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Cubes, triangular prisms, nano-acorn, nano-centipedes, nanoshells, nano-whiskers. . . . Now that we can create nanoparticles in a wide variety of shapes and morphologies, comes the next challenge: finding ways to organize this collection of particles into larger and more complex systems. Nanoparticle Assemblies and Superstructures, edited by pioneer of nanoparticle self-organization Nicholas A. Kotov, employs three critical questions to provide a framework of open-ended inquiry: What are the methods of organization of nanocolloids in more complex structures? What kind of structures do we need? What are the new properties appearing in nanocolloid superstructures? Pulling together a collection of contributors unmatched in both their expertise and enthusiasm, Kotov presents what he refers to as a snapshot of nanoassembly work in progress. The first section of this comprehensive volume provides background through an assessment of the current status of nanoparticle assembly development and the requirements for different applications of organized nanomaterials. The middle chapters explore the changes that occur in various properties of individual particles when they are brought together to form agglomerates and simple assemblies. In the final section, a number of top scientists describe various methods for organizing particles in complex nanostructured superstructures. These include techniques involving biological ligands and force fields, as well as methods based on self-organization. This remarkably prescient text upholds Kotov's belief that the research on organization of nanoparticles and other nanostructures, will most certainly uncover a wealth of "interesting discoveries and surprising phenomena." Nicholas A. Kotov has received several state, national, and international awards for his research on nanomaterials, including the Mendeleev Stipend, the Humboldt Fellowship, and the CAREER award.
The first book on optical OFDM by the leading pioneers in the field The only book to cover error correction codes for optical OFDM Gives applications of OFDM to free-space communications, optical access networks, and metro and log haul transports show optical OFDM can be implemented Contains introductions to signal processing for optical engineers and optical communication fundamentals for wireless engineers This book gives a coherent and comprehensive introduction to the fundamentals of OFDM signal processing, with a distinctive focus on its broad range of applications. It evaluates the architecture, design and performance of a number of OFDM variations, discusses coded OFDM, and gives a detailed study of error correction codes for access networks, 100 Gb/s Ethernet and future optical networks. The emerging applications of optical OFDM, including single-mode fiber transmission, multimode fiber transmission, free space optical systems, and optical access networks are examined, with particular attention paid to passive optical networks, radio-over-fiber, WiMAX and UWB communications. Written by two of the leading contributors to the field, this book will be a unique reference for optical communications engineers and scientists. Students, technical managers and telecom executives seeking to understand this new technology for future-generation optical networks will find the book invaluable. William Shieh is an associate professor and reader in the electrical and electronic engineering department, The University of Melbourne, Australia. He received his M.S. degree in electrical engineering and Ph.D. degree in physics both from University of Southern California. Ivan Djordjevic is an Assistant Professor of Electrical and Computer Engineering at the University of Arizona, Tucson, where he directs the Optical Communications Systems Laboratory (OCSL). His current research interests include optical networks, error control coding, constrained coding, coded modulation, turbo equalization, OFDM applications, and quantum error correction. "This wonderful book is the first one to address the rapidly emerging optical OFDM field. Written by two leading researchers in the field, the book is structured to comprehensively cover any optical OFDM aspect one could possibly think of, from the most fundamental to the most specialized. The book adopts a coherent line of presentation, while striking a thoughtful balance between the various topics, gradually developing the optical-physics and communication-theoretic concepts required for deep comprehension of the topic, eventually treating the multiple optical OFDM methods, variations and applications. In my view this book will remain relevant for many years to come, and will be increasingly accessed by graduate students, accomplished researchers as well as telecommunication engineers and managers keen to attain a perspective on the emerging role of OFDM in the evolution of photonic networks." -- Prof. Moshe Nazarathy, EE Dept., Technion, Israel Institute of Technology * The first book on optical OFDM by the leading pioneers in the field * The only book to cover error correction codes for optical OFDM * Applications of OFDM to free-space communications, optical access networks, and metro and log haul transports show optical OFDM can be implemented * An introduction to signal processing for optical communications * An introduction to optical communication fundamentals for the wireless engineer
Electrical and Electronic Principles and TechnologyRoutledge
Microtimes
Functional Tactile Sensors
American Military Vehicles of World War I
Proceedings : München, Germany, June 19-23, 2004
Membership Directory

