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Energy Storage Manuel Bailera 2020-05-09 This book presents a detailed analysis of Power-to-Gas, a promising energy storage technology. It discusses the main mechanisms involved, and presents two Power-to-Gas and carbon capture hybridizations. The book begins by providing an introduction to energy storage technologies. It then reviews a number of Power-to-Gas projects now in progress, highlighting the current barriers to commercializing the technology. Moreover, the book presents two novel Power-to-Gas hybridizations, which improve the technology's applicability in terms of efficiency, utilization of resources and profitability. Given its scope, the book will be of interest to graduate students, researchers and practitioners in the fields of engineering and energy.

Teaching and Learning Difficulties 2nd ed. Peter Westwood 2016-01-01 The 2nd edition of Peter Westwood's best-selling Teaching and Learning Difficulties addresses recent initiatives around effective teaching, the greater focus on teaching standards, and the increasing importance of teachers' level of expertise and depth of subject knowledge. It presents evidence-based methods for teaching, aligned with the Australian Curriculum, and references the most recent policies, practices and research literature on effective teaching strategies and approaches. Teaching and Learning Difficulties provides guidance on teaching students that encounter difficulties in a number of learning areas, including science, social studies, history, geography and environmental education. Using a cross-curricular perspective, it explores multiple teacher-directed and student-centred instructional approaches for classroom use, highlighting the strengths, weaknesses and specific aspects of each one. It also examines the impact of classroom interactions that influence learning, suggests strategies for reducing learning failure and enhancing students' progress, and presents a 'big picture' perspective on teaching and learning difficulties. In the Learning Difficulties series, Peter Westwood evaluates, summarises and presents research, strategies and best-practice methodologies for working with students that have learning difficulties in particular subject areas. Rigorous yet accessible, the titles in this series provide teachers with the knowledge, data and direction they need to develop their skills and meet student needs.

Handbook of Research on Driving STEM Learning With Educational Technologies Ramírez-Montoya, María-Soledad 2017-02-01 Educational strategies have evolved over the years, due to research breakthroughs and the application of technology. By using the latest learning

innovations, curriculum and instructional design can be enhanced and strengthened. The Handbook of Research on Driving STEM Learning With Educational Technologies is an authoritative reference source for the latest scholarly research on the implementation and use of different techniques of instruction in modern classroom settings. Featuring exhaustive coverage on a variety of topics including data literacy, student motivation, and computer-aided assessment, this resource is an essential reference publication ideally designed for academicians, researchers, and professionals seeking current research on emerging uses of technology for STEM education.

The ESD Handbook Steven H. Voldman 2021-04-12 A practical and comprehensive reference that explores Electrostatic Discharge (ESD) in semiconductor components and electronic systems The ESD Handbook offers a comprehensive reference that explores topics relevant to ESD design in semiconductor components and explores ESD in various systems. Electrostatic discharge is a common problem in the semiconductor environment and this reference fills a gap in the literature by discussing ESD protection. Written by a noted expert on the topic, the text offers a topic-by-topic reference that includes illustrative figures, discussions, and drawings. The handbook covers a wide-range of topics including ESD in manufacturing (garments, wrist straps, and shoes); ESD Testing; ESD device physics; ESD semiconductor process effects; ESD failure mechanisms; ESD circuits in different technologies (CMOS, Bipolar, etc.); ESD circuit types (Pin, Power, Pin-to-Pin, etc.); and much more. In addition, the text includes a glossary, index, tables, illustrations, and a variety of case studies. Contains a well-organized reference that provides a quick review on a range of ESD topics Fills the gap in the current literature by providing information from purely scientific and physical aspects to practical applications Offers information in clear and accessible terms Written by the accomplished author of the popular ESD book series Written for technicians, operators, engineers, circuit designers, and failure analysis engineers, The ESD Handbook contains an accessible reference to ESD design and ESD systems.

