Chemistry & Material Science

January to April 2023

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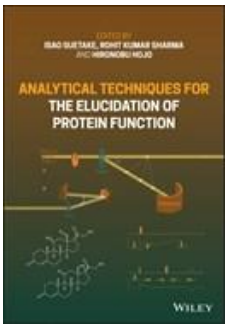

Analytical Techniques for the Elucidation of Protein Function
Isao Suetake, Rohit Sharma, Hironobu Hojo
9781119886327
Pub Date: 3/20/23
$155.00 USD
300 pages
Hardcover
Science / Chemistry / Analytic

Summary: An essential aid for scientists seeking alternative techniques for investigating proteins

Proteins are the building blocks of living organisms, and they play an enormous range of fundamental roles in sustaining and shaping life. The critical determinant of a protein's function is its structure, and the analysis of protein structures has therefore become a significant component of biological research. In recent years, longstanding analytical techniques such as X-ray crystallography and nuclear magnetic resonance (NMR) spectroscopy have been supplemented by a number of new methods which promise to revolutionize the study of proteins and their functions.

Analytical Techniques for the Elucidation of Protein Function serves as an introduction to these techniques, which are especially crucial for analyzing intrinsically disordered regions and post-translational modifications. These have...

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Mass Spectrometry for Lipidomics : Methods and Applications
M Holcapek
9783527350155
Pub Date: 3/20/23
$205.00 USD
736 pages
Hardcover
Science / Spectroscopy & Spectrum Analysis

Summary: All-in-one guide to successful lipidomic analysis, combining the latest advances and best practices from academia, industry, and clinical research

Mass Spectrometry for Lipidomics presents a systematic overview of lipidomic analysis, covering established standards of lipid analysis, available technology, and key lipid classes, as well as applications in basic research, medicine, pharma, and the food industry.

Through connecting recent technological advances with key application areas, this unique guide bridges the gap between academia and industry by translating the vast body of knowledge that has been gained in the past decade into much-needed practical advice for novices as well as routine users.

Edited by the president and vice-president of the

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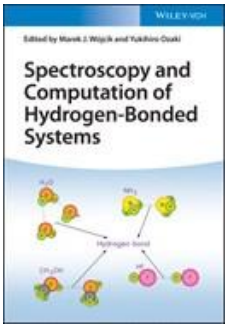

Spectroscopy and Computation of Hydrogen-BondedSystems
MJ Wójcik
9783527349722
Pub Date: 3/27/23
$205.00 USD
576 pages
Hardcover
Science / Spectroscopy & Spectrum Analysis

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

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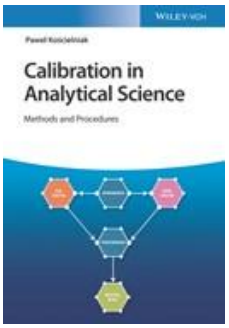

Calibration in Analytical Science : Methods and Procedures
Pawel Koscielniak
9783527348466
Pub Date: 4/17/23
$165.00 USD
360 pages
Hardcover
Science / Chemistry / Analytic

Summary: Designed to help analytical chemists save time and money by selecting the best calibration method in a quality control, substance monitoring, or research setting

Univariate analytical calibration is a vital step in every chemical procedure that involves determining the identity or concentration of a particular substance. Depending on the type of instrument and measurement, analytical chemists need to follow different calibration strategies and protocols to ensure their instruments yield accurate readings.

Calibration in Analytical Science systematically classifies and describes a wide range of calibration methods and procedures based on mathematical and empirical models for use in qualitative and quantitative analysis. Focusing on the chemical aspects of analytical calibration, this much-needed reference uses a set of equipment-independent terms and definitions that are easily tra

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Laser Induced Breakdown Spectroscopy (LIBS) : Concepts, Instrumentation, Data Analysis and Applications, 2 Volume Set
VK Singh
9781119758402
Pub Date: 4/24/23
$395.00 USD
992 pages
Hardcover
Science / Spectroscopy & Spectrum Analysis

Summary: Essential resource covering the field of LIBS, with respect to its fundamentals, established and novel applications, and future prospects

Laser Induced Breakdown Spectroscopy (LIBS), presents in two comprehensive volumes a thorough discussion of the basic principles of the method, including important recently available data which can lead to a better characterization of the LIBS plasma. This extensive work contains detailed discussions on the lasers, spectrometers, and detectors that can be used for LIBS apparatuses and describes various instrumentation, ranging from basic setups to more advanced configurations.

As a modern resource, the work includes the newest advances and capabilities of LIBS instruments, featuring the recent developments of Dual-Pulse LIBS, Femtosecond LIBS, and Micro-LIBS as well as their applications. Throughout, the contributions discuss the analytical capa

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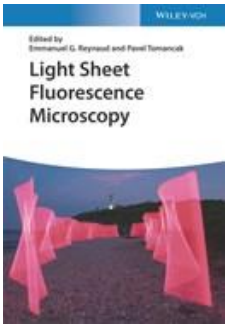

Light Sheet Fluorescence Microscopy
EG Reynaud
9783527341351
Pub Date: 4/17/23
$110.75 USD
416 pages
Paperback
Science / Microscopes & Microscopy

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

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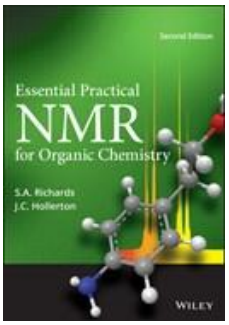

Essential Practical NMR for Organic Chemistry (2nd Edition)
S. A. Richards, J. C. Hollerton
9781119844808
Pub Date: 5/1/23
$95.00 USD
320 pages
Hardcover
Science / Spectroscopy & Spectrum Analysis

Summary: A hands-on resource advocating an ordered approach to gathering and interpreting NMR data

The second edition of *Essential Practical NMR for Organic Chemistry* delivers a pragmatic and accessible text demonstrating an ordered approach to gathering and interpreting NMR data. In this informal guide, you'll learn to make sense of the high density of NMR information through the authors' problem-solving strategies and interpretations.

The book also discusses critical aspects of NMR theory, as well as data acquisition and processing strategy. It explains the use of NMR spectroscopy for dealing with problems of small organic molecule structural elucidation and includes a brand-new chapter on Nitrogen-15 NMR. Readers will also find:

- Strategies for preparing a sample, spectrum acquisition, processing, and interpreting your spectrum

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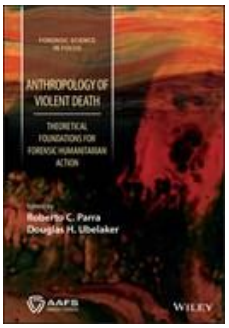

Anthropology of Violent Death : Theoretical Foundations for Forensic Humanitarian Action
RC Parra
9781119806363
Pub Date: 5/1/23
$160.00 USD
432 pages
Hardcover
Medical / Forensic Medicine
Series: Forensic Science in Focus

Summary: The first book to specifically focus on the theoretical foundations of humanitarian forensic science

Anthropology of Violent Death: Theoretical Foundations for Forensic Humanitarian Action consolidates the concepts and theories that are central to securing the posthumous dignity of the deceased, respecting their memories, and addressing the needs of the surviving populations affected. Focusing on the social and cultural significance of the deceased, this much-needed volume develops a theoretical framework that extends the role of humanitarian workers and specifically the actions of forensic scientists beyond an exclusively legal and technical approach.

Anthropology of Violent Death is designed to inspire and alerts the scientific community, authorities, and the justice systems to think and take actions to avoid the moral injury in society and cultures due to grave disrespect again

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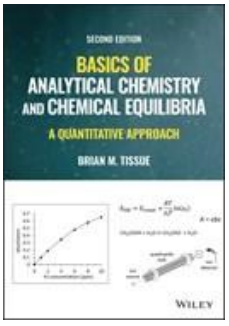

Basics of Analytical Chemistry and Chemical Equilibria (2nd Edition)
Tissue
9781119707356
Pub Date: 4/4/23
$78.00 USD
496 pages
Paperback
Science / Chemistry / Analytic

Summary: Familiarize yourself with the fundamentals of analytical chemistry with this easy-to-follow textbook

Analytical chemistry is the study of chemical composition, concerned with analyzing materials to discover their constituent substances, the amounts in which these substances are present, and more. Since materials exist in different states and undergo reactions, analytical chemistry is also concerned with chemical equilibria, the state at which various reactants and substances will undergo no observable chemical change without outside stimulus. This field has an immense range of practical applications in both industry and research and is a highly desirable area of expertise for the next generation of chemists.

