

Physical Chemistry Kundu And Jain

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A Textbook of Physical Chemistry - Volume 1 - Mandeep Dalal
2018-01-01

An advanced-level textbook of physical chemistry for the graduate (B.Sc) and postgraduate (M.Sc) students of Indian and foreign universities. This book is a part of four volume series, entitled "A Textbook of Physical Chemistry - Volume I, II, III, IV". CONTENTS: Chapter 1. Quantum Mechanics - I: Postulates of quantum mechanics; Derivation of Schrodinger wave equation; Max-Born interpretation of wave functions; The Heisenberg's uncertainty principle; Quantum mechanical operators and their commutation relations; Hermitian operators (elementary ideas, quantum mechanical operator for linear momentum, angular momentum and energy as Hermitian operator); The average value of the square of Hermitian operators; Commuting operators and uncertainty principle (x & p ; E & t); Schrodinger wave equation for a particle in one dimensional box; Evaluation of average position, average momentum and determination of uncertainty in position and momentum and hence Heisenberg's uncertainty principle; Pictorial representation of the wave equation of a particle in one dimensional box and its influence on the kinetic energy of the particle in each successive quantum level; Lowest energy of the particle. Chapter 2. Thermodynamics - I: Brief resume of first and second

Law of thermodynamics; Entropy changes in reversible and irreversible processes; Variation of entropy with temperature, pressure and volume; Entropy concept as a measure of unavailable energy and criteria for the spontaneity of reaction; Free energy, enthalpy functions and their significance, criteria for spontaneity of a process; Partial molar quantities (free energy, volume, heat concept); Gibb's-Duhem equation. Chapter 3. Chemical Dynamics - I: Effect of temperature on reaction rates; Rate law for opposing reactions of 1st order and 2nd order; Rate law for consecutive & parallel reactions of 1st order reactions; Collision theory of reaction rates and its limitations; Steric factor; Activated complex theory; Ionic reactions: single and double sphere models; Influence of solvent and ionic strength; The comparison of collision and activated complex theory. Chapter 4. Electrochemistry - I: Ion-Ion Interactions: The Debye-Huckel theory of ion-ion interactions; Potential and excess charge density as a function of distance from the central ion; Debye Huckel reciprocal length; Ionic cloud and its contribution to the total potential; Debye - Huckel limiting law of activity coefficients and its limitations; Ion-size effect on potential; Ion-size parameter and the theoretical mean-activity coefficient in the case of ionic clouds with finite-sized ions; Debye - Huckel-Onsager treatment for aqueous solutions and its limitations; Debye-Huckel-

Onsager theory for non-aqueous solutions; The solvent effect on the mobility at infinite dilution; Equivalent conductivity (Λ) vs. concentration $c^{1/2}$ as a function of the solvent; Effect of ion association upon conductivity (Debye-Huckel-Bjerrum equation). Chapter 5. Quantum Mechanics - II: Schrodinger wave equation for a particle in a three dimensional box; The concept of degeneracy among energy levels for a particle in three dimensional box; Schrodinger wave equation for a linear harmonic oscillator & its solution by polynomial method; Zero point energy of a particle possessing harmonic motion and its consequence; Schrodinger wave equation for three dimensional Rigid rotator; Energy of rigid rotator; Space quantization; Schrodinger wave equation for hydrogen atom, separation of variable in polar spherical coordinates and its solution; Principle, azimuthal and magnetic quantum numbers and the magnitude of their values; Probability distribution function; Radial distribution function; Shape of atomic orbitals (s, p & d). Chapter 6. Thermodynamics - II: Clausius-Clayperon equation; Law of mass action and its thermodynamic derivation; Third law of thermodynamics (Nernst heat theorem, determination of absolute entropy, unattainability of absolute zero) and its limitation; Phase diagram for two completely miscible components systems; Eutectic systems, Calculation of eutectic point; Systems forming solid compounds $A_x B_y$ with congruent and incongruent melting points; Phase diagram and thermodynamic treatment of solid solutions. Chapter 7. Chemical Dynamics - II: Chain reactions: hydrogen-bromine reaction, pyrolysis of acetaldehyde, decomposition of ethane; Photochemical reactions (hydrogen - bromine & hydrogen - chlorine reactions); General treatment of chain reactions (ortho-para hydrogen conversion and hydrogen - bromine reactions); Apparent activation energy of chain reactions, Chain length; Rice-Herzfeld mechanism of organic molecules decomposition (acetaldehyde); Branching chain reactions and explosions (H_2-O_2 reaction); Kinetics of (one intermediate) enzymatic reaction : Michaelis-Menton treatment; Evaluation of Michaelis 's constant for enzyme-substrate binding by Lineweaver-Burk plot and Eadie-Hofstae methods; Competitive and non-competitive inhibition. Chapter 8. Electrochemistry - II: Ion Transport in