Characterisation of Soft Magnetic Materials Under Rotational Magnetisation Stanislaw Zurek 2017-11-22 The book presents practical aspects related to the measurement of rotational power loss in soft magnetic materials. The book furthermore focuses on practical aspects of performing such measurements, the associated difficulties as well as solutions to the most common problems. Numerous practical aspects, hands-on experience, and most commonly encountered pitfalls are heavily discussed in the book. The text begins with introduction to magnetism, then follows with definitions of measurement methods of rotational power loss from physical viewpoint. Two chapters describe and detail the various sensors which can be employed for such measurements as well as all the aspects of designing, making, and using a magnetising apparatus. A synthesis of the likely optimal design of a magnetising apparatus is also given, preceded with the full reasoning based on all the research carried out to date. Characterisation of Soft Magnetic Materials Under Rotational Magnetisation serves as an excellent starting point for any student having to perform magnetic measurements under rotational magnetisation, but also under 1D, 2D or 3D excitation. Because the methods, sensors, and apparatus are extensively discussed it will also be a great reference for more senior researchers and experts in the field. There is a whole chapter devoted to analysis of measurement uncertainty. This subject is rarely published for magnetic measurements, which makes it more difficult for all researchers to understand the concepts and methodology used in uncertainty estimation. This chapter not only introduces the whole subject, but also provides multiple step-by-step examples which can be easily followed, from very simple cases to much more complex ones. All equations are presented with full SI units which greatly helps in practical application of the presented methodology. Each chapter is written in such a way that it can be studied on its own, so that the reader can focus only on the specific aspects, as required. Electrostatic Discharge Protection Juin J. Liou 2017-12-19 Electrostatic discharge (ESD) is one of the most prevalent threats to electronic components. In an ESD event, a finite amount of charge is transferred from one object (i.e., human body) to another (i.e., microchip). This

process can result in a very high current passing through the microchip within a very short period of time. Thus, more than 35 percent of single-event chip damages can be attributed to ESD events, and designing ESD structures to protect integrated circuits against the ESD stresses is a high priority in the semiconductor industry. Electrostatic Discharge Protection: Advances and Applications delivers timely coverage of component- and system-level ESD protection for semiconductor devices and integrated circuits. Bringing together contributions from internationally respected researchers and engineers with expertise in ESD design, optimization, modeling, simulation, and characterization, this book bridges the gap between theory and practice to offer valuable insight into the state of the art of ESD protection. Amply illustrated with tables, figures, and case studies, the text: Instills a deeper understanding of ESD events and ESD protection design principles Examines vital processes including Si CMOS, Si BCD, Si SOI, and GaN technologies Addresses important aspects pertinent to the modeling and simulation of ESD protection solutions Electrostatic Discharge Protection: Advances and Applications provides a single source for cutting-edge information vital to the research and development of effective, robust ESD protection solutions for semiconductor devices and integrated circuits.

Progress in Renewable Energies Offshore C. Guedes Soares 2016-11-18 Progress in Renewable Energies Offshore includes the papers presented in the 2nd International Conference on Renewable Energies Offshore (RENEW2016, Lisbon, Portugal, 24-26 October 2016). The scope of the book is broad, covering all aspects of renewable energies offshore activities such as resource assessment; wind energy; wave energy; tidal energy; ocean energy devices; multiuse platforms; PTO design; grid connection; economic assessment; installation and maintenance planning. The contents of the present book are organized in these main subject areas corresponding to the sessions in the Conference. The conference reflects the importance of the renewable energies offshore worldwide and is an opportunity to contribute to the exchange of information on the developments and experience obtained in concept development, design and operation of these devices. Progress in Renewable Energies Offshore has as main target academics and professionals working in the related areas of renewable energies.

Handbook of Radiotherapy Physics Philip Mayles 2021-12-31 From the essential background physics and radiobiology to the latest imaging and treatment modalities, the updated second edition of Handbook of Radiotherapy Physics: Theory & Practice covers all aspects of the subject. In Volume 1, Part A includes the Interaction of Radiation with Matter (charged particles and photons) and the Fundamentals of Dosimetry with an extensive section on small-field physics. Part B covers Radiobiology with increased emphasis on hypofractionation. Part C describes Equipment for Imaging and Therapy including MR-guided linear accelerators. Part D on Dose Measurement includes chapters on ionisation chambers, solid-state detectors, film and gels, as well as a detailed description and explanation of Codes of Practice for Reference Dose Determination including detector correction factors in small fields. Part E describes the properties of Clinical (external) Beams. The various methods (or 'algorithms') for Computing Doses in Patients irradiated by photon, electron and proton beams are described in Part F with increased emphasis on Monte-Carlo-based and grid-based deterministic algorithms. In Volume 2, Part G covers all aspects of Treatment Planning including CT-, MR- and Radionuclide-based patient imaging, Intensity-Modulated Photon Beams, Electron and Proton Beams, Stereotactic and Total Body Irradiation and the use of the dosimetric and radiobiological metrics TCP and NTCP for plan evaluation and optimisation. Quality Assurance fundamentals with application to equipment and processes are covered in Part H. Radionuclides, equipment and methods for Brachytherapy and Targeted Molecular Therapy are covered in Parts I and J, respectively. Finally, Part K is devoted to Radiation Protection of the public, staff and patients. Extensive tables of Physical Constants, Photon, Electron and Proton Interaction data, and typical Photon Beam and Radionuclide data are given in Part L. Edited by recognised authorities in the field, with individual chapters written by renowned specialists, this second edition of Handbook of Radiotherapy Physics provides the essential up-to-date theoretical and practical knowledge to deliver safe and effective