Basics of Analytical Chemistry and Chemical Equilibria provides an introduction to this foundational subject, ideal for specialized courses. It introduces not only the core co

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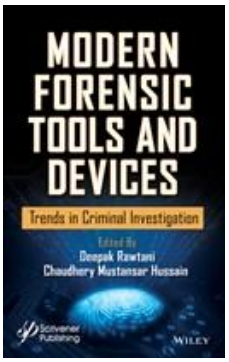

Modern Forensic Tools and Devices : Emerging Trends in Crime Investigation
Hussain
9781119760412
Pub Date: 4/11/23
$225.00 USD
448 pages
Hardcover
Medical / Forensic Medicine

Summary: This book discusses the importance of the tools and devices that are utilized by the forensic laboratories as well as by crime scene processing unit. The digital tools are utilized by the laboratories and the detection kits are used by the crime scene processing unit. The digital forensic tools include the tools that are used in processing of the data retrieved from the personal digital assistants, smartphones and computer. Different tools are also there which can be used for the segregation of the relevant data from large pool of data and then collection of the packets of data that is available on the network and utilization of the information for forensically sound investigation. The Biometric identification system consists of the tools utilized for the processing of the biometric information and creation of the database for the system. On-spot detection devices and imaging de...

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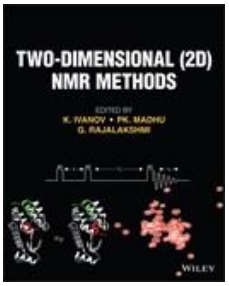

Two-Dimensional (2D) NMR Methods
Konstantin Ivanov, K. P. Madhu, G Rajalakshmi
9781119806691
Pub Date: 5/15/23
$195.00 USD
544 pages
Hardcover
Science / Spectroscopy & Spectrum Analysis

Summary: Practical guide explaining the fundamentals of 2D-NMR for experienced scientists as well as relevant for advanced students

Two-Dimensional (2D) NMR Methods is a focused work presenting an overview of 2D-NMR concepts and techniques, including basic principles, practical applications, and how NMR pulse sequences work.

Contributed to by global experts with extensive experience in the field, *Two-Dimensional (2D) NMR Methods* provides in-depth coverage of sample topics such as:

- Basics of 2D-NMR, data processing methods (Fourier and beyond), product operator formalism, basics of spin relaxation, and coherence transfer pathways
- Multidimensional methods (single- and multiple-quantum spectroscopy), NOESY (principles and applications), and DOSY methods

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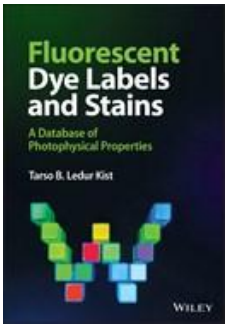

Fluorescent Dye Labels and Stains : A Database of Photophysical Properties
TB Ledur Kist
9781119835134
Pub Date: 5/22/23
$170.00 USD
480 pages
Hardcover
Science / Life Sciences / Biochemistry

Summary: The only comprehensive database of fluorophores and their physical and photochemical properties

Fluorophores are chemical compounds that strongly absorb in the ultraviolet, visible, and/or near-infrared and with bright emission in these ranges. As a result, they are exceptionally valuable as dyes for various analytical processes, capable of labeling and staining particular targets for purposes of fluorescent imaging, sensitive detection, and quantification (exhibiting linear responses over very wide concentration ranges). These compounds are many and varied, and panoramic views of their options, physical properties and their reactions to light excitations can be critical to their successful integration into chemical analysis, pharmaceutical analysis, clinical analysis, microscopies, optical bioimaging, cancer imaging, real-time PCR, flow cytometry, multiplexing in proteomics, lif...

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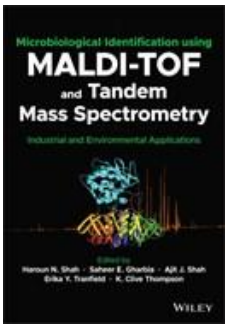

Microbiological Identification using MALDI-TOF and Tandem Mass Spectrometry : Industrial and Environmental Applications
Haroun N. Shah, Saheer E. Gharbia, Ajit Shah, Erika Tranfield, Clive Thompson
9781119814054
Pub Date: 5/22/23
$185.00 USD
528 pages
Hardcover
Science / Spectroscopy & Spectrum Analysis

Summary: Detailed resource presenting the capabilities of MALDI mass spectrometry (MS) to industrially and environmentally significant areas in the biosciences

Microbiological Identification using MALDI-TOF and Tandem Mass Spectrometry: Industrial and Environmental Applications fulfills a need to bring the key analytical technique of MALDI mass spectrometric analysis into routine practice by specialists and non-specialists, and technicians. It informs and educates established researchers on the development of techniques as applied to industrially significant areas within the biosciences. Throughout the text, the reader is presented with recognized and emerging techniques of this powerful and continually advancing field of analytical science to key areas of importance.

While many scientific papers are reporting new applications of MS-based analysis in specific foci, this book is unique in

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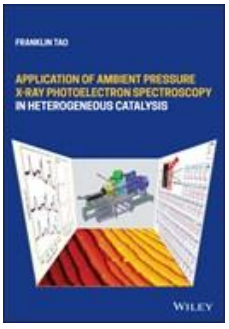

Application of Ambient Pressure X-ray Photoelectron Spectroscopy to Catalysis
Franklin (Feng) Tao
9781119845447
Pub Date: 5/30/23
$160.00 USD
256 pages
Hardcover
Science / Spectroscopy & Spectrum Analysis

Summary: Authoritative and detailed reference on ambient-pressure x-ray photoelectron spectroscopy for practitioners and researchers starting in the field

Application of Ambient Pressure X-ray Photoelectron Spectroscopy to Catalysis introduces a relatively new analytical method and its applications to chemistry, energy, environmental, and materials sciences, particularly the field of heterogeneous catalysis, covering its background and historical development, its principles, the instrumentation required to use it, analysis of data collected with it, and the challenges it faces.

The features of this method are described early in the text; the starting chapters provide a base for understanding how AP-XPS tracks crucial information in terms of the surface of a catalyst during catalysis. The second half of this book delves into the specific applications of AP-XPS to fundamental studies of diff

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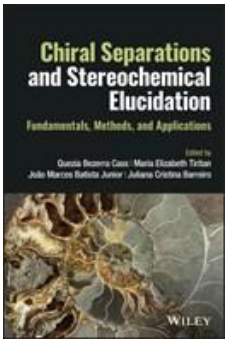

Chiral Separations and Stereochemical Elucidation : Fundamentals, Methods, and Applications
Quezia Bezerra Cass, Maria Elizabeth Tiritan, João Marcos Batista Junior, Juliana Cristina Barreiro
9781119802259
Pub Date: 5/2/23
$250.00 USD
600 pages
Hardcover
Science / Chemistry / Organic

Summary: An expert resource for chemists using stereochemical analysis methods

In *Chiral Separations and Stereochemical Elucidation: Fundamentals, Methods, and Applications*, a team of distinguished researchers delivers a robust and authoritative discussion of the theoretical fundamentals of chiral separation, the most commonly used chiral selectors, and stereochemical elucidation methods. The book offers expert discussions of a variety of chiral separation methods by gas chromatography (GC), supercritical fluid chromatography (SFC), capillary electrophoresis (CE), and liquid chromatography (LC).

