

Basic Mechanical Engineering Shingare

Power Electronics : Devices and CircuitsThe Invincible Iron ManInternational Aerospace AbstractsModern PhysicsEngineering Mechanics : (As Per The New Syllabus, B.Tech. 1 Year Of U.P. Technical University)Power ElectronicsSprouted GrainsIntroduction to Basic Electricity and Electronics TechnologyS Chand Higher Engineering MathematicsTransferability of Skills Across Economic SectorsCommunications in Behavioral BiologyProblems and Solutions in Engineering MechanicsBASIC ELECTRICAL ENGINEERINGChalcogenadiazolesPiezotronics and Piezo-PhototronicsIntroduction to Power ElectronicsSonochemistrySmart Technologies for Energy, Environment and Sustainable DevelopmentHandbook on Applications of UltrasoundComputing Algorithms with Applications in EngineeringFiber-Reinforced Nanocomposites: Fundamentals and ApplicationsOrganic SonochemistryBasic Electronics for Scientists and EngineersThe Indian Textile JournalEngineering MechanicsThe EngineerElectronics CookbookGreen Chemistry for Environmental SustainabilitySulfur ChemistryGreen Chemistry and Sustainable TechnologyGreen Extraction and Valorization of By-Products from Food ProcessingHandbook of Probabilistic ModelsClay Mineral Catalysis of Organic ReactionsMechanical Engineering, Industrial Materials and Industrial ElectronicsThe Management of Natural Coastal Carbon SinksCode of Federal RegulationsPower ElectronicsICT for Competitive StrategiesPolarization Gradient in Elastic DielectricsIron Age

Power Electronics : Devices and Circuits

Taking an interdisciplinary approach, this new volume brings together innovative research, new concepts, and novel developments in the application of new tools in green chemistry and sustainable technology. The diverse coverage includes chapters on ionic liquids as green solvents, an environmentally friendly approach to the synthesis and biological evaluation of α -aminophosphonate derivatives, the application of nanotechnology in biological sciences and green chemistry, eco-friendly polymers, the effect of global warming and greenhouse gases on environmental system, and more.

The Invincible Iron Man

This book collects high-quality research papers presented at the International Conference on Computing Applications in Electrical & Electronics Engineering, held at Rajkiya Engineering College, Sonbhadra, India, on August 30–31, 2019. It provides novel contributions in computational intelligence, together with valuable reference material for future research. The topics covered include: big data analytics, IoT and smart infrastructures, machine learning, artificial intelligence and deep learning, crowd sourcing and social intelligence, natural language processing, business intelligence, high-performance computing, wireless, mobile and green communications, ad-hoc, sensor and mesh networks, SDN and network

virtualization, cognitive systems, swarm intelligence, human-computer interaction, network and information security, intelligent control, soft computing, networked control systems, renewable energy sources and technologies, biomedical signal processing, pattern recognition and object tracking, and sensor devices and applications.

International Aerospace Abstracts

For Engineering students & also useful for competitive Examination.

Modern Physics

Engineering Mechanics : (As Per The New Syllabus, B.Tech. 1 Year Of U.P. Technical University)

The fundamental principle of piezotronics and piezo-phototronics were introduced by Wang in 2007 and 2010, respectively. Due to the polarization of ions in a crystal that has non-central symmetry in materials, such as the wurtzite structured ZnO, GaN and InN, a piezoelectric potential (piezopotential) is created in the crystal by applying a stress. Owing to the simultaneous possession of piezoelectricity and semiconductor properties, the piezopotential created in the crystal has a strong effect on the carrier transport at the interface/junction. Piezotronics is for devices fabricated using the piezopotential as a “gate” voltage to control charge carrier transport at a contact or junction. The piezo-phototronic effect uses the piezopotential to control the carrier generation, transport, separation and/or recombination for improving the performance of optoelectronic devices, such as photon detector, solar cell and LED. The functionality offered by piezotronics and piezo-phototronics are complimentary to CMOS technology. There is an effective integration of piezotronic and piezo-phototronic devices with silicon based CMOS technology. Unique applications can be found in areas such as human-computer interfacing, sensing and actuating in nanorobotics, smart and personalized electronic signatures, smart MEMS/NEMS, nanorobotics and energy sciences. This book introduces the fundamentals of piezotronics and piezo-phototronics and advanced applications. It gives guidance to researchers, engineers and graduate students.