radiotherapy. It will be of interest to clinical and research medical physicists, radiation oncologists, radiation technologists, PhD and Master's students.

Offshore Oil & Gas Rigs JOB INTERVIEW Petrogav International Oil & Gas Training Center 2020-07-01 The job interview is probably the most important step you will take in your job search journey. Because it's always important to be prepared to respond effectively to the questions that employers typically ask at a job interview Petrogav International has prepared this eBooks that will help you to get a job in oil and gas industry. Since these questions are so common, hiring managers will expect you to be able to answer them smoothly and without hesitation. This eBook contains 272 questions and answers for job interview and as a BONUS web addresses to 289 video movies for a better understanding of the technological process. This course covers aspects like HSE, Process, Mechanical, Electrical and Instrumentation & Control that will enable you to apply for any position in the Oil and Gas Industry.

Bridging Research and Practice in Science Education Eilish McLoughlin 2019-08-27 This edited volume presents innovative current research in the field of Science Education. The chapter's deal with a wide variety of topics and research approaches, conducted in a range of contexts and settings. Together they make a strong contribution to knowledge on science teaching and learning. The book consists of selected presentations from the 12th European Science Education Research Association (ESERA) Conference, held in Dublin, Ireland from 21st to 25th August, 2017. The ESERA community is made up of professionals with diverse disciplinary backgrounds from natural sciences to social sciences. This diversity enables a rich understanding of cognitive and affective aspects of science teaching and learning. The studies in this book will stimulate discussion and interest in finding new ways of implementing and researching science education for the future. The twenty-two chapters in this book are presented in four parts highlighting innovative approaches to school science, emerging identities in science education, approaches to developing learning and competence progressions, and ways of enhancing science teacher education. This collection of studies showcases current research orientations in science education and is of interest to science teachers, teacher educators and science education researchers around the world with a commitment to bridging research and practice in science teaching and learning.

Comprehensive Energy Systems 2018-02-07 Comprehensive Energy Systems provides a unified source of information covering the entire spectrum of energy, one of the most significant issues humanity has to face. This comprehensive book describes traditional and novel energy systems, from single generation to multi-generation, also covering theory and applications. In addition, it also presents high-level coverage on energy policies, strategies, environmental impacts and sustainable development. No other published work covers such breadth of topics in similar depth. High-level sections include Energy Fundamentals, Energy Materials, Energy Production, Energy Conversion, and Energy Management. Offers the most comprehensive resource available on the topic of energy systems Presents an authoritative resource authored and edited by leading experts in the field Consolidates information currently scattered in publications from different research fields (engineering as well as physics, chemistry, environmental sciences and economics), thus ensuring a common standard and language

Extreme Tribology Ahmed Abdelbary 2020-01-06 Tribology is an unfamiliar term for many, but is experienced by all. It is the science of friction, wear and lubrication of contacting surfaces in relative motion. The aim of this book is to introduce the fundamentals of tribology as well as its challenges in extreme operating conditions. The book comprises a historical background and an introduction to familiarize both undergraduate and postgraduate readers with such an important topic. It addresses a comprehensive coverage of classical tribology of solid contacts, friction mechanics, wear mechanisms and lubrication technologies. The tribology of polymer composites, MEMS and NEMS are explored. In addition, tribology of automotive components is presented, as are tribological applications in many practical situations. Various test methods used in

evaluating wear are reviewed. Diverse techniques applied in predicting wear behavior by mathematical models, FE modeling and ANN approach are discussed. The book reviews key features of extraordinary conditions associated with, but not limited to, harsh environments, severe sliding and poor lubrication challenges. A basic understanding of failure modes in tribological systems is covered. The state-of-the-art research on tribology under these extreme conditions is extensively discussed, which will be of interest to researchers. The book highlights solutions for extreme tribology problems and provides an overview of various factors affecting tribosystems in harsh conditions.

