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Engineering Physics-I - S. Mani Naidu

Data Structures and Program Design in C - Robert Kruse 2007-09

Boron Nitride Nanostructures - Mikhael Bechelany 2018
The research topic of this Special Issue will consider (i) the design of nanostructured boron nitride nanostructures with controlled crystal structures, porosity, and dimensionality, (ii) the functionalization of boron nitride, and (iii) prospective applications of boron nitride nanostructures and materials. It contains six papers dealing with (i) the exfoliation of hexagonal Boron Nitride (h-BN) in liquid phase by ion intercalation, (ii) effective mechanical properties and thickness determinations of Boron Nitride nanosheets using molecular dynamics simulation, (iii) direct observation of inner-layer inward contractions of multiwalled Boron Nitride nanotubes upon in situ heating, (iv) the alignment of Boron Nitride nanofibers in epoxy composite films for thermal conductivity and dielectric breakdown strength improvement, (v) the effect of Boron Nitride on the thermal and mechanical properties of poly(3-hydroxybutyrate-co-3-hydroxyvalerate), and (vi) hexagonal Boron Nitride functionalized with Au nanoparticles—properties and potential biological applications
WITS 2020 - Saad Bennani 2021-07-21
This book presents peer-reviewed articles from the 6th International Conference on Wireless Technologies, Embedded and Intelligent Systems (WITS 2020), held at Fez, Morocco. It presents original research results, new ideas and practical lessons learnt that touch on all aspects of wireless technologies, embedded and intelligent systems. WITS is an international conference that serves researchers, scholars, professionals, students and academicians looking to foster both working relationships and gain access to the latest research results. Topics covered include Telecoms & Wireless Networking Electronics & Multimedia Embedded & Intelligent Systems Renewable Energies.
Agrobacterium: From Biology to Biotechnology - Tzvi Tzfira 2007-12-25
Agrobacterium is a plant pathogen which causes the “crown-gall” disease, a neoplastic growth that results from the transfer of a well-defined DNA segment (“transferred DNA”, or “T-DNA”) from the bacterial Ti (tumor-inducing) plasmid to the host cell, its integration into the host genome, and the expression of oncogenes contained on the T-DNA. The molecular machinery, needed for T-DNA generation and transport into the host cell and encoded by a series of chromosomal (chv) and Ti-plasmid virulence (vir) genes, has been the subject of numerous studies over the past several decades. Today, Agrobacterium is the tool of choice for plant genetic engineering with an ever expanding host range that includes many commercially important crops, flowers, and tree species. Furthermore, its recent application for the genetic transformation of non-plant species, from yeast to cultivated mushrooms and even to human cells, promises this bacterium a unique place in the future of biotechnological applications. The book is a comprehensive volume describing Agrobacterium's biology, interactions with host species, and uses for genetic engineering.
The Physics of Graphene - Mikhail I. Katsnelson 2020-03-19
Leading graphene research theorist Mikhail I. Katsnelson systematically presents the basic concepts of graphene physics in this fully revised second edition. The author illustrates and explains basic concepts such as Berry phase, scaling, Zitterbewegung, Kubo, Landauer and Mori formalisms in quantum kinetics, chirality, plasmons, commensurate-incommensurate transitions and many others. Open issues and unsolved problems introduce the reader to the latest developments in the field. New achievements and topics presented include the basic concepts of Van der Waals heterostructures, many-body physics of graphene, electronic optics of Dirac electrons, hydrodynamics of electron liquid and the mechanical properties of one atom-thick membranes. Building on an undergraduate-level knowledge of quantum and statistical physics and solid-state theory, this is an important graduate textbook for students in nanoscience, nanotechnology and condensed matter. For physicists and material scientists working in related areas, this is an excellent introduction to the fast-growing field of graphene science.
International Communication - Daya Kishan Thussu 2018-12-27
The third edition of International Communication examines the profound changes that have taken place, and are continuing to take place at an astonishing speed, in international media and communication. Building on the success of previous editions, this book maps out the expansion of media and telecommunications corporations within the macro-economic context of liberalisation, deregulation and privitisation. It then goes on to explore the impact of such growth on audiences in different cultural contexts and from regional, national and international perspectives. Each chapter contains engaging case studies which exemplify the main concepts and arguments.
Solar-to-Chemical Conversion - Hongqi Sun 2021-04-29
This comprehensive book systematically covers the fundamentals in solar energy conversion to chemicals, either fuels or chemical products. It includes natural photosynthesis with emphasis on artificial processes for solar energy conversion and utilization. The chemical processes of solar energy conversion via homogeneous and/or heterogeneous photocatalysis has been described with the mechanistic insights. It also consists of reaction systems toward a variety of applications, such as water splitting for hydrogen or oxygen evolution, photocatalytic CO2 reduction to fuels, and light driven N2 fixation, etc. This unique book offers the readers a broad view of solar energy utilization based on chemical processes and their perspectives for future sustainability.
THEORY AND PROBLEMS OF BASIC ELECTRICAL ENGINEERING,, Second Edition - NAGRATH, I. J. 2016-08-19
This comprehensive book with a blend of theory and solved problems on Basic Electrical Engineering has been updated and upgraded in the Second Edition as per the current needs to cater undergraduate students of all branches of engineering and to all those who are appearing in competitive examinations such as AMIE, GATE and graduate IETE. The text provides a lucid yet exhaustive exposition of the fundamental concepts, techniques and devices in basic electrical engineering through a series of carefully crafted solved examples, multiple choice (objective type) questions and review questions. The book covers, in general, three major areas: electric circuit theory, electric machines, and measurement and instrumentation systems.
Recent Advances in Intelligent Information Systems and Applied Mathematics - Oscar Castillo 2020-01-31
This book describes the latest advances in intelligent techniques such as fuzzy logic, neural networks, and optimization algorithms, and their relevance in building intelligent information systems in combination with applied mathematics. The authors also outline the applications of these systems in areas like intelligent