Power Electronics

Sprouted Grains

A timely and authoritative treatise on the chemistry and diverse applications of chalcogenadiazoles — the five-membered rings containing two carbons, two nitrogens, and one chalcogen (an member of group 16, the oxygen family). The number of different chalcogenadiazoles and their structural diversity make it difficult to gain a clear understanding of the subject by studying an individual system in isolation. Chalcogenadiazoles: Chemistry and Applications emphasizes general features of this class of heterocyclic compounds. It concentrates on properties of each class of chalcogenadiazoles and their cycle-fused derivatives, considering chemical reactions of functional groups only in cases when these reactions permit to characterize the heterocycles as substituents or in respect of its aromaticity. Covering an important and rapidly developing branch of heterocyclic chemistry, this book is an essential resource for students, young professionals and experienced specialists in adjacent fields who are interested in: Trends in the search for compounds with established bioactivity or use in medicine, as agrochemicals, or as reagents for environmental and biochemical analysis Differences in classes of chalcogenadiazoles with respect to their degree of aromaticity and similar general concepts helpful to the nonspecialist The effects of the chalcogen nature and the alternation manner of all atomic constituents on properties of these heterocyclic compounds Combining data from organic, biological, medicinal, materials science, and supramolecular chemistry, Chalcogenadiazoles: Chemistry and Applications is an important source of information not only for chemists in the fields of organic, inorganic, and organometallic chemistry, but also for anyone interested in the research and development of chalcogenadiazoles and related species.

Introduction to Basic Electricity and Electronics Technology

Handbook of Probabilistic Models carefully examines the application of advanced probabilistic models in conventional engineering fields. In this comprehensive handbook, practitioners, researchers and scientists will find detailed explanations of technical concepts, applications of the proposed methods, and the respective scientific approaches needed to solve the problem. This book provides an interdisciplinary approach that creates advanced probabilistic models for engineering fields, ranging from conventional fields of mechanical engineering and civil engineering, to electronics, electrical, earth sciences, climate, agriculture, water resource, mathematical sciences and computer sciences. Specific topics covered include minimax probability machine regression, stochastic finite element method, relevance vector machine, logistic regression, Monte Carlo simulations, random matrix, Gaussian process regression, Kalman filter, stochastic optimization, maximum likelihood, Bayesian inference, Bayesian update, kriging, copula-statistical models, and more. Explains the application of advanced probabilistic models encompassing multidisciplinary research Applies probabilistic modeling to emerging areas in engineering Provides an interdisciplinary approach to probabilistic models and their applications, thus solving a wide range of practical problems

S Chand Higher Engineering Mathematics

This book provides informative, useful, and stimulating reading on the topic of organic sonochemistry – the core of ultrasound-based applications. Given the increasing interest in new and improved technologies, allied to their green and sustainable character (not always a valid premise), there is a great attraction for organic chemists to apply these protocols in synthesis and process chemistry. Unfortunately, as with other enabling technologies, many researchers new to the field have received a simple and dishonest message: just switch on! Therefore a significant portion of sonochemical syntheses lack reproducibility (surprisingly cavitation control and/or ultrasonic parameters are omitted) and the actual role of sonication remains uncertain. While this book does not provide a detailed description of fundamentals, the introductory remarks highlight the importance of cavitational effects and their experimental control. It presents a number of concepts of sonochemical reactivity and empirical rules with pertinent examples, often from classical and recent literature. It then focuses on scenarios of current interest where organic chemistry, and synthesis in particular, may benefit from sonication in terms of both chemical and mechanical activation. The “sustainable corner” of this field is largely exemplified through concepts like atom economy, renewable sources, wasteless syntheses, and benign solvents as reaction media. This book is useful for both researchers and graduate students, especially those familiar with the field of sonochemistry and applications of ultrasound in general. However, it is also of interest to a broader audience as it discusses the fundamentals, techniques, and experimental skills necessary for scientists wishing to initiate the use of ultrasound in their domain of expertise.

Transferability of Skills Across Economic Sectors

Communications in Behavioral Biology

Problems and Solutions in Engineering Mechanics

With this revised edition we aim to present a text on Power Electronics for the UG level which will provide a comprehensive coverage of converters, choppers, inverters and motor drives. All this, with a rich pedagogy to support the conceptual understanding and integral use of PSPICE.