Let There Be Light! Robert S. Dutch 2017-06-16 Have you ever wondered what it is like to work on a nuclear power plant? Robert Dutch worked in the UK's nuclear industry for many years as a scientist and then as a tutor at a nuclear training center. He also holds degrees in theology. Drawing upon his qualifications and experience Robert addresses the controversial issue of nuclear power from a Christian perspective. In contrast to a negative nuclear narrative often portrayed, he presents a positive nuclear narrative alongside other ways of generating electricity. Be prepared to be challenged to think seriously about nuclear's merits in providing clean, low-carbon electricity.

Future Spacecraft Propulsion Systems and Integration Paul A. Czysz 2017-08-30 The updated and expanded third edition of this book focuses on the multi-disciplinary coupling between flight-vehicle hardware alternatives and enabling propulsion systems. It discusses how to match near-term and far-term aerospace vehicles to missions and provides a comprehensive overview of the subject, directly contributing to the next-generation space infrastructure, from space tourism to space exploration. This holistic treatment defines a mission portfolio addressing near-term to long-term space transportation needs covering sub-orbital, orbital and escape flight profiles. In this context, a vehicle configuration classification is introduced covering alternatives starting from the dawn of space access. A best-practice parametric sizing approach is introduced to correctly design the flight vehicle for the mission. This technique balances required mission with the available vehicle solution space and is an essential capability sought after by technology forecasters and strategic planners alike.

Emerging Research, Practice, and Policy on Computational Thinking Peter J. Rich 2017-04-24 This book reports on research and practice on computational thinking and the effect it is having on education worldwide, both inside and outside of formal schooling. With coding becoming a required skill in an increasing number of national curricula (e.g., the United Kingdom, Israel, Estonia, Finland), the ability to think computationally is quickly becoming a primary 21st century "basic" domain of knowledge. The authors of this book investigate how this skill can be taught and its resultant effects on learning throughout a student's education, from elementary school to adult learning.

Electrical Connectors San Kyeong 2020-12-12 Discover the foundations and nuances of electrical connectors in this comprehensive and insightful resource *Electrical Connectors: Design, Manufacture, Test, and Selection* delivers a comprehensive discussion of electrical connectors, from the components and materials that comprise them to their classifications and underwater, power, and high-speed signal applications. Accomplished engineer and author Michael G. Pecht offers readers a thorough explanation of the key performance and reliability concerns and trade-offs involved in electrical connector selection. Readers, both at introductory and advanced levels, will discover the latest industry standards for performance, reliability, and safety assurance. The book discusses everything a student or practicing engineer might require to design, manufacture, or select a connector for any targeted application. The science of contact physics, contact finishes, housing materials, and the full connector assembly process are all discussed at length, as are test methods, performance, and guidelines for various applications. *Electrical Connectors* covers a wide variety of other relevant and current topics, like: A comprehensive description of all electrical connectors, including their materials, components, applications, and classifications A discussion of the design and manufacture of all parts of a connector Application-specific criteria for contact resistance, signal quality, and temperature rise An examination of key suppliers, materials

used, and the different types of data provided A presentation of guidelines for end-users involved in connector selection and design Perfect for connector manufacturers who select, design, and assemble connectors for their products or the end users who concern themselves with operational reliability of the system in which they're installed, Electrical Connectors also belongs on the bookshelves of students learning the basics of electrical contacts and those who seek a general reference with best-practice advice on how to choose and test connectors for targeted applications.

Environmental Politics for a Changing World Ronnie D. Lipschutz 2018-07-12 Environmental problems are, first and foremost, political and, therefore, about power. Using a framework of political economy and political ecology, the authors deconstruct current environmental problems to identify root causes and the possibilities to address problems through mobilization of collective action and social power.

An Introduction to Artificial Intelligence in Education Shengquan Yu 2021-11-29 This book systematically reviews a broad range of cases in education that utilize cutting-edge AI technologies. Furthermore, it introduces readers to the latest findings on the scope of AI in education, so as to inspire researchers from non-technological fields (e.g. education, psychology and neuroscience) to solve education problems using the latest AI techniques. It also showcases a number of established AI systems and products that have been employed for education. Lastly, the book discusses how AI can offer an enabling technology for critical aspects of education, typically including the learner, content, strategy, tools and environment, and what breakthroughs and advances the future holds. The book provides an essential resource for researchers, students and industrial practitioners interested and engaged in the fields of AI and education. It also offers a convenient handbook for non-professional readers who need a primer on AI in education, and who want to gain a deeper understanding of emerging trends in this domain.