The aim of this book is to introduce students to the basic electrical and electronic principles needed by technicians in fields such as electrical engineering, electronics and telecommunications. The emphasis is on the practical aspects of the subject, and the author has followed his usual successful formula, incorporating many worked examples and problems (answers supplied) into the learning process. Electrical Principles and Technology for Engineering is John Bird's core text for Further Education courses at BTEC levels N11 and N111 and Advanced GNVQ. It is also designed to provide a comprehensive introduction for students on a variety of City & Guilds courses, and any students or technicians requiring a sound grounding in Electrical Principles and Electrical Power Technology.
Functional Tactile Sensors: Materials, Devices and Integrations focuses on the subject of novel materials design and device integration of tactile sensors for functional applications. The book addresses the design, materials characteristics, device operation principles, specialized device application and mechanisms of the latest reported tactile sensors. The emphasis of the book lies in the materials science aspects of tactile sensors—understanding the relationship between material properties and device performance. It will be an ideal resource for researchers working in materials science, engineering and physics. Includes the latest advances and recent developments in tactile sensors for artificial intelligence applications Reviews the relationship between materials properties and device performance Addresses materials and device design strategies for targeted sensing applications
The book presents the latest power conversion and control technology in modern wind energy systems. It has nine chapters, covering technology overview and market survey, electric generators and modeling, power converters and modulation techniques, wind turbine characteristics and configurations, and control schemes for fixed- and variable-speed wind energy systems. The book also provides in-depth steady-state and dynamic analysis of squirrel cage induction generator, doubly fed induction generator, and synchronous generator based wind energy systems. To illustrate the key concepts and help the reader tackle real-world issues, the book contains more than 30 case studies and 100 solved problems in addition to simulations and experiments. The book serves as a comprehensive reference for academic researchers and practicing engineers. It can also be used as a textbook for graduate students and final year undergraduate students.
2018 International Plumbing Code Turbo Tabs
An Illustrated History of Armored Cars, Staff Cars, Motorcycles, Ambulances, Trucks, Tractors and Tanks
Nanoparticle Assemblies and Superstructures
Power Conversion and Control of Wind Energy Systems
Byte

This book presents a distinctive way of understanding quantum correlations beyond entanglement, introducing readers to this less explored yet very fundamental aspect of quantum theory. It takes into account most of the new ideas involving quantum phenomena, resources, and applications without entanglement, both from a theoretical and an experimental point of view. This book serves as a reference for both beginner students and experienced researchers in physics and applied mathematics, with an interest in joining this novel venture towards understanding the quantum nature of the world.
Many physicists are not aware of the fact that they can solve their problems by applying optimization algorithms. Since the number of such algorithms is steadily increasing, many new algorithms have not been presented comprehensively until now. This presentation of recently developed algorithms applied in physics, including demonstrations of how they work and related results, aims to encourage their application, and as such the algorithms selected cover concepts and methods from statistical physics to optimization problems emerging in theoretical computer science.
Written by renowned experts in the field of photon management in solar cells, this one-stop reference gives an introduction to the physics of light management in solar cells, and discusses the different concepts and methods of applying photon management. The authors cover the physics, principles, concepts, technologies, and methods used, explaining how to increase the efficiency of solar cells by splitting or modifying the solar spectrum before they absorb the sunlight. In so doing, they present novel concepts and materials allowing for the cheaper, more flexible manufacture of solar cells and systems. For educational purposes, the authors have split the reasons for photon management into spatial and spectral light management. Bridging the gap between the photonics and the photovoltaics communities, this is an invaluable reference for materials scientists, physicists in industry, experimental physicists, lecturers in physics, Ph.D. students in physics and material sciences, engineers in power technology, applied and surface physicists.
PC Mag
Dielectrics in Electric Fields
Particle Physics Reference Library
Principles & Practice of Physics
Interface Integrated Circuits
This practical resource introduces electrical and electronic principles and technology covering theory through detailed examples, enabling students to develop a sound understanding of the knowledge required by technicians in fields such as electrical engineering, electronics and telecommunications. No previous background in engineering is assumed, making this an ideal text for vocational courses at Levels 2 and 3, foundation degrees and introductory courses for undergraduates.
Design Transactions presents the outcome of new research to emerge from 'Innochain', a consortium of six leading European architectural and engineering-focused institutions and their industry partners. The book presents new advances in digital design tooling that challenge established building cultures and systems. It offers new sustainable and materially smart design solutions with a strong focus on changing the way the industry thinks, designs, and builds our physical environment. Divided into sections exploring communication, simulation and materialisation, Design Transactions explores digital and physical prototyping and testing that challenges the traditional linear construction methods of incremental refinement. This novel research investigates 'the digital chain' between phases as an opportunity for extended interdisciplinary design collaboration. The highly illustrated book features work from 15 early-stage researchers alongside chapters from world-leading industry collaborators and academics.
An organized, structured approach to the 2018 INTERNATIONAL PLUMBING CODE Soft Cover, these TURBO TABS will help you target the specific information you need, when you need it. Packaged as pre-printed, full-page inserts that categorize the IPC into its most frequently referenced sections, the tabs are both handy and easy to use. They were created by leading industry experts who set out to develop a tool that would prove valuable to users in or entering the field.
Engineering
A Handbook for the Identification and Recording of Culturally Modified Trees
Design Transactions
SPICE for Power Electronics and Electric Power
The Independent Guide to IBM-standard Personal Computing