control and robotics, pattern recognition, medical diagnosis, time series prediction, and optimization of complex problems. By sharing fresh ideas and identifying new targets/problems it offers young researchers and students new directions for their future research. The book is intended for readers from mathematics and computer science, in particular professors and students working on theory and applications of intelligent systems for real-world applications.

Applied Physics, System Science and Computers - Klimis Ntalianis 2017-07-20

This book reports on advanced theories and methods in three related fields of research: applied physics, system science and computers. It is organized in two main parts, the first of which covers applied physics topics, including lasers and accelerators; condensed matter, soft matter and materials science; nanoscience and quantum engineering; atomic, molecular, optical and plasma physics; as well as nuclear and high-energy particle physics. It also addresses astrophysics, gravitation, earth and environmental science, as well as medical and biological physics. The second part focuses on advances in system science and computers, exploring automatic circuit control, power systems, computer communication, fluid mechanics, simulation and modeling, software engineering, data structures and applications of artificial intelligence among other areas. Offering a collection of contributions presented at the 1st International Conference on Applied Physics, System Science and Computers (APSAC 2016), the book bridges the gap between applied physics and electrical engineering. It not only to presents new methods, but also promotes collaborations between different communities working on related topics at the interface between physics and engineering, with a special focus on communication, data modeling and visualization, quantum information, applied mechanics as well as bio and geophysics.

Mathematical Theory of Continuum Mechanics - Rabindranath Chatterjee 1999

This text provides an introduction to the theory of continuum mechanics in a logically satisfying form. A simple knowledge of Cartesian tensors is a sufficient prerequisite for this book. The book deals with two major branches of continuum mechanics - the mechanics of elastic solids and the mechanics of fluids providing the basis of civil and mechanical engineering, applied mathematics and physics. Traditional courses in solid mechanics and fluid mechanics are usually taught separately with emphasis on physical behaviour at the cost of rigorous mathematical foundation neglecting the analogies between solids and fluids. The book brings two disciplines under one roof seeking to generalize and unify specialized topics.

