circuitry, sensing applications, energy conversion and storage, and environmental remediation. Flexibility in these applications offers great potential, especially in the areas of wearable sensors, solar cells, transistors, electronic skin, and human body monitoring. The book investigates flexible and wearable devices based on metal oxide nanostructures or thin films that are capable of bending, rolling, compression, and folding, all while maintaining their performance.

Metal oxide nanomaterials display exceptional properties that include mechanical stress tolerance, high optical transparency, high carrier mobilities, wide band gap, high dielectric constant, and superconductivity, amongst others. In some cases, they are also earth abundant, environmentally benign, cost-effective, chemically stable, and compatible with low-cost wet-chemical synthesis routes. The focus of the book is on wearables manufactured using sustainable manufacturing methods and integrated into substrates that are flexible, inexpensive, recyclable, abundant, and lightweight, including polymer, textile, cellulose and cork substrates.



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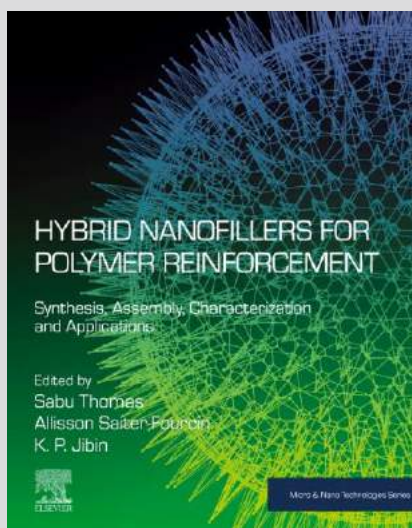
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# Hybrid Nanofillers for Polymer Reinforcement

## Synthesis, Assembly, Characterization, and Applications

Edited by : **Sabu Thomas**, International and Inter University Centre for Nanoscience and Nanotechnology, School of Energy Materials, and School of Nanoscience and Nanotechnology, Mahatma Gandhi University, Kottayam, Kerala, India; **Allisson Saiter-Fourcin**, Professor, Univ Rouen Normandie, INSA Rouen Normandie, CNRS, Groupe de Physique des Matériaux, Rouen, France and **K. P Jibin**, Senior Researcher, School of Chemical Sciences, Mahatma Gandhi University, India



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**DISCOUNT:** Reference

**FORMAT:** Paperback

**TRIM:** 7.50w x 9.25h

**PAGES:** c. 586

**AUDIENCE:** Academia: Researchers and advanced students across polymer science, nanotechnology, rubber technology, chemistry, sustainable materials, and materials engineering. Industry: Scientists, engineers, and R&D professionals with an interest in hybrid nanostructures or advanced nanomaterials for a range of industrial applications (energy storage, electronics, environmental, automotive & aerospace, construction, biomedical, etc.).

**BIC CODES:** TJ

**THEMA CLASSIFICATION:** THEMATJFD

**An innovative guide to the preparation of advanced hybrid nanostructures for a range of advanced applications**

A Volume in the *Micro and Nano Technologies Series*

### KEY FEATURES

- Provides synthesis methods, characterization techniques, and structure-property analysis for hybrid nanostructures
- Offers in-depth coverage that focuses on specific applications across energy storage, environment, automotive, aerospace, construction and biomedicine
- Includes the latest novel areas, such as elastomeric hybrid nano systems, hybrid ceramic polymer nanocomposites, and self-assembled structures

### DESCRIPTION

*Hybrid Nanofillers for Polymer Reinforcement: Synthesis, Assembly, Characterization, and Applications* provides a targeted approach to hybrid nanostructures, enabling the development of these advanced nanomaterials for specific applications. The book begins by reviewing the status of hybrid nanostructures, their current applications, and future opportunities. This is followed by chapters examining synthesis and characterization techniques, as well as interactions within nanohybrid systems. The second part of the book provides detailed chapters each highlighting a particular application area and discussing the preparation of various hybrid nano systems that can potentially be utilized in that area.

The last chapters turn towards notable state-of-the-art hybrid nanomaterials and their properties and applications. This book is a valuable resource for researchers and advanced students across polymer science, nanotechnology, rubber technology, chemistry, sustainable materials, and materials engineering, as well as scientists, engineers, and R&D professionals with an interest in hybrid nanostructures or advanced nanomaterials for a industrial application.