Assessment, Testing, and Measurement Strategies in Global Higher Education Railean, Elena Aurel 2020-01-03 Teachers assist students in order to gain data and to determine whether the instructional objectives have been met. Usually, the assessment process takes place as part of ongoing learning and teaching, periodically and at key transitions. The term "assessment" refers to the wide variety of methods, procedures, and tools used to determine what students know, learn, and how they apply knowledge in concrete situations. Assessment, Testing, and Measurement Strategies in Global Higher Education is a comprehensive synthesis of correlations between assessment, testing, and measurement in the context of global education. It analyzes the impact of educational technology on learning analytics, challenges of rapidly changing learning environments, and computer-based assessment. Featuring an assortment of topics such as educational technologies, risk management, and metacognition, this book is optimal for academicians, higher education faculty, deans, performance evaluators, practitioners, curriculum designers, researchers, administrators, and students.

17 Solved Papers & 20 Practice Sets for SBI Clerk Prelim & Main Exams 2020 with 5 Online Tests (8th edition) Disha Experts 2020-01-04 ESD Testing Steven H. Voldman 2016-12-19 With the evolution of semiconductor technology and global diversification of the semiconductor business, testing of semiconductor devices to systems for electrostatic discharge (ESD) and electrical overstress (EOS) has increased in importance. ESD Testing: From Components to Systems updates the reader in the new tests, test models, and techniques in the characterization of semiconductor components for ESD, EOS, and latchup. Key features: Provides understanding and knowledge of ESD models and specifications including human body model (HBM), machine model (MM), charged device model (CDM), charged board model (CBM), cable discharge events (CDE), human metal model (HMM), IEC 61000-4-2 and IEC 61000-4-5. Discusses new testing methodologies such as transmission line pulse (TLP), to very fast transmission line pulse (VF-TLP), and future methods of long pulse TLP, to ultra-fast TLP (UF-TLP). Describes both conventional testing and new testing techniques for both chip and system level evaluation. Addresses EOS testing,

electromagnetic compatibility (EMC) scanning, to current reconstruction methods. Discusses latchup characterization and testing methodologies for evaluation of semiconductor technology to product testing. ESD Testing: From Components to Systems is part of the authors' series of books on electrostatic discharge (ESD) protection; this book will be an invaluable reference for the professional semiconductor chip and system-level ESD and EOS test engineer. Semiconductor device and process development, circuit designers, quality, reliability and failure analysis engineers will also find it an essential reference. In addition, its academic treatment will appeal to both senior and graduate students with interests in semiconductor process, device physics, semiconductor testing and experimental work.

World Congress on Medical Physics and Biomedical Engineering, June 7-12, 2015, Toronto, Canada David A. Jaffray 2015-07-13 This book presents the proceedings of the IUPESM World Biomedical Engineering and Medical Physics, a tri-annual high-level policy meeting dedicated exclusively to furthering the role of biomedical engineering and medical physics in medicine. The book offers papers about emerging issues related to the development and sustainability of the role and impact of medical physicists and biomedical engineers in medicine and healthcare. It provides a unique and important forum to secure a coordinated, multileveled global response to the need, demand and importance of creating and supporting strong academic and clinical teams of biomedical engineers and medical physicists for the benefit of human health.

The Routledge International Handbook of Research on Dialogic Education Neil Mercer 2019-09-26 The Routledge International Handbook of Research on Dialogic Education provides a comprehensive overview of the main ideas and themes that make up the exciting and diverse field of Dialogic Education. With contributions from the world's leading researchers, it describes underpinning theoretical approaches, debates, methodologies, evidence of impact, how Dialogic Education relates to different areas of the curriculum and ways in which work in this field responds to the profound educational challenges of our time. The handbook is divided into seven sections, covering: The theory of Dialogic Education Classroom dialogue Dialogue, teachers and professional development Dialogic Education for literacy and language Dialogic Education and digital technology Dialogic Education in science and mathematics Dialogic Education for transformative purposes Expertly written and researched, the handbook marks the coming of age of Dialogic Education as an important and distinctive area of applied educational research. Featuring chapters from authors working in different educational contexts around the world, the handbook is of international relevance and provides an invaluable resource for researchers and students concerned with the study of educational dialogue and allied areas of socio-cultural research. It will interest students on PhD programmes in Education Faculties, Master's level courses in Education and postgraduate teacher-training courses. The accounts of results achieved by high-impact research projects around the world will also be very valuable for policy makers and practitioners.

