

Chemistry & Material Science

September to December 2022

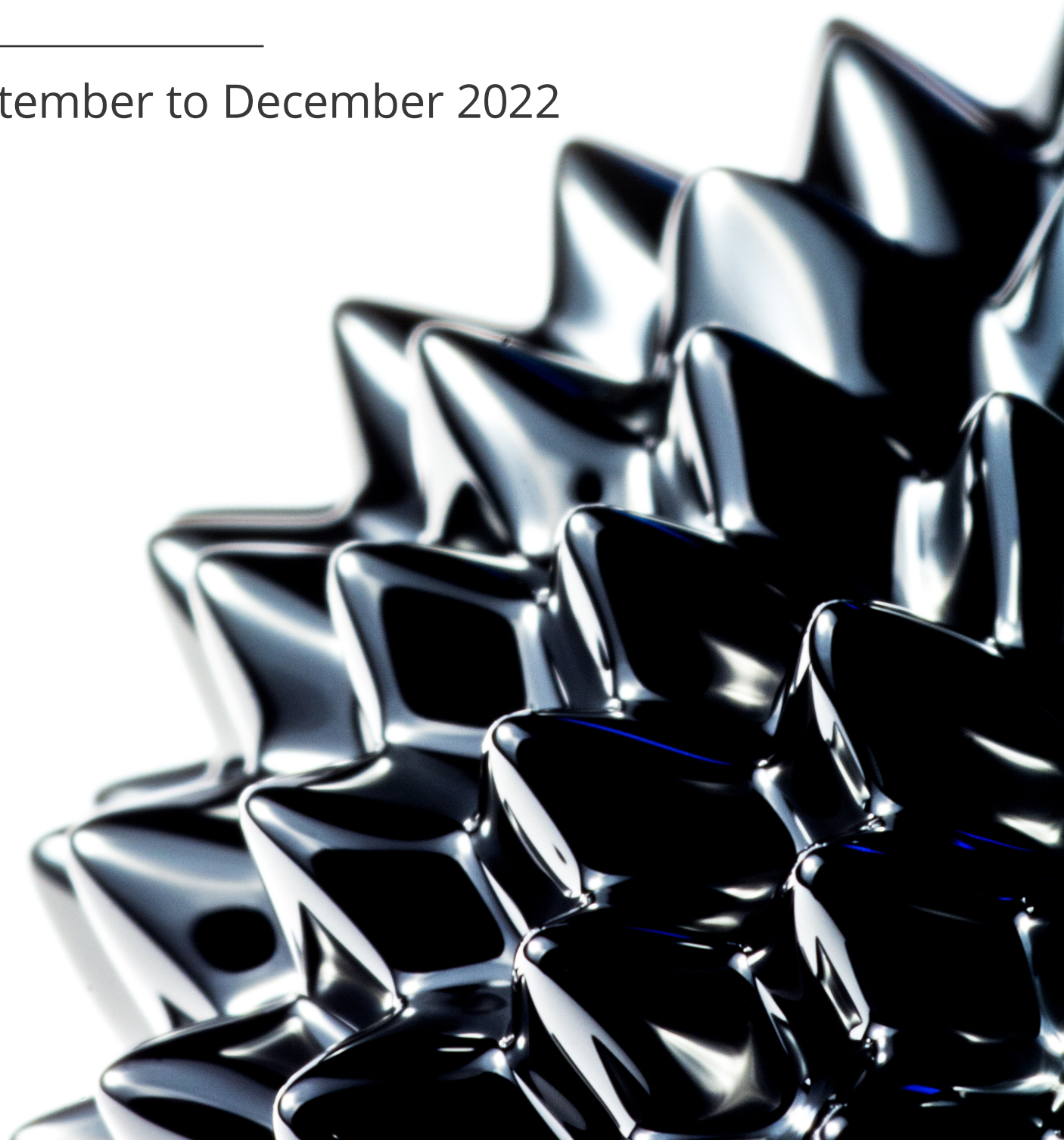


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Spreadsheet Applications in Chemistry Using Microsoft Excel : Data Processing and Visualization (2nd Edition)

Aoife Morrin, Dermot Diamond

9781119182979

Pub Date: 10/11/22

\$75.95 USD

192 pages

Paperback

Science / Chemistry

Summary: SPREADSHEET APPLICATIONS IN CHEMISTRY USING MICROSOFT® EXCEL®

Find step-by-step tutorials on scientific data processing in the latest versions of Microsoft® Excel®

The Second Edition of *Spreadsheet Applications in Chemistry Using Microsoft® Excel®* delivers a comprehensive and up-to-date exploration of the application of scientific data processing in Microsoft® Excel®. Written to incorporate the latest updates and changes found in Excel® 2021, as well as later versions, this practical textbook is tutorial-focused and offers simple, step-by-step instructions for scientific data processing tasks commonly used by undergraduate students.

Readers will also benefit from an online repository of experimental datasets that can be used to work through the tutorials to gain familiarity with data processing and



Burnt Human Remains : Recovery, Analysis, and Interpretation

Sarah Ellingham, Joe Adserias-Garriga, Sara C.

Zapico, Douglas H. Ubelaker

9781119682608

Pub Date: 10/24/22

\$185.00 USD

496 pages

Hardcover

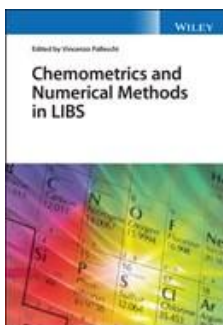
Medical / Forensic Medicine

Series: Forensic Science in Focus

Summary: An all-encompassing reference and guide designed for professionals involved in the forensic analysis of burnt remains

Burnt Human Remains: Recovery, Analysis and Interpretation presents an in-depth multidisciplinary approach to the detection, recovery, analysis, and identification of thermally altered remains. Bridging the gap between research and practice, this invaluable one-stop reference provides detailed coverage of analytical techniques in forensic medicine and pathology, forensic anthropology, forensic odontology, and forensic chemistry and forensic biology. Contributions from a panel of expert authors review the newest findings in forensics research and discuss their applicability to forensic case work.

Opening with a historical overview of the discipline, the book covers the search and recovery aspects of burnt human remains, medico-legal investigations, determination of



Chemometrics and Numerical Methods in LIBS

Vincenzo Palleschi

9781119759584

Pub Date: 11/14/22

\$165.00 USD

368 pages

Hardcover

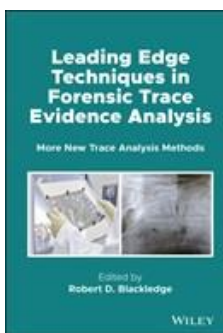
Science / Chemistry / Analytic

Summary: Chemometrics and Numerical Methods in LIBS

A practical guide to the application of chemometric methods to solve qualitative and quantitative problems in LIBS analyses

Chemometrics and Numerical Methods in LIBS, delivers an authoritative and practical exploration of the use of advanced chemometric methods to laser-induced breakdown spectroscopy (LIBS) cases. The book discusses the fundamentals of chemometrics before moving on to solutions that can be applied to data analysis methods. It is a concise guide designed to help readers at all levels of knowledge solve commonly encountered problems in the field.

The book includes three sections: LIBS information simplification, LIBS classification, and quantitative analysis by LIBS. Each section of the book is divided into a description



Leading Edge Techniques in Forensic Trace Evidence Analysis : More New Trace Analysis Methods

Robert D. Blackledge
9781119591610
Pub Date: 11/1/22
\$150.00 USD
368 pages
Hardcover
Science / Chemistry / Analytic

Summary: Leading Edge Techniques in Forensic Trace Evidence Analysis

In-depth exploration of the latest methodologies, tools, and techniques for analyzing trace evidence

In *Leading Edge Techniques in Forensic Trace Evidence Analysis*, distinguished and highly qualified contributors cover the significant advances in methodology and instruments that are now being used to analyze trace evidence in forensic laboratories, including new techniques used to determine authenticity of objects and artifacts (such as Combined Raman/LIBS Microscopy) and those used to analyze surface treatments (such as py-GC-PARCI-MS). The work also covers new evidence types, such as surface-modified fibers, microscopic particles, and shimmer, and provides detailed explanations and practical examples of all of the aforementioned topics.



A Practical Guide to Scanning Electron Microscopy in the Biosciences

Gerhard Wanner
9783527350490
Pub Date: 12/5/22
\$150.00 USD
400 pages
Hardcover
Science / Microscopes & Microscopy

Summary: A concise and authoritative introduction to scanning electron microscopy in the biological sciences

In *Scanning Electron Microscopy in the Biosciences: A Practical Guide* distinguished electron microscopist Gerhard Wanner delivers a practical handbook for biological scientists working with microbial, plant, and animal cells and tissues, enabling them to successfully apply scanning electron microscopy (SEM) to their object of study.

The book begins with an introduction to the principles of electron microscopy and the operation of electron microscopes before moving on to describe the preparation and mounting of specimens. It also explores the process of recoding images and their subsequent analysis, along with a wide range of advanced microscopy techniques, including cryo-SEM, tomography, FIB-SEM, and stereo-SEM.

Scanning Electron Microscopy in the Biosciences contains



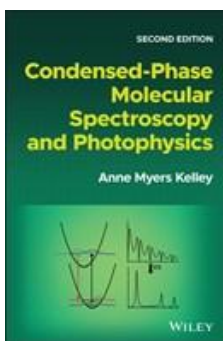
Cyber Investigations

André Årnes
9781119582311
Pub Date: 12/19/22
\$100.00 USD
256 pages
Paperback
Medical / Forensic Medicine

Summary: A classroom tested introduction to cyber investigations with real-life examples included

Cyber Investigations provides an introduction to the topic, an overview of the investigation process applied to cyber investigations, a review of legal aspects of cyber investigations, a review of Internet forensics and open-source intelligence, a research-based chapter on anonymization, and a deep-dive on multimedia forensics. The content is structured in a consistent manner, with an emphasis on accessibility for students of computer science, information security, law enforcement, and military disciplines.

To aid in reader comprehension and seamless assimilation of the material, real-life examples and student exercises are provided throughout, as well as an Educational Guide for both teachers and students. The material has been classroom-tested and is a perfect fit for most learning



Condensed-Phase Molecular Spectroscopy and Photophysics (2nd Edition)

Anne Myers Kelley

9781119829263

Pub Date: 10/11/22

\$195.00 USD

432 pages

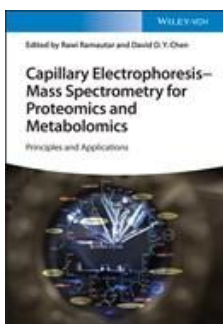
Hardcover

Science / Spectroscopy & Spectrum Analysis

Summary: An introduction to one of the fundamental tools in chemical research—spectroscopy and photophysics in condensed-phase and extended systems

Condensed-Phase Molecular Spectroscopy and Photophysics comprehensively covers radiation-matter interactions for molecules in condensed phases along with metallic and semiconductor nanostructures, examining optical processes in extended systems such as metals, semiconductors, and conducting polymers and addressing the unique optical properties of nanoscale systems.