The authors also describe several methods for stereochemical elucidation, including X-ray crystallography, nuclear magnetic resonance spectroscopy, and chiroptical methods. The explored material is ideal for practicing chemists seeking a resource to help them guide method

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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: 3/6/23
$135.00 USD
704 pages
Hardcover
Science / Life Sciences / Biochemistry

Summary: The modern approach to teaching chemical biology

Advanced Chemical Biology is organized around the central dogma of life, progressing from genes to proteins and higher-order cellular structures, including core application areas such as imaging, chemical genetics, activity-based protein profiling, and natural product discovery and biosynthesis. Advanced topics and applications in, e. g., microbiology, developmental biology, and neurobiology, are covered in separate sections.

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 of how the concept has been turned into practice. The subdivision of the contents into core and supplemental chapters enables a flexible use in teaching, both for a one-semester and a two-semester course

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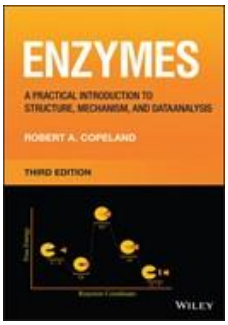

Enzymes : A Practical Introduction to Structure, Mechanism, and Data Analysis
(3rd Edition)
Robert A. Copeland
9781119793250
Pub Date: 3/14/23
$215.00 USD
528 pages
Hardcover
Science / Life Sciences / Biochemistry

Summary: A complete and approachable introduction to the study of enzymes, from theory to practice

Enzymes catalyze the bulk of important biological processes, both metabolic and biochemical. They are specialized proteins whose function is determined by their structure, understanding which is therefore a key focus of biological, pharmacological, and agrarian research, among many others. A thorough knowledge of enzyme structure, pathways, and mechanisms is a fundamental building block of the life sciences and all others connected to them.

Enzymes offers a detailed introduction to this critical subject. It analyzes enzyme proteins at the structural level and details the mechanisms by which they perform their catalyzing functions. The book's in-depth engagement with primary literature and up-to-date research allows it to continuously deploy illustrative examples and connect readers with furth

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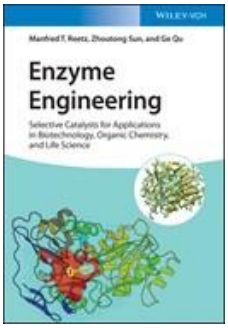

Enzyme Engineering : Selective Catalysts for Applications in Biotechnology, Organic Chemistry, and Life Science
Manfred T. Reetz, Zhoutong Sun, Ge Qu
9783527350339
Pub Date: 4/24/23
$185.00 USD
416 pages
Hardcover
Science / Life Sciences / Molecular Biology

Summary: An authoritative and up-to-date discussion of enzyme engineering and its applications

In *Enzyme Engineering: Selective Catalysts for Applications in Biotechnology, Organic Chemistry, and Life Science*, a team of distinguished researchers deliver a robust treatment of enzyme engineering and its applications in various fields such as biotechnology, life science, and synthesis. The book begins with an introduction to different protein engineering techniques, covers topics like gene mutagenesis methods for directed evolution and rational enzyme design. It includes industrial case studies of enzyme engineering with a focus on selectivity and activity.

The authors also discuss new and innovative areas in the field, involving machine learning and artificial intelligence. It offers several insightful perspectives on the future of this work.

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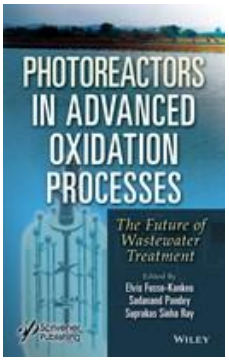

Photoreactors in Advanced Oxidation Process : The Future of Wastewater Treatment
Elvis Fosso-Kankeu, Sadanand Pandey, Suprakas Sinha Ray
9781394166299
Pub Date: 2/7/23
$195.00 USD
350 pages
Hardcover
Science / Chemistry / Organic

Summary: Although a host of works have been done in the development of photocatalysts and photoreactors, there are still some challenges limiting the extensive application of the technology at large scale. Thus, this book contributes to identifying the most critical issues and challenges that limit the use of these processes in planning, design and operation of modern water and wastewater treatment facilities. Thorough understanding of the fundamentals of Advanced Oxidation Processes (AOPs) and photochemistry as well as its application to AOPs for the removal of contaminants or the detoxification of contaminated waters may lead to acquire in-depth knowledge that can be used to devise and design effective AOP treatment systems to meet not only current, but also anticipated regulatory requirements and enhance the independent learning and critical thinking skills.

This book invigor...

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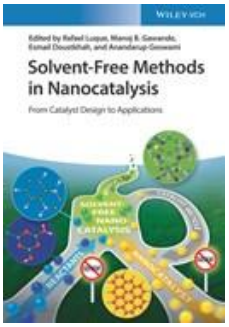

Solvent-Free Methods in Nanocatalysis : From Catalyst Design to Applications
Rafael Luque, Manoj B. Gawande, Esmail Doustkhah, Anandarup Goswami
9783527348749
Pub Date: 4/10/23
$170.00 USD
352 pages
Hardcover
Technology & Engineering / Materials Science

Summary: Discover solvent-free approaches for the synthesis of nanocatalysts as well as various catalytic transformations in this unique one-stop resource

Solvent-free methods have attracted wide attention in organic synthesis and catalysis as a promising approach towards "greener" and more sustainable chemical transformations. In this regard, nanocatalysis has seen particular growth in recent years.

Solvent-Free Methods in Nanocatalysis gives an in-depth overview of nanocatalysts and their catalytic applications using solvent-free methods. After a brief introduction, it covers various synthetic techniques for the preparation of nanocatalysts and supports using solvent-free methods, e.g. ball-milling, microwave- and plasma-assisted methods. The book discusses in detail different catalyst classes, such as metal oxides, doped and functionalized nanocarbons, as well as nitride- and silica-bas

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UV-Visible Photocatalysis for Clean Energy Production and Pollution Remediation : Materials, Reaction Mechanisms, and Applications
Xinchen Wang, Mazakazu Anpo, Xianzhi Fu
9783527350506
Pub Date: 5/30/23
$170.00 USD
384 pages
Hardcover
Technology & Engineering / Materials Science

Summary: Provides the current developments in photocatalytic reactions on both inorganic and organic-based materials which operate under UV-visible light or sunlight irradiation, with focuses on the fundamentals and applications in clean energy production and pollution remediation.

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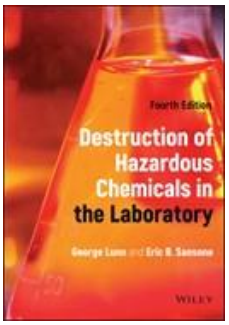

Destruction of Hazardous Chemicals in the Laboratory (4th Edition)
George Lunn, Eric B. Sansone
9781119848806
Pub Date: 2/7/23
$185.00 USD
640 pages
Hardcover
Science / Chemistry / Industrial & Technical

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

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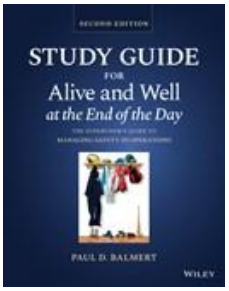

Alive and Well at the End of the Day : The Supervisor's Guide to Managing Safety in Operations, Study Guide (2nd Edition)
Balmert
9781119906681
Pub Date: 3/14/23
$19.95 USD
64 pages
Paperback
Technology & Engineering / Industrial Health & Safety

Summary:

Created by the highly experienced training specialists of Balmert Consulting, the Study Guide uses training best practices to help affix the principals of Alive & Well in the minds of professional students. The use of strategically-crafted questions--both at the beginning and end of each review session--allows the student to work with the material conceptually, becoming more familiar and facile with it. This Study Guide was originally developed in response to multiple requests from readers of Alive & Well who--enthusiastic about the messages and ideas in the book--wanted to find ways to make it become part of their operation's safety culture and practices.