Solutions: Ionic movement under the influence of an electric field; Mobility of ions; Ionic drift velocity and its relation with current density; Einstein relation between the absolute mobility and diffusion coefficient; The Stokes-Einstein relation; The Nernst-Einstein equation; Walden's rule; The Rate-process approach to ionic migration; The Rate process equation for equivalent conductivity; Total driving force for ionic transport, Nernst-Planck Flux equation; Ionic drift and diffusion potential; the Onsager phenomenological equations; The basic equation for the diffusion; Planck-Henderson equation for the diffusion potential.

DNA Engineered Noble Metal Nanoparticles - Ignác Capek 2015-04-13

There is a growing interest in the use of nanoparticles modified with DNAs, viruses, peptides and proteins for the rational design of nanostructured functional materials and their use in biosensor applications. The challenge is to control the organization of biomolecules on nanoparticles while retaining their biological activity as potential chemical and gene therapeutics. These noble metal nanoparticles/biomolecules conjugates have specific properties and therefore they are attractive materials for nanotechnology in biochemistry and medicine. In this book, the author review work performed dealing with the DNA structure and functionalities, interactions between DNA, noble metal nanoparticles, surface active agents, solvents and other additives. Particular attention is given to how the DNA's chain length and the DNA conformation affect the interaction and structure of the nanoconjugates and nanostructures that are formed. Also discussed are the recent advances in the preparation, characterization, and applications of noble metal nanoparticles that are conjugated with DNA aptamers and oligomers. The advantages and disadvantages of functionalized nanoparticles through various detection modes are highlighted, including colorimetry, fluorescence, electrochemistry, SPR, and, mass spectrometry for the detection of small molecules and biomolecules. The functionalized noble metal nanoparticles are selective and sensitive for the analytes, showing their great potential in biosensing. Furthermore, this book reviews recent progress in the area of DNA-noble metal nanoparticles based artificial nanostructures, that is, the preparation, collective

properties, and applications of various DNA-based nanostructures are also described.

Essentials of Physical Chemistry - Arun Bahl

Essentials of Physical Chemistry is a classic textbook on the subject explaining fundamental 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.

Intelligent Nanomaterials for Drug Delivery Applications - Nabeel Ahmad 2020-03-29

Intelligent Nanomaterials for Drug Delivery Applications discusses intelligent nanomaterials with a particular focus on commercial and premarket tools. The book looks at the applications of intelligent nanomaterials within the field of medicine and discusses their future role. This includes the use of intelligent nanomaterials for drugs used in cardiovascular and cancer treatments and examines the promising market of nanoparticles for biomedical and biosensing applications. This resource will be of great interest to scientists and researchers involved in multiple disciplines, including micro- and nano-engineering, bionanotechnology, biomedical engineering, and nanomedicine, as well as pharmaceutical and biomedical industries. Focuses on applications of intelligent nanomaterials within the field of medicine and discusses their role in the future. Discusses intelligent nanomaterials, with a particular focus on commercial and premarket tools. Examines the promising market of nanoparticles for biomedical and biosensing applications.