BASIC ELECTRICAL ENGINEERING

The book provides insight into the working of clays and clay minerals in speeding up a variety of organic reactions. Clay minerals are known to have a large propensity for taking up organic molecules and can catalyse numerous organic reactions due to fine particle size, extensive surface area, layer structure, and peculiar charge characteristics. They can be

used as heterogeneous catalysts and catalyst carriers of organic reactions because they are non-corrosive, easy to separate from the reaction mixture, and reusable. Clays and clay minerals have an advantage over other solid acids as they are abundant, inexpensive, and non-polluting.

Chalcogenadiazoles

This book comprises select proceedings of the International Conference on Smart Technologies for Energy, Environment, and Sustainable Development (ICSTEESD 2018). The chapters are broadly divided into three focus areas, viz. energy, environment, and sustainable development, and discusses the relevance and applications of smart technologies in these fields. A wide variety of topics such as renewable energy, energy conservation and management, energy policy and planning, environmental management, marine environment, green building, smart cities, smart transportation are covered in this book. Researchers and professionals from varied engineering backgrounds contribute chapters with an aim to provide economically viable solutions to sustainable development challenges. The book will prove useful for academics, professionals, and policy makers interested in sustainable development.

Piezotronics and Piezo-Phototronics

Introduction to Power Electronics

Sonochemistry

Sprouted Grains: Nutritional Value, Production and Applications is a complete and comprehensive overview of sprouted grains, with coverage from grain to product. Sections includes discussions on the process of grain germination from both a genetic and physiological perspective, the nutrients and bioactive compounds present in spouted grains, and the equipment and technical innovation of use to manufacturers of sprouted grains and sprouted grain products. This book is essential reading for cereal science academics and postgraduate students interested in the subject of cereal processing, but is also ideal for industrial product developers in cereal companies. This edited volume brings together the world's leading researchers on sprouted grains. Presents the nutrient and bioactive components of these healthy grains Provides extensive coverage of products developed from sprouted grains Includes contributions from an International team of both academic and industrial authors Covers the equipment and technology used in grain processing

Smart Technologies for Energy, Environment and Sustainable Development

Collection of selected, peer reviewed papers from the 2013 International Conference on Mechanical Engineering, Industrial Materials and Industrial Electronics (MII 2013), September 1-2, 2013, Hong Kong. The 64 papers are grouped as follows: Chapter 1: Applied Materials; Chapter 2: Mechanical Engineering; Chapter 3: Mechatronics, Robotics, Control and Automation; Chapter 4: Engineering Management.

Handbook on Applications of Ultrasound

Generating of agricultural wastes and by-products during the production, processing and consumption of agricultural commodities is unavoidable and over the last decades, an increased public interest has been shown in the challenge of food wastage. Apart from its significant quantities, the physicochemical characteristics of the various agricultural waste and by-products denote that there is immense potential for their reuse, recycle, and valorisation through various different processes. Green Extraction and Valorization of By-Products from Food Processing provides an overview about the valorization or reuse of agricultural wastes and by-products during the production, processing and consumption of agricultural commodities. Waste disposal and by-product management in food processing industry pose problems in the areas of environmental protection and sustainability. However, they could be a great source of valuable nutraceuticals, which can be used to deal with the prospects of feeding fast growing population in 21st century. Features: Gives detailed guidance and presents case-studies about valorization of food wastes and by-products Shows the main conventional and innovative extraction techniques for food waste and by-products valorization Provides an estimated idea regarding the recovery of high-added value compounds Discusses the recovery of high-added value compounds Perspectives originated from the enormous amounts of food related materials that are discharged worldwide and the existing technologies, which promise the recovery, recycling and sustainability of high-added value ingredients inside food chain will be discussed in this book. This book is of value to academics, research institutes, and food industry engineers particularly the research and development professionals who are looking for effective management and utilization of food processing wastes and byproducts. In addition, it is suitable for undergraduate, post-graduate students, research scholars, postdoctoral fellows and faculty members from universities and colleges who pursue academic careers in Food Technology, Food Biotechnology, Fermentation and Bioengineering, Bioprocess Technology, Food science and Technology.