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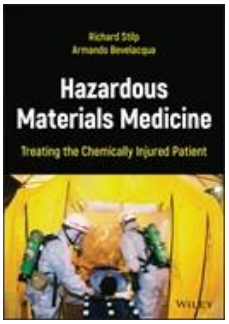


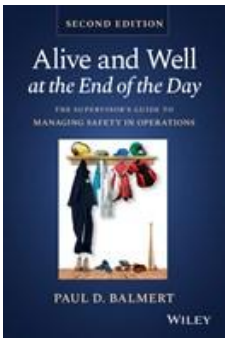
Hazardous Materials Medicine : Treating the Chemically Injured Patient
Stilp
9781119663928
Pub Date: 5/9/23
$120.00 USD
400 pages
Hardcover
Technology & Engineering / Industrial Health & Safety

Summary: Complete background on chemical exposures that create illnesses, including assessment, diagnosis, and treatment protocols

Written on a level that can be understood by field practitioners and/or first responders, *Hazardous Materials Medicine Treating the Chemically Injured Patient* provides an in-depth understanding of how to diagnose and treat toxic chemical exposures in a prehospital or emergency department setting.

The protocols used in this book conform to the guidelines set forth in the NFPA 470 standard, and the medical guidance developed by FEMA for Type I, II & III Deployable Hazmat Response Teams. The hazardous materials medical protocols in this book have been fully vetted by three poison control toxicologists, multiple emergency physicians, and paramedics.

Wiley



Alive and Well at the End of the Day : The Supervisor's Guide to Managing Safety in Operations (2nd Edition)
Paul D. Balmert
9781119906650
Pub Date: 5/16/23
$89.95 USD
336 pages
Hardcover
Technology & Engineering / Industrial Health & Safety

Summary: The Second Edition of *Alive and Well at the End of the Day* is written to provide industrial leaders in operations practical solutions to the tough safety leadership challenges they must manage. The book describes in detail the nature of those challenges – what makes them that tough – and offers proven best practices to successfully deal with them. The practices described in the book come from the author's first-hand observation of leaders in operations who were great at leading and managing safety performance. These best practices are defined and described in detail, allowing the reader to immediately and successfully put them into practice. In addition to providing "what to do" and "how to do that" for effective safety leadership, the book also explains "how it works" and "why to do it that way." In that way, the book provides insight and understanding in addition to effective ...

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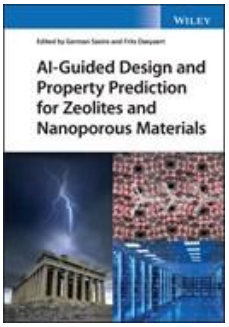


AI-Guided Design and Property Prediction for Zeolites and Nanoporous Materials
German Sastre, Frits Daeyaert
9781119819752
Pub Date: 3/6/23
$210.00 USD
512 pages
Hardcover
Science / Chemistry / Physical & Theoretical

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

Wiley-VCH

Silicon : Electrochemistry, Production, Purification and Applications
Eimutis Juzeliunas
9783527348978
Pub Date: 4/3/23
$165.00 USD
296 pages
Hardcover
Science / Chemistry / Physical & Theoretical

Summary: The expert reference on sustainable and energy-efficient production of photovoltaic-grade silicon materials

Electrochemical methods, in particular molten-salt approaches, are a cost-effective, energy-efficient, and highly sustainable approach for producing solar-grade silicon. Surface micro- and nanostructuring methods for effective light harvesting, silicon electrorefining in molten salts, electrodeposition of photoresponsive films, and other related processes are likely to replace conventional carbothermic production methods.

Silicon: Electrochemistry, Production, Purification and Applications presents an up-to-date summary of recent experimental and technological developments in the field, highlighting sustainable and energy-efficient processes for high-grade silicon production for a variety of photovoltaic and energy applications. Presented in a logical and concise

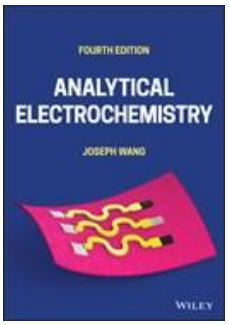
Wiley

Electrochemical Methods : Fundamentals and Applications 3e, Student Solutions Manual (3rd Edition)
Zoski
9781119524069
Pub Date: 4/10/23
$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.

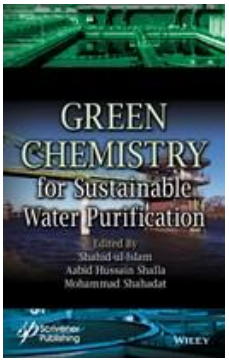
Wiley



Analytical Electrochemistry (4th Edition)
Wang
9781119787693
Pub Date: 3/28/23
$134.95 USD
256 pages
Hardcover
Science / Chemistry / Analytic

Summary: This textbook covers the full scope of modern electroanalytical techniques and devices. The main emphasis is on electroanalysis rather than physical electrochemistry, as the objective is to provide a sound understanding of the fundamentals of electrode reactions and of the principles of electrochemical methods, as well as demonstrating the potential for solving real-life analytical problems. The *fourth edition* has been extensively revised and updated and will reflect the dramatic growth and new directions and tools of electroanalytical chemistry over the past 15 years and covers new topics and the latest developments and trends in electroanalytical chemistry. Coverage of the literature has been updated by over 50%. The fundamental aspects of different electrochemical processes and techniques has also been expanded throughout the text. Additional worked-out examples and variety o...

Wiley-Scrivener



Green Chemistry for Sustainable Water Purification
Ul–Islam
9781119852292
Pub Date: 2/14/23
$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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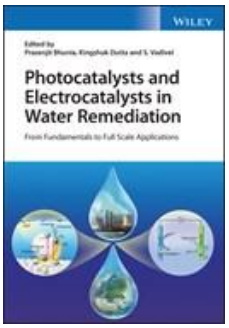

Photocatalysts and Electrocatalysts in Water Remediation : From Fundamentals to Full Scale Applications
P Bhunia
9781119855316
Pub Date: 4/17/23
$185.00 USD
352 pages
Hardcover
Science / Chemistry / Organic

Summary: Comprehensive resource describing the fundamentals, synthesis, and commercial applications of photocatalysts and electrocatalysts in water decontamination

Photocatalysts and Electrocatalysts in Water Remediation introduces the fundamentals of both photo- and electro-catalysts and highlights the potentials of photo- and electro-catalysis towards water decontamination, covering strategies to improve photo- and electro-catalytic efficacies, functions of photo- and electro-catalysts and involved chemical reactions, and challenges and recent developments in the field, with additional discussion of both lab-scale and commercial-scale materials and processes.

As a forward-thinking resource, the text also discusses the scope of further research on photo-, electro- and electrophoto-catalysts. Edited by three highly qualified professionals, with significant experience in the field, the

Wiley

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Microplastics in the Ecosphere : Air, Water, Soil,and Food
M Vithanage
9781119879503
Pub Date: 5/30/23
$245.00 USD
544 pages
Hardcover
Science / Chemistry / Organic

Summary: Discover the environmental impact of microplastics with this comprehensive resource

Microplastics are the minute quantities of plastic that result from industrial processes, household release and the breakdown of larger plastic items. Widespread reliance on plastic goods and, particularly, single-use plastics, which has been increased by the COVID-19 pandemic, has made microplastics ubiquitous; they can be found throughout the ecosphere, including in the bloodstreams of humans and other animals. As these plastics emerge as a potential threat to the environment and to public health, it has never been more critical to understand their distribution and environmental impact.