Physical Chemistry - 1984

Impex Reference Catalogue of Indian Books - 1960

Advanced Nanoformulations - Md Saquib Hasnain 2023-03-24

Advanced Nanoformulations: Theranostic Nanosystems, Volume Three

examines the applications of nanotherapeutic systems and nanodiagnostics in relation to polymeric nanosystems. In the last decade, numerous biopolymers have been utilized to prepare polymeric nanosystems for therapeutic applications. These biopolymers include polylactic acid, polylactide-co-glycolide, polycaprolactone, acrylic polymers, cellulose and cellulose derivatives, alginates, chitosan, gellan gum, gelatin, albumin, chondroitin sulfate, hyaluronic acid, guar gum, gum Arabic, gum tragacanth, xanthan gum, and starches. Besides these biopolymers, grafted polymers are also being used as advanced polymeric materials to prepare many theranostic nanocarriers and nanoformulations. This book explores the array of polymeric nanosystems to understand therapeutic potentials. It will be useful to pharmaceutical scientists, including industrial pharmacists and analytical scientists, health care professionals, and regulatory scientists actively involved in the pharmaceutical product and process development of tailor-made polysaccharides in drug delivery applications. Contains in-depth discussions of the advanced formulations using nanosystems including high-quality graphics, flowcharts, and graphs for enhanced understanding. Reviews the literature on advanced formulations while also suggesting new avenues. Includes contributions in all areas of advanced formulations, providing a thorough and interdisciplinary work.

Nanotechnology - 2019-05-22

Nanotechnology, Volume 46, the latest release in the Methods in Microbiology series, contains review articles on the application of nanotechnology in various fields of microbiology, including environmental microbiology, food microbiology and medical microbiology. Chapters in this new release include discussions on the Biosynthesis of Nanomaterials Utilizing Biomacromolecules, Nanotechnology in Medical Biology – Application of Nanodiagnostics in Infectious Diseases, Applications of Nanotechnology in Food Microbiology, Biosynthesis of Nanomaterials Utilizing Microorganisms, Nanotechnology in Medical Biology – Interaction of Pathogens and Nanostructured Surfaces, Biocompatible Polymers: Synthesis Methods, Surface Functionalization and its Biomedical Applications, and The Bacterial Flagellum. Written by experts in the field

of microbiology from all over the world Contains high quality illustrations to enhance learning Provides a comprehensive review of the literature in the area of nanotechnology

Machine Learning in Chemistry - Hugh M Cartwright 2020-07-15

Progress in the application of machine learning (ML) to the physical and life sciences has been rapid. A decade ago, the method was mainly of interest to those in computer science departments, but more recently ML tools have been developed that show significant potential across wide areas of science. There is a growing consensus that ML software, and related areas of artificial intelligence, may, in due course, become as fundamental to scientific research as computers themselves. Yet a perception remains that ML is obscure or esoteric, that only computer scientists can really understand it, and that few meaningful applications in scientific research exist. This book challenges that view. With contributions from leading research groups, it presents in-depth examples to illustrate how ML can be applied to real chemical problems. Through these examples, the reader can both gain a feel for what ML can and cannot (so far) achieve, and also identify characteristics that might make a problem in physical science amenable to a ML approach. This text is a valuable resource for scientists who are intrigued by the power of machine learning and want to learn more about how it can be applied in their own field.

A Textbook of Physical Chemistry, 6th Edition - Sharma K.K. & Sharma L.K.

This book has been successfully guiding undergraduate students of science, engineering and pharmacy of the Indian universities since 1978 due to its approach of teaching the subject in the simplest possible way. The book emphasizes on fundamental rather than excessive details and develops the topics from the first principles. It contains a considerable number of worked-out examples exposing the students to practical applications of equations and helping them comprehend the magnitude of many different physiochemical quantities. Both the traditional cgs/esu and the newer SI systems of units have been used identically. This is so because in spite of wider acceptance of the SI units,

the cgs units continue to be used in most chemical literature. New in this Edition • Quick Recap' section with every chapter to bring the concepts on fingertips • Vastly augmented section on MCQs for complete comprehension • Additional review questions to make them broad based • Revised and updated topics

Noble and Precious Metals - Mohindar Seehra 2018-07-04

The use of copper, silver, gold and platinum in jewelry as a measure of wealth is well known. This book contains 19 chapters written by international authors on other uses and applications of noble and precious metals (copper, silver, gold, platinum, palladium, iridium, osmium, rhodium, ruthenium, and rhenium). The topics covered include surface-enhanced Raman scattering, quantum dots, synthesis and properties of nanostructures, and its applications in the diverse fields such as high-tech engineering, nanotechnology, catalysis, and biomedical applications. The basis for these applications is their high-free electron concentrations combined with high-temperature stability and corrosion resistance and methods developed for synthesizing nanostructures. Recent developments in all these areas with up-to-date references are emphasized.