Inorganic Biomaterials - Xiang C Zhang 2014-06-26

This book provides a practical guide to the use and applications of inorganic biomaterials. It begins by introducing the concept of inorganic biomaterials, which includes bioceramics and bioglass. This concept is further extended to hybrid biomaterials consisting of inorganic and organic materials to mimic natural biomaterials. The book goes on to provide the reader with information on biocompatibility, bioactivity and bioresorbability. The concept of the latter is important because of the increasing role resorbable biomaterials are playing in implant applications. The book also introduces a new concept on mechanical compatibility - 'mechacompatibility'. Almost all implant biomaterials employed to date, such as metal and ceramic implants, do not meet this biological requirement as they have far higher modulus than any biomaterials in the body. The practical techniques that are used in the characterization of biomaterials, including chemical, physical, biological, microscopy and mechanical characterization are described. Some specialised techniques are also introduced such as Synchrotron Micro-Computed Tomography (u-CT) and Magnetic Resonance Imaging (MRI). The reader is given important information on new biomaterials development for orthopaedic and other areas, including controlled release technology, hydroxyapatite and hybrid bioresorbable materials. Finally the book provides a guide to regulatory considerations, an area which is often overlooked, but is an important part of R&D and manufacturing of medical materials and devices.

American Ways - Maryanne Kearny Datesman 2005-05

Modern Physics for Engineers - Jasprit Singh 2008-11-20

Linking physics fundamentals to modern technology-a highly applied primer for students and engineers Reminding us that modern inventions-new materials, information technologies, medical technological breakthroughs-are based on well-established fundamental principles of physics, Jasprit Singh integrates important topics from quantum mechanics, statistical thermodynamics, and materials science, as well as the special theory of relativity. He then goes a step farther and applies these fundamentals to the workings of electronic devices-an essential leap for anyone interested in developing new technologies. From semiconductors to nuclear magnetic resonance to superconducting materials to global positioning systems, Professor Singh draws on wide-ranging applications to demonstrate each concept under discussion. He downplays extended mathematical derivations in favor of results and their real-world design implication, supplementing the book with nearly 100 solved examples, 120 figures, and 200 end-of-chapter problems. Modern Physics for Engineers provides engineering and physics students with an accessible, unified introduction to the complex world underlying today's design-oriented curriculums. It is also an extremely useful resource for engineers and applied scientists wishing to take advantage of research opportunities in diverse fields.

A Dictionary of Media and Communication - Daniel Chandler 2020-02-21

This authoritative and up-to-date A-Z covers all aspects of interpersonal, mass, and networked communication, including digital and mobile media, advertising, journalism, and nonverbal communication. This new edition is particularly focused on expanding coverage of social media terms, to reflect its increasing prominence to media and communication studies as a whole. More than 2,000 entries have been revised, and over 500 new terms have been added to reflect current theoretical terminology, including concepts such as artificial intelligence, cisgender, fake news, hive mind, use theory, and wikiality. The dictionary also bridges the gap between theory and practice, and contains many technical terms that are relevant to the communication industry, including dialogue editing, news aggregator, and primary colour correction. The text is complemented by biographical notes and extensively cross-referenced, while web links supplement the entries. It is an indispensable guide for undergraduate students of media and communication studies, and also for those taking related subjects such as television studies, video production, communication design, visual communication, marketing communications, semiotics, and cultural studies.

Civics Today - Richard C. Remy 2006-01

A civics program building the next generation of active Americans Civics Today: Citizenship, Economics, and You meets the content standards for civics and government as outlined by the National Standards for Civics and Government. Many young citizens are completing their education with little or no sense of civic responsibility. This program teaches the knowledge and skills needed to be an effective, active citizen. It also encourages an appreciation for the American political system and fosters a willingness to take part in American democracy. Two economics units provide an understanding of the interrelationship between democracy and the free enterprise system.