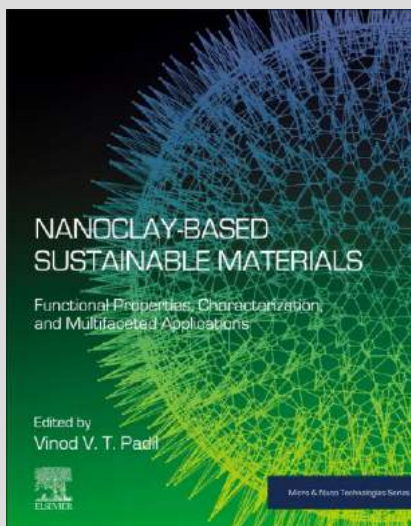
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# Nanoclay-Based Sustainable Materials

## Functional Properties, Characterization, and Multifaceted Applications

Edited by : **Vinod V. T. Padil**, Associate Professor, The Institute for Nanomaterials, Advanced Technologies, and Innovation, Technical University of Liberec, Czech Republic

**ISBN:** 9780443133909  
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**PAGES:** c. 567

**AUDIENCE:** Academic and industrial researchers working in the field of application of nanotechnology for sustainable development and global sustainability

**BIC CODES:** TJ, TGM, KCN, RN

**THEMA CLASSIFICATION:** THEMATJFD; THEMATGM; THEMAKCVG; THEMATQ

**Comprehensive reference on the functional properties and characterization of nanoclays and their applications on several fields, including pollution remediation, energy, and biomedicine**

A Volume in the *Micro and Nano Technologies Series*

### KEY FEATURES

- Features fundamentals and state-of-the-art developments in the field of nanoclays, providing an overview on their classification, preparation and properties
- Explores the deployment and application of nanoclays in water treatment, biomedical applications, energy storage and harvesting, and environmental remediation, among others
- Discusses advancements of nanoclays and present challenges and future possibilities for innovative applications

### DESCRIPTION

*Nanoclay-based Sustainable Materials: Functional Properties, Characterization, and Multifaceted Applications* provides a detailed overview of the preparation, processing, and application of earth-abundant nanoclay fillers. The book encompasses the critical applications of nanoclays, comprising emerging themes such as environmental bioremediation, energy harvesting and storage, bio-sensing (both medical and ecological), catalysis, antimicrobial, and biomedical applications, such as drug delivery, tissue engineering and wound healing, nanomedicine, and much more.

This book is an important reference source for all those who are working in the research and development sector and need to learn more about nanoclay-based materials for sustainable development.



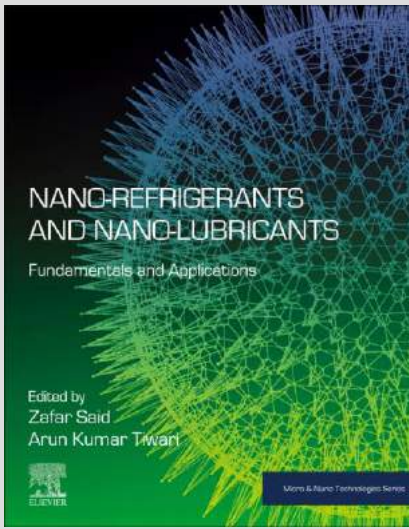
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# Nano-refrigerants and Nano-lubricants

## Fundamentals and Applications

Edited by : **Zafar Said**, Associate Professor, Department of Sustainable Renewable Energy Engineering, University of Sharjah, United Arab Emirates and **Arun Kumar Tiwari**, Professor, Mechanical Engineering Department, Institute of Engineering and Technology, Dr. A.P.J. Abdul Kalam Technical University, India

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**PAGES:** c. 288

**AUDIENCE:** Academic and industrial researchers and scientists involved in the research and development of micro- and nanofluidics, Industry practitioners in the field of nanotechnology and chemical engineering, R&D, engineers and manufacturing technical staff in the chemical industry

**BIC CODES:** TGM, TJ  
**THEMA CLASSIFICATION:** THEMATGM; THEMATJFD

**Provides a complete understanding of the fundamentals of synthesis, characterization, and influence of nanoparticles on the thermophysical properties of nanorefrigerants and nanolubricants**

A Volume in the *Micro and Nano Technologies Series*

### KEY FEATURES

- Summarizes preparation and characterization techniques for nano-refrigerants and nano-lubricants
- Examines a selection of nanoparticles based on variation in thermophysical properties and includes theoretical models and correlations for predicting their properties
- Features stability analysis of nano-refrigerants and nano-lubricants

### DESCRIPTION

*Nano-refrigerants and Nano-lubricants: Fundamentals and Applications* provides an overview of nano-refrigerants and nano-lubricants, their synthesis, characterization, and influence of nanoparticles on the thermophysical properties. The book also describes the theoretical modeling and correlations using artificial intelligence, along with the effect of all these parameters on potential applications. Future challenges and research directions are thoroughly addressed by authors.