Textbook of Physical Chemistry - L.K. Sharma 1990

Indian Journal of Chemistry - 1992

Mixed Metal Nanomaterials - 2009-05-26

The book series Nanomaterials for the Life Sciences, provides an in-depth overview of all nanomaterial types and their uses in the life sciences. Each volume is dedicated to a specific material class and covers fundamentals, synthesis and characterization strategies, structure-property relationships and biomedical applications. The series brings nanomaterials to the Life Scientists and life science to the Materials Scientists so that synergies are seen and developed to the fullest. Written by international experts of various facets of this exciting field of research, the series is aimed at scientists of the following disciplines: biology, chemistry, materials science, physics, bioengineering, and medicine, together with cell biology,

biomedical engineering, pharmaceutical chemistry, and toxicology, both in academia and fundamental research as well as in pharmaceutical companies. VOLUME 3 - Mixed Metal Nanomaterials This volume covers the aspects of synthesis, characterization and application of bimetallic and multielemental spherical and anisotropic nanomaterials in the life sciences.

Journal of Bangladesh Academy of Sciences - Bangladesh Academy of Sciences 2000

Nanobiosensors for point-of-care medical diagnostics - Manashjit Gogoi 2023-01-01

This book examines the role of nanobiosensors in point-of-care applications for personalized healthcare and management. It begins by discussing various biomaterials that are used for the development of biosensors in medical diagnostics, and reviews advances in their fabrication and the miniaturization of biosensor devices for lab-on-chip analysis. In turn, it explores the rapidly evolving applications of nanomaterials in the context of biomaterial diagnostics. The book also explores the immense potential of biosensors in medical diagnostics, where they are increasingly being used to detect a wide range of biomolecules and biomarkers. In closing, it discusses the current challenges and outlines the future role of nanobiosensors in the development of next-generation point-of-care applications.

Indian Books - 1984

Pakistan Journal of Scientific Research - 2006

Theoretical Models and Experimental Approaches in Physical Chemistry - A. K. Hagi 2018-10-01

This new volume presents an up-to-date review of modern materials and physical chemistry concepts, issues, and recent advances in the field. It presents a modern theoretical and experimental approach in applied physical chemistry. The volume discusses the developments of advanced chemical products and respective tools to characterize and predict the

chemical material properties and behavior. With chapters from distinguished scientists and engineers from key institutions worldwide, the volume provides understanding through numerous examples and practical applications drawn from research and development chemistry. It emphasizes the intersection of chemistry, math, physics, and the resulting applications across many disciplines of science and explores applied physical chemistry principles in specific areas. At the same time, each topic is framed within the context of a broader more interdisciplinary approach, demonstrating its relationship and interconnectedness to other areas. This new book fills a gap within modeling texts, focusing on applications across a broad range of disciplines, and presents information on many important problems in physical chemistry. These investigations are accompanied by real-life applications in practice.

Soil Health - Bhoopander Giri 2020-05-26

This book gathers the latest insights into soil health and its sustainability, providing an up-to-date overview of the various aspects of soil quality and fertility management, e.g., plant-microbe interactions to maintain soil health; and the use of algal, fungal and bacterial fertilizers and earthworms for sustainable soil health and agricultural production. It first discusses the past, present, and future scenarios of soil health, and then explores factors influencing soil health, as well as the consequences of degradation of soil health for sustainable agriculture. Lastly it highlights solutions to improve and maintain soil health so as to achieve greater productivity and sustainability without damaging the soil system or the environment. Soil health is defined as the capacity of a soil to function within ecosystem frontiers, to sustain biological productivity, to maintain environmental quality and to promote plant, animal and human health. Soil health is established through the interactions of physical, chemical and biological properties, e.g., soil texture, soil structure, and soil organisms. Healthy soil provides adequate levels of macro- and micronutrients to plants and contains sufficient populations of soil microorganisms. As a result of the increasingly intensified agriculture over the past few decades, soils are now showing symptoms of exhaustion and stagnating or declining crop yields. Exploring these developments as well