Strategic Writing - Charles Marsh 2015-07-17

In its third edition, Strategic Writing emphasizes the strategic, goal-oriented mission of high-quality media and public relations writing with clear, concise instructions for more than 40 types of documents. This multidisciplinary text covers writing for public relations, advertising, sales and marketing, and business communication. Featuring a spiral binding, numerous examples and a user-friendly "recipe" approach, Strategic Writing is ideal for public relations writing classes that include documents from other disciplines.

Two-Dimensional (2D) Nanomaterials in Separation Science - Rasel Das 2021-04-26

This book covers newly emerging two-dimensional nanomaterials which have been recently used for the purpose of water purification. It focuses on the synthesis methods of 2D materials and answers how scientists/engineers/nanotechnologist/environmentalists could use these materials for fabricating new separation membranes and most probably making commercially feasible technology. The chapters are written by a collection of international experts ensuring a broad view of each topic. The book will be of interest to experienced researchers as well as young scientists looking for an introduction into 2D materials-based cross-disciplinary research.

State-of-the-Art of Quantum Dot System Fabrications - Ameenah Al-Ahmadi 2012

The book "State-of-the-art of Quantum Dot System Fabrications" contains ten chapters and devotes to some of quantum dot system fabrication methods that considered the dependence of shape, size and composition parameters on growth methods and conditions such as temperature, strain and deposition rates. This is a

collaborative book sharing and providing fundamental research such as the one conducted in Physics, Chemistry, Material Science, with a base text that could serve as a reference in research by presenting up-to-date research work on the field of quantum dot systems.

Health Psychology - Felicity Allen 1998

A comprehensive introduction to health psychology which covers both health enhancing and hazardous behaviours, as well as ways of encouraging people to improve their health.

Stellar Collapse - Chris L. Fryer 2004-04-30

Supernovae, hypernovae and gamma-ray bursts are among the most energetic explosions in the universe. The light from these outbursts is, for a brief time, comparable to billions of stars and can outshine the host galaxy within which the explosions reside. Most of the heavy elements in the universe are formed within these energetic explosions. Surprisingly enough, the collapse of massive stars is the primary source of not just one, but all three of these explosions. As all of these explosions arise from stellar collapse, to understand one requires an understanding of the others. Stellar Collapse marks the first book to combine discussions of all three phenomena, focusing on the similarities and differences between them. Designed for graduate students and scientists newly entering this field, this book provides a review not only of these explosions, but the detailed physical models used to explain them from the numerical techniques used to model neutrino transport and gamma-ray transport to the detailed nuclear physics behind the evolution of the collapse to the observations that have led to these three classes of explosions.

Educating the Profession - Michael Seadle 2016-07-11

Education and training for the library profession have changed over the decades, and this publication looks both at the past and the future of these developments at schools of library and information science as well as the role of IFLA's Section on Education and Training. The chapters cover regional developments in Europe, Asia, Africa, Australia and the Americas; special topics, such as quality assurance and case studies; and future considerations in LIS education.

Autophagy - Daniel Klionsky 2003-12-15

Starting in the early 1970s, a type of programmed cell death called apoptosis began to receive attention. Over the next three decades, research in this area continued at an accelerated rate. In the early 1990s, a second type of programmed cell death, autophagy, came into focus. Autophagy has been studied in mammalian cells for many years. The recen

The Physics of Semiconductor Devices - R. K. Sharma 2019-01-31

This book disseminates the current knowledge of semiconductor physics and its applications across the scientific community. It is based on a biennial workshop that provides the participating research groups with a stimulating platform for interaction and collaboration with colleagues from the same scientific community. The book discusses the latest developments in the field of III-nitrides; materials & devices, compound semiconductors, VLSI technology, optoelectronics, sensors, photovoltaics, crystal growth, epitaxy and characterization, graphene and other 2D materials and organic semiconductors.