The text differs from others through its emphasis on the molecule-environment interactions that strongly influence spectra in condensed phases, including spectroscopy and photophysics of molecular aggregates, molecular solids, and metals and semiconductors, as well as more modern topics such as two-dimensional and single-molecule spectroscopy.



Capillary Electrophoresis Mass Spectrometry for Proteomics and Metabolomics : Principles and Applications

Rawi Ramautar, David D. Y. Chen

9783527349210

Pub Date: 12/19/22

\$155.00 USD

400 pages

Hardcover

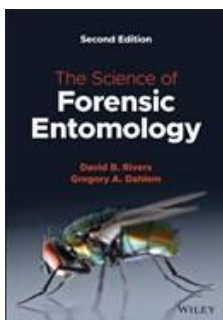
Science / Life Sciences / Biochemistry

Summary: A powerful and essential resource for researchers with an interest in CE-MS

In *Capillary Electrophoresis Mass Spectrometry for Proteomics and Metabolomics: Principles and Applications*, a team of distinguished researchers delivers a comprehensive overview of bioanalytical capillary electrophoresis coupled to mass spectrometry (CE-MS). The book explains foundational principles, technology as well the strategies and techniques used in data analysis for metabolic and proteomic studies. It also provides a global overview of recent developments and advances for improving CE-MS sensitivity and reproducibility.

An essential handbook for everyone performing metabolomic and proteomic analysis, the information provided here will assist researchers in tapping into the full potential of this technique to answer biological and clinical questions.

Readers will also find:



The Science of Forensic Entomology (2nd Edition)

David B. Rivers, Gregory A. Dahlem

9781119640660

Pub Date: 1/17/23

\$100.00 USD

544 pages

Paperback

Medical / Forensic Medicine

Summary: A thoroughly updated introduction to forensic entomology

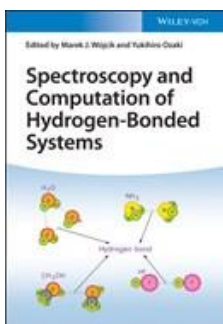
In the newly revised second edition of *The Science of Forensic Entomology*, two distinguished entomologists deliver a foundational and practical resource that equips students and professionals to be able to understand and resolve questions concerning the presence of specific insects at crime scenes. Each chapter in the book addresses a topic that delves into the underlying biological principles and concepts relevant to the insect biology that grounds the use of insects in legal and investigational contexts.

In addition to non-traditional topics, including the biology of maggot masses, temperature tolerances of necrophagous insects, chemical attraction and communication, reproductive strategies of necrophagous flies, and archaeoentomology, the book also offers readers:

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**Modern Forensic Tools and Devices
: Emerging Trends in Crime Investigation**

Hussain
97811119760412
Pub Date: 5/16/23
\$225.00 USD
500 pages
Hardcover
Medical / Forensic Medicine



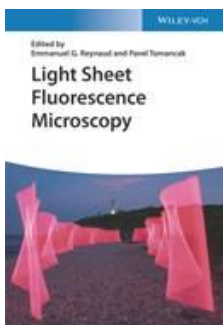
Spectroscopy and Computation of Hydrogen-Bonded Systems

Edited by Marek J. Wójcik and Yukihiro Ozaki
Marek J. Wójcik, Yukihiro Ozaki
9783527349722
Pub Date: 1/17/23
\$205.00 USD
576 pages
Hardcover
Science / Spectroscopy & Spectrum Analysis

Summary: Comprehensive spectroscopic view of the state-of the-art in theoretical and experimental hydrogen bonding research

Spectroscopy and Computation of Hydrogen-Bonded Systems includes diverse research efforts spanning the frontiers of hydrogen bonding as revealed through state-of-the-art spectroscopic and computational methods, covering a broad range of experimental and theoretical methodologies used to investigate and understand hydrogen bonding. The work explores the key quantitative relationships between fundamental vibrational frequencies and hydrogen-bond length/strength and provides an extensive reference for the advancement of scientific knowledge on hydrogen-bonded systems.

Theoretical models of vibrational landscapes in hydrogen-bonded systems, as well as kindred studies designed to interpret intricate spectral features in gaseous complexes



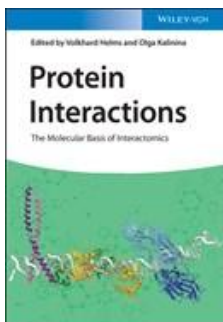
Light Sheet Fluorescence Microscopy

Edited by Emmanuel G. Reynaud and Pavel Tomancak
Emmanuel G. Reynaud, Pavel Tomancak
9783527341351
Pub Date: 3/13/23
\$110.75 USD
300 pages
Paperback
Science / Microscopes & Microscopy

Summary: An indispensable guide to a novel, revolutionary fluorescence microscopy technique!

Light sheet-based fluorescence microscopy has revolutionized microscopy, since it allows scientists to perform experiments in an entirely different manner and to record data that had not been accessible before. With contributions from noted experts in the fields of physics, biology, and computer science, *Light Sheet Fluorescence Microscopy* is a unique guide that offers a practical approach to the subject, including information on the basics of light sheet fluorescence microscopy, instrumentation, applications, sample preparation, and data analysis.

Comprehensive in scope, the book is filled with the cutting-edge methods as well as valuable insider tips. Grounded in real-world applications, the book includes chapters from major manufacturers that explores their recent systems and developments. In ad



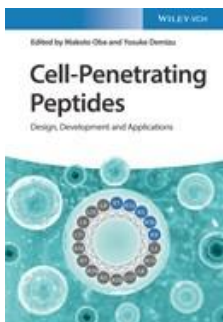
Protein Interactions : The Molecular Basis of Interactomics

Volkhard Helms, Olga Kalinina
9783527348640
Pub Date: 1/24/23
\$185.00 USD
448 pages
Hardcover
Science / Life Sciences / Biochemistry

Summary: A fundamental guide to the burgeoning field of protein interactions

From enzymes to transcription factors to cell membrane receptors, proteins are at the heart of biological cell function. Virtually all cellular processes are governed by their interactions, with one another, with cell bodies, with DNA, or with small molecules. The systematic study of these interactions is called Interactomics, and research within this new field promises to shape the future of molecular cell biology.

Protein Interactions goes beyond any existing guide to protein interactions, presenting the first truly comprehensive overview of the field. Edited by two leading scholars in the field of protein bioinformatics, this book covers all known categories of protein interaction, stable as well as transient, as well as the effect of mutations and post-translational modifications on the interaction behavior.



Cell-Penetrating Peptides : Design, Development and Applications

Makoto Oba, Yosuke Demizu
9783527350117
Pub Date: 1/30/23
\$185.00 USD
416 pages
Hardcover
Science / Life Sciences / Biochemistry

Summary: The definitive reference on the rational design of cell-penetrating peptides enables readers to develop tailor-made peptides for their specific needs.

In recent years, cell-penetrating peptides (CPPs) have become valuable tools for the cellular delivery of proteins, nucleic acids, and drugs. These small peptide sequences can be artificially designed and synthesized with custom-made characteristics to mediate the efficient and non-toxic transport of biomolecules, drugs, or nanoparticles into the cell.

Cell-Penetrating Peptides: Design, Development, and Applications provides an up-to-date account of the development and use of CPPs for delivering membrane-impermeable bioactive molecules into cells. Bringing together contributions from leading researchers from around the world, this comprehensive volume describes the characteristics and mechanisms of CPPs as well as their

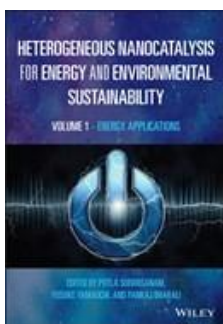
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Advanced Chemical Biology : Chemical Dissection and Reprogramming of Biological Systems

Howard C. Hang, Matthew R. Pratt, Jennifer A. Prescher
9783527347339
Pub Date: 2/6/23
\$135.00 USD
704 pages
Hardcover
Science / Life Sciences / Biochemistry

Summary: This novel textbook for advanced undergraduate and graduate students is organized around the central dogma of life, progressing from genes to proteins and higher-order cellular structures. Core application areas such as imaging, chemical genetics, activity-based protein profiling, and natural product discovery and biosynthesis are covered in the core section of the book. Additional advanced topics and applications in, e. g., microbiology, developmental biology, and neurobiology are covered in the supplemental section. Every chapter is homogeneous in style and layout, consisting of a short historical introduction followed by a description of the underlying concepts and a selection of recent examples how the concept has been turned into practice.

With its broad scope and focus on turning ideas into applications, this textbook will serve as a starting point for anyone entering the fi...



Heterogeneous Nanocatalysis for Energy and Environmental Sustainability, Volume 1 : Energy Applications

Putla Sudarsanam, Yusuke Yamauchi, Pankaj Bharali

9781119771999

Pub Date: 11/30/22

\$185.00 USD

384 pages

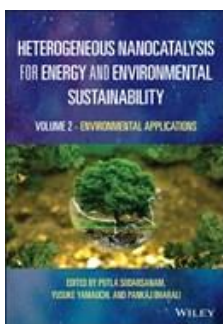
Hardcover

Technology & Engineering / Materials Science

Summary: An essential companion for catalysis researchers and professionals studying economically viable and eco-friendly catalytic strategies for energy conversion

In the two-volume *Heterogeneous Nanocatalysis for Energy and Environmental Sustainability*, a team of distinguished researchers deliver a comprehensive discussion of fundamental concepts in, and practical applications of, heterogeneous nanocatalysis for alternative energy production, biomass conversion, solar energy, green fuels, H₂ production, fuel cells, electrochemical energy conversion processes, CO₂ conversion, clean water, and environmental protection.