World Congress on Medical Physics and Biomedical Engineering 2018 Lenka Lhotska 2018-05-29 This book (vol. 1) presents the proceedings of the IUPESM World Congress on Biomedical Engineering and Medical Physics, a triennially organized joint meeting of medical physicists, biomedical engineers and adjoining health care professionals. Besides the purely scientific and technological topics, the 2018 Congress will also focus on other aspects of professional involvement in health care, such as education and training, accreditation and certification, health technology assessment and patient safety. The IUPESM meeting is an important forum for medical physicists and biomedical engineers in medicine and healthcare learn and share knowledge, and discuss the latest research outcomes and technological advancements as well as new ideas in both medical physics and biomedical engineering field.

Parallel Computing is Everywhere S. Bassini 2018-03-07 The most powerful computers work by harnessing the combined computational power of millions of processors, and exploiting the full potential of such large-scale systems is something which becomes more difficult with each

succeeding generation of parallel computers. Alternative architectures and computer paradigms are increasingly being investigated in an attempt to address these difficulties. Added to this, the pervasive presence of heterogeneous and parallel devices in consumer products such as mobile phones, tablets, personal computers and servers also demands efficient programming environments and applications aimed at small-scale parallel systems as opposed to large-scale supercomputers. This book presents a selection of papers presented at the conference: Parallel Computing (ParCo2017), held in Bologna, Italy, on 12 to 15 September 2017. The conference included contributions about alternative approaches to achieving High Performance Computing (HPC) to potentially surpass exa- and zetascale performances, as well as papers on the application of quantum computers and FPGA processors. These developments are aimed at making available systems better capable of solving intensive computational scientific/engineering problems such as climate models, security applications and classic NP-problems, some of which cannot currently be managed by even the most powerful supercomputers available. New areas of application, such as robotics, AI and learning systems, data science, the Internet of Things (IoT), and in-car systems and autonomous vehicles were also covered. As always, ParCo2017 attracted a large number of notable contributions covering present and future developments in parallel computing, and the book will be of interest to all those working in the field.

The Vacuum Interrupter Paul G. Slade 2020-11-16 Title: The Vacuum Interrupter: Theory, Design, and Application Shelving guide: Electrical Engineering Dr. Paul Slade draws from his nearly six decades of active experience to develop this second edition of The Vacuum Interrupter: Theory, Design, and Application. This book begins by discussing the design requirements for high voltage vacuum interrupters and then the contact requirements to interrupt the vacuum arc. It then continues by describing the various applications in which the vacuum interrupter is generally utilized. Part 1 of this book begins with a detailed review of the vacuum breakdown process. It continues by covering the steps necessary for the design and the manufacture of a successful vacuum interrupter. The vacuum arc is then discussed, including how it is affected as a function of current. An overview of the development and use of practical contact materials, along with their advantages and disadvantages, follows. Contact designs that are introduced to control the high current vacuum arc are also analyzed. Part 2, on application, begins with a discussion of the arc interruption process for low current and high current vacuum arcs. It examines the voltage escalation phenomenon that can occur when interrupting inductive circuits. The occurrence of contact welding for closed contacts subjected to the passage of high currents, and for contacts when closing on high currents, is explored. The general requirements for the successful manufacture and testing of vacuum circuit breakers is then presented. The general application of vacuum interrupters to switch load currents, especially when applied to capacitor circuits, is also given. The interruption of high short circuit currents is presented along with the expected performance of the two major contact designs. Owing to the ever-increasing need for environmentally friendly circuit protection devices, the development and application of the vacuum interrupter will only increase in the future. At present the vacuum circuit breaker is the technology of choice for distribution circuits (5kV to 40.5kV). It is increasingly being applied to transmission circuits (72.5kV to 242kV). In the future, its application for protecting high voltage DC networks is assured. Audience This is a practical source book for engineers and scientists interested in studying the development and application of the vacuum interrupter Research scientists in industry and universities Graduate students beginning their study of vacuum interrupter phenomena Design engineers applying vacuum interrupters in vacuum switches, vacuum contactors, vacuum circuit breakers, and vacuum contactors It provides a unique and comprehensive review of all aspects of vacuum interrupter technology for those new to the subject and for those who wish to obtain a deeper understanding of its science and application Scientists and engineers, who are beginning their research into vacuum breakdown and aspects of the vacuum arc, will find the extensive bibliography and phenomenological