as possible solutions based on holistic and sustainable approaches, this book is a valuable resource for researchers in the area of soil and environmental science, agronomy, agriculture, as well as students in the field of botany, ecology and microbiology.

Drug Delivery Using Nanomaterials - Yasser Shahzad 2022-01-19

After the drug discovery and development process, designing suitable formulations to safely deliver the optimum dose, while avoiding side effects, has been a constant challenge, especially when drugs are very toxic and have poor solubility and undesirable clearance profiles. With recent advances in synthetic technologies, nanoparticles can be custom-made from a variety of advanced materials to mimic the bioenvironment and can be equipped with various targeting and imaging moieties for site-specific delivery and real-time imaging. *Drug Delivery Using Nanomaterials* covers advancements in the field of nanoparticle-based drug-delivery systems, along with all the aspects needed for a successful and marketable nanoformulation. FEATURES Offers a general overview of the entire process involved in the synthesis and characterization of pharmaceutical nanoparticles Covers a broad range of synthetic materials for developing nanoformulations customized for specific disease states, target organs, and drugs Every chapter sequentially builds, providing a progressive pathway from classical nanoparticles to the more advanced to be used as a full drug product by consumers Provides information in a bottom-up manner in that definitions and explanations of relevant background information serve as a framework for understanding advanced concepts This user-friendly reference is aimed at materials engineers, chemical engineers, biomedical engineers, pharmaceutical scientists, chemists, and others working on advanced drug delivery, from academia as well as industry.

Indian Books in Print - 2003

Indian Journal of Chemistry. Section A. Inorganic, Physical, Theoretical, and Analytical - 1981

Polymer Functionalized Graphene - Arun Kumar Nandi 2021-06-28

There is an immense variety of research on polymer functionalized graphene (PFG). Functionalization of graphene is necessary for improvement of the compatibility with polymers. Applications of these graphene polymer hybrids include in chemical and biological sensing, photovoltaic devices, supercapacitors and batteries, dielectric materials and drug/gene delivery vehicles. This book will shed light on the synthesis, properties and applications of these new materials, covering two methods (covalent and noncovalent) for producing polymer functionalized graphene. Chapters cover physical, optical, mechanical and electronic properties, applications of polymer functionalized graphene in energy harvesting and storage, and uses in biomedicine and bioengineering. Written by an expert in the field, *Polymer Functionalized Graphene* will be of interest to graduate students and researchers in polymer chemistry and nanoscience.

Chitosan in Drug Delivery - Md Saquib Hasnain 2021-10-26

Chitosan in Drug Delivery provides thorough insights into chitosan chemistry, collection, chemical modifications, characterization and applications in the pharmaceutical industry and healthcare fields. The book explores molecular weight, degree of deacetylation and molecular geometry, emphasizing recent advances in the field as written by academic, industry and regulatory scientists. It will be a useful resource for pharmaceutical scientists, including industrial pharmacists, analytical scientists, postgraduate students, health care professionals and regulatory scientists actively involved in pharmaceutical product and process development in natural polymers containing drug delivery. Provides methodologies for the design, development and selection of chitosan in drug delivery for particular therapeutic applications Includes illustrations demonstrating the mechanism of biological interaction of chitosan Discusses the regulatory aspects and demonstrates the clinical efficacy of chitosan

Physical Chemistry - Ignacio Tinoco 2002

Presents the principles and applications of physical chemistry as they are used to solve problems in biology and medicine. The First Law; the Second Law; free energy and chemical equilibria; free energy and physical

Equilibria; molecular motion and transport properties; kinetics: rates of chemical reactions; enzyme kinetics; the theory and spectroscopy of molecular structures and interactions: molecular distributions and statistical thermodynamics; and macromolecular structure and X-ray diffraction.