The volumes cover the design and catalytic performance of various nanocatalysts, including nanosized metals and metal oxides, supported metal nanoparticles, inverse oxide-metal nanocatalysts, core-shell nanocatalysts, nanosized zeolites,



Heterogeneous Nanocatalysis for Energy and Environmental Sustainability, Volume 2 : Environmental Applications

Putla Sudarsanam, Yusuke Yamauchi, Pankaj Bharali

9781119772026

Pub Date: 11/30/22

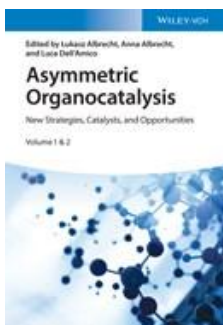
\$185.00 USD

352 pages

Hardcover

Technology & Engineering / Materials Science

Summary: Explore the environmental applications of heterogeneous nanocatalysis in the field of alternative energy production In Volume 2: Environmental Applications of Heterogeneous Nanocatalysis for Energy and Environmental Sustainability, a team of distinguished researchers discusses the foundational concepts and practical applications of heterogeneous nanocatalysis for alternative energy production. Volume 2 focuses on the purification of auto exhaust pollutants and volatile organic compounds, as well as CO₂ conversion and wastewater treatment over a range of nano-sized catalysts.



Asymmetric Organocatalysis : New Strategies, Catalysts, and Opportunities, 2 Volumes

Lukasz Albrecht, Anna Albrecht, Luca Dell'Amico

9783527349074

Pub Date: 1/4/23

\$400.00 USD

896 pages

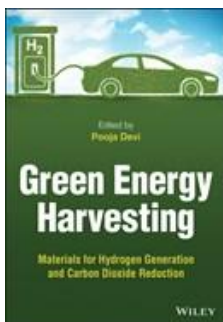
Hardcover

Technology & Engineering / Materials Science

Summary: Comprehensive resource on the latest and most important developments in the highly vivid field of asymmetric organocatalysis

The book provides a comprehensive overview of the most important advancements in the field of asymmetric organocatalysis that have occurred within the last decade. It presents valuable examples of newly developed synthetic methodologies based on various organocatalytic activation modes.

Special emphasis is given to strategies where organocatalysis is expanding its potential by pushing the boundaries and founding new synergistic interactions with other fields of synthetic chemistry, such as metal catalysis, photocatalysis, and biocatalysis. The application of different concepts (such as vinylogy, dearomatization, or cascade reactivity), resulting in the development of new functionalization strategies, is also discussed. Sample topics covered within the book i



Green Energy Harvesting : Materials for Hydrogen Generation and Carbon Dioxide Reduction

Pooja Devi

9781119776055

Pub Date: 1/10/23

\$170.00 USD

316 pages

Hardcover

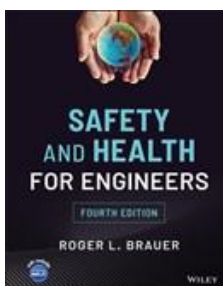
Technology & Engineering / Materials Science

Summary: Comprehensive resource summarizing current approaches to generating hydrogen from water and reducing CO₂ into various hydrocarbons

Green Energy Harvesting: Materials for Hydrogen Generation and Carbon Dioxide Reduction provides an in-depth treatment of the subject by exploring the fundamentals required for the selection of the materials, their synthesis methods, and possible ways to modify them for higher efficiency and enhanced stability. The prospects of adopting these sustainable solutions at a commercial level are summarized. Special emphasis is given to the figure-of-merits for currently developed systems for hydrogen generation and CO₂ reduction and to an assessment of available materials in terms of efficacy and efficiency.

Green Energy Harvesting also includes information on:

- Renewable energy in general, including the role of



Safety and Health for Engineers (4th Edition)

Roger L. Brauer

9781119802297

Pub Date: 9/27/22

\$149.95 USD

672 pages

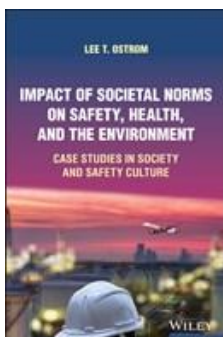
Hardcover

Technology & Engineering / Industrial Health & Safety

Summary: SAFETY AND HEALTH FOR ENGINEERS

A comprehensive resource for making products, facilities, processes, and operations safe for workers, users, and the public

Ensuring the health and safety of individuals in the workplace is vital on an interpersonal level but is also crucial to limiting the liability of companies in the event of an onsite injury. The Bureau of Labor Statistics reported over 4,700 fatal work injuries in the United States in 2020, most frequently in transportation-related incidents. The same year, approximately 2.7 million workplace injuries and illnesses were reported by private industry employers. According to the National Safety Council, the cost in lost wages, productivity, medical and administrative costs is close to 1.2 trillion dollars in the US alone. It is imperative—by law and ethics—for engineers and safety and health professionals to drive down these stati



Impact of Societal Norms on Safety, Health, and the Environment : Case Studies in Society and Safety Culture

Lee T. Ostrom

9781119830023

Pub Date: 10/18/22

\$165.00 USD

672 pages

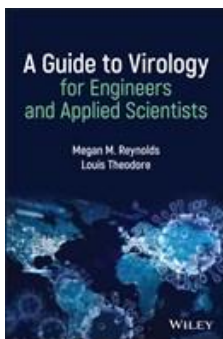
Hardcover

Technology & Engineering / Industrial Health & Safety

Summary: A compelling exploration of how social norms and commercial culture impact the safety of organizational operations

In *Impact of Societal Norms on Safety, Health, and the Environment: Case Studies in Society and Safety Culture*, distinguished engineer Dr. Lee T. Ostrom delivers an authoritative treatment of the cultural, social, and human factors of safety cultures and issues in the workplace. The book offers readers compelling discussions of how those factors impact organizational operations and what contributes to making those impacts beneficial or detrimental.

The author provides numerous real-world case studies from North America and Europe that are relevant to a global audience, highlighting the central message of the book: that an organization that views its safety culture as unimportant could be setting itself up for a significant workplace accident



A Guide to Virology for Engineers and Applied Scientists : Epidemiology, Emergency Management, and Optimization

Megan M. Reynolds, Louis Theodore

9781119853138

Pub Date: 12/13/22

\$145.00 USD

368 pages

Hardcover

Technology & Engineering / Industrial Health & Safety

Summary: A hands-on guide covering the fundamentals of virology written from an engineering perspective

In *A Guide to Virology for Engineers and Applied Scientists: Epidemiology, Emergency Management, and Optimization*, a team of distinguished researchers delivers a robust and accessible treatment of virology from an engineering perspective. The book synthesizes a great deal of general information on viruses—including coronaviruses—in a single volume. It provides critical context that engineers and applied scientists can use to evaluate and manage viruses encountered in the environment. The fundamental principles of virology are explored with calculation details for health and hazard risk assessments. Each chapter combines numerous illustrative examples and sample problems ideal for advanced courses in environmental health and safety, pharmaceuticals, and environmental science and engineer...

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Human and Ecological Risk Assessment : Theory and Practice, Set (2nd Edition)

Dennis J. Paustenbach

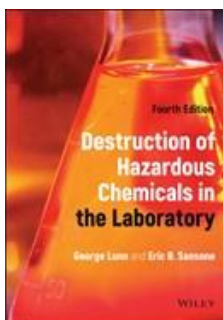
9781119551102

Pub Date: 12/20/22

\$416.00 USD

Hardcover

Technology & Engineering / Industrial Health & Safety



Destruction of Hazardous Chemicals in the Laboratory (4th Edition)

George Lunn, Eric B. Sansone

9781119848806

Pub Date: 12/20/22

\$185.00 USD

640 pages

Hardcover

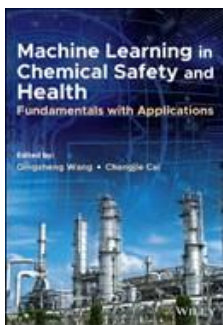
Science / Chemistry / Industrial & Technical

Summary: Single volume reference providing all necessary procedural information for the destruction of a wide variety of hazardous chemicals

Destruction of Hazardous Chemicals in the Laboratory is a practical reference that describes procedures for the destruction of a comprehensive list of hazardous chemicals and provides general methods for the destruction of hazardous chemicals in the laboratory without the need for exotic reagents and equipment.

Unlike most other sources on this subject, detailed reaction parameters are provided to readers. These details will help the reader decide if a procedure will be appropriate. To further aid in reader comprehension, numerous tables throughout the book allow for ready comparison of procedures.

Destruction of Hazardous Chemicals in the Laboratory also



Machine Learning in Chemical Safety and Health : Fundamentals with Applications

Qingsheng Wang, Changjie Cai

9781119817482

Pub Date: 2/21/23

\$165.00 USD

320 pages

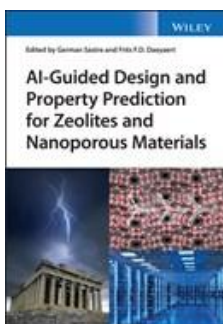
Hardcover

Technology & Engineering / Industrial Health & Safety

Summary: Introduces Machine Learning Techniques and Tools and Provides Guidance on How to Implement Machine Learning Into Chemical Safety and Health-related Model Development

There is a growing interest in the application of machine learning algorithms in chemical safety and health-related model development, with applications in areas including property and toxicity prediction, consequence prediction, and fault detection. This book is the first to review the current status of machine learning implementation in chemical safety and health research and to provide guidance for implementing machine learning techniques and algorithms into chemical safety and health research.

Written by an international team of authors and edited by renowned experts in the areas of process safety and occupational and environmental health, sample topics covered within the work include:



AI-Guided Design and Property Prediction for Zeolites and Nanoporous Materials

German Sastre, Watcharop Chaikittisilp

9781119819752

Pub Date: 2/28/23

\$215.00 USD

456 pages

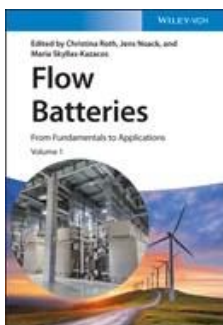
Hardcover

Science / Chemistry / Physical & Theoretical

Summary: A cohesive and insightful compilation of resources explaining the latest discoveries and methods in the field of nanoporous materials

In *Artificial Intelligence for Zeolites and Nanoporous Materials: Design, Synthesis and Properties Prediction* a team of distinguished researchers delivers a robust compilation of the latest knowledge and most recent developments in computational chemistry, synthetic chemistry, and artificial intelligence as it applies to zeolites, porous molecular materials, covalent organic frameworks and metal-organic frameworks. The book presents a common language that unifies these fields of research and advances the discovery of new nanoporous materials.