Microplastics in the Ecosphere aims to cultivate that understanding with a comprehensive overview of microplastics in terrestrial ecosystems. It analyzes microplastic distribution in aerosphere, hydrosphere, and s

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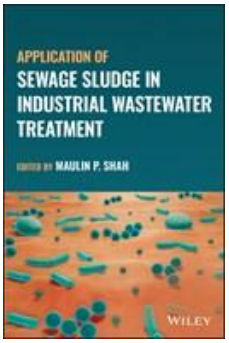
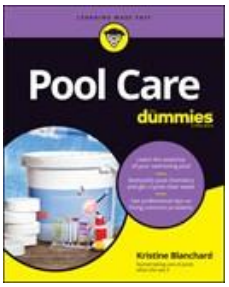


Application of Sewage Sludge in Industrial Wastewater Treatment
Shah
9781119857365
Pub Date: 5/9/23
$195.00 USD
400 pages
Hardcover
Science / Chemistry / Organic

Summary: The character and treatability of industrial wastewaters is highly variable and specific for each industrial activity. Biological treatment with activated sludge is the appropriate technology for industrial wastewaters from several major industrial sectors. Industrial wastewater treatment by activated sludge deals with the activated sludge treatment of industrial wastewaters by considering conceptual frameworks, methodologies and case studies, in a stepwise manner. The issues related to activated sludge treatment, such as biodegradability based characterization, modeling, assessment of stoichiometric and kinetic parameters and design, as well as the issues of industrial pollution control, e.g. in-plant control, effect of pretreatment, etc. are combined in a way to provide a comprehensive and information-rich view to the reader. In addition, these technologies are segregated and ...

For Dummies



Pool Care For Dummies
Kristine Blanchard
9781394166114
Pub Date: 5/16/23
$24.99 USD
Paperback
House & Home / Outdoor & Recreational Areas

Summary: Crystal-clear advice for maintaining a crystal-clear swimming pool

Keeping a swimming pool ready for use requires some chemistry know-how, an understanding of how pool mechanics work, and some time spent doing good old-fashioned cleaning work. *Pool Care For Dummies* offers a reliable, comprehensive resource for building the knowledge that lets you turn pool maintenance into a do-it-yourself task. Written by a certified swimming pool professional who started taking care of pools when she was 5 years old, this book helps you separate the good advice from the bad as you learn to build an upkeep schedule, figure out what chemicals you actually need and which are less-than-magical potions, and fix the common problems that plague all pool owners. With so much trustworthy pool care advice in one place, you can finally cut back on time spent searching for swimming pool advice and more tim...

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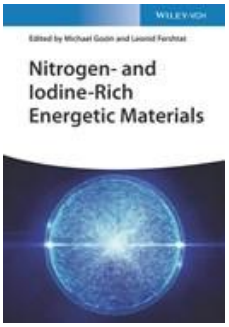

Nitrogen-Rich Energetic Materials
Michael Gozin, Leonid Fershtat
9783527349296
Pub Date: 2/21/23
$185.00 USD
448 pages
Hardcover
Science / Chemistry / Industrial & Technical

Summary: Provides in-depth and comprehensive knowledge on both the chemistry and practical applications of nitrogen- 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-Rich Energetic Materials presents a detailed summary of the development of nitrogen-rich energetic materials over the past decade and provides up-to-date knowledge on their

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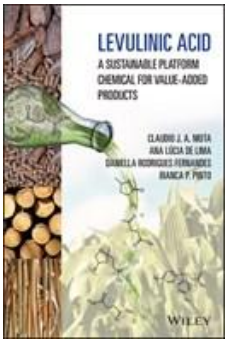


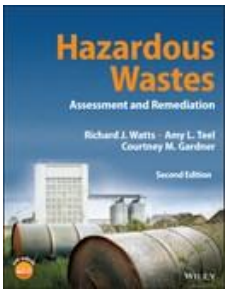
Levulinic Acid : A Sustainable Platform Chemical for Value-Added Products
CJA Mota
9781119814665
Pub Date: 3/6/23
$160.00 USD
224 pages
Hardcover
Science / Chemistry / Industrial & Technical

Summary: An essential overview of this renewable platform chemical with growing commercial applications

Use of fossil fuels and their derivatives has been one of the major drivers of climate change. This ongoing crisis has driven a global search for biofuels and biomass-derived chemicals which can serve as the basis for sustainable and renewable industry. One such 'platform molecule' is Levulinic acid, whose derivatives are increasingly replacing traditional fossil-derived chemicals. The importance of Levulinic acid for renewable industry is therefore only growing.

Levulinic Acid: A Sustainable Platform for Value-Added Products provides a book-length introduction to this chemical and its derivatives, like the levulinates, which applications include fuel additives, food and cosmetic preservatives, flavors, solvents, and more. The book surveys the production routes and necessary technologies

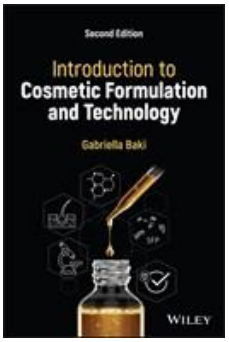
Wiley



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...

Wiley



Introduction to Cosmetic Formulation and Technology (2nd Edition)
Baki
9781119709770
Pub Date: 2/14/23
$136.00 USD
800 pages
Hardcover
Science / Chemistry / Organic

Summary: An accessible and practical review of cosmetics and OTC drug-cosmetic products

In the newly revised second edition of *Introduction to Cosmetic Formulation and Technology*, veteran educator and researcher Dr. Gabriella Baki delivers a comprehensive discussion of cosmetics and personal care products, including coverage of basic concepts, ingredient selection, formulation technology, and testing. The book offers a clear and easy-to-understand review of cosmetics and over the counter (OTC) drug-cosmetic products available in the United States.

In this latest edition, the author expands on general concepts and adds brand-new chapters on the basics of cosmetics testing, ingredients, and skin lightening products. Each chapter includes a summary of common abbreviations with questions provided online, alongside a solutions manual for instructors.

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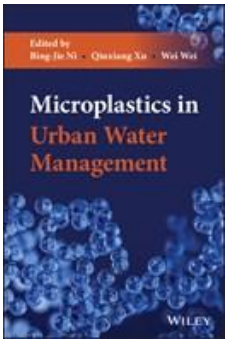


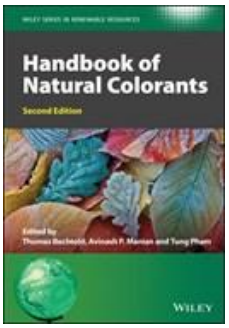
Microplastics in Urban Water Management
Bing-Jie Ni, Qiuxiang Xu, Wei Wei
9781119759348
Pub Date: 3/14/23
$185.00 USD
480 pages
Hardcover
Science / Chemistry / Toxicology

Summary: Enables readers to understand the true occurrence and fate of microplastics in drinking water, wastewater and sludge, and receiving water

Microplastics in Urban Water Management focuses on the occurrence, fate, effect, and removal of microplastics in the urban water management systems, summarizing relevant methods for enhancing microplastics removal and degradation, providing comprehensive data from source to sink (including occurrence and fate of microplastics in urban water management), and covering practical applications, which are expected to provide some theoretical guidance for controlling or mitigating microplastics pollution and its environmental risks.

The work also includes detailed multidisciplinary information on the way in which microplastics behave in urban water management, plus recent advances of nanoplastics, i.e., nano-sized microplastics, in the aquatic environm...

Wiley



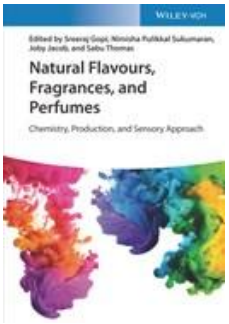
Handbook of Natural Colorants (2nd Edition)
Thomas Bechtold, Avinash P. Manian, Tung Pham, Christian V. Stevens
9781119811718
Pub Date: 5/8/23
$215.00 USD
672 pages
Hardcover
Science / Chemistry / Industrial & Technical
Series: Wiley Series in Renewable Resource

Summary: A detailed survey of a variety of natural colorants and their different applications including textiles, polymers, and cosmetics

Colorants describe a wide range of materials such as dyes, pigments, inks, paint, or chemicals, which are used in small quantities but play an important role in many products such as textiles, polymers, food, and cosmetics. As the effects of climate change begin to be felt, there has been a shift in focus in the field to renewable resources and sustainability, and an interest in the replacement of oil-based products with greener substitutions. As the push to adopt natural resources grows, there have been significant developments in the research and application of natural colorants as a step in the transition to a bio-based economy.