Publisher's Monthly - 1997

Problems in Physical Chemistry - Alexander Wood 1974

Recent Advances in Nanophotonics - Mojtaba Kahrizi 2020-11-26

This volume brings together several recent research articles in the field of nanophotonics. The editors have arranged the chapters in three main parts: quantum devices, photonic devices, and semiconductor devices. The chapters cover a wide variety of scopes in those areas including principles of plasmonic, SPR, LSPR and their applications, graphene-based nanophotonic devices, generation of entangled photon and quantum dots, perovskite solar cells, photo-detachment and photoionization of two-electrons systems, diffusion and intermixing of atoms in semiconductor crystals, lattice and molecular elastic and inelastic scattering including surface-enhanced Raman Scattering and their applications. It is our sincerest hope that science and engineering students and researchers could benefit from the new ideas and recent advances in the field that are covered in this book.

Pharmaceuticals in Aquatic Environments - Vinod Kumar Garg 2023-11-13

This book covers pharmaceutical residue dispersion in the aquatic environment and its toxic effect on living organisms. It discusses conventional and advanced remediation technologies such as the use of biomaterials for the sequestration of contaminants, nanotechnology, and phytoremediation. The book includes topics such as the removal of pharmaceutical and personal care product residues from water bodies, green chemistry, and legal regimens for pharmaceuticals in the aquatic environment. It also covers the application of modified biochar in pharmaceutical removal. FEATURES Explores the management of the

environment through green chemistry Describes phytoremediation technology for decontamination of pharmaceutical-laden water and wastewater Covers the detection methods and quantification of pharmaceutical residues in various contaminated sources Discusses ecotoxicological aspects and risk assessment of pharmaceuticals in the aquatic environment Reviews degradation and treatment technologies including nanotechnology, biomaterials, and biochar This book is meant for pharmaceutical, toxicology, and environmental science industry experts and researchers.

International Books in Print - 1998

Frontiers of Textile Materials - Mohd Shabbir 2020-03-10

The book "Frontiers and Textile Materials will deal with the important materials that can be utilized for value-addition and functionalization of textile materials. The topics covered in this book includes the materials like enzymes, polymers, etc. that are utilized for conventional textile processing and the advanced materials like nanoparticles which are expected to change the horizons of textiles. The futuristic techniques for textile processing like plasma are also discussed.

Metal-free Functionalized Carbons in Catalysis - Alberto Villa 2018-05-24

Metal-free carbons have recently shown great efficiency in several catalytic processes, including oxidative dehydrogenation (ODH) of ethylbenzene and alkenes, hydrogen evolution, liquid Brønsted and Lewis acid catalysis and electrochemical reactions. The catalytic activities of carbon materials are intimately related to their defects, structures, and surface chemistry. In particular, nitrogen functionalized carbons present different surface functional groups, and they can be used as multifunctional catalysts, either through their electronic or nucleophilic properties, or their ability to form additional H bonds with substrates. This book provides an overview of the preparation, characterization and application of metal-free functionalized carbons, including carbon nanotubes, graphene, carbon nitride and covalent organic frameworks (COFs). It is ideal for researchers and industrialists working in catalysis, gas sensing and carbon dioxide storage.