Embedded Systems and Artificial Intelligence - Vikrant Bhateja 2020-04-07

This book gathers selected research papers presented at the First International Conference on Embedded Systems and Artificial Intelligence (ESAI 2019), held at Sidi Mohamed Ben Abdellah University, Fez, Morocco, on 2–3 May 2019. Highlighting the latest innovations in Computer Science, Artificial Intelligence, Information Technologies, and Embedded Systems, the respective papers will encourage and inspire researchers, industry professionals, and policymakers to put these methods into practice.

Uniform Plumbing Code Study Guide - Mario J. Fala 1985

Basic Electrical Engineering - V. N. Mittle 1990

Topics in Igneous Petrology - Jyotisankar Ray 2010-12-06

The second half of the past century witnessed a remarkable paradigm shift in approach to the understanding of igneous rocks. Global literature records a change from a classical petrographic approach to emphasis on mineral chemistry, trace element characteristics, tectonic setting, phase relations, and theoretical simulation of magma generation and evolution processes. This book contains contributions by international experts in different fields of igneous petrology and presents an overview of recent developments. This book is dedicated to the late Dr Mihir K. Bose, former professor of the Department of Geology, Presidency College, Calcutta, India, who actively participated in the development of this new global view of igneous petrology.

Engineering Physics - D. K. Bhattacharya 2015-08-20

Engineering Physics is designed as a textbook for first year undergraduate engineering students. The book comprehensively covers all relevant and important topics in a simple and lucid manner. It explains the principles as well as the applications of a given topic using numerous solved examples and self-explanatory figures.

Microfluidics and Nanofluidics - Clement Kleinstreuer 2013-12-04

Fluidics originated as the description of pneumatic and hydraulic control systems, where fluids were employed (instead of electric currents) for signal transfer and processing. Microfluidics and Nanofluidics: Theory and Selected Applications offers an accessible, broad-based coverage of the basics through advanced applications of microfluidics and nanofluidics. It is essential reading for upper-level undergraduates and graduate students in engineering and professionals in industry.

Handbook Of Pattern Recognition And Computer Vision (2nd Edition) - Chi Hau Chen 1999-03-12

The very significant advances in computer vision and pattern recognition and their applications in the last few years reflect the strong and growing interest in the field as well as the many opportunities and challenges it offers. The second edition of this handbook represents both the latest progress and updated knowledge in this dynamic field. The applications and technological issues are particularly emphasized in this edition to reflect the wide applicability of the field in many practical problems. To keep the book in a single volume, it is not possible to retain all chapters of the first edition. However, the chapters of both editions are well written for permanent reference. This indispensable handbook will continue to serve as an authoritative and comprehensive guide in the field.

A Textbook of Engineering Physics (For 1st & 2nd Semester of M.G. University, Kerala) - Atmajan A./ Issac Tessy/ Manoj Abin & Pisharady, Sreejith K. 2014

Lasers And Holography |Nano Technology & Super Conductivity| Crystallography & Moder Engineering |Ultrasonics | Fibre Optics Applications Of Optical Fibress

Satyendra Nath Bose - Santimay Chatterjee 1976

Biography of the Indian physicist Satyendranath Bose, 1894-1974.

Electrode Materials for Energy Storage and Conversion - Mesfin A. Kebede 2021-11-17

This book provides a comprehensive overview of the latest developments and materials used in electrochemical energy storage and conversion devices, including lithium-ion batteries, sodium-ion batteries, zinc-ion batteries, supercapacitors and conversion materials for solar and fuel cells. Chapters introduce the technologies behind each material, in addition to the fundamental principles of the devices, and their wider impact and contribution to the field. This book will be an ideal reference for researchers and individuals working in industries based on energy storage and conversion technologies across physics, chemistry and engineering. FEATURES Edited by established authorities, with chapter contributions from subject-area specialists Provides a comprehensive review of the field Up to date with the latest developments and research Editors Dr. Mesfin A. Kebede obtained his PhD in Metallurgical Engineering from Inha University, South Korea. He is now a principal research scientist at Energy Centre of Council for Scientific and Industrial Research (CSIR), South Africa. He was previously an assistant professor in the Department of Applied Physics and Materials Science at Hawassa University, Ethiopia. His extensive research experience covers the use of electrode materials for energy storage and energy conversion. Prof. Fabian I. Ezema is a professor at the University of Nigeria, Nsukka. He obtained his PhD in Physics and Astronomy from University of Nigeria, Nsukka. His research focuses on several areas of materials science with an emphasis on energy applications, specifically electrode materials for energy conversion and storage.