The second edition of this popular textbook, *Handbook of Natural Colorants* provides a detailed introduction to natural color

Wiley-VCH



Natural Flavours, Fragrances, and Perfumes : Chemistry, Production and Sensory Approach
Sabu Thomas, Sreeraj Gopi, Nimisha Pulikkal Sukumaran, Joby Jacob
9783527347087
Pub Date: 5/1/23
$205.00 USD
256 pages
Hardcover
Science / Chemistry / Industrial & Technical

Summary: Explore this one-stop resource on every relevant aspect of natural flavors and fragrances

The use of sensory science has the potential to give scientists, researchers, and industry specialists a way to overcome the challenges in nutraceuticals and, more generally, in the functional food industry. Flavor and fragrance have the potential to significantly influence consumer satisfaction with products and its success in the marketplace. In order to effectively produce and optimize a customer's experience in both food and household products, it is essential to have a strong understanding of the fundamentals of chemistry and physicochemical processes.

Natural Flavours, Fragrances and Perfumes offers a comprehensive look at the sensory sciences necessary to produce the most appealing olfactory responses derived from natural resources for consumers – from the analysis and biomolecular asp

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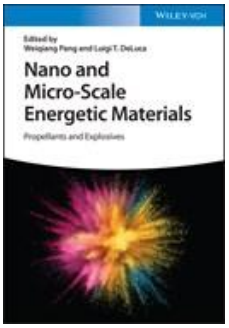

Nano and Micro-Scale Energetic Materials, 2 Volumes : Propellants and Explosives
W Pang
9783527349814
Pub Date: 5/8/23
$345.00 USD
800 pages
Hardcover
Science / Chemistry / Industrial & Technical

Summary: This book focuses on the novel energetic materials exploration, special focus on the modification, ignition, combustion performance and application of innovative energetic materials in propellants and explosives.

Wiley–Blackwell

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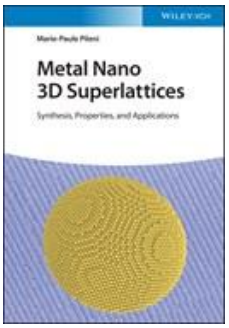
Converting Power into Chemicals and Fuels: Power–t o–X Technology for a Sustainable Future
Bajus
9781394184293
Pub Date: 5/4/23
$150.00 USD
400 pages
Hardcover

Wiley-VCH



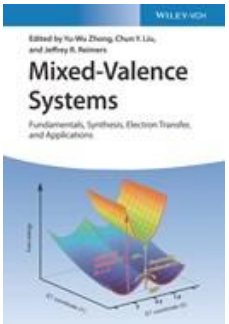
Metal Nano 3D Superlattices : Synthesis, Properties, and Applications
Marie-Paule Pileni
9783527344772
Pub Date: 2/28/23
$185.00 USD
448 pages
Hardcover
Science / Chemistry / Inorganic

Summary: Metal Nano 3D Superlattices

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, physical, and intrinsic properties, *Metal Nano 3D Superlattices: Synthesis, Properties, and Applications* reveals the existence of new materials with unexpected properties. Readers will gain insight into the various approaches on the production and on the specific properties of nanocrystals self-assembled in 3D superlattices also called colloidal crystals, supra or super crystals. These properties open up new avenues of research and potentially aiding in major progress. Overall, the work reviews the progress of and gives perspectiv

Wiley-VCH



Mixed-Valence Systems : Fundamentals, Synthesis, Electron Transfer, and Applications
Y–W Zhong
9783527349807
Pub Date: 5/15/23
$195.00 USD
528 pages
Hardcover
Science / Chemistry / Inorganic

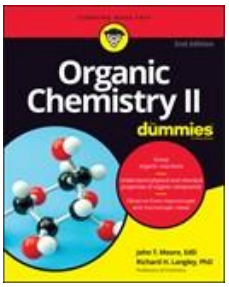
Summary: Comprehensive overview on the advanced development of mixed-valence chemistry

Mixed-Valence Systems: Fundamentals, Synthesis, Electron Transfer, and Applications covers all topics related to the theory and experimental results of mixed-valence systems, including the design, synthesis, and applications of mixed-valence compounds containing inorganic, organometallic and organic redox-active centers. The text also covers the recent advances in mixed-valence chemistry, including the development of new mixed-valence systems, transition of mixed valency, better understanding of the spectral characteristics of intervalence charge transfer, and controllable electron transfer related to molecular electronics.

In *Mixed-Valence Systems*, readers can expect to find detailed information on sample topics such as:

- Characterization and evaluation of mixed-valence

For Dummies



Organic Chemistry II For Dummies (2nd Edition)
John T. Moore, Richard H. Langley
9781119985174
Pub Date: 2/1/23
$24.99 USD
384 pages
Paperback
Science / Chemistry / Organic

Summary: With Dummies at your side, you can conquer O-chem

Organic chemistry is, well, tough. With *Organic Chemistry II For Dummies*, you can (and will!) succeed at one of the most difficult college courses you'll encounter. We make the subject less daunting in the second semester, with a helpful review of what you learned in Organic Chemistry I, clear descriptions of organic reactions, hints for working with synthesis and roadmaps, and beyond. You'll love the straightforward, effective way we explain advanced O-chem material. This updated edition is packed with new practice problems, fresh examples, and updated exercises to help you learn quickly. Observe from a macroscopic and microscopic view, understand the properties of organic compounds, get an overview of carbonyl group basics, and everything else you'll need to pass the class. *Organic Chemistry II For Dummies* is packed with tips to...

Wiley

Organic Reaction Mechanisms 2019
Mark G. Moloney
9781119608271
Pub Date: 3/13/23
$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

Wiley

Organic Reactions, Volume 112, Parts A and B
P. Andrew Evans
9781119982241
Pub Date: 2/7/23
$695.00 USD
1450 pages
Hardcover
Science / Chemistry / Organic
Series: Organic Reactions

Summary: A carefully curated review of the scientific literature, Volume 112 of Organic Reactions commemorates the 50th anniversary of the Ugi reaction. It explores the practical and theoretical aspects of one of the most widely used reactions in organic chemistry, focusing on the main Ugi reaction as well as on its many variants. This volume is published in two parts, A and B.
Launched in 1942, the Organic Reactions series today is a leading secondary- and tertiary-level source for organic chemists across the world.

Wiley

Organogermanium Compounds : Theory, Experiment, and Applications, 2 Volumes
Lee
9781119613435
Pub Date: 3/14/23
$425.00 USD
1072 pages
Hardcover
Science / Chemistry / Inorganic

Summary: Understand chemistry of organogermanium compounds with this thorough and cutting-edge reference

Discovered comparatively late in the history of chemistry, germanium has become one of the most technology-critical elements in modern industry. Germanium and its inorganic and organic derivatives found widespread applications in fiber- and infrared-optics, electronics, polymerization catalysis, solar electric technology, nanotechnology, chemotherapy, and more. Organogermanium compounds containing carbon to germanium chemical bonds, have applications in microelectronics, medicinal and health industries, and beyond.

Organogermanium Compounds: Theory, Experiment, and Applications, 2 Volume Set provides a comprehensive review of this class of compounds in two thorough volumes. It covers all modern aspects of these critically important

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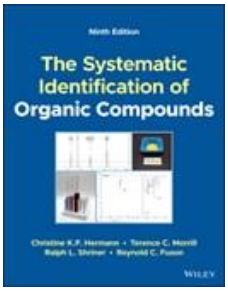

The Systematic Identification of Organic Compounds (9th Edition)
Christine K. F. Hermann, Terence C. Morrill, Ralph L. Shriner, Reynold C. Fuson
9781119799665
Pub Date: 4/18/23
$109.00 USD
752 pages
Paperback
Science / Chemistry / Organic

Summary: A comprehensive introduction to the identification of unknown organic compounds

Identifying unknown compounds is one of the most important parts of the study of chemistry. From basic characteristics such as melting and/or boiling point to more complex data generated through cutting-edge techniques, the range of possible methods for identifying unknown organic compounds is substantial. The utility of a research reference which compiles known techniques and characteristics of possible compounds is clear.