The editors have included resources that describe strategies to synthesize new nanoporous materials, construct databases of materials, structure directing agents, and synthesis conditions, and explain computati



Flow Batteries, 3 Volume Set : From Fundamentals to Applications

Christina Roth, Jens Noack, Maria Skyllas-Kazacos

9783527349227

Pub Date: 2/6/23

\$480.00 USD

1244 pages

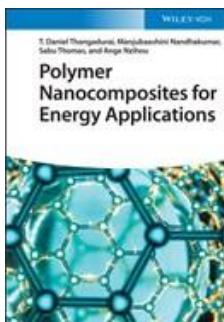
Hardcover

Technology & Engineering / Power Resources / Electrical

Summary: The premier reference on Redox Flow Battery technology for large-scale, high-performance, and sustainable energy storage and production

From basics to commercial applications, *Flow Batteries* covers the main aspects and recent developments of (Redox) Flow Batteries (FBs or RFBs), encompassing the electrochemical fundamentals, the used materials, and their characterization. Edited by a team of leading experts, including the "founding mother of flow battery technology" Maria Skyllas-Kazacos, key topics covered in *Flow Batteries* include:

- FB computational modeling and simulation, including quantum mechanical considerations, cell, stack, and system modeling, techno-economics, and grid behavior
- The mature vanadium FB variant as well as the new and emerging FBs using different chemistries and how they will change the field



Polymer Nanocomposites for Energy Applications

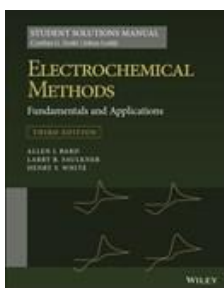
T. Daniel Thangadurai, N. Manjubaashini, Sabu Thomas, Ange Nzihou
9783527350483
Pub Date: 11/14/22
\$167.89 USD
272 pages
Hardcover
Technology & Engineering / Power Resources / Electrical

Summary: Polymer Nanocomposites for Energy Applications

Explore the science of polymer nanocomposites and their practical use in energy applications

In Polymer Nanocomposites for Energy Applications, a team of distinguished researchers delivers a comprehensive review of the synthesis and characterization of polymer nanocomposites, as well as their applications in the field of energy. Succinct and insightful, the book explores the storage of electrical, magnetic, and thermal energy and hydrogen. It also discusses energy generation by polymer-based solar cells. Finally, the authors present a life cycle analysis of polymer nanocomposites for energy applications and provide four real-world case studies where these materials have been successfully used.

Readers will also find:

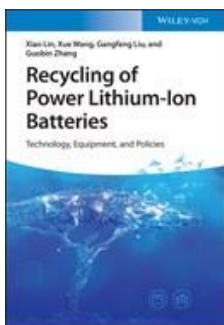


Electrochemical Methods : Fundamentals and Applications 3e, Student Solutions Manual (3rd Edition)

Cynthia G. Zoski, Johna Leddy, Allen J. Bard, Larry R. Faulkner, Henry S. White
9781119524069
Pub Date: 2/6/23
\$69.95 USD
200 pages
Paperback
Science / Chemistry / Physical & Theoretical

Summary: Provides students with solutions to problems in the 3rd edition of the classic textbook **Electrochemical Methods: Fundamentals and Applications**

Electrochemical Methods is a popular textbook on electrochemistry that takes the reader from the most basic chemical and physical principles, through fundamentals of thermodynamics, kinetics, and mass transfer, all the way to a thorough treatment of all important experimental methods. Holistically, it offers comprehensive coverage of all important topics in the field. To aid in reader comprehension, exercises are included at the end of each chapter which extend concepts introduced in the text or show how experimental data are reduced to fundamental results. This book provides worked solutions for many of the end-of-chapter exercises and is a key resource for any student who makes use of the original textbook.



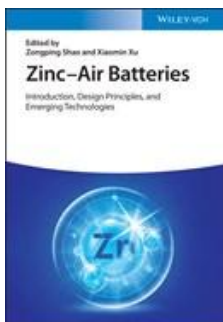
Recycling of Power Lithium-Ion Batteries : Technology, Equipment, and Policies

Xiao Lin, Xue Wang, Gangfeng Liu, Guobin Zhang
9783527351084
Pub Date: 12/27/22
\$145.00 USD
272 pages
Hardcover
Technology & Engineering / Power Resources / Electrical

Summary: Explore the past, present, and future of power lithium-ion battery recycling, from the governing regulatory framework to predictions of the future of the industry

In Recycling of Power Lithium-Ion Batteries: Technology, Equipment, and Policies, a team of distinguished researchers and engineers delivers an authoritative and illuminating exploration of the industrial status and development trends in the global power lithium-ion battery sector. The book examines the development of advanced battery materials and new recycling technologies, as well as typical case studies in enterprise battery recycling. The authors provide a roadmap to the development of spent power battery recycling enterprises that can provide support to the sustainable development industry.

Recycling of Power Lithium-Ion Batteries discusses a wide variety of topics with immediate applications to modern



Zinc-Air Batteries : Introduction, Design Principles and Emerging Technologies

Zongping Shao, Xiaomin Xu

9783527350469

Pub Date: 1/17/23

\$160.00 USD

320 pages

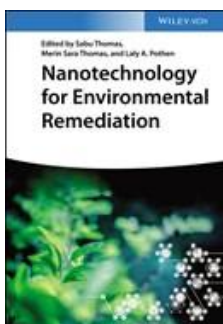
Hardcover

Technology & Engineering / Power Resources / Electrical

Summary: Authoritative and comprehensive resource covering foundational knowledge of zinc-air batteries as well as their practical applications

Zinc-Air Batteries provides a comprehensive understanding of the history and development of Zn-air batteries, with a systematic overview of components, design, and device innovation, along with recent advances in the field, especially with regards to the cathode catalyst design made by cutting-edge materials, engineering processes, and technologies.

In particular, design principles regarding the key components of Zn-air batteries, ranging from air cathode, to zinc anode, and to electrolyte, are emphasized. Furthermore, industrial developments of Zn-air batteries are discussed and emerging new designs of ZABs are also introduced. The authors argue that designing advanced Zn-air battery technologies is important to the realization of efficient



Nanotechnology for Environmental Remediation

S Thomas

9783527349272

Pub Date: 8/1/22

\$175.00 USD

464 pages

Hardcover

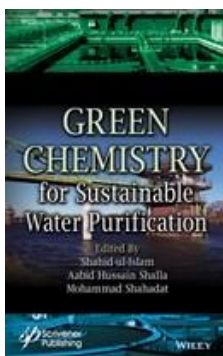
Science / Chemistry / Organic

Summary: Nanotechnology for Environmental Remediation

Comprehensive resource on using nanomaterials to alleviate environmental pollution

Contaminated land, soil and water pose a threat to the environment and health. These sites require immediate action in terms of assessing pollution and new remediation strategies. *Nanotechnology for Environmental Remediation* helps readers understand the potential of nanotechnology in resolving the growing problem of environmental contamination.

The specific aim of this book is to provide comprehensive information relating to the progress in the development of functional nanomaterials and nanocomposites which are used for the environmental remediation of a variety of contaminants. The work deals with the different aspects of



Green Chemistry for Sustainable Water Purification

Shahid Ul-Islam, Aabid Hussain Shalla, Mohammad Shahadat

9781119852292

Pub Date: 12/13/22

\$195.00 USD

290 pages

Hardcover

Science / Chemistry / Organic

Summary: Providing safe drinking water is one of the top priorities for scientists and industrialists working on humanitarian projects, and one particular problem is the contamination of groundwater with toxic organic and inorganic compounds released by various industries. The presence of contaminants or industrial effluents in drinking water systems has increasingly become a major environmental challenge. To address the problem, a number of methods, including ion exchange, membrane filtration, advanced oxidation, biological degradation, photocatalytic degradation, electro-coagulation, and adsorption, are in operation for removing or minimizing these wastes. The purification process of wastewater using conventional methods has proved to be markedly ineffective, very difficult, and highly expensive.

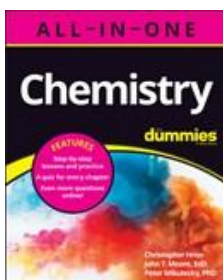
On the other hand, for the remediation of water resources, a concept like green chemistry, ...

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**LABORATORY MANUAL FOR PRINCIPLES OF
GENERAL CHEMISTRY, 11TH EDITION:
INTERNATIONAL ADAPTATION**

9781119889069
Pub Date: 10/3/22
\$294.95 USD

For Dummies



**Chemistry All-in-One For Dummies (+
Chapter Quizzes Online)**

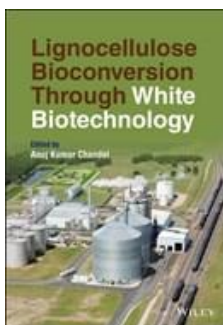
Christopher Hren, John T. Moore, Peter J.
Mikulecky
9781119908319
Pub Date: 11/23/22
\$39.99 USD
624 pages
Paperback
Science / Chemistry

**Summary: Everything you need to crush chemistry
with confidence**

Chemistry All-in-One For Dummies arms you with all the no-nonsense, how-to content you'll need to pass your chemistry class with flying colors. You'll find tons of practical examples and practice problems, and you'll get access to an online quiz for every chapter. Reinforce the concepts you learn in the classroom and beef up your understanding of all the chemistry topics covered in the standard curriculum. Prepping for the AP Chemistry exam? Dummies has your back, with plenty of review before test day. With clear definitions, concise explanations, and plenty of helpful information on everything from matter and molecules to moles and measurements, *Chemistry All-in-One For Dummies* is a one-stop resource for chem students of all valences.

- Review all the topics covered in a full-year high school

Wiley



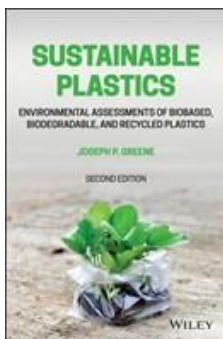
**Lignocellulose Bioconversion Through White
Biotechnology**

A Chandel
9781119735953
Pub Date: 11/21/22
\$200.00 USD
416 pages
Hardcover
Science / Biotechnology

**Summary: Comprehensive resource summarizing the
recent technological advancements in white
biotechnology and biomass conversion into fuels,
chemicals, food, and more**

Lignocellulose Bioconversion Through White Biotechnology presents cutting-edge information on lignocellulose biomass conversion, detailing how white biotechnology can develop sustainable biomass pretreatment methods, effective plant cell wall degrading enzymes to yield high quality cellulosic sugars, and the eventual conversion of these sugars into fuels, chemicals, and other materials. To provide comprehensive coverage of the subject, the work offers in-depth critical analysis into both techno-economic and life cycle analysis of lignocellulose-based products.