Encyclopedia of Chemical Processing (Online) - Sunggyu Lee 2005-11-01
This second edition Encyclopedia supplies nearly 350 gold standard articles on the methods, practices, products, and standards influencing the chemical industries. It offers expertly written articles on technologies at the forefront of the field to maximize and enhance the research and production phases of current and emerging chemical manufacturing practices and techniques. This collecting of information is of vital interest to chemical, polymer, electrical, mechanical, and civil engineers, as well as chemists and chemical researchers. A complete reconceptualization of the classic reference series the Encyclopedia of Chemical Processing and Design, whose first volume published in 1976, this resource offers extensive A-Z treatment of the subject in five simultaneously published volumes, with comprehensive indexing of all five volumes in the back matter of each tome. It includes material on the design of key unit operations involved with chemical processes; the design, unit operation, and integration of reactors and separation systems; process system peripherals such as pumps, valves, and controllers; analytical techniques and equipment; and pilot plant design and scale-up criteria. This reference contains well-researched sections on automation, equipment, design and simulation, reliability and maintenance, separations technologies, and energy and environmental issues. Authoritative contributions cover chemical processing equipment, engineered systems, and laboratory apparatus currently utilized in the field. It also presents expert overviews on key engineering science topics in property predictions, measurements and analysis, novel materials and devices, and emerging chemical fields. ALSO AVAILABLE ONLINE This Taylor & Francis encyclopedia is also available through online subscription, offering a variety of extra benefits for both researchers, students, and librarians, including: Citation tracking and alerts Active reference linking Saved searches and marked lists HTML and PDF format options Contact Taylor and Francis for more information or to inquire about subscription options and print/online combination packages. US: (Tel) 1.888.318.2367; (E-mail) e-reference@taylorandfrancis.com International: (Tel) +44 (0) 20 7017 6062; (E-mail) online.sales@tandf.co.uk

PHYSICAL CHEMISTRY (For Graduate Students) - KAMLQDVAB JHA
2021-10-16

The book, name Physical Chemistry has been written for the students of B.Sc. at different Universities of India, is mainly for examination oriented text book for those, who wants to achieve good concept and good results in their academic examinations, which makes capable to enroll into the Postgraduation courses also

Applied Chemistry: A Textbook for Engineers and Technologists - H.D. Gesser 2013-11-27

This book is the result of teaching a one semester course in Applied Chemistry (Chemistry 224) to second year engineering students for over 15 years. The contents of the course evolved as the interests and needs of both the students and Engineering Faculty changed. All the students had at least one semester of Introductory Chemistry and it has been assumed in this text that the students have been exposed to Thermodynamics, Chemical Kinetics, Solution Equilibrium, and Organic Chemistry. These topics must be discussed either before starting the Applied subjects or developed as required if the students are not familiar with these prerequisites. Engineering students often ask "Why is another Chemistry course required for Non-Chemical Engineers?" There are many answers to this question but foremost is that the Professional Engineer must know when to consult a Chemist and be able to communicate with him. When this is not done the consequences can be a disaster due to faulty design, poor choice of materials or inadequate safety factors. Examples of blunders abound and only a few will be described in an attempt to convince the student to take the subject matter seriously.

Indian Science Abstracts - 1993-04

Indian National Bibliography - B. S. Kesavan 2006

Bangladesh Journal of Scientific and Industrial Research - 2002

Cancer Nanotechnology - Sang Hyun Cho 2016-04-19

Rapid advances in nanotechnology have enabled the fabrication of

nanoparticles from various materials with different shapes, sizes, and properties, and efforts are ongoing to exploit these materials for practical clinical applications. Nanotechnology is particularly relevant in the field of oncology, as the leaky and chaotic vasculature of tumors—a hallmark of unrestrained growth—results in the passive accumulation of nanoparticles within tumors. *Cancer Nanotechnology: Principles and Applications in Radiation Oncology* is a compilation of research in the arena of nanoparticles and radiation oncology, which lies at the intersection of disciplines as diverse as clinical radiation oncology, radiation physics and biology, nanotechnology, materials science, and biomedical engineering. The book provides a comprehensive, cross-disciplinary survey of basic principles, research techniques, and outcomes with the goals of eventual clinical translation. Coverage includes A general introduction to

fabrication, preferential tumor targeting, and imaging of nanoparticles. The specific applications of nanomaterials in the realms of radiation therapy, hyperthermia, thermal therapy, and normal tissue protection from radiation exposure. Outlooks for future research and clinical translation including regulatory issues for ultimate use of nanomaterials in humans. Reflecting profound advances in the application of nanotechnology to radiation oncology, this comprehensive volume demonstrates how the unique physicochemical properties of nanoparticles lead to novel strategies for cancer treatment and detection. Along with various computational and experimental techniques, each chapter highlights the most promising approaches to the use of nanoparticles for radiation response modulation.