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Foreword by Dr. Asad Madni, C. Eng., Fellow IEEE, Fellow IEE Learn the fundamentals of RF and microwave electronics visually, using many thoroughly tested, practical examples RF and microwave technology are essential throughout industry and to a world of new applications-in wireless communications, in Direct Broadcast TV, in Global Positioning System (GPS), in healthcare, medical and many other sciences. Whether you're seeking to strengthen your skills or enter the field for the first time, Radio Frequency and Microwave Electronics Illustrated is the fastest way to master every key measurement, electronic, and design principle you need to be effective. Dr. Matthew Radmanesh uses easy mathematics and a highly graphical approach with scores of examples to bring about a total comprehension of the subject. Along the way, he clearly introduces everything from wave propagation to impedance matching in transmission line circuits, microwave linear amplifiers to hard-core nonlinear active circuit design in Microwave Integrated Circuits (MICs). Coverage includes: A scientific framework for learning RF and microwaves easily and effectively Fundamental RF and microwave concepts and their applications The characterization of two-port networks at RF and microwaves using S-parameters Use of the Smith Chart to simplify analysis of complex design problems Key design considerations for microwave amplifiers: stability, gain, and noise Workable considerations in the design of practical active circuits: amplifiers, oscillators, frequency converters, control circuits RF and Microwave Integrated Circuits (MICs) Novel use of "live math" in circuit analysis and design Dr. Radmanesh has drawn upon his many years of practical experience in the microwave industry and educational arena to introduce an exceptionally wide range of practical concepts and design methodology and techniques in the most comprehensible fashion. Applications include small-signal, narrow-band, low noise, broadband and multistage transistor amplifiers; large signal/high power amplifiers; microwave transistor oscillators, negative-resistance circuits, microwave mixers, rectifiers and detectors, switches, phase shifters and attenuators. The book is intended to provide a workable knowledge and intuitive understanding of RF and microwave electronic circuit design. Radio Frequency and Microwave Electronics Illustrated includes a comprehensive glossary, plus appendices covering key symbols, physical constants, mathematical identities/formulas, classical laws of electricity and magnetism, Computer-Aided-Design (CAD) examples and more. About the Web Site The accompanying web site has an "E-Book" containing actual design examples and methodology from the text, in Microsoft Excel environment, where files can easily be manipulated with fresh data for a new design.

The years between the 1860s and the First World War transformed Britain more profoundly than any other comparable era.

The two-and-a-half centuries after 1066 were momentous ones in the history of Britain. In 1066, England was conquered for the last time. The Anglo-Saxon ruling class was destroyed and and the English became a subject race, dominated by a Norman-French dynasty and aristocracy. This book shows how the English domination of the kingdom was by no means a foregone conclusion. The struggle for mastery in the book's title is in reality the struggle for different masteries within Great Britain. The book weaves together the histories of England, Scotland and Wales in a new way and argues that all three, in their different fashions, were competing for domination

Electrochemical Energy: Advanced Materials and Technologies covers the development of advanced materials and technologies for electrochemical energy conversion and storage. The book was created by participants of the International Conference on Electrochemical Materials and Technologies for Clean Sustainable Energy (ICES-2013) held in Guangzhou, China, and incorporates select papers presented at the conference. More than 300 attendees from across the globe participated in ICES-2013 and gave presentations in six major themes: Fuel cells and hydrogen energy Lithium batteries and advanced secondary batteries Green energy for a clean environment Photo-Electrocatalysis Supercapacitors Electrochemical clean energy applications and markets Comprised of eight sections, this book includes 25 chapters featuring highlights from the conference and covering every facet of synthesis, characterization, and performance evaluation of the advanced materials for electrochemical energy. It thoroughly describes electrochemical energy conversion and storage technologies such as batteries, fuel cells, supercapacitors, hydrogen generation, and their associated materials. The book contains a number of topics that include electrochemical processes, materials, components, assembly and manufacturing, and degradation mechanisms. It also addresses challenges related to cost and performance, provides varying perspectives, and emphasizes existing and emerging solutions. The result of a conference encouraging enhanced research collaboration among members of the electrochemical energy community, Electrochemical Energy: Advanced Materials and Technologies is dedicated to the development of advanced materials and technologies for electrochemical energy conversion and storage and details the technologies, current achievements, and future directions in the field.

The main objective of the book is to offer a vision of the dynamics of the main disasters in South America, describing their mechanisms and consequences on South American societies. The chapters are written by selected specialists of each country. Human-induced disasters are also included, such as desertification in Patagonia and soil erosion in Brazil. The receding of South-American glaciers as a response to recent climatic trends and sea-level scenarios are discussed. The approach is broad in analyzing causes and consequences and includes social and economic costs, discussing environmental and planning problems, but always describing the geomorphologic/geologic involved processes with a good scientific substantiation. This is important to differentiate the book from others of a more 'social' impact that discuss risks and disasters with emphases mainly on economy and simple impacts. Actual theme, interesting for a variety of professionals Fills in the scarcity of specialized literature in geosciences from South America The first book in the market exclusively devoted to geomorphology of disasters in South America

Exercise Physiology in Special Populations covers the prevalent health conditions that are either linked to an