The Systemic Identification of Organic Compounds provides such a reference, designed to teach a hands-on approach in the chemistry lab. It takes readers step-by-step through the process of identifying an unknown compound and elucidating its structure from infrared, nuclear magnetic resonance, and mass spectra in addition to solubility characteristics, melting point, boiling point, a

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Transition-Metal-Catalyzed C-H Functionalization of Heterocycles, 2 Volumes
Punniyamurthy
9781119774136
Pub Date: 4/18/23
$395.00 USD
960 pages
Hardcover
Science / Chemistry / Organic

Summary: A comprehensive guide to recent advances in this field

Constituting the majority of all known compounds, heterocycles are structures that incorporate one or more heteroatoms within their core, thus exhibiting properties that are quite different from their all-carbon analogs. They are fundamental to all fields of chemistry and, therefore, their synthesis and modification has attracted a great deal of attention in the recent years. In this vein, transition-metal-catalyzed (C-H) bond functionalization forms a crucial tool for generating and analyzing heterocyclic compounds.

Transition-Metal-Catalyzed C-H Functionalization of Heterocycles, Two-Volume Set, showcases diverse C-H functionalization methodologies and their incorporation into the latest research. The chapters serve as an essential tool depicting detailed site-selective functionalization of heterocyclic cores, along with a c

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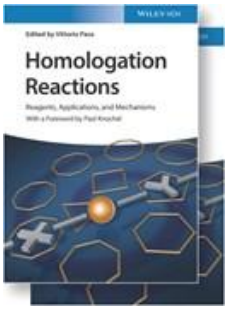

Homologation Reactions, 2 Volumes : Reagents, Applications, and Mechanisms
Vittorio Pace
9783527348152
Pub Date: 5/22/23
$375.00 USD
800 pages
Hardcover
Science / Chemistry / Organic

Summary: Provides a unique summary of homologation strategies in organic synthesis

Homologation Reactions presents different concepts underpinning the use of homologating reagents as well as their applications in organic synthesis. It covers in-depth discussions on the rationales governing this kind of transformations with a strong emphasis on mechanistic elements modulating critical aspects (e.g. selectivity) of the processes. In addition, this two-volume work features:

- Metal carbenoids, ylides, and diazo reagents
- Homologating agents working under nucleophilic, electrophilic, and radical regime
- Homologations realized on boron-containing or carbon-centered linchpins
- Use of highly sensitive fluorinated homologating agents
- Progressive homologations and the concept of assembly line synthesis

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Perspectives on Structure and Mechanism in Organic Chemistry (3rd Edition)
Felix A. Carroll
9781119808619
Pub Date: 4/25/23
$116.00 USD
960 pages
Hardcover
Science / Chemistry / Organic

Summary: "Beyond the basics" physical organic chemistry textbook, written for advanced undergraduates and beginning graduate students

Based on the author's first-hand classroom experience, *Perspectives on Structure and Mechanism in Organic Chemistry* uses complementary conceptual models to give new perspectives on the structures and reactions of organic compounds, with the overarching goal of helping students think beyond the simple models of introductory organic chemistry courses. Through this approach, the text better prepares readers to develop new ideas in the future.

In the 3rd Edition, the author thoroughly updates the topics covered and reorders the contents to introduce computational chemistry earlier and to provide a more natural flow of topics, proceeding from substitution, to elimination, to addition. About 20% of the 438 problems have been either replaced or updated, with answer

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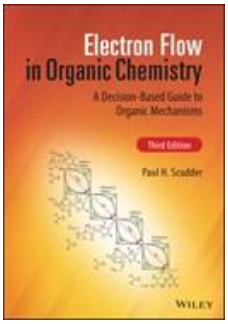

Electron Flow in Organic Chemistry : A Decision-Based Guide to Organic Mechanisms (3rd Edition)
Paul H. Scudder
9781119718932
Pub Date: 5/2/23
$66.00 USD
600 pages
Paperback
Science / Chemistry / Organic

Summary: Using a mechanistic approach, this book helps students develop a good intuition for organic chemistry and the ability to approach and solve complex problems -- methods of analysis that are valuable and portable to other fields.

- Features new chapters that expand on problem-solving methods and an addition to the appendix that will aid students transitioning from the electron-pushing approach of organic chemistry to the different approach of inorganic chemistry
- Supplies additional new exercises for students with answers to odd-numbered problems included
- Provides online material for adopting faculty: answers to the text's even-numbered problems and an exam file

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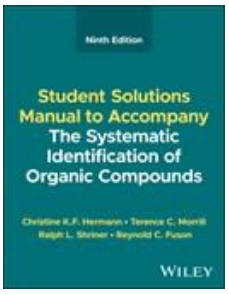

The Systematic Identification of Organic Compounds, Student Solutions Manual (9th Edition)
Hermann
9781119799856
Pub Date: 5/2/23
$46.00 USD
420 pages
Paperback
Science / Chemistry / Organic

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Solutions Manual for Perspectives on Structure and Mechanism in Organic Chemistry (3rd Edition)
Felix A. Carroll
9781119808657
Pub Date: 5/2/23
$39.00 USD
200 pages
Paperback
Science / Chemistry / Organic

Summary: This book is the solutions manual for the 438 problems in the textbook *Perspectives on Structure and Mechanism in Organic Chemistry, 3rd Edition*.

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Perspectives on Structure and Mechanism in Organic Chemistry (3rd Edition)
Carroll
9781119808664
Pub Date: 5/2/23
$136.00 USD
Paperback
Science / Chemistry / Organic

Summary: "Beyond the basics" physical organic chemistry textbook, written for advanced undergraduates and beginning graduate students

Based on the author's first-hand classroom experience, *Perspectives on Structure and Mechanism in Organic Chemistry* uses complementary conceptual models to give new perspectives on the structures and reactions of organic compounds, with the overarching goal of helping students think beyond the simple models of introductory organic chemistry courses. Through this approach, the text better prepares readers to develop new ideas in the future.

In the 3rd Edition, the author thoroughly updates the topics covered and reorders the contents to introduce computational chemistry earlier and to provide a more natural flow of topics, proceeding from substitution, to elimination, to addition. About 20% of the 438 problems have been either replaced or updated, with answer

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Organic Reactions, Volume 113
P. Andrew Evans
9781119982272
Pub Date: 5/9/23
$395.00 USD
800 pages
Hardcover
Science / Chemistry / Organic
Series: Organic Reactions

Summary: A carefully curated review of the scientific literature, Volume 113 of Organic Reactions presents critical discussions of widely used organic reactions or particular steps of a reaction. The material is treated from a preparative viewpoint, with emphasis on limitations, interfering influences, effects of structure and the selection of experimental techniques. The work includes tables that contain all possible examples of the reaction under consideration. Detailed procedures illustrate the significant modifications of each method.
Launched in 1942, the Organic Reactions series today is a leading secondary- and tertiary-level source for organic chemists across the world.

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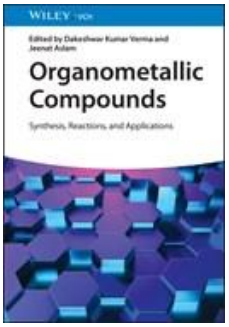

Organometallic Compounds : Synthesis, Reactions, and Applications
Dakeshwar Kumar Verma, Jeenat Aslam
9783527351787
Pub Date: 6/6/23
$168.83 USD
448 pages
Hardcover
Science / Chemistry / Organic

Summary: A thoroughly up-to-date overview of the fundamentals, synthesis, and applications of organometallic compounds

In *Organometallic Compounds: Synthesis, Reactions, and Applications*, a team of distinguished researchers delivers an accessible and robust introduction to the fundamentals of organometallic compounds, including their reactions, catalytic mechanisms, and modern applications, including carbon-dioxide fixation, reduction, gas adsorption and purification, drug delivery, renewable energy, and wastewater treatment. The book also covers toxicological and computational studies.