Computing Algorithms with Applications in Engineering

Fiber-Reinforced Nanocomposites: Fundamentals and Applications

Ultrasonic irradiation and the associated sonochemical and sonophysical effects are complementary techniques for driving more efficient chemical reactions and yields. Sonochemistry—the chemical effects and applications of ultrasonic waves—and sustainable (green) chemistry both aim to use less hazardous chemicals and solvents, reduce energy consumption, and increase product selectivity. A comprehensive collection of knowledge, Handbook on Applications of Ultrasound covers the most relevant aspects linked to and linking green chemistry practices to environmental sustainability through the uses and applications of ultrasound-mediated and ultrasound-assisted biological, biochemical, chemical, and physical processes. Chapters are presented in the areas of: Medical applications Drug and gene delivery Nanotechnology Food technology Synthetic applications and organic chemistry Anaerobic digestion Environmental contaminants degradation Polymer chemistry Industrial syntheses and processes Reactor design Electrochemical systems Combined ultrasound–microwave technologies While the concepts of sonochemistry have been known for more than 80 years, in-depth understanding of this phenomenon continues to evolve. Through a review of the current status of chemical and physical science and engineering in developing more environmentally friendly and less toxic synthetic processes, this book highlights many existing applications and the enormous potential of ultrasound technology to upgrade present industrial, agricultural, and environmental processes.

Organic Sonochemistry

Get energized about your future with INTRODUCTION TO BASIC ELECTRICITY AND ELECTRONICS TECHNOLOGY, 1st Edition, the easy-to-read resource on electricity and electronics! Emphasizing teamwork and critical thinking, this entry-level book helps you understand technical vocabulary and technologies while imparting the skills necessary to read schematic diagrams, apply problem-solving formulas, and follow troubleshooting processes. Topics address all key fundamentals, including direct and alternating current, semiconductor devices, linear circuits, digital circuits, printed circuit board fabrication, test equipment, and more. Practical, job-based discussions delve into calculator applications, hazardous materials handling, general safety protocols, using power and hand tools, electronics software, professional certifications, and the many career options for technicians. Accompanied by a Lab Manual for hands-on practice, INTRODUCTION TO BASIC ELECTRICITY AND ELECTRONICS TECHNOLOGY, 1st Edition is available in a convenient eBook format and with a variety of interactive supplements designed to make learning easier. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Basic Electronics for Scientists and Engineers

The Indian Textile Journal

Ideal for a one-semester course, this concise textbook covers basic electronics for undergraduate students in science and engineering. Beginning with the basics of general circuit laws and resistor circuits to ease students into the subject, the textbook then covers a wide range of topics, from passive circuits through to semiconductor-based analog circuits and basic digital circuits. Using a balance of thorough analysis and insight, readers are shown how to work with electronic circuits and apply the techniques they have learnt. The textbook's structure makes it useful as a self-study introduction to the subject. All mathematics is kept to a suitable level, and there are several exercises throughout the book. Password-protected solutions for instructors, together with eight laboratory exercises that parallel the text, are available online at www.cambridge.org/Eggleston.

Engineering Mechanics

Problem Solving Is A Vital Requirement For Any Aspiring Engineer. This Book Aims To Develop This Ability In Students By Explaining The Basic Principles Of Mechanics Through A Series Of Graded Problems And Their Solutions. Each Chapter Begins With A Quick Discussion Of The Basic Concepts And Principles. It Then Provides Several Well Developed Solved Examples Which Illustrate The Various Dimensions Of The Concept Under Discussion. A Set Of Practice Problems Is Also Included To Encourage The Student To Test His Mastery Over The Subject. The Book Would Serve As An Excellent Text For Both Degree And Diploma Students Of All Engineering Disciplines. Amie Candidates Would Also Find It Most Useful.

The Engineer

Electronics Cookbook

Green Chemistry for Environmental Sustainability

The series Topics in Current Chemistry Collections presents critical reviews from the journal Topics in Current Chemistry organized in topical volumes. The scope of coverage is all areas of chemical science including the interfaces with related disciplines such as biology, medicine and materials science. The goal of each thematic volume is to give the non-specialist reader, whether in academia or industry, a comprehensive insight into an area where new research is emerging which is of interest to a larger scientific audience. Each review within the volume critically surveys one aspect of that topic and places it within the context of the volume as a whole. The most significant developments of the last 5 to 10 years are presented using selected examples to illustrate the principles discussed. The coverage is not intended to be an exhaustive summary

of the field or include large quantities of data, but should rather be conceptual, concentrating on the methodological thinking that will allow the non-specialist reader to understand the information presented. Contributions also offer an outlook on potential future developments in the field.