Nano-refrigerants and Nano-lubricants are a novel class of nanofluids containing a mixture of nanoparticles, lubricant, and refrigerant, and because of their enhanced heat transfer properties, they have a broad potential range of residential and commercial applications.



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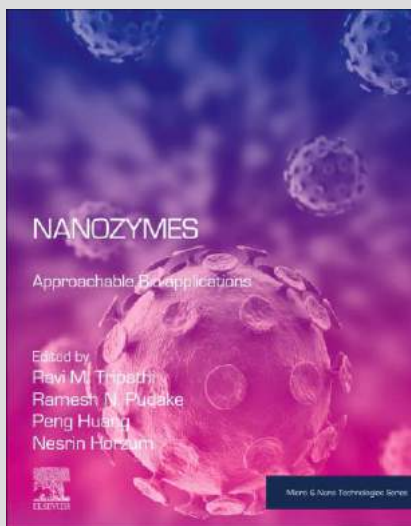


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# Nanozymes

## Approachable Bio-applications

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**AUDIENCE:** Researchers and scientists interested in the application of material science and nanotechnology in different fields, Professionals working on the development of enzyme-based products

**BIC CODES:** MQW, TCB, TGM, TJ

**THEMA CLASSIFICATION:**

THEMATCB; THEMATGM;

THEMAMQW; THEMATJFD

**Compiles information related to the fundamentals of nanozymes and their potential application in various industries**

A Volume in the *Micro and Nano Technologies Series*

### KEY FEATURES

- Highlights recent developments and future directions of nanozymes research for readers across multidisciplinary fields
- Features a broad range of applications of nanozymes, from environmental monitoring to therapeutic applications
- Includes numerous illustrations to help readers easily understand the role of nanozymes-based tools in different areas

### DESCRIPTION

*Nanozymes: Approachable Bio-applications* provides an in-depth overview of nanozymes, with a special focus on nanozymes synthesis and their various applications in biological sciences. The book starts with introductory chapters exploring the enzymatic mechanism of nanozymes and providing the concept of engineering to surface modification to achieve enhanced nanozymatic properties. Subsequent chapters focus on the application of nanozymes in many different fields, including biomedical science, agriculture, environmental science and more. This work is an important reference source for worldwide materials scientists and researchers interested on the recent developments, challenges, and future directions of nanozymes research.



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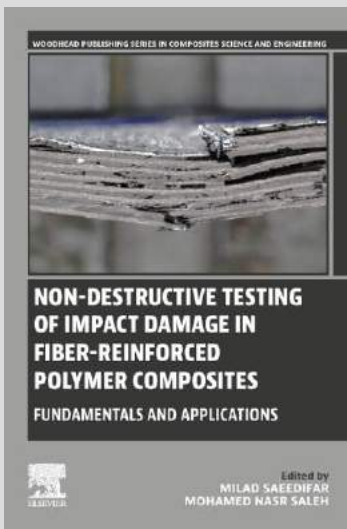


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# Non-destructive Testing of Impact Damage in Fiber-Reinforced Polymer Composites

## Fundamentals and Applications

Edited by : **Milad Saeedifar**, Assistant Professor, Faculty of New Technologies and Aerospace Engineering, Ministry of Science, Research, and Technology (SBU), Iran and **Mohamed Nasr Saleh**, Composites and Thermoplastics Lead, Technology Innovation Institute, Masdar City, Abu Dhabi, UAE

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**AUDIENCE:** Academic and industrial researchers in mechanical, aeronautical, electronic and measurement engineering, materials scientists, and civil engineers and all those who work with NDT and evaluation techniques in composite structures, PhD students, and postgraduate students

**BIC CODES:** TDCP, TDCQ  
**THEMA CLASSIFICATION:** THEMATDPF; THEMATGM; THEMATGMP

**Presents fundamentals, applications, and current state-of-the-art of different relatively new non-destructive testing techniques**

A Volume in the *Woodhead Publishing Series in Composites Science and Engineering Series*

### KEY FEATURES

- Insights into the diverse damage levels in composite materials resulting from low-velocity impact, ranging from micro matrix cracks to severe delamination and fiber breakage
- Covers a broad range of NDT techniques, including recently developed NDT techniques, suitable for detecting impact damage in composite materials
- Serves as a valuable reference for both academia and industry, providing comprehensive coverage of fundamental principles, practical insights, applications, case studies, current research trends, and future prospects for each NDT technique

### DESCRIPTION

*Non-destructive Testing of Impact Damage in Fiber-reinforced Polymer Composites: Fundamentals and Applications* provides detailed knowledge on the fundamentals and applications of frequently used nondestructive testing (NDT) techniques utilized to assess impact damage in composite structures.