The authors address the current challenges confronting researchers seeking to sustainably synthesize and process organometallic compounds and offer complete coverage on the most recent advancements in applications relating to the fields of environmental science, electronics, fossil fuels, and

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The Systematic Identification of Organic Compounds, Set (9th Edition)
Hermann
9781119799863
Pub Date: 5/16/23
$155.00 USD
Paperback
Science / Chemistry / Organic

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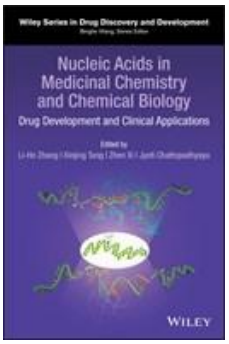

Nucleic Acids in Medicinal Chemistry and Chemical Biology : Drug Development and Clinical Applications
Li-He Zhang, Xinjing Tang, Zhen Xi, Jyoti Chattopadhyaya
9781119692744
Pub Date: 2/7/23
$250.00 USD
576 pages
Hardcover
Science / Life Sciences / Biochemistry
Series: Wiley Series in Drug Discovery and Development

Summary: An up-to-date and comprehensive exploration of nucleic acid medicinal chemistry and its applications

In *Nucleic Acids in Medicinal Chemistry and Chemical Biology: Drug Development and Clinical Applications,* a team of distinguished researchers delivers a comprehensive overview of the chemistry and biology of nucleic acids and their therapeutic applications. The book emphasizes the latest research in the field, including new technologies like CRISPR that create novel possibilities to edit mutated genes at the genomic DNA level and to treat inherited diseases and cancers.

The authors explore the application of modified nucleosides and nucleotides in medicinal chemistry, a variety of current topics on nucleic acid chemistry and biology, nucleic acid drugs used to treat disease, and more. They also probe new domains of pharmaceutical research, offering the reader a

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Advances of Novel Formulations in Drug Delivery
Raj K. Keservani, Rajesh Kumar Kesharwani, Anil K. Sharma
9781394166435
Pub Date: 2/14/23
$249.00 USD
582 pages
Hardcover
Science / Chemistry / Organic

Summary: The world is witnessing a fast-paced progress in approaches purported to deliver the drug for desired pharmacological response. The use of nanotechnology for drug delivery offers the possibility for improved therapeutic strategies with targeted delivery and minimal side effects. Nanotechnology assisted drug delivery employ designed nanomaterials to form delivery systems of nanoscale magnitude.

The book is written by contributors from all parts of the world possessing academic acumen in diverse zones of drug research. This is an endeavor to bring all the nanotechnology-based drug carriers under the umbrella of a single text. The drug carriers made up using natural as well as synthetic polymers are described in detail. The drug carriers include (though not limited to) particulates, vesicular, dendrimers, quantum dots, carbon nano tubes

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Medical Toxicology : Occupational and Environmental Exposures, Multi-Volume
Donald G. Barceloux, Robert B. Palmer
9781119872962
Pub Date: 2/22/23
$750.00 USD
2160 pages
Hardcover
Science / Chemistry / Industrial & Technical

Summary: In-depth, evidence-based resource covering important toxins affecting human health and safety

Medical Toxicology of Occupational and Environmental Exposures presents crucial information on various important toxins that affect human health and safety, focusing on their chemical structures, analytical methods, clinical features, and comprehensive treatment options. Organized across three volumes, it provides comprehensive and insightful information for clinicians, students, and investigators with interests in metals, radiation, and cancer. The interdisciplinary, evidence-based approach of the work is designed to reach beyond clinical settings to increase the scientific understanding of those in associated fields.

To allow for quick reference, the information is presented in a consistent and easy-to-read format. Additional information is readily available to the interested reader thr

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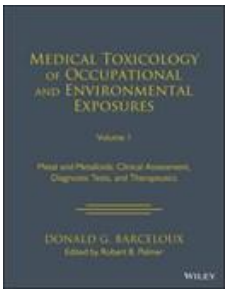

Medical Toxicology of Occupational and Environmental Exposures to Metal and Metalloids, Volume 1 : Clinical Assessment, Diagnostic Tests, and Therapeutics
Donald G. Barceloux, Robert B. Palmer
9781119881247
Pub Date: 2/22/23
$295.00 USD
976 pages
Hardcover
Science / Chemistry / Industrial & Technical

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 ...

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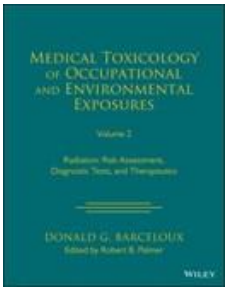

Medical Toxicology of Occupational and Environmental Exposures to Radiation, Volume 2 : Risk Assessment, Diagnostic Tests, and Therapeutics
Donald G. Barceloux, Robert B. Palmer
9781119881254
Pub Date: 2/22/23
$195.00 USD
480 pages
Hardcover
Science / Chemistry / Industrial & Technical

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 ...

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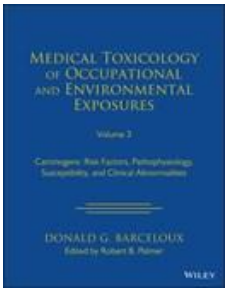

Medical Toxicology of Occupational and Environmental Exposures to Carcinogens, Volume 3 : Risk Factors, Pathophysiology, and Clinical Abnormalities
Donald G. Barceloux, Robert B. Palmer
9781119881261
Pub Date: 2/22/23
$260.00 USD
704 pages
Hardcover
Science / Chemistry / Industrial & Technical

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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The Greening of Pharmaceutical Engineering, Applications for Physical Disorder Treatments
M. R. Islam, Jaan S. Islam, Gary M. Zatzman
9781119183778
Pub Date: 3/14/23
$225.00 USD
500 pages
Hardcover
Science / Chemistry / Industrial & Technical

Summary: This fourth and final volume in a four-volume series on the greening of pharmaceutical engineering presents evidence for the applications of new theories advanced in the first two volumes. Similar to the Volume three, which was for mental health, this volume presents applications for the diagnosis and treatment of physical disorders. Based on the groundwork laid in the first two volumes, the authors now embark on significant, real-life scenarios that apply their theory to physical disorder treatments. In keeping with the tradition of engineering solutions, practical yet sustainable solutions are presented.

The fundamental flaws of the conventional approach to medicine is well known. However, this book does not stop at unearthing criticism of western medicine. It offers hope and recommends a series of solutions for both prevention and treatment of physical ailments. Both evidenc...

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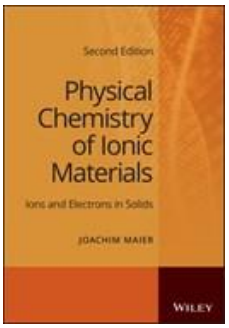

Physical Chemistry of Ionic Materials : Ions and Electrons in Solids (2nd Edition)
Maier
9781119799108
Pub Date: 3/20/23
$97.00 USD
624 pages
Hardcover
Science / Chemistry / Physical & Theoretical

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 su

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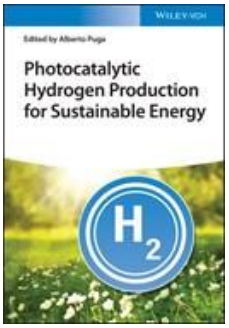

Photocatalytic Hydrogen Production for Sustainable Energy
Alberto Puga
9783527349838
Pub Date: 5/30/23
$160.00 USD
336 pages
Hardcover
Science / Chemistry / Industrial & Technical

Summary: Using sunlight for hydrogen production is one of the most emerging field in catalysis and material science, because it offers a sustainable and renewable energy source. All fascinating aspects are presented and the book is a must-read for every researcher in the field.

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Beijing
Room 805-808, Floor 8, Sun Palace,
No. 12A, Taiyanggong Middle Road
Chaoyang District, Beijing, P.R. China
Postal code 100028
Tel: (86) 10 8541 9300
Fax: (86) 10 8541 9400
china_marketing@wiley.com

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India

Corporate office
1402, 14th Floor,
World Trade Tower
Plot No. C-1, Sector – 16,
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Tel: 0120-6291100
csupport@wiley.com
delsales@wiley.com

Bengaluru
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Bengaluru - 560010
Tel: 91-80-23132383
blrsales@wiley.com

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Fax: (60) 3 7722 5901
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