Sulfur Chemistry

1 Elementary Concepts 2 Magnetic Circuits 3 Electromagnetic Induction 4 Single Phase Transformers 5 Electrostatics 6 A C fundamentals 7 Single Phase A C circuits 8 Three Phase A C Circuits 9 D C Circuits Appendix

Green Chemistry and Sustainable Technology

Fourth International Conference on Information and Communication Technology for Competitive Strategies targets state-of-the-art as well as emerging topics pertaining to information and communication technologies (ICTs) and effective strategies for its implementation for engineering and intelligent applications.

Green Extraction and Valorization of By-Products from Food Processing

The series Topics in Current Chemistry Collections presents critical reviews from the journal Topics in Current Chemistry organized in topical volumes. The scope of coverage is all areas of chemical science including the interfaces with related disciplines such as biology, medicine and materials science. The goal of each thematic volume is to give the non-specialist reader, whether in academia or industry, a comprehensive insight into an area where new research is emerging which is of interest to a larger scientific audience. Each review within the volume critically surveys one aspect of that topic and places it within the context of the volume as a whole. The most significant developments of the last 5 to 10 years are presented using selected examples to illustrate the principles discussed. The coverage is not intended to be an exhaustive summary of the field or include large quantities of data, but should rather be conceptual, concentrating on the methodological thinking that will allow the non-specialist reader to understand the information presented. Contributions also offer an outlook on potential future developments in the field.

Handbook of Probabilistic Models

When the Nobel Prize Committee recognized the importance of green chemistry with its 2005 Nobel Prize for Chemistry, this relatively new science came into its own. Although no concerted agreement has been reached yet about the exact content and limits of this interdisciplinary discipline, there seems to be increasing interest in environmental topic

Clay Mineral Catalysis of Organic Reactions

Mechanical Engineering, Industrial Materials and Industrial Electronics

The Management of Natural Coastal Carbon Sinks

Code of Federal Regulations

Fiber-reinforced Nanocomposites: Fundamentals and Applications explores the fundamental concepts and emerging applications of fiber-reinforced nanocomposites in the automobile, aerospace, transportation, construction, sporting goods, optics, electronics, acoustics and environmental sector. In addition, the book provides a detailed overview of the properties of fiber-reinforced nanocomposites, including discussion on embedding these high-strength fibers in matrices. Due to the mismatch in structure, density, strain and thermal expansion coefficients between matrix and fibers, their thermo-mechanical properties strongly depend not only on the preparative methods, but also on the interaction between reinforcing phase and matrix phase. This book offers a concise overview of these advances and how they are leading to the creation of stronger, more durable classes of nanocomposite materials. Explores the interaction between fiber, nanoreinforcers and matrices at the nanoscale Shows how the properties of fiber-enforced nanocomposites are ideal for use for a variety of consumer products Outlines the major challenges to creating fiber-reinforced nanocomposites effectively

Power Electronics

If you're among the many hobbyists and designers who came to electronics through Arduino and Raspberry Pi, this cookbook will help you learn and apply the basics of electrical engineering without the need for an EE degree. Through a series of practical recipes, you'll learn how to solve specific problems while diving into as much or as little theory as you're comfortable with. Author Simon Monk (Raspberry Pi Cookbook) breaks down this complex subject into several topics, from using the right transistor to building and testing projects and prototypes. With this book, you can quickly search electronics topics and go straight to the recipe you need. It also serves as an ideal reference for experienced electronics makers. This cookbook includes: Theoretical concepts such as Ohm's law and the relationship between power, voltage, and current The fundamental use of resistors, capacitors and inductors, diodes, transistors and integrated circuits, and switches and relays Recipes on power, sensors and motors, integrated circuits, and radio frequency for designing electronic circuits and devices

Advice on using Arduino and Raspberry Pi in electronics projects How to build and use tools, including multimeters, oscilloscopes, simulations software, and unsoldered prototypes

ICT for Competitive Strategies

Polarization Gradient in Elastic Dielectrics

The book systematically develops the concepts and principles essential for understanding the subject. The difficulties usually faced by new engineering students have been taken care of while preparing the book. A large number of numerical problems have been selected from university and competitive examination papers and question banks, properly graded, solved and arranged in various chapters. The present book has been divided in five parts: * Two-Dimensional Force System * Beams and Trusses * Moment of Inertia * Dynamics of Rigid Body * Stress and Strain Analysis The highlights of the book are. * Comparison tables and illustrative drawings * Exhaustive question bank on theory problems at the end of every chapter * A large number of solved numerical examples * SI units used throughout

Iron Age

What is extremism, who has unleashed it, and what does its emergence portend for the world?"--P. [4] of cover.

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