This book starts with an introduction to impact damage in composite structures, each subsequent chapter focuses on evaluating damage using specific NDT methods. Chapters 2–4 concentrate on vision-based NDT methods such as visual inspection, digital image correlation, and digital shearography. Following this, Chapters 5–6 delve into ultrasound-based methods, including acoustic emission and phased-array ultrasonic inspection. Radiation-based methods, micro-CT, and thermography are discussed in Chapters 7 and 8, while Chapters 9 and 10 elucidate microwave inspection and electrical impedance tomography.

This book is a useful reference for both academia and industry and covers the fundamentals, practical tips, case studies, and applications, as well as current research trends and future possibilities, for each technique.



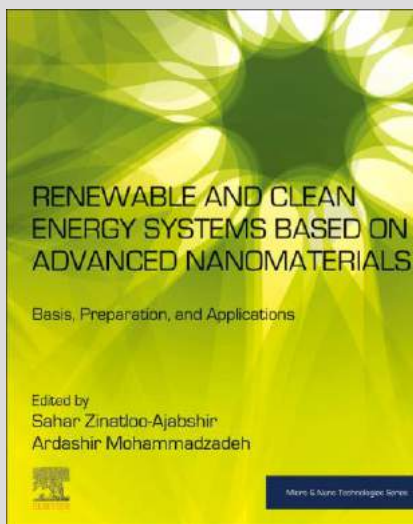
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# Renewable and Clean Energy Systems Based on Advanced Nanomaterials

## Basis, Preparation, and Applications

Edited by : **Sahar Zinatloo-Ajabshir**, Associate Professor of Nanoscience and Nanotechnology, Department of Chemical Engineering, University of Bonab, Iran and **Ardashir Mohammadzadeh**, Professor, Multidisciplinary Center for Infrastructure Engineering, Shenyang University of Technology, Shenyang, China

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**PAGES:** c. 384  
**AUDIENCE:** Materials scientists, engineers, R&D professionals, and those working in the green energy sector wanting to learn more about the applications of nanomaterials in renewable and clean energy systems  
**BIC CODES:** KCN, TGM, TJ, RN  
**THEMA CLASSIFICATION:** THEMAKCVG; THEMATQ; THEMATGM; THEMATJFD

**Provides a comprehensive overview of preparation methods and applications of advanced nanomaterials in renewable and clean energy systems**

A Volume in the *Micro and Nano Technologies Series*

### KEY FEATURES

- Features recent advances on nanomaterials preparation methods and their applications in photovoltaic technology
- Discusses sustainable strategies for producing large-scale nanomaterials, focusing on preparation techniques that are cost-effective and eco-friendly
- Reviews the efficiency of nanomaterials used in solar energy storage and conversion

### DESCRIPTION

*Renewable and Clean Energy Systems Based on Advanced Nanomaterials: Basis, Preparation and Applications* describes the fundamental aspects of a diverse range of nanomaterials used in the fields of renewable and clean energy. Various methods of preparing several different nanomaterials for green energy systems, such as advanced nanomaterials for solar cells, mixed metal oxide-based nanomaterials for hydrogen storage, and active nanomaterials for Li ion batteries are presented along with their advantages, disadvantages, and applications. Chapters also discuss novel methods of power analysis, frequency regulation methods, practical applications of solar panels, economic efficiency of solar energy, solar physics, and much more.

This is a valuable resource on the basic science, preparation methods, and practical applications of advanced nanomaterials for green energy systems.



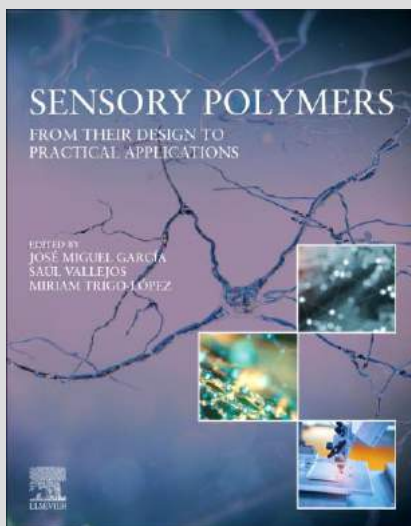
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# Sensory Polymers

## From their Design to Practical Applications

Edited by : **José Miguel García**, Full Professor, Chemistry Department, University of Burgos, Spain; **Saúl Vallejos**, Posdoctoral Researcher, Chemistry Department, University of Burgos, Spain and **Miriam Trigo-López**, Posdoctoral Researcher, Chemistry Department, University of Burgos, Spain

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**AUDIENCE:** Academic and industrial researchers in the fields of polymers, materials science or chemistry, Advanced undergraduate and graduate students interested on materials science for sensing applications, polymer science, supramolecular chemistry, and chemical sensory systems.