Each of the 16 chapters, written by a well-qualified and established researchers, academics, and engineers, presents key information on a specific facet of lignocellulose



Sustainable Plastics : Environmental Assessments of Biobased, Biodegradable, and Recycled Plastics (2nd Edition)

Joseph P. Greene

9781119882060

Pub Date: 11/8/22

\$185.00 USD

464 pages

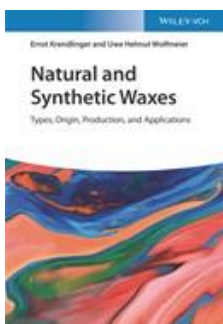
Hardcover

Technology & Engineering / Chemical & Biochemical

Summary: Enables Readers to Understand the What, Why, and How Behind Using Sustainable Plastics in Manufacturing Operations

The impact of 50 years of unbridled plastics production, use, and disposal is now becoming well known and documented. Plastics made from non-renewable petroleum and natural gas resources threaten the environment, human health, species maintenance, and the very life of the ocean. This book helps readers understand the ability of plastics to be sustainable and goes over the plastic products which have a lower carbon footprint, lower waste, and lower pollution.

The well-qualified author's unique perspective puts a special focus on comprehensive coverage of environmental impacts of plastics including Life Cycle Assessments (LCA) and sustainability strategies related to biobased plastics (e.g., corn), recycled plastics, and petroleum-based plastics. Other examples topics on



Natural and Synthetic Waxes : Origin, Production, Technology, and Applications

EJ Krendlinger

9783527342228

Pub Date: 12/12/22

\$193.99 USD

656 pages

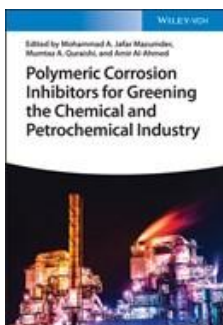
Hardcover

Science / Chemistry / Industrial & Technical

Summary: A compilation of all relevant information for the production and use of waxes in technical applications

This book is an up-to-date reference work on waxes. It includes information on wax classes, chemical and physical properties, processing technologies, and technical applications. With over 20 years of experience as a Technology and R&D Manager in the wax industry, the well-qualified author covers many key topics on the topic of waxes, such as:

- The chemistry of waxes, including their chemical composition, molecular structure and analysis
- Physical properties, such as carbon chain length distribution, dropping point, and acid number
- Synthetic waxes from fischer-tropsch processes, paraffin and amide waxes, as well as diverse wax blends and emulsions



Polymeric Corrosion Inhibitors for Greening the Chemical and Petrochemical Industry

Mohammad Abu Jafar Mazumder, Mumtaz A.

Quraishi, Amir Al-Ahmed

9783527349920

Pub Date: 12/27/22

\$185.00 USD

448 pages

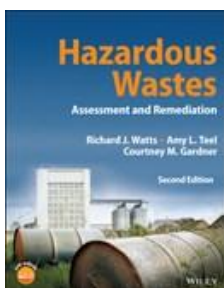
Hardcover

Technology & Engineering / Power Resources / Fossil Fuels

Summary: Primary reference on polymeric corrosion inhibitors for researchers and professionals in the chemical and petrochemical industries

Polymeric Corrosion Inhibitors for Greening the Chemical and Petrochemical Industry provides an extensive overview of polymeric corrosion inhibitors for chemical and petrochemical industry—from design, synthesis, and characterization—to applications. The text discusses the different media in which corrosion is observed and enables readers to minimize/prevent pipes and other plant systems' failures by adequately dealing with corrosion.

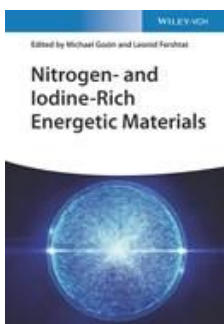
Considering the high importance of corrosion inhibitors development for the chemical and petrochemical industries, this book aims to provide fundamental and current practice with comprehensive coverage of the recent advancements of green polymeric corrosion inhibitors that could be used. The text systematically presents f



Hazardous Wastes : Assessment and Remediation (2nd Edition)

Watts
9781119634065
Pub Date: 12/8/22
\$192.95 USD
640 pages
Hardcover
Science / Environmental Science

Summary: *Hazardous Wastes: Assessment and Remediation* provides a fundamental and comprehensive approach to all aspects of hazardous waste problems. The first section, Assessment, focuses on the chemistry and properties of hazardous chemicals, their partitioning, volatilization, and abiotic and biotic degradation, and human health effects and quantitative risk assessment. In the second section, Remediation, five chapters are devoted to currently used remediation processes based on partitioning, volatilization, abiotic treatment, and biotic treatment, and residuals mitigation. The second edition of *Hazardous Wastes* focuses on adding new information that has been developed since the first edition was published, updating tabular data, and adding expanded chapters on treatment. The salient topic relative to new information is the chemistry of emerging contaminants, including perfluorinated co...



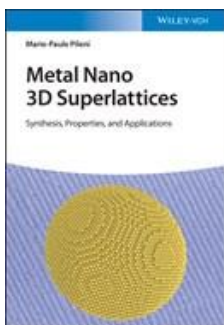
Nitrogen- and Iodine-Rich Energetic Materials

Michael Gozin, Leonid Fershtat
9783527349296
Pub Date: 1/30/23
\$185.00 USD
448 pages
Hardcover
Science / Chemistry / Industrial & Technical

Summary: Provides in-depth and comprehensive knowledge on both the chemistry and practical applications of nitrogen- and iodine-rich energetic materials

Energetic materials, a class of material with high amounts of stored chemical energy, include explosives, pyrotechnics, and propellants. Initially used for military applications, nitrogen-rich energetic materials have become important in the civil engineering and aerospace sectors, they are increasingly used in commercial mining and construction as well as in rocket propulsion. Making these nitrogen-rich energetic materials safer, more powerful, and more cost-effective requires a thorough understanding of their chemistry, physics, synthesis, properties, and applications.

Nitrogen- and Iodine-Rich Energetic Materials presents a detailed summary of the development of nitrogen- and iodine-rich energetic materials over the past decade and

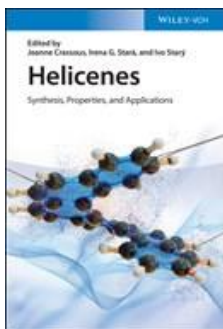


Metal Nano 3D Superlattices : Synthesis, Properties, and Applications

Marie-Paule Pileni
9783527344772
Pub Date: 1/4/23
\$185.00 USD
464 pages
Hardcover
Science / Chemistry / Inorganic

Summary: Unique view on producing metal nano 3D superlattices by differing their morphologies, crystalline structures, chemical, and physical properties

After presenting an overview on the various factors involved in producing metal 3D superlattices called supracrystals by differing their morphologies, crystalline structures, chemical, and physical properties, *Metal Nano 3D Superlattices: Synthesis, Properties, and Applications* reveals the limitations faced by the system and the potential research required to improve the system. Readers will gain insight into the various approaches on the production and on the chemical and physical properties of nanocrystals self-assembled in 3D superlattices also called colloidal crystals, supra or super crystals. They are composed by either one or two components, thus opening up new avenues of research and potentially aiding in major progress. Overall, ...



Helicenes : Synthesis, Properties, and Applications

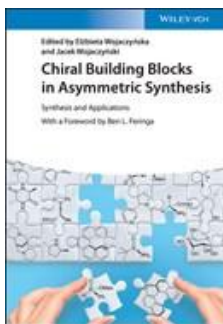
Jeanne Crassous, Irena G. Stara, Ivo Stary
9783527348107
Pub Date: 8/8/22
\$195.00 USD
560 pages
Hardcover
Science / Chemistry / Organic

Summary: Helicenes

A thorough introduction to everything there is to know about this fascinating compound class

The intriguing nature of this highly interesting compound class has inspired much research over the last decade, and much of what has been produced is highly interdisciplinary, with applications found in catalysis, material science, and spectroscopy. Indeed, the field has reached maturity such that elegant synthetic methods are now available and novel applications in arenas such as enantioselective catalysis and optoelectronics are appearing.

Helicenes provides not only an introduction to the synthesis of the fascinating compound class of helicenes, but also describes the properties and, most importantly, their applications. The book thoroughly explains several synthetic routes from classical to state-of-the-art methods. In addition,



Chiral Building Blocks in Asymmetric Synthesis : Synthesis and Applications

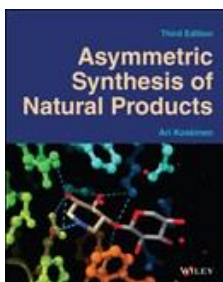
Elzbieta Wojaczynska, Jacek Wojaczynski
9783527349463
Pub Date: 8/8/22
\$230.00 USD
688 pages
Hardcover
Science / Chemistry / Physical & Theoretical

Summary: Chiral Building Blocks in Asymmetric Synthesis

A comprehensive introduction to the important classes of chiral building blocks

Chirality — the asymmetric quality found in certain chemical compounds — plays an essential role in our world: chiral compounds can be found in biology, pharmaceutical compounds, agrochemicals, and fragrances. The stereoselective preparation of these complex molecular constructions constitutes a challenge. To this end, modern asymmetric synthesis utilizes a variety of valuable and efficient reagents employed as chiral auxiliaries, metal complexes and organocatalysts in stereoselective catalysis, and enantiopure reactants termed as chiral building blocks.

In *Chiral Building Blocks in Asymmetric Synthesis*, the achievements in the fields of preparation of and applications



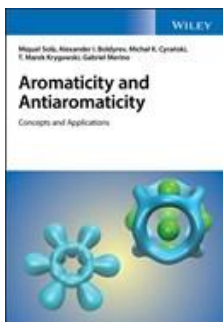
Asymmetric Synthesis of Natural Products (3rd Edition)

AMP Koskinen
9781119707028
Pub Date: 11/14/22
\$89.95 USD
384 pages
Paperback
Science / Chemistry / Organic

Summary: Fully updated textbook learning resource covering the concept of using natural product chemistry for strategies in asymmetric synthesis

The third edition of *Asymmetric Synthesis of Natural Products* introduces students to the rapidly growing field of natural products in organic chemistry, discussing the practical, mainly pharmacological, importance of selected compounds and emphasizing the target-oriented approach of organic synthesis which is key in industrial strategies. To aid in reader comprehension, the text includes key references and an Index of Compounds.