The Chemistry of Inorganic Biomaterials - Christopher Spicer 2021-08-18

This book overviews the underlying chemistry behind the most common and cutting-edge inorganic materials in current use, or approaching use, in vivo.

Engineering Physics - Mani Naidu
Engineering Physics is designed to cater to the needs of first year undergraduate engineering students. Written in a lucid style, this book assimilates the best practices of conceptual pedagogy, dealing at length with various topics such as crystallography, principles of quantum mechanics, free electron theory of metals, dielectric and magnetic properties, semiconductors, nanotechnology, etc.
Genetic Algorithms in Search, Optimization, and Machine Learning - David Edward Goldberg 1989
A gentle introduction to genetic algorithms. Genetic algorithms revisited: mathematical foundations. Computer implementation of a genetic algorithm. Some applications of genetic algorithms. Advanced operators and techniques in genetic search. Introduction to genetics-based machine learning. Applications of genetics-based machine learning. A look back, a glance ahead. A review of combinatorics and elementary probability. Pascal with random number generation for fortran, basic, and cobol programmers. A simple genetic algorithm (SGA) in pascal. A simple classifier system(SCS) in pascal. Partition coefficient transforms for problem-coding analysis.
Advances in Communication Systems and Networks - J. Jayakumari 2020-06-13
This book presents the selected peer-reviewed papers from the International Conference on Communication Systems and Networks (ComNet) 2019. Highlighting the latest findings, ideas, developments and applications in all areas of advanced communication systems and networking, it covers a variety of topics, including next-generation wireless technologies such as 5G, new hardware platforms, antenna design, applications of artificial intelligence (AI), signal processing and optimization techniques. Given its scope, this book can be useful for beginners, researchers and professionals working in wireless communication and networks, and other allied fields.
Introduction to Semi-supervised Learning - Xiaojin Zhu 2009
Semi-supervised learning is a learning paradigm concerned with the study of how computers and natural systems such as humans learn in the presence of both labeled and unlabeled data. Traditionally, learning has been studied either in the unsupervised paradigm (e.g., clustering, outlier detection) where all the data are unlabeled, or in the supervised paradigm (e.g., classification, regression) where all the data are labeled. The goal of semi-supervised learning is to understand how combining labeled and unlabeled data may change the learning behavior, and design algorithms that take advantage of such a combination. Semi-supervised learning is of great interest in machine learning and data mining because it can use readily available unlabeled data to improve supervised learning tasks when the labeled data are scarce or expensive. Semi-supervised learning also shows potential as a quantitative tool to understand human category learning, where most of the input is self-evidently unlabeled. In this introductory book, we present some popular semi-supervised learning models, including self-training, mixture models, co-training and multiview learning, graph-based methods, and semi-supervised support vector machines. For each model, we discuss its basic mathematical formulation. The success of semi-supervised learning depends critically on some underlying assumptions. We emphasize the assumptions made by each model and give counterexamples when appropriate to demonstrate the limitations of the different models. In addition, we discuss semi-supervised learning for cognitive psychology. Finally, we give a computational learning theoretic perspective on semi-supervised learning, and we conclude the book with a brief discussion of open questions in the field. Table of Contents: Introduction to Statistical Machine Learning / Overview of Semi-Supervised Learning / Mixture Models and EM / Co-Training / Graph-Based Semi-Supervised Learning / Semi-Supervised Support Vector Machines / Human Semi-Supervised Learning / Theory and Outlook