**BIC CODES:** TDCP, TGM

**THEMA CLASSIFICATION:** THEMATDCP; THEMATGMP; THEMATDPF; THEMATGM

**Discusses the foundation and state of the art of sensory polymers, including their classification, production methods, and research trends and challenges**

### KEY FEATURES

- Discusses the foundation of sensory polymers, from material design to development and production
- Explores state-of-the-art applications in environmental control, biomedicine, sensing, the chemical industry, and food science
- Provides perspectives and future applications of polymer chemosensors

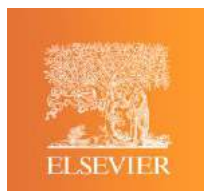
### DESCRIPTION

*Sensory Polymers: From their Design to Practical Applications* discusses recent developments in the field of sensory polymers and showcases the potential applications of these materials in food control and security, civil security, the biomedical field, environmental control and remediation, industrial control of chemicals, and more.

Written by worldwide experts in the field, chapters provide in-depth knowledge on several different polymer sensors and their response to different stimuli, which makes this book a valuable resource for researchers and advanced students in polymer science, materials science, and chemistry, as well as those interested on sensing applications and chemical sensory systems, including industry R&D.



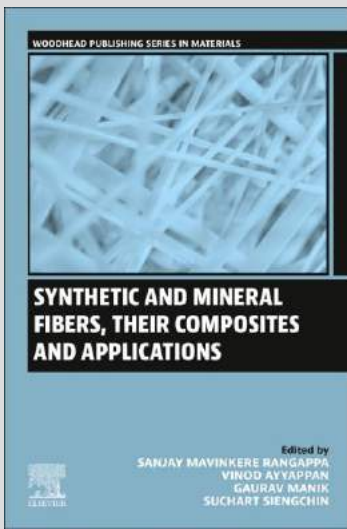
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# Synthetic and Mineral Fibers, Their Composites and Applications

Edited by : **Sanjay Mavinkere Rangappa**, Senior Research Scientist and Associate Professor, King Mongkut's University of Technology North Bangkok, Thailand; **Vinod Ayyappan**, Research fellow, Department of Materials and Production Engineering (MPE), King Mongkut's University of Technology North Bangkok. The Sirindhorn International Thai – German Graduate School of Engineering (TGGS), North Bangkok, Thailand; **Gaurav Manik**, Head of Department, Department of Polymer and Process Engineering, Indian Institute of Technology Roorkee (IITR), Saharanpur Campus, Saharanpur, India and **Suchart Siengchin**, President of King Mongkut's University of Technology North Bangkok

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**AUDIENCE:** Academic and industrial researchers, materials scientists and engineers working in the development of polymer composite materials reinforced with synthetic and mineral fibres for applications in aerospace, medical, defense, automotive and construction sectors, Postgraduate students in above disciplines.  
**BIC CODES:** TDCQ, TDCP  
**THEMA CLASSIFICATION:** THEMATDPF; THEMATGM; THEMATGMP

**Covers recent advances in mineral and synthetic fibers, and their related composites and new technologies**

A Volume in the *Woodhead Publishing in Materials Series*

## KEY FEATURES

- Covers both synthetic and mineral fibers, their composites, and applications
- Highlights recent advances in mineral fiber- reinforced polymer composites, modern processing methods, and functionalization
- Provides updates on hybrid (combination of both synthetic and mineral fiber) composite technologies
- Features applications in aerospace, medical, defense and the construction industries

## DESCRIPTION

*Synthetic and Mineral Fibers, Their Composites and Applications* reviews recent advances and technological developments in this important research field. The book provides an up-to-date record of significant research findings and observations along with an update on current and future potential applications. The book provides vital information on recent advancements, modern processing technologies, manufacturing, and applications and summarizes lifecycle and performance parameters for these types of composites.

This book will be a valuable reference resource for academic and industrial researchers and materials scientists and engineers working in the development of polymer composite materials reinforced with synthetic and mineral fibers for applications in aerospace, medical, defense, automotive and construction sectors.



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