The textbook is based on two lecture courses (Asymmetric Synthesis and Asymmetric Synthesis of Natural products), which the author has delivered more than 50 times over the past 20 years in Finland, the UK, Italy, and Greece. This third edition is fully updated from the earlier versions (published by Wiley in 1993 and 2012)



Aromaticity and Antiaromaticity : Basics and Applications

Miquel Solà, Alexander I. Boldyrev, Michal K. Cyrański, T. Marek Krygowski, Gabriel Merino
9781119085898

Pub Date: 11/21/22

\$160.00 USD

352 pages

Hardcover

Science / Chemistry / Physical & Theoretical

Summary: A comprehensive review of the science of aromaticity, as well as its evolution, from benzene to atomic clusters

In *Aromaticity and Antiaromaticity: Concepts and Applications*, a team of accomplished chemists delivers a comprehensive exploration of the evolution and critical aspects of aromaticity. The book examines the new global criteria used to evaluate aromaticity, including the Nucleus Independent Chemical Shift (NICS) index and the electronic indices based on electronic properties.

Additional discussions of inorganic aromatic compounds developed in this century, which give rise to new concepts like multifold aromaticity, are included. Three-dimensional aromaticity found in fullerenes and nanotubes, Möbius aromaticity present in some annulenes, and excited state aromaticity are explored as well.

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Perspectives on Structure and Mechanism in Organic Chemistry (3rd Edition)

Felix A. Carroll

9781119808664

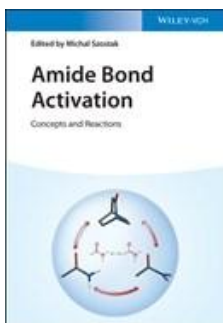
Pub Date: 11/22/22

\$136.00 USD

Paperback

Science / Chemistry / Organic

Summary: This is a textbook on physical organic chemistry for advanced undergraduates and beginning graduate students, with the overarching goal to help students think beyond the simple models of introductory organic chemistry courses. Based on the author's first-hand classroom experience, the text uses complementary conceptual models to give new perspectives on the structures and reactions of organic compounds. In the 3rd edition, the author thoroughly updates the topics covered including reordering the contents (so that computational chemistry can be used to explain conformational energies) to provide a more natural flow of topics, proceeding from substitution to elimination to addition. About 20% of the problems are either replaced or updated, with answers available in the companion solutions manual.



Amide Bond Activation : Concepts and Reactions

Michal Szostak

9783527348312

Pub Date: 12/12/22

\$195.00 USD

544 pages

Hardcover

Science / Chemistry / Organic

Summary: Comprehensive resource on the pivotal role of the amide bond in organic synthesis

This book provides the reader with insight into the advances that have taken place in the field of amide bond activation. It focuses on both the fundamental structural properties of the amide bond and the synthetic reactions mediated by transition-metals.

By discussing amide bond activation in terms of modern organic synthesis, the reader is provided with a thorough overview of the area and its crucial role in forging carbon-carbon and carbon-heteroatom bonds. Sample topics discussed within the work include:

- Cross-coupling of amides
- Amide bond activation by twisting and nitrogen pyramidalization
- Electrophilic amide bond functionalization

**Organic Reaction Mechanisms 2019**

Mark G. Moloney

9781119608271

Pub Date: 1/10/23

\$535.00 USD

336 pages

Hardcover

Science / Chemistry / Organic

Series: Organic Reaction Mechanisms Series

Summary: *Organic Reaction Mechanisms 2019*, the 55th annual volume in this highly successful and unique series, surveys research on organic reaction mechanisms described in the available literature dated 2019. The following classes of organic reaction mechanisms are comprehensively reviewed:

- Reaction of Aldehydes and Ketones and their Derivatives
- Reactions of Carboxylic, Phosphoric, and Sulfonic Acids and their Derivatives
- Oxidation and Reduction
- Carbenes and Nitrenes
- Nucleophilic Aromatic Substitution
- Electrophilic Aromatic Substitution
- Carbocations
- Nucleophilic Aliphatic Substitution
- Carbanions and Electrophilic Aliphatic Substitution
- Elimination Reactions

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Metal Whiskering

Karpov

9781119841890

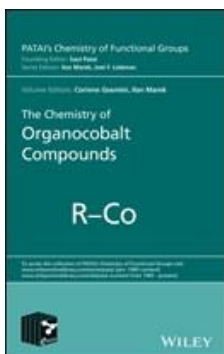
Pub Date: 12/8/22

\$225.00 USD

250 pages

Hardcover

Science / Chemistry / Organic

**The Chemistry of Organocobalt Compounds**

Corinne Gosmini, Ilan Marek, Joel F. Liebman, Zvi

Rappoport

9781119692010

Pub Date: 5/22/23

\$665.00 USD

640 pages

Hardcover

Science / Chemistry / Organic

Summary: PATAI's Chemistry of Functional Groups publishes comprehensive reviews on all aspects of specific functional groups. Each volume contains outstanding surveys on theoretical and computational aspects, NMR, MS, other spectroscopic methods and analytical chemistry, structural aspects, thermochemistry, photochemistry, synthetic approaches and strategies, synthetic uses and applications in chemical and pharmaceutical industries, biological, biochemical, and environmental aspects. To date, over 150 volumes have been published in the series.

The present volume is the first in the series to survey the properties and chemical behavior of organocobalt compounds, as well as their use in small- and large-scale organic synthesis. Organocobalt compounds have important uses as catalysts in cross-coupling and cycloaddition reactions, as well as in industrial-scale hydroformylation and carbonylation...

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Modern Organic Synthesis, Set : An Introduction (3rd Edition)

George S. Zweifel, Michael H. Nantz, Peter Somfai
9781119815112
Pub Date: 12/28/22
\$169.95 USD
Paperback
Science / Chemistry / Organic



Animal Models for the Development of Cancer Immunotherapy

Seng-Lai Tan
9781119535287
Pub Date: 8/23/22
\$175.00 USD
320 pages
Hardcover
Medical / Pharmacology

Summary: Animal Models for the **Development of Cancer Immunotherapy**

Provides readers with a clear understanding of the value and challenges of using common and emerging preclinical models in cancer immunotherapy research and development.

Animal models are essential tools for studying a range of issues in preclinical and clinical research on therapies targeting cancerous tumors. As clinical trials of advances in cancer immunotherapy are predicted to outpace preclinical research in the near future, there remains an urgent need to develop better animal models for preclinical evaluation of novel modulators. *Animal Models for the Development of Cancer Immunotherapy* provides a detailed overview of different preclinical model systems for development of novel cancer immunotherapies while highlighting how key aspects of individual models translate into clinical findings.



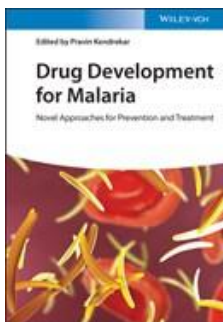
Integrated Pharmaceutics : Applied Preformulation, Product Design, and Regulatory Science (2nd Edition)

Antoine Al-Achi, Mali Ram Gupta, William Craig Stagner
9781119574699
Pub Date: 10/11/22
\$215.00 USD
784 pages
Hardcover
Medical / Pharmacy

Summary: This work is an examination of all aspects of the science in developing effective dosage form for drug delivery

Pharmaceutics refers to the subfield of pharmaceutical sciences that develops drug delivery products or devices to optimize the drug's performance once administered. This multidisciplinary field draws on physical chemistry, organic chemistry, and biophysics to generate and refine these crucial elements of medical care. Moreover, incorporating such disparate dimensions of drug product design as material properties and legal regulation bridges the gap between effective chemicals and viable medical treatments.

Integrated Pharmaceutics provides a comprehensive introduction to the creation and manufacture of effective dosage forms for drug delivery. It presents its subject following the principles of physical pharmacy, product design, and drug regulations. This tripartite str



Drug Development for Malaria : Novel Approaches for Prevention and Treatment

Pravin Kendrekar
9783527348602
Pub Date: 10/31/22
\$170.00 USD
400 pages
Hardcover
Medical / Pharmacology

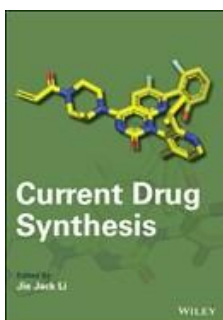
Summary: Drug Development for Malaria

Provides readers with first-hand advice for the development of novel antimalarial drugs

This book provides a systematic overview of antimalarial drug development and presents a wealth of data and insight from drug developers across three continents, including many from countries where the disease is endemic. Throughout, the contributions have been written with the drug developer in mind, highlighting challenges but also opportunities for the successful development of effective antimalarial drugs. Case studies and method-oriented chapters provide an abundance of practical first-hand advice on how to successfully develop an antimalarial drug.

Key topics covered in the book include:

- The performance of current drugs and therapies, the



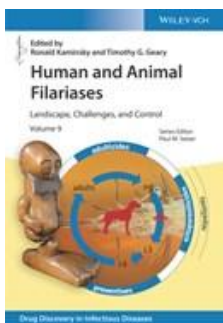
Current Drug Synthesis

Jie Jack Li
97811119847250
Pub Date: 11/8/22
\$195.00 USD
400 pages
Hardcover
Science / Chemistry / Organic
Series: Wiley Series on Drug Synthesis

Summary: The latest entry in the widely read Drug Synthesis series

In *Current Drug Synthesis*, accomplished medicinal chemist and researcher Dr. Jie Jack Li and 27 expert coauthors deliver an authoritative and comprehensive discussion of the medicinal chemistry of current drugs, as well as the cutting-edge science involved in their synthesis. The book demystifies the process of modern drug discovery for both industry practitioners and students, while capturing the state-of-the-art techniques used to discover some of the most impactful medicines on the market today.

Covering six different disease areas – including infectious disease, cancer, cardiovascular and metabolic disease, the central nervous system, anti-inflammatory disease, and a miscellaneous section – the book explores 18 different drugs before concluding with chapters on computational drug discovery and peptide drugs.



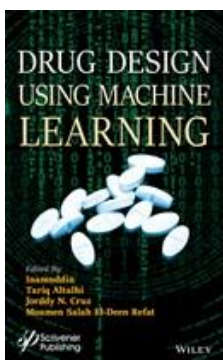
Human and Animal Filariases : Landscape, Challenges, and Control

Ronald Kaminsky, Timothy G. Geary, Paul M. Selzer
9783527346592
Pub Date: 12/27/22
\$205.00 USD
576 pages
Hardcover
Science / Chemistry / Industrial & Technical
Series: Drug Discovery in Infectious Diseases

Summary: The rational approach to controlling human and animal diseases caused by nematodes

Filariiae are a family of parasitic worms which infect animals and humans, causing severe diseases such as elephantiasis (lymphatic filariasis) and river blindness (onchocerciasis) in humans, as well as heartworm disease (dirofilariasis) in dogs and cats. While these diseases are rarely fatal, the blindness and disfigurement resulting from these infections constitute a severe burden for the affected individuals and to the healthcare systems in many tropical countries. In 2017, the World Health Organization classified several filariases as neglected tropical diseases and announced a new program seeking to eradicate these infections, which has in turn sparked a new push to develop antifilarial drugs.