descriptions to be a useful introduction

Innovation and Interdisciplinary Solutions for Underserved Areas Cheikh M. F. Kebe 2018-01-24 This book constitutes the refereed post-conference proceedings of the First International Conference on Innovation and Interdisciplinary Solutions for Underserved Areas, InterSol 2017, and the 6th Colloque National sur la Recherche en Informatique et ses Applications (CNRIA), held in Dakar, Senegal, in April 2017. The 15 papers presented at InterSol were selected from 76 submissions and are grouped thematically in science, energy and environment, education, innovation, and healthcare. The proceedings also contain 13 papers from the co-located 6th CNRIA (Colloque National sur la Recherche en Informatique et ses Applications) focusing on network architecture and security, software engineering, data management, and signal processing.

Advanced Characterization and Testing of Textiles Patricia I. Dolez 2017-09-19 Advanced Characterization and Testing of Textiles explores developments in physical and chemical testing and specific high-performance tests relating to textiles. The book introduces the principles of advanced characterization and testing, including the importance of performance-based specifications in the textiles industry. Chapters are organized by textile properties, providing in-depth coverage of each characteristic. Tests for specific applications are addressed, with the main focus on high-performance and technical textiles. Focuses on advanced testing methods for technical and high-performance textiles, covering state-of-the-art technology in its field Details specific textile properties and associated testing for each characteristic

Process Systems and Materials for CO₂ Capture Athanasios I. Papadopoulos 2017-03-28 This comprehensive volume brings together an extensive collection of systematic computer-aided tools and methods developed in recent years for CO₂ capture applications, and presents a structured and organized account of works from internationally acknowledged scientists and engineers, through: Modeling of materials and processes based on chemical and physical principles Design of materials and processes based on systematic optimization methods Utilization of advanced control and integration methods in process and plant-wide operations The tools and methods described are illustrated through case studies on materials such as solvents, adsorbents, and membranes, and on processes such as absorption / desorption, pressure and vacuum swing adsorption, membranes, oxycombustion, solid looping, etc. Process Systems and Materials for CO₂ Capture: Modelling, Design, Control and Integration should become the essential introductory resource for researchers and industrial practitioners in the field of CO₂ capture technology who wish to explore developments in computer-aided tools and methods. In addition, it aims to introduce CO₂ capture technologies to process systems engineers working in the development of general computational tools and methods by highlighting opportunities for new developments to address the needs and challenges in CO₂ capture technologies.

Sentimental Analysis and Deep Learning Subarna Shakya

Handbook on Electricity Markets Glachant, Jean-Michel 2021-11-12 With twenty-two chapters written by leading international experts, this volume represents the most detailed and comprehensive Handbook on electricity markets ever published.

Psychology Douglas A. Bernstein 2017-09-18 Make introductory psychology modern and accessible! Strike a balance between classic and contemporary topics and theory. The new edition of this text engages students with local ideas and examples, within the context of psychology as an international discipline. Rich cultural and indigenous coverage is integrated throughout the text, as well as new chapters, 'Indigenous psychology', and 'Culture and psychology'. There is also the continued, and unique focus throughout the text on graduate attributes for accreditation, careers in psychology and the professional discipline of psychology. Linkages features in the text knit together student understanding of psychology's sub-disciplines, and the research sections show the how and why of research. World class learning technology

available with Bernstein includes CourseMate Express, and a new MindTap.

Target New Pattern SBI Clerk Junior Associate Preliminary & Main Exam - 13 Solved Papers + 20 Practice Sets with 5 Online Tests (6th edition) Disha Experts This title contains an Access Code along with instructions to access the Online Material. In case you face any difficulty, write to us at ebooks.support@aiets.co.in. Target New Pattern SBI Clerk Junior Associate Exam (6th Edition) provides 13 Past Papers + 5 Prelim Practice Sets & 10 Main Practice Sets in the Book + 5 Main Exam Online Tests. The book provides the right exposure to the new pattern of the online SBI clerk exam. The book contains the detailed solutions of the 2009, 2011, June & October 2012, Aug 2014 & Jan 2015 & 2016 SBI Clerk Prelim & Main papers. Thus in all 13 past papers have been provided in the book. This is followed by 15 Practice Sets. The solutions to these sets are provided at the end of the book. The 5 Online Tests can be accessed Online - details provided in the book.