Carbon nanotubes have been studied extensively in relation to fullerenes, and together with fullerenes have opened a new science and technology field on nano scale materials. A whole range of issues from the preparation, structure, properties and observation of quantum effects in carbon nanotubes in comparison with 0-D fullerenes are discussed. In addition, complementary reviews on carbon nanoparticles such as carbon nano-capsules, onion-like graphite particles and metal-coated fullerenes are covered. This book aims to cover recent research and development in this area, and so provide a convenient reference tool for all researchers in this field. It is also hoped that this book can serve to stimulate future work on carbon nanotubes.
Microbial production: From genome design to cell surface engineering affords a comprehensive review of novel technology and approaches being implemented for manufacturing microorganisms, written by specialists in both academia and industry. This book is divided into three sections: the first includes technology for improvement of fermentation strains and many supporting technologies and information; the second examines novel technology useful for analysis of cell activities, analyzing gene function, and designing genomes of producer strains; and finally, a discussion of the practical application of the techniques and success case studies in many fields of bio-production, such as microbiological production, pharmaceuticals, chemicals, foods and cosmetics.
PCMag.com is a leading authority on technology, delivering Labs-based, independent reviews of the latest products and services. Our expert industry analysis and practical solutions help you make better buying decisions and get more from technology.
Who's Who in Science and Engineering 2008-2009
Surface Plasmon Nanophotonics
From Genome Design to Cell Engineering
Microbial Production
Interface Integrated Circuit D. A. T. A. Book

This second open access volume of the handbook series deals with detectors, large experimental facilities and data handling, both for accelerator and non-accelerator based experiments. It also covers applications in medicine and life sciences. A joint CERN-Springer initiative, the "Particle Physics Reference Library" provides revised and updated contributions based on previously published material in the well-known Landolt-Boernstein series on particle physics, accelerators and detectors (volumes 21A,B1,B2,C), which took stock of the field approximately one decade ago. Central to this new initiative is publication under full open access.
Earlier conferences called: International Symposium on Gas Flow and Chemical Lasers.
Genomic signal processing (GSP) can be defined as the analysis, processing, and use of genomic signals to gain biological knowledge, and the translation of that knowledge into systems-based applications that can be used to diagnose and treat genetic diseases. Situated at the crossroads of engineering, biology, mathematics, statistics, and computer science, GSP requires the development of both nonlinear dynamical models that adequately represent genomic regulation, and diagnostic and therapeutic tools based on these models. This book facilitates these developments by providing rigorous mathematical definitions and propositions for the main elements of GSP and by paying attention to the validity of models relative to the data. Ilya Shmulevich and Edward Dougherty cover real-world situations and explain their mathematical modeling in relation to systems biology and systems medicine. Genomic Signal Processing makes a major contribution to computational biology, systems biology, and translational genomics by providing a self-contained explanation of the fundamental mathematical issues facing researchers in four areas: classification, clustering, network modeling, and network intervention.
Electrometric methods
Carbon Nanotubes
Fourteenth International Symposium on Gas Flow, Chemical Lasers, and High-Power Lasers
Electrical Principles and Technology for Engineering
Materials, Devices and Integrations
To be accredited, a power electronics course should cover a significant amount of design content and include extensive use of computer-aided analysis with simulation tools such as SPICE. Based upon the authors' experience in designing such courses, SPICE for Power Electronics and Electric Power, Second Edition integrates a SPICE simulator with a po
Examines the influences of electric fields on dielectric materials and explores their distinctive behavior through well established principles of physics and engineering and recent literature on dielectrics. Facilitates understanding of the space charge phenomena in the nonuniform fields. Contains more than 800 display equations.
In World War I the American motor vehicle industry was tested by the sudden appearance of vast transport challenges. The nation's immense manufacturing capabilities and abundant natural resources combined with increased standardization and mass production to enable the industry to meet the military's needs. Motor vehicles and aircraft were quickly cemented as the most influential military tools of the early twentieth century. This book both describes the development and use of a wide range of specialized motor vehicles during World War I and analyzes how their advent indelibly altered modern warfare and transportation.
High-Frequency Magnetic Components
31st Annual International Symposium on Computer Architecture
Lectures on General Quantum Correlations and their Applications
System Applications Guide
New Optimization Algorithms in Physics