Considering the current and future importance of this topic, *Human and Animal Filariases* takes a compr...

**Drug Design using Machine Learning**

Inamuddin, Tariq A. Altalhi, Jorddy N. Cruz,
Moamen Salah El-Deen Refat

9781394166282

Pub Date: 10/25/22

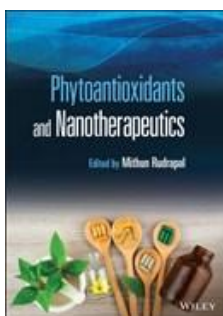
\$225.00 USD

380 pages

Hardcover

Medical / Pharmacology

Summary: The objective of this book is to bring together several chapters that function as an overview of the use of machine learning and artificial intelligence applied to drug development. The initial chapters discuss drug-target interactions through machine learning for improving drug delivery, healthcare, and medical systems. Further chapters also provide topics on drug repurposing through machine learning, drug designing, and ultimately discuss drug combinations prescribed for patients with multiple or complex ailments.

**Phytoantioxidants and Nanotherapeutics**

Mithun Rudrapal

9781119811770

Pub Date: 9/27/22

\$225.00 USD

576 pages

Hardcover

Medical / Pharmacology

Summary: Phytoantioxidants and Nanotherapeutics

Discover the medicinal importance of antioxidant herbal medicines, phytochemicals, and nanodelivery systems for a wide range of diseases

Phytomedicine has been—and continues to be—central to many cultures and societies due to its low toxicity, low cost, accessibility, and efficacy in treating difficult diseases. In fact, many plant-derived bioactive natural products serve as potential sources of drug leads or therapeutic agents in the treatment of a wide range of human diseases. When combined with nanotechnology, phytomedicine has the potential to affect and impact a tissue-specific site, which can reduce drug dosage and side effects while improving activity.

Phytoantioxidants and Nanotherapeutics offers a comprehensive look at the significant role that phytomedicine-derived antioxidants play on the field of

**GPCRs as Therapeutic Targets**

Annette Gilchrist

9781119564744

Pub Date: 10/4/22

\$395.00 USD

948 pages

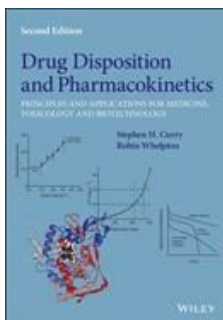
Hardcover

Medical / Pharmacology

Summary: A thorough discussion of the structure, pharmacology, function, and role of G protein-coupled receptors

In *GPCRs as Therapeutic Agents*, distinguished researcher Dr. Annette Gilchrist delivers an authoritative and in-depth compendium of a vibrant and active area of academic and industrial drug discovery. The book serves as an important reference for new and experienced researchers studying G protein-coupled receptors and discusses the molecular pharmacology of this important target class. It also includes up-to-date material on GPCR structures and structure-based drug design.

The book explores the role of GPCRs in the treatment of disease and novel approaches to their study. In addition to providing information on the structure, pharmacology, and function of GPCRs, it discusses their role in disease states, and advances new methods for measuring GPCR activity in



Drug Disposition and Pharmacokinetics : Principles and Applications for Medicine, Toxicology and Biotechnology (2nd Edition)

Stephen H. Curry, Robin Whelpton

9781119588436

Pub Date: 11/21/22

\$190.00 USD

528 pages

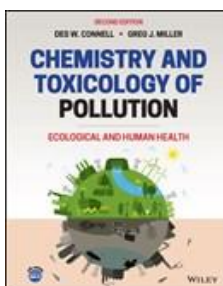
Hardcover

Science / Chemistry / Industrial & Technical

Summary: The most up-to-date edition of a leading reference in drug disposition and pharmacokinetics

In this new, fully-revised edition of *Drug Disposition and Pharmacokinetics: Principles and Applications for Medicine, Toxicology and Biotechnology* the authors deliver an authoritative and comprehensive discussion of the fate of drug molecules in the body, as well as its implications for pharmacological and clinical effects. The text offers a unique and balanced approach that combines discussion of the specific physical and biological factors affecting the absorption, distribution, metabolism, and excretion of drugs, with mathematical assessments of plasma and body fluid concentrations. The book assumes little prior knowledge and is an ideal reference for practicing professionals in industry as well as researchers and academics.

This latest edition provides readers with a new introductory



Chemistry and Toxicology of Pollution : Ecological and Human Health (2nd Edition)

Des W. Connell, Gregory J. Miller

9781119377603

Pub Date: 11/15/22

\$116.00 USD

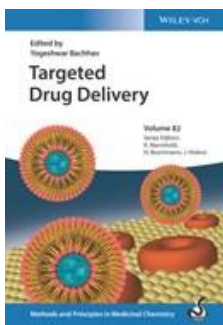
368 pages

Hardcover

Science / Chemistry / Industrial & Technical

Summary: Describes the transport of pollutants through the environment and their impact on natural and human systems, fully updated to cover key topics in modern pollution science

Chemistry and Toxicology of Pollution examines the interactions and adverse effects of pollution on both natural ecosystems and human health, addressing chemical, toxicological, and ecological factors at both the regional and global scale. The book is written using a conceptual framework that follows the interaction of a pollutant with the environment from distribution in the various abiotic sectors of the environment to exposure and effects on individuals and ecosystems. The authors also highlight the critical role of various socio-economic, political, and cultural aspects in achieving sustainable goals, strategies, and science-based solutions to pollution and health. This comprehensive volume covers the chemic...



Targeted Drug Delivery

Yogeshwar Bachhav, Raimund Mannhold, Helmut Buschmann, Jörg Holenz

9783527347810

Pub Date: 12/12/22

\$175.00 USD

464 pages

Hardcover

Science / Chemistry / Organic

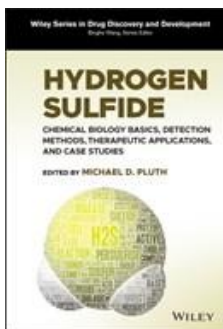
Series: Methods & Principles in Medicinal Chemistry

Summary: Novel approaches in targeted drug delivery for both small molecule and biopharmaceutical drugs

Targeted Drug Delivery explores a new frontier in drug research that has become a focus for developing novel medications. The work discusses a wide range of approaches for targeting small molecules as well as peptide and macromolecular drugs, from prodrugs to drug conjugates to drug carriers and devices, helping readers to stay up to date on the latest developments in the field.

The following key topics are addressed:

- Antibody conjugates, prodrugs, and suicide therapeutics
- Protac technology for selectively degrading target proteins
- Delivery of nucleic acid drugs
- Novel drug carriers, such as liposomes, vesicles, and



Hydrogen Sulfide : Chemical Biology Basics, Detection Methods, Therapeutic Applications, and Case Studies

Michael D Pluth, Binghe Wang

9781119799870

Pub Date: 10/18/22

\$250.00 USD

560 pages

Hardcover

Science / Life Sciences / Biochemistry

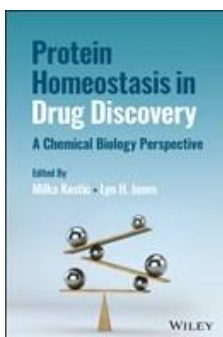
Series: Wiley Series in Drug Discovery and Development

Summary: HYDROGEN SULFIDE

Covers H₂S interactions, methods of detection and delivery in biological environments, and a wide range of applications

Research on hydrogen sulfide (H₂S) spans diverse disciplines including chemistry, biology, and physiology. In recent years, new materials and approaches have been developed to deliver H₂S and related reactive sulfur species in various clinical contexts. Although many biological pathways involving H₂S are complex, all are governed by fundamental chemical interactions between reactive sulfur species and other molecular entities.

Hydrogen Sulfide: Chemical Biology Basics, Detection Methods, Therapeutic Applications, and Case Studies provides the foundation required for understanding the fundamental chemical biology of H₂S while highlighting the



Protein Homeostasis in Drug Discovery : A Chemical Biology Perspective

Milka Kostic, Lyn H. Jones

9781119774129

Pub Date: 12/8/22

\$225.00 USD

544 pages

Hardcover

Science / Chemistry / Organic

Summary: Comprehensive resource on all aspects of protein homeostasis, covering both historical perspectives and emerging technologies that are revolutionizing the field

Protein Homeostasis in Drug Discovery highlights drug discovery and development efforts targeting protein homeostasis and considers the emerging appreciation that a protein's activity may not be the only factor to consider when developing therapeutic agents.

The chapters cover various aspects of protein homeostasis such as cellular localization, abundance, interactions, and more. Moreover, the text contains up-to-date information regarding targeted protein degradation, an emerging drug discovery modality.

Readers interested in targeting different regulatory events that control protein homeostasis or modulating protein



Drug Metabolism Handbook : Concepts and Applications in Cancer Research (2nd Edition)

Ala F. Nassar, Paul F Hollenberg, JoAnn Scatina, Soumen Kanti Manna, Su Zeng

9781119851011

Pub Date: 12/8/22

\$345.00 USD

1296 pages

Hardcover

Medical / Pharmacology

Summary: A comprehensive explanation of drug metabolism concepts and applications in drug development and cancer treatment

In the newly revised second edition of *Drug Metabolism Handbook: Concepts and Applications in Cancer Research*, a distinguished team of researchers delivers an incisive and robust exploration of the drug metabolism system and a well-illustrated and detailed explanation of the latest tools and techniques used in the research, pharmacology, and medicine. The book discusses the creation of new molecular entities, drug development, troubleshooting, and other highly relevant concepts, guiding readers through new applications in pharmaceutical research, development, and assessment.