15 Solved Papers & 20 Practice Sets for SBI Clerk Preliminary & Main Exam with 5 Online Tests (7th edition) Disha Experts 2019-04-24 This title contains an Access Code along with instructions to access the Online Material. In case you face any difficulty, write to us at ebooks.support@aiets.co.in. Target New Pattern SBI Clerk Exam (7th Edition) provides 15 Past Papers + 7 Prelim Practice Sets (5 in Book + 2 Online) & 13 Main Practice Sets (10 in Book + 3 Online). The book provides the right exposure to the new pattern of the online SBI clerk Junior Associate exam. The book contains the detailed solutions of the 2009, 2011, June & October 2012, Aug 2014 & Jan 2015, 2016 & 2018 SBI Clerk Prelim & Main papers. Thus in all 13 past papers have been provided in the book. The solutions to the Practice Sets are provided at the end of the book. The solutions to the Online Tests can be accessed Online - details provided in the book.

Cardiovascular Physiology and Medical Assessments: Physics and Engineering Perspectives Dhanjoo Ghista 2021-02-09

Technical specifications of radiotherapy equipment for cancer treatment 2021-03-05

Proceedings of GeoShanghai 2018 International Conference: Multi-physics Processes in Soil Mechanics and Advances in Geotechnical Testing Liangbo Hu 2018-05-03 This book is the second volume of the proceedings of the 4th GeoShanghai International Conference that was held on May 27 - 30, 2018. This conference showcased the recent advances and technology in geotechnical engineering, geoenvironmental engineering and transportation engineering. This volume, entitled "Multi-physics Processes in Soil Mechanics and Advances in Geotechnical Testing", covers a wide range of topics in soil mechanics, focusing on the behaviours of partially saturated soils, combined effects of multi-physics processes in geological materials and systems, and emerging methods and techniques in geotechnical in-situ testing and monitoring. This book may benefit researchers and scientists from the academic fields of soil and rock mechanics, geotechnical engineering, geoenvironmental engineering, transportation engineering, geology, mining and energy, as well as practical engineers from the industry. Each of the papers included in this book received at least two positive peer reviews. The editors would like to express their sincerest appreciation to all of the anonymous reviewers all over the world, for their diligent work.

Risk, Reliability and Safety: Innovating Theory and Practice Lesley Walls 2016-11-25 Risk, Reliability and Safety contains papers describing innovations in theory and practice contributed to the scientific programme of the European Safety and Reliability conference (ESREL 2016), held at the University of Strathclyde in Glasgow, Scotland (25—29 September 2016). Authors include scientists, academics, practitioners, regulators and other key individuals with expertise and experience relevant to specific areas. Papers include domain specific applications as well as general modelling methods. Papers cover evaluation of contemporary solutions, exploration of future challenges, and exposition of concepts, methods and processes. Topics include human factors, occupational health and safety, dynamic and systems reliability modelling,

maintenance optimisation, uncertainty analysis, resilience assessment, risk and crisis management.

Millimeter-Wave Integrated Circuits Mladen Božani? 2020-03-16 This peer-reviewed book explores the methodologies that are used for effective research, design and innovation in the vast field of millimeter-wave circuits, and describes how these have to be modified to fit the uniqueness of high-frequency nanoelectronics design. Each chapter focuses on a specific research challenge related to either small form factors or higher operating frequencies. The book first examines nanodevice scaling and the emerging electronic design automation tools that can be used in millimeter-wave research, as well as the singular challenges of combining deep-submicron and millimeter-wave design. It also demonstrates the importance of considering, in the millimeter-wave context, system-level design leading to differing packaging options. Further, it presents integrated circuit design methodologies for all major transceiver blocks typically employed at millimeter-wave frequencies, as these methodologies are normally fundamentally different from the traditional design methodologies used in analogue and lower-frequency electronics. Lastly, the book discusses the methodologies of millimeter-wave research and design for extreme or harsh environments, rebooting electronics, the additional opportunities for terahertz research, and the main differences between the approaches taken in millimeter-wave research and terahertz research.

International Perspectives on Knowledge Integration Thomas Lehmann 2020-05-18 International Perspectives on Knowledge Integration explores theoretical conceptions and methods and reports on original research and good practices for fostering knowledge integration in pre-service teacher and higher education.