During the Russian Revolution and Civil War, amateur theater groups sprang up in cities across the country. Workers, peasants, students, soldiers, and sailors provided entertainment ranging from improvisations to gymnastics and from propaganda sketches to the plays of Chekhov. In Revolutionary Acts, Lynn Mally reconstructs the history of the amateur stage in Soviet Russia from 1917 to the height of the Stalinist purges. Her book illustrates in fascinating detail how Soviet culture was transformed during the new regime's first two decades in power. Of all the arts, theater had a special appeal for mass audiences in Russia, and with the coming of the revolution it took on an important role in the dissemination of the new socialist culture. Mally's analysis of amateur theater as a space where performers, their audiences, and the political authorities came into contact enables her to explore whether this culture emerged spontaneously "from below" or was imposed by the revolutionary elite. She shows that by the late 1920s, Soviet leaders had come to distrust the initiatives of the lower classes, and the amateur theaters fell increasingly under the guidance of artistic professionals. Within a few years, state agencies intervened to homogenize repertoire and performance style, and with the institutionalization of Socialist Realist principles, only those works in a unified Soviet canon were presented.

Based on his storied research and teaching, Eric Mazur ' s Principles & Practice of Physics builds an understanding of physics that is both thorough and accessible. Unique organization and pedagogy allow students to develop a true conceptual understanding of physics alongside the quantitative skills needed in the course. New learning architecture: The book is structured to help students learn physics in an organized way that encourages comprehension and reduces distraction. Physics on a contemporary foundation: Traditional texts delay the introduction of ideas that we now see as unifying and foundational. This text builds physics on those unifying foundations, helping students to develop an understanding that is stronger, deeper, and fundamentally simpler. Research-based instruction: This text uses a range of research-based instructional techniques to teach physics in the most effective manner possible. The result is a groundbreaking book that puts physics first, thereby making it more accessible to students and easier for instructors to teach. Build an integrated, conceptual understanding of physics: Help students gain a deeper understanding of the unified laws that govern our physical world through the innovative chapter structure and pioneering table of contents. Encourage informed problem solving: The separate Practice Volume empowers students to reason more effectively and better solve problems.

Beginning Oct. 1959 some issues include "Russian supplement."

OFDM for Optical Communications

Genomic Signal Processing

Photon Management in Solar Cells

Electrical and Electronic Principles and Technology

PC Magazine

This book discusses a new class of photonic devices, known as surface plasmon nanophotonic structures. The book highlights several exciting new discoveries, while providing a clear discussion of the underlying physics, the nanofabrication issues, and the materials considerations involved in designing plasmonic devices with new functionality. Chapters written by the leaders in the field of plasmonics provide a solid background to each topic.

Revolutionary Acts

Culturally Modified Trees of British Columbia

Volume 2: Detectors for Particles and Radiation

Rethinking Information Modelling for a New Material Age