The latest edition offers updated content on metabolism basics and the application of a variety of new techniques to cancer treatment, including mass spectrometry, imaging, metabolomics, and immune



Drug Safety Evaluation (4th Edition)
 Shayne Cox Gad, Dexter W. Sullivan, Jr.
 9781119755852
 Pub Date: 1/5/23
 \$345.00 USD
 880 pages
 Hardcover
 Medical / Pharmacology
 Series: Pharmaceutical Development Series

Summary: Practical guide presenting a roadmap for safety assessment as an integral part of the development of drugs and therapeutics

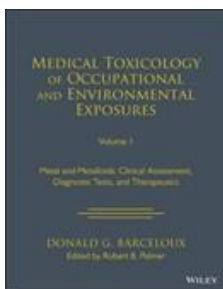
This fourth edition of *Drug Safety Evaluation* maintains the central objective of presenting an all-inclusive practical guide for those who are responsible for ensuring the safety of drugs and biologics to patients and shepherding valuable candidates to market, healthcare providers, those involved in the manufacture of medicinal products, and all those who need to understand how the safety of these products is evaluated.

Individual chapters address specific approaches to evaluation hazards, including problems that are encountered and their solutions. Also covered are the scientific and philosophical bases for evaluation of specific concerns (e.g., carcinogenicity, development toxicity, etc.) to provide both understanding and guidance for approaching the new



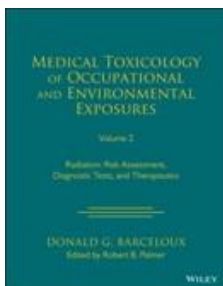
Medical Toxicology : Occupational and Environmental Exposures, Multi-Volume
 Donald G. Barceloux, Robert B. Palmer
 9781119872962
 Pub Date: 1/12/23
 \$750.00 USD
 2160 pages
 Hardcover
 Science / Chemistry / Industrial & Technical

Summary: *Medical Toxicology of Occupational and Environmental Exposures: Metals, Radiation, and Cancer* is the only reference which comprehensively covers the clinical, analytical, and monitoring information needed by clinicians, students and investigators with interests in metals, radiation, and cancer. The information in all chapters is presented in a cogent, standardized format which greatly simplifies the use of the text as a reference. Reviewed by a distinguished panel of well-known toxicology experts, the information is critically evaluated and authoritative. The interdisciplinary, evidence-based approach is designed to reach beyond clinical settings to increase the scientific understanding of those in associated fields (analytical laboratories, universities, federal and state regulatory and environmental agencies) involved with decisions regarding metals, radiation, and chemical ca...



Medical Toxicology of Occupational and Environmental Exposures to Metal and Metalloids, Volume 1 : Clinical Assessment, Diagnostic Tests, and Therapeutics
 Donald G. Barceloux, Robert B. Palmer
 9781119881247
 Pub Date: 1/12/23
 \$295.00 USD
 976 pages
 Hardcover
 Science / Chemistry / Industrial & Technical

Summary: *Medical Toxicology of Occupational and Environmental Exposures: Metals, Radiation, and Cancer* is the only reference which comprehensively covers the clinical, analytical, and monitoring information needed by clinicians, students and investigators with interests in metals, radiation, and cancer. The information in all chapters is presented in a cogent, standardized format which greatly simplifies the use of the text as a reference. Reviewed by a distinguished panel of well-known toxicology experts, the information is critically evaluated and authoritative. The interdisciplinary, evidence-based approach is designed to reach beyond clinical settings to increase the scientific understanding of those in associated fields (analytical laboratories, universities, federal and state regulatory and environmental agencies) involved with decisions regarding metals, radiation, and chemical ...



Medical Toxicology of Occupational and Environmental Exposures to Radiation, Volume 2 : Risk Assessment, Diagnostic Tests, and Therapeutics

Donald G. Barceloux, Robert B. Palmer

9781119881254

Pub Date: 1/12/23

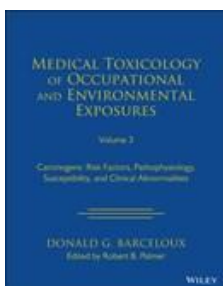
\$195.00 USD

480 pages

Hardcover

Science / Chemistry / Industrial & Technical

Summary: *Medical Toxicology of Occupational and Environmental Exposures: Metals, Radiation, and Cancer* is the only reference which comprehensively covers the clinical, analytical, and monitoring information needed by clinicians, students and investigators with interests in metals, radiation, and cancer. The information in all chapters is presented in a cogent, standardized format which greatly simplifies the use of the text as a reference. Reviewed by a distinguished panel of well-known toxicology experts, the information is critically evaluated and authoritative. The interdisciplinary, evidence-based approach is designed to reach beyond clinical settings to increase the scientific understanding of those in associated fields (analytical laboratories, universities, federal and state regulatory and environmental agencies) involved with decisions regarding metals, radiation, and chemical ...



Medical Toxicology of Occupational and Environmental Exposures to Carcinogens, Volume 3 : Risk Factors, Pathophysiology, and Clinical Abnormalities

Donald G. Barceloux, Robert B. Palmer

9781119881261

Pub Date: 1/12/23

\$260.00 USD

704 pages

Hardcover

Science / Chemistry / Industrial & Technical

Summary: *Medical Toxicology of Occupational and Environmental Exposures: Metals, Radiation, and Cancer* is the only reference which comprehensively covers the clinical, analytical, and monitoring information needed by clinicians, students and investigators with interests in metals, radiation, and cancer. The information in all chapters is presented in a cogent, standardized format which greatly simplifies the use of the text as a reference. Reviewed by a distinguished panel of well-known toxicology experts, the information is critically evaluated and authoritative. The interdisciplinary, evidence-based approach is designed to reach beyond clinical settings to increase the scientific understanding of those in associated fields (analytical laboratories, universities, federal and state regulatory and environmental agencies) involved with decisions regarding metals, radiation, and chemical ...

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Inducing Targeted Protein Degradation : From Chemical Biology to Drug Discovery and Clinical Applications

Philipp Cromm

9783527350131

Pub Date: 1/30/23

\$170.00 USD

368 pages

Hardcover

Medical / Pharmacology

Summary: Enables drug developers in academia and industry to expand the range of accessible drug targets through induced protein degradation

Since the introduction of the PROTAC technology in 2015, targeted protein degradation has greatly increased the range of druggable protein targets, enabling pharma companies to develop completely novel therapeutics. *Inducing Targeted Protein Degradation* is a timely guide to navigating the complexities of the subject and understanding its practical application, with an eye on expanding the range of druggable targets.

In *Inducing Targeted Protein Degradation*, readers will find the most recent information on:

- Cellular mechanisms of targeted protein degradation and current approaches to retarget these mechanisms for therapeutic use

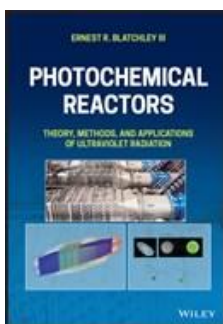
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The Physical Chemist's Toolbox (2nd Edition)

Robert M. Metzger
9781119755777
Pub Date: 10/25/22
\$195.00 USD
1152 pages
Paperback
Science / Chemistry

Summary: Assembling a great deal of material in one place, this book serves as a valuable guide for chemists and related physical scientists throughout their careers -- covering essential equations, theories, and tools needed for conducting and interpreting contemporary research.

- Offers a comprehensive and in-depth treatment of the most challenging concepts of chemistry
- Updates and revises existing chapters from the prior edition and adds: new chapters on inorganic, organic, and biochemistry; appendices about nuclides and organic reactions; and expanded questions at the end of chapters
- Has a complementary website with a solutions manual and PowerPoint presentations for instructors



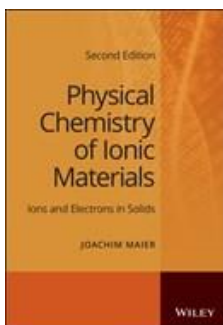
Photochemical Reactors : Theory, Methods, and Applications of Ultraviolet Radiation

Ernest R. Blatchley, III
9781119871309
Pub Date: 11/1/22
\$195.00 USD
608 pages
Hardcover
Science / Chemistry / Physical & Theoretical

Summary: An intuitively organized and incisive exploration of UV radiation and its modern applications

In *Photochemical Reactors: Theory, Methods, and Applications of Ultraviolet Radiation*, distinguished civil engineer and researcher Dr. Ernest R. Blatchley III delivers a comprehensive exploration of the theory, methods, and contemporary and emerging applications of ultraviolet (UV) radiation. The author describes the fundamentals of the history of photochemistry and photochemical reactions before moving on to consider the dynamic behavior of UV-based reactor systems and the physical concepts that govern natural and man-made sources of UV radiation.

The book also covers the numerical and empirical methods used to evaluate photochemical kinetics, photobiological kinetics, and the dynamics of UV photoreactors. Common and emerging applications of UV radiation—like the



Physical Chemistry of Ionic Materials : Ions and Electrons in Solids (2nd Edition)

Joachim Maier
9781119799108
Pub Date: 2/13/23
\$97.00 USD
624 pages
Hardcover
Science / Chemistry / Physical & Theoretical

Summary: Discover the physical chemistry of charge carriers in the second edition of this popular textbook

Ionic and electronic charge carriers are critical to the kinetic and electrochemical properties of ionic solids. These charge carriers are point defects and are decisive for electrical conductivity, mass transport and storage phenomena. Generally, defects are deviations from the perfect structure, and if higher-dimensional, also crucial for the mechanical properties. The study of materials science and energy research therefore requires a thorough understanding of defects, in particular the charged point defects, their mobilities and formation mechanisms.

Physical Chemistry of Ionic Materials is a comprehensive introduction to these charge carrier particles and the processes that produce, move, and activate them. Covering both core principles and practical applications, it discusses



Sustainability in Biofuel Production Technology

P Agrawal

9781119888833

Pub Date: 11/14/22

\$180.00 USD

368 pages

Hardcover

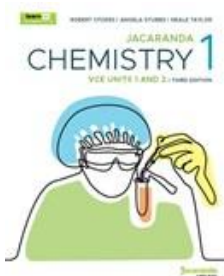
Science / Chemistry

Summary: Sustainability in Biofuel Production Technology

Explore current challenges and the latest technologies in biofuel production

In *Sustainability in Biofuel Production Technology*, a team of engineers and chemists delivers a thorough and accessible exploration of the source of renewable energy biofuels poised to help conserve natural resources and limit the impact of fossil fuel use. The book offers detailed information about the challenges and trends in biodiesel production and includes contributions from leading researchers in the field of biodiesel production.

Readers will explore aviation biofuels, biofuel production technologies, reactor design and safety considerations, and the modelling and simulation of biofuel production as they move through the book's 14 chapters. The authors also



JACARANDA CHEMISTRY 1 VCE UNITS 1 AND 2 3E LEARNON AND PRINT

9781119884316

Pub Date: 9/30/22

\$57.95 USD

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