

Neeraj Kumar Physical Chemistry

Yeah, reviewing a books **neeraj kumar physical chemistry** could be credited with your close connections listings. This is just one of the solutions for you to be successful. As understood, achievement does not suggest that you have astonishing points.

Comprehending as competently as settlement even more than supplementary will present each success. neighboring to, the proclamation as skillfully as insight of this neeraj kumar physical chemistry can be taken as well as picked to act.

Essential Organic Chemistry, Global Edition - Paula Yurkanis Bruice
2015-06-04

NOTE You are purchasing a standalone product; MasteringChemistry does not come packaged with this content. If you would like to purchase both the physical text and MasteringChemistry search for 032196747X / 9780321967473 Essential Organic Chemistry 3/e Plus

MasteringChemistry with eText -- Access Card Package: The access card package consists of: 0321937716 / 9780321937711 Essential Organic Chemistry 3/e0133857972 / 9780133857979 MasteringChemistry with PearsonKey Benefits: MasteringChemistry should only be purchased when required by an instructor." For one-term Courses in Organic Chemistry. " A comprehensive, problem-solving approach for the brief Organic Chemistry course. Modern and thorough revisions to the streamlined, " Essential Organic Chemistry f"ocus on developing students' problem solving and analytical reasoning skills throughout organic chemistry. Organized around reaction similarities and rich with contemporary biochemical connections, Bruice's Third Edition discourages memorization and encourages students to be mindful of the fundamental reasoning behind organic reactivity: electrophiles react with nucleophiles. Developed to support a diverse student audience studying organic chemistry for the first and only time, Essentials fosters an understanding of the principles of organic structure and reaction mechanisms, encourages skill development through new Tutorial Spreads and emphasizes bioorganic processes. Contemporary and rigorous, Essentials addresses the skills needed for the 2015 MCAT and serves both pre-med and biology majors. Also Available with MasteringChemistry(R) This title is also available with MasteringChemistry - the leading online homework, tutorial, and assessment system, designed to improve results by engaging students before, during, and after class with powerful content. Instructors ensure students arrive ready to learn by assigning educationally effective content before class, and encourage critical thinking and retention with in-class resources such as Learning Catalytics(TM). Students can further master concepts after class through traditional and adaptive homework assignments that provide hints and answer-specific feedback. The Mastering gradebook records scores for all automatically graded assignments in one place, while diagnostic tools give instructors access to rich data to assess student understanding and misconceptions. MasteringChemistry brings learning full circle by continuously adapting to each student and making learning more personal than ever--before, during, and after class.

Photocatalysts in Advanced Oxidation Processes for Wastewater Treatment - Elvis Fosso-Kankeu 2020-06-10

Photocatalysts in Advanced Oxidation Processes for Wastewater Treatment comprehensively covers a range of topics aiming to promote the implementation of photocatalysis at large scale through provision of facile and green methods for catalysts synthesis and elucidation of pollutants degradation mechanisms. This book is divided into two main parts namely "Synthesis of effective photocatalysts" (Part I) and "Mechanisms of the photocatalytic degradation of various pollutants" (Part II). The first part focuses on the exploration of various strategies to synthesize sustainable and effective photocatalysts. The second part of the book provides an insights into the photocatalytic degradation mechanisms and pathways under ultraviolet and visible light irradiation, as well as the challenges faced by this technology and its future prospects.

Alien Gene Transfer in Crop Plants, Volume 1 - Aditya Pratap 2013-11-01
Genetic engineering and biotechnology along with conventional breeding have played an important role in developing superior cultivars by transferring economically important traits from distant, wild and even unrelated species to the cultivated varieties which otherwise could not have been possible with conventional breeding. There is a vast amount of literature pertaining to the genetic improvement of crops over last few decades. However, the wonderful results achieved by crop scientists in

food legumes' research and development over the years are scattered in different journals of the World. The two volumes in the series 'Alien Gene Transfer in Crop Plants' address this issue and offer a comprehensive reference on the developments made in major food crops of the world. These volumes aim at bringing the contributions from globally renowned scientists at one platform in a reader-friendly manner. The 1st volume entitled, 'Alien Gene Transfer in Crop Plants: Innovations, Methods and Risk Assessment' will deal exclusively with the process and methodology. The contents of this volume have been designed to appraise the readers with all the theoretical and practical aspects of wide hybridization and gene transfer like processes and methods of gene transfer, role of biotechnology with special reference to embryo rescue, genetic transformation, protoplast fusion and molecular marker technology, problems such as cross incompatibility and barriers to distant hybridization and solutions to overcome them. Since wild and weedy relatives of crop plants may have negative traits associated with them, there are always possibilities of linkage drag while transferring alien alleles. Therefore, problems and limitations of alien gene transfer from these species will also be discussed in this series. Further, the associated risks with this and assessment of risks will also be given due weightage.

Nanomaterials - R. Praveen Kumar 2021-05-20

Nanomaterials: Application in Biofuels and Bioenergy Production Systems looks at how biofuels and bioenergy can be part of the "sustainable" solution to the worlds energy problems. By addressing bioenergy products compared to their fossil energy counterparts, covering research and development in biofuels applied with nanomaterials this book analyzes the future trends and how biofuels and bioenergy can contribute to its optimization. Starting from fundamentals up to synthesis, characterization and applications of nanomaterials in biofuels and bioenergy production systems, the chapters include the procedures needed for introducing nanomaterials in these specific sectors along with the benefits derived from their applications. Including the hazards and environmental effects of nanomaterials in bioenergy applications, sustainability issues and a techno-economic analysis of the topic, this book provides researchers in bioscience, energy & environment and bioengineering with an up to date look at the full life cycle assessment of nanomaterials in bioenergy. Provides a one stop solution manual for applications of nanomaterials in bioenergy and biofuels Includes biofuel applications with compatible global application case studies Addresses the demand for environmental and techno-economic analysis of nanomaterials applications

Essentials of Physical Chemistry - Arun Bahl

Essentials of Physical Chemistry is a classic textbook on the subject explaining fundamentals concepts with discussions, illustrations and exercises. With clear explanation, systematic presentation, and scientific accuracy, the book not only helps the students clear misconceptions about the basic concepts but also enhances students' ability to analyse and systematically solve problems. This bestseller is primarily designed for B.Sc. students and would equally be useful for the aspirants of medical and engineering entrance examinations.

Organic Chemistry, 9e - Jr. Leroy G. Wade

Organic Chemistry, Ninth Edition gives students a contemporary overview of organic principles and the tools for organizing and understanding reaction mechanisms and synthetic organic chemistry with unparalleled and highly refined pedagogy. This text presents key principles of organic chemistry in the context of fundamental reasoning and problem solving. Authored to complement how students use a textbook today, new Problem-Solving Strategies, Partially Solved Problems, Visual Reaction Guides and Reaction Starbursts encourage students to use the text before class as a primary introduction to organic chemistry as well as a comprehensive study tool for working problems and/or preparing for exams.

Advanced Problems in Organic Chemistry for Competitive

Examinations - Akshay Choudhary

Advanced Problems in Organic Chemistry for competitive examinations comprises 10 chapters which are designed in a coherently to aid problem solving. The exercises in the book have been divided into two levels. The first level will help candidates to practice fundamental problems involving concepts learnt in the chapters. The second level contains advance level problems for students. Workbook exercises have also been added at the end of important chapters to give aspirants an extra edge to crack the examinations.

Soy Protein - Rakesh Kumar 2017-07

Soy protein is abundantly present in soybeans, which have in the past been termed as wonder beans. Soy flour, soy protein concentrate and soy protein isolate can be extracted from soybeans after removing the oil components. After the removal of oil components, one can use protein components as milk, paneer, cheese and sauce. The best feature of soybean is that it possesses medicinal properties, and hence can be consumed as a main course for nutrients and sustenance. Consumption of soy-based products is also helpful in reducing the chances of several hormone dependent diseases such as cancer, osteoporosis, cardiovascular disease and menopausal symptoms. Additionally, soybean can be used to prepare bioplastics and biofibres. The book contains ten chapters and is written so as to give the readers the multiple benefits of soy protein as food. This book also discusses the properties of edible soy protein films, with special emphasis on their mechanical properties; these mechanical properties can be determined experimentally.

Theoretically, the mechanical properties of soy protein film can be determined by a statistical tool known as the Response Surface Methodology (RSM). The basic concept of RSM is discussed in one of the chapter of this book. The reader will benefit greatly by reading this book.

Free Radical Biology and Environmental Toxicity - Kavindra Kumar Kesari 2022-02-08

The main aim of this book is to collect a series of research articles and reviews from a diverse group of scientists to share their research work on the role of free radical research and environmental toxicity. This book presents various state-of-the-art chapters of recent progress in the field of cellular toxicology and clinical manifestations of various disorders. Topics include cell signaling, various risk factors, the pathophysiology of disease instigation and distribution, mechanistic insights into metal and nanoparticle toxicity, neural toxicity, nongenotoxic carcinogenicity, immune and idiosyncratic toxicity, prevention, biomarkers related to disease progression and therapeutic strategies. In particular, this book provides valuable insight for researchers, pathologists, and clinicians with an interest in toxicological research and cellular impairments with special emphasis on therapeutic advancement.

The Pearson Guide to Physical Chemistry for the IIT JEE - Singhal**Mayo Clinic Neurology Board Review** - Kelly D. Flemming 2021-11-05

"The cerebrospinal vasculature originates at the aortic arch. The right brachiocephalic artery divides into the right common carotid artery and the right subclavian artery. The left common carotid and left subclavian arteries arise directly from the aortic arch. The 2 common carotid arteries bifurcate into the internal and external carotid arteries. The anterior circulation of the brain includes the distal branches from the internal carotid artery, including the anterior cerebral artery and the middle cerebral artery. The vertebral arteries arise from the subclavians and join at the pontomedullary junction, forming the basilar artery. The vertebrobasilar system and distal branches are commonly known as the posterior circulation of the brain"--

Numerical Problems in Physical Chemistry (with Solutions and Hints) - Amalendu Ghosal 1989-01-01**Developability of Biotherapeutics** - Sandeep Kumar 2015-11-18

Biopharmaceuticals are emerging as frontline medicines to combat several life-threatening and chronic diseases. However, such medicines are expensive to develop and produce on a commercial scale, contributing to rising healthcare costs. *Developability of Biotherapeutics: Computational Approaches* describes applications of computational and molecular modeling techniques that improve the overall process of discovery and development by removing empiricism. The concept of developability involves making rational choices at the pre-clinical stages of biopharmaceutical drug development that could positively impact clinical outcomes. The book also addresses a general lack of awareness of the many different contributions that computation can make to biopharmaceutical drug development. This informative and practical reference is a valuable resource for professionals engaged in industrial

research and development, scientists working with regulatory agencies, and pharmacy, medicine, and life science students and educators. It focuses primarily on the developability of monoclonal antibody candidates, but the principles described can also be extended to other modalities such as recombinant proteins, fusion proteins, antibody drug conjugates and vaccines. The book is organized into two sections. The first discusses principles and applications of computational approaches toward discovering and developing biopharmaceutical drugs. The second presents best practices in developability assessments of early-stage biopharmaceutical drug candidates. In addition to raising awareness of the promise of computational research, this book also discusses solutions required to improve the success rate of translating biologic drug candidates into products available in the clinic. As such, it is a rich source of information on current principles and practices as well as a starting point for finding innovative applications of computation towards biopharmaceutical drug development.

Hazardous Gases - Jaspal Singh 2021-07-30

Hazardous Gases: Risk Assessment on Environment and Human Health examines all relevant routes of exposure, inhalation, skin absorption and ingestion, and control measures of specific hazardous gases resulting from workplace exposure from industrial processes, traffic fumes, and the degradation of waste materials and how they impact the health and environment of workers. The book examines the risk assessment and effect of poisonous gases on the environment human health. It also covers necessary emergency guidelines, safety measures, physiological impact, hazard control measures, handling and storage of hazardous gases. Each chapter is formatted to include an introduction, historical background, physicochemical properties, physiological role discussing mechanisms of toxicity, its effect on human health as well as environment, followed by case studies and recent research on toxic gases. *Hazardous Gases: Risk Assessment on Environment and Human Health* is a helpful resource for academics and researchers in toxicology, occupational health and safety, and environmental sciences as well as those in the field who work to assess and mitigate the impact of toxic gases on the work environment and the health of the workforce.

Emphasizes the environmental monitoring in the workplace of hazardous materials Includes all relevant storage and handling information required for detailing all personnel on the hazards and risks from the substances with which they work Offers practical examples and case studies related to toxic gases and their impact on health

Hydrocarbon - Vladimir Kutcherov 2013-01-16

Hydrocarbons provide our core energy resource. Information on their origin, properties and phase behavior is interesting from the point of view of physical chemistry. At the same time this information is of great value to the oil and gas industry. The book "Hydrocarbon" is comprised of 9 chapters, covering different topics: from origin of hydrocarbons to the method for hydrocarbon exploration. Distribution of polycyclic aromatic hydrocarbons in soil and their influence to environment are also discussed. This book should serve as a support to researchers and students as well as experts, both in academia and industry.

Fundamentals of Physical Chemistry - Ananya Ganguly

Fundamentals of Physical Chemistry is the signature compilation of the class tested notes of iconic chemistry coach Ananya Ganguly. Her unique teaching methodology and authoritative approach in teaching of concepts, their application and strategy is ideal for preparing for the IITJEE examinations. The author's impeccable command and the authority on each foray of chemistry teaching are visible in each chapter and the chapter ending exercises. Each chapter unfolds the structured, systematic and patterned chemistry concepts in lucid and student friendly approach. The book is without those unnecessary frills that make the bulk in other popular books in the market for the IITJEE. An indispensable must have for in-depth comprehension of Chemistry for the coveted IITJEE.

Electron Impact Ionization - T.D. Märk 2013-06-29

It is perhaps surprising that a process which was one of the first to be studied on an atomic scale, and a process which first received attention over seven decades ago, continues to be the object of diverse and intense research efforts. Such is the case with the (seemingly) conceptually simple and familiar mechanism of electron impact ionization of atoms, molecules, and ions. Not only has the multi-body nature of the collision given ground to theoretical effort only grudgingly, but also the variety and subtlety of processes contributing to ionization have helped insure that progress has come only with commensurate work: no pain - no gain. Modern experimental methods have made it possible to effectively measure and explore threshold laws, differential cross sections, partial

cross sections, inner-shell ionization, and the ionization of unstable species such as radicals and ions. In most instances the availability of experimental data has provided impetus and guidance for further theoretical progress.

Thoracic Anesthesia Procedures - Alan Kaye 2021-04-09

As the practice of thoracic anesthesia becomes increasingly recognized as a major subspecialty of anesthesia, there is a growing need among current practitioners to evolve their neuraxial, regional, and general anesthesia techniques and expand their understanding of the latest evidence. Thoracic Anesthesia Procedures is a timely update in the field, providing a concise, evidence-based, and richly illustrated book ideal for students, trainees, and practicing clinicians. Comprehensive in scope, this book addresses essential topics such as thoracic physiology and pathophysiology, airway devices and other equipment, anesthetic techniques, surgical considerations, ventilation techniques, and postoperative care.

Essential Physical Chemistry - Ranjeet Shahi

Advances in Nanosensors for Biological and Environmental Analysis - Akash Deep 2019-06-14

Advances in Nanosensors for Biological and Environmental Analysis presents the current state-of-art in nanosensors for biological and environmental analysis, also covering commercial aspects. Broadly, the book provides detailed information on the emergence of different types of nanomaterials as transduction platforms used in the development of nanosensors. These include carbon nanotubes, graphene, 2-D transition metal dichalcogenides, conducting polymers and metal organic frameworks. Additional topics include sections on the way nanosensors have inspired new product development in various types of biological and environmental applications that are currently available and on the horizon. Features detailed information on various types of biological and environmental nanosensors Gives particular attention to the different categories of advanced functional interfaces, processes for their development, and application areas Includes the current state-of-the-art in terms of commercial aspects

Catalytic Application of Nano-Gold Catalysts - Neeraj Kumar Mishra 2016-08-31

Gold, considered catalytically inactive for a long time, is now a fascinating partner of modern chemistry, as scientists such as Bond, Teles, Haruta, Hutchings, Ito and Hayashi opened new perspectives for the whole synthetic chemist community. Recently gold has attracted significant attention due to its advantageous characteristics as a catalytic material and since it allows easy functionalization with biologically active molecules. In this context, when gold is prepared as very small particles, it turns out to be a highly active catalyst. However, such a phenomenon completely disappears when the gold particle size grows into the micrometer range. Therefore, the preparation for obtaining an active gold catalyst is so important. The primary objective of this book is to provide a comprehensive overview of gold metal nanoparticles and their application as promising catalysts.

Formwork for Concrete Structures - Garold (Gary) Oberlender 2010-09-06

The definitive guide to formwork design, materials, and methods--fully updated Formwork for Concrete Structures, Fourth Edition, provides current information on designing and building formwork and temporary structures during the construction process. Developed with the latest structural design recommendations by the National Design Specification (NDS 2005), the book covers recent advances in materials, money- and energy-saving strategies, safety guidelines, OSHA regulations, and dimensional tolerances. Up-to-date sample problems illustrate practical applications for calculating loads and stresses. This comprehensive manual also includes new summary tables and equations and a directory of suppliers. Formwork for Concrete Structures, Fourth Edition, covers: Economy of formwork Pressure of concrete on formwork Properties of form material Form design Shores and scaffolding Failures of formwork Forms for footings, walls, and columns Forms for beams and floor slabs Patented forms for concrete floor systems Forms for thin-shell roof slabs Forms for architectural concrete Slipforms Forms for concrete bridge decks Flying deck forms

Atkins' Physical Chemistry 11e - Peter Atkins 2019-08-20

Atkins' Physical Chemistry: Molecular Thermodynamics and Kinetics is designed for use on the second semester of a quantum-first physical chemistry course. Based on the hugely popular Atkins' Physical Chemistry, this volume approaches molecular thermodynamics with the assumption that students will have studied quantum mechanics in their

first semester. The exceptional quality of previous editions has been built upon to make this new edition of Atkins' Physical Chemistry even more closely suited to the needs of both lecturers and students. Re-organised into discrete 'topics', the text is more flexible to teach from and more readable for students. Now in its eleventh edition, the text has been enhanced with additional learning features and maths support to demonstrate the absolute centrality of mathematics to physical chemistry. Increasing the digestibility of the text in this new approach, the reader is brought to a question, then the math is used to show how it can be answered and progress made. The expanded and redistributed maths support also includes new 'Chemist's toolkits' which provide students with succinct reminders of mathematical concepts and techniques right where they need them. Checklists of key concepts at the end of each topic add to the extensive learning support provided throughout the book, to reinforce the main take-home messages in each section. The coupling of the broad coverage of the subject with a structure and use of pedagogy that is even more innovative will ensure Atkins' Physical Chemistry remains the textbook of choice for studying physical chemistry.

Advanced Materials and Technologies for Wastewater Treatment - Sreedevi Upadhyayula 2021-09-27

Advanced Materials and Technologies for Wastewater Treatment discusses the methods and technologies of physical, chemical, biological, and thermo-catalytic treatment techniques. It includes the treatment of waste generated by municipal, agro-industry, and other industries including chemical, biomedical, pharmaceutical, textile, and other sectors. FEATURES Covers implementation of advanced water and wastewater treatment techniques, with a focus on pollutant or pathogen removal Includes qualitative and quantitative analyses Focuses on physical, chemical, and biological treatment technologies Discusses the advancements of materials and technologies applicable to both potable water and wastewater from industrial and municipal sources Explores future challenges and viable solutions This book is aimed at chemical and environmental engineers and researchers seeking a thorough treatment of innovative water treatment materials and techniques for practical applications.

Numerical Chemistry - PRATESH BAHADUR 1994

Superatoms - Puru Jena 2021-11-30

Explore the theory and applications of superatomic clusters and cluster assembled materials Superatoms: Principles, Synthesis and Applications delivers an insightful and exciting exploration of an emerging subfield in cluster science, superatomic clusters and cluster assembled materials. The book presents discussions of the fundamentals of superatom chemistry and their application in catalysis, energy, materials science, and biomedical sciences. Readers will discover the foundational significance of superatoms in science and technology and learn how they can serve as the building blocks of tailored materials, promising to usher in a new era in materials science. The book covers topics as varied as the thermal and thermoelectric properties of cluster-based materials and clusters for CO₂ activation and conversion, before concluding with an incisive discussion of trends and directions likely to dominate the subject of superatoms in the coming years. Readers will also benefit from the inclusion of: A thorough introduction to the rational design of superatoms using electron-counting rules Explorations of superhalogens, endohedrally doped superatoms and assemblies, and magnetic superatoms A practical discussion of atomically precise synthesis of chemically modified superatoms A concise treatment of superatoms as the building blocks of 2D materials, as well as superatom-based ferroelectrics and cluster-based materials for energy harvesting and storage Perfect for academic researchers and industrial scientists working in cluster science, energy materials, thermoelectrics, 2D materials, and CO₂ conversion, Superatoms: Principles, Synthesis and Applications will also earn a place in the libraries of interested professionals in chemistry, physics, materials science, and nanoscience. *STOICHIOMETRY AND PROCESS CALCULATIONS* - K. V. NARAYANAN 2006-01-01

This textbook is designed for undergraduate courses in chemical engineering and related disciplines such as biotechnology, polymer technology, petrochemical engineering, electrochemical engineering, environmental engineering, safety engineering and industrial chemistry. The chief objective of this text is to prepare students to make analysis of chemical processes through calculations and also to develop in them systematic problem-solving skills. The students are introduced not only to the application of law of combining proportions to chemical reactions

(as the word 'stoichiometry' implies) but also to formulating and solving material and energy balances in processes with and without chemical reactions. The book presents the fundamentals of chemical engineering operations and processes in an accessible style to help the students gain a thorough understanding of chemical process calculations. It also covers in detail the background materials such as units and conversions, dimensional analysis and dimensionless groups, property estimation, P-V-T behaviour of fluids, vapour pressure and phase equilibrium relationships, humidity and saturation. With the help of examples, the book explains the construction and use of reference-substance plots, equilibrium diagrams, psychrometric charts, steam tables and enthalpy composition diagrams. It also elaborates on thermophysics and thermochemistry to acquaint the students with the thermodynamic principles of energy balance calculations. Key Features : • SI units are used throughout the book. • Presents a thorough introduction to basic chemical engineering principles. • Provides many worked-out examples and exercise problems with answers. • Objective type questions included at the end of the book serve as useful review material and also assist the students in preparing for competitive examinations such as GATE.

Functionally Graded Materials - Y. Miyamoto 2013-11-27

Seven years have elapsed since Dr. Renee Ford, editor-in-chief of Materials Technology, first suggested to me to publish a book on Functionally Graded Materials (FGMs). She said that the FGM concept, then largely unknown outside of Japan and a relatively few laboratories elsewhere, would be of great interest to everyone working in the materials field because of its potentially universal applicability. There was no book about FGMs in English at that time, although the number of research papers, review articles, and FGM conference proceedings had been increasing yearly. We discussed what the book should cover, and decided it should present a comprehensive description from basic theory to the most recent applications of FGMs. This would make it useful both as an introduction to FGMs for those simply curious about what this new materials field was all about, and also as a textbook for researchers, engineers, and graduate students in various material fields. The FGM Forum in Japan generously offered to support this publication program. It is very difficult for an individual author to write a book that covers such a wide range of various aspects of many different materials, so I invited more than 30 eminent materials scientists throughout the world, who were associated with FGM research, to contribute selected topics. I also asked several leading researchers in this field to edit selected chapters: Dr. Barry H. Rabin, then at the U. S.

Heterocyclic N-Oxides - Oleg V. Larionov 2017-07-12

The series Topics in Heterocyclic Chemistry presents critical reviews on present and future trends in the research of heterocyclic compounds. Overall the scope is to cover topics dealing with all areas within heterocyclic chemistry, both experimental and theoretical, of interest to the general heterocyclic chemistry community. The series consists of topic related volumes edited by renowned editors with contributions of experts in the field. All chapters from Topics in Heterocyclic Chemistry are published Online First with an individual DOI. In references, Topics in Heterocyclic Chemistry is abbreviated as Top Heterocycl Chem and cited as a journal.

Carbon Nanomaterial-Based Adsorbents for Water Purification - Suprakas Sinha Ray 2020-06-27

The deterioration of water quality and unavailability of drinkable water are pressing challenges worldwide. The removal of toxic organic and inorganic pollutants from water is vital for a clean environment, as a response to water scarcity. Adsorption-based water technologies are among the most widely used because of their high efficiency and low cost, without relying on a complex infrastructure. In recent years, carbon nanomaterials (CNMs), such as graphene and derivatives, carbon nanotubes, carbon nanofibers, nanoporous carbon, fullerenes, graphitic carbon nitride, and nanodiamonds have been extensively exploited as adsorbents due to their extraordinary surface properties, ease of modification, large surface area, controlled structural varieties, high chemical stability, porosity, low density, ease of regeneration, and reusability. This book provides a thorough overview of the state of the art in carbon nanomaterials as they are used for adsorption applications in water purifications, as well as addressing their toxicological challenges. This volume primarily explores the fundamentals of adsorption, its mechanical aspects, synthesis and properties of CNMs, and adsorption performances of CNMs and their nanocomposites with organic and inorganic materials. Structural engineering and activation processes produce materials with enhanced adsorptive properties and separation efficiencies. Furthermore, the formation of CNMs with 2D and 3D macro-

and microstructures and high porosities is a potential approach to improve adsorption performances and extend CNM use at the industrial level. The book also addresses important issues regarding these adsorbents that potentially affect future research and industrial applications of carbon-based nano-adsorbents in water security. Presents advances in multifunctional 3D superstructures of carbon nanomaterials and their composites for adsorption applications. Outlines the fundamentals on synthesis and characterization techniques of carbon-based nanostructures and their composites. Assesses the major toxicological challenges in using nanostructured materials as adsorbents for water purification.

Khaki Files - Neeraj Kumar 2019-10-24

December 13, 2001: Pak-based terrorists carry out an audacious attack on the Indian Parliament killing eight security personnel and a gardener; all five terrorists are killed in their gun-battle with policemen deployed at the citadel of Indian democracy; the case is solved and all accused arrested within 72 hours. December 16, 2012: a 23-year-old physiotherapist is brutally gang raped in a moving bus in Delhi; the case is cracked within five days despite the lack of initial leads; a head constable loses his life in the line of duty during riots that follow the dastardly crime. In Khaki Files, Neeraj Kumar, a former Delhi Police Commissioner revisits many such high profile police cases of his career - from investigation of one of the biggest lottery frauds in the country to foiled ISI attempt to kill Tarun Tejpal and Anirudh Behal of Tehalka - bringing to light numerous achievements of the country's police force, otherwise largely reviled and ridiculed.

Chemistry - Richard Post 2020-09-16

A practical, complete, and easy-to-use guide for understanding major chemistry concepts and terms. Master the fundamentals of chemistry with this fast and easy guide. Chemistry is a fundamental science that touches all other sciences, including biology, physics, electronics, environmental studies, astronomy, and more. Thousands of students have successfully used the previous editions of Chemistry: Concepts and Problems, A Self-Teaching Guide to learn chemistry, either independently, as a refresher, or in parallel with a college chemistry course. This newly revised edition includes updates and additions to improve your success in learning chemistry. This book uses an interactive, self-teaching method including frequent questions and study problems, increasing both the speed of learning and retention. Monitor your progress with self-tests, and master chemistry quickly. This revised Third Edition provides a fresh, step-by-step approach to learning that requires no prerequisites, lets you work at your own pace, and reinforces what you learn, ensuring lifelong mastery. Master the science of basic chemistry with this innovative, self-paced study guide. Teach yourself chemistry, refresh your knowledge in preparation for medical studies or other coursework, or enhance your college chemistry course. Use self-study features including review questions and quizzes to ensure that you're really learning the material. Prepare for a career in the sciences, medicine, or engineering with the core content in this user-friendly guide. Authored by expert postsecondary educators, this unique book gently leads students to deeper levels and concepts with practice, critical thinking, problem solving, and self-assessment at every stage.

Biodegradable Polymers in Clinical Use and Clinical Development - Abraham J. Domb 2011-05-12

This book focuses on biodegradable polymers that are already in clinical use or under clinical development. Synthetic and natural polymers will be included. This excludes polymers that have been investigated and did not reach clinical development. The purpose of this book is to provide updated status of the polymers that are in clinical use and those that are now being developed for clinical use and hopefully will reach the clinic during the next 5 years. The book provides information that is of interest to academics and practicing researchers including chemists, biologists and bioengineers and users: physicians, pharmacists.

Food Safety and Human Health - Ram Lakhan Singh 2019-07-30

Food Safety and Human Health provides a framework to manage food safety risks and insure a safe food system. This reference takes a reader-friendly approach in presenting the entire range of toxic compounds found naturally in foods or introduced by industrial contamination or food processing methods. It provides the basic principles of food toxicology and its processing and safety for human health to help professionals and students better understand the real problems of toxic materials. This essential resource will help readers address problems regarding food contamination and safety. It will be particularly useful for graduate students, researchers and professionals in the agri-food industry. Encompasses the first pedagogic treatment of the entire range

of toxic compounds found naturally in foods or introduced by industrial contamination or food processing methods Features areas of vital concern to consumers, such as the toxicological implications of food, implications of food processing and its safety to human health Focuses on the safety aspects of genetically modified foods currently available

VIRAT - Neeraj Jha 2019-05-25

THE GRIPPING AND ACTION-PACKED STORY OF THE BOY WHO NEVER GAVE UP! He is that exceptional teenager who returned to play an innings the day his dad passed away. He is the chubby rookie who now sets fitness goals. He is the fiery batsman and nimble fielder who always wants to win. Virat Kohli's determination to overcome his drawbacks and shine his skills has him well on his way to becoming an all-time great in cricket. From gully cricket and junior teams to the Ranji and national squads, Virat has had more than his share of hurdles. But pressure is his middle name - and he has made performing under the toughest conditions an art with his fine strokes, his electric feet and his ginormous hunger for runs. That's why the dashing King Kohli - captain of Team India across all formats of the game - holds many records and prestigious awards. Virat looks unstoppable in the lead-up to the top, and his tremendously inspiring story is told vividly in this book. Peppered with anecdotes and stories from his coaches, teammates and other insiders from the cricketing world, this is one life story that is a must-read for everyone who, like Virat, prizes both guts and glory.

Handbook of Research on Water Sciences and Society - Ashok Vaseashta 2022

"The purpose of this reference book is to serve as a compendium of all available knowledge of Science of Water and Society, complete with a detailed index, as well as numerous adjuncts such as bibliographies, illustrations, lists of abbreviations and foreign expressions"--

Industrial System Engineering for Drones - Neeraj Kumar Singh 2019-07-15

Explore a complex mechanical system where electronics and mechanical engineers work together as a cross-functional team. Using a working example, this book is a practical "how to" guide to designing a drone system. As system design becomes more and more complicated, systematic, and organized, there is an increasingly large gap in how

system design happens in the industry versus what is taught in academia. While the system design basics and fundamentals mostly remain the same, the process, flow, considerations, and tools applied in industry are far different than that in academia. Designing Drone Systems takes you through the entire flow from system conception to design to production, bridging the knowledge gap between academia and the industry as you build your own drone systems. What You'll Learn Gain a high level understanding of drone systems Design a drone systems and elaborating the various aspects and considerations of design Review the principles of the industrial system design process/flow, and the guidelines for drone systems Look at the challenges, limitations, best practices, and patterns of system design Who This Book Is For Primarily for beginning or aspiring system design experts, recent graduates, and system design engineers. Teachers, trainers, and system design mentors can also benefit from this content.

Nanoscience and Technology -

A Guidebook to Mechanism in Organic Chemistry - Peter Sykes 1986-09

A Problem Book In CHEMISTRY for IIT JEE - Ranjeet Shahi 2018-04-20

Cracking JEE Main & Advanced requires skills to solve a variety of thought-provoking problems with requisite synthesis of many concepts and may additionally require tricky mathematical manipulations. A massive collection of the most challenging problems, the Selected Problems Series comprises of 3 books, one each for Physics, Chemistry and Mathematics to suit the practice needs of students appearing for upcoming JEE Main and Advanced exam. Ranjeet Shahi's, 1500 Selected Problems Asked in Chemistry aims to sharpen your Problem-Solving Skills according to the exam syllabi, across 30 logically sequenced chapters. Working through these chapters, you will be able to make precise inferences while avoiding the pitfalls in applying various laws of Chemistry. The Step-by-Step solutions to the problems in the book train you in both- the general and specific problem-solving strategies essential for all those appearing in JEE Main & Advanced and all other Engineering Entrance Examinations or anyone who is interested to Problem Solving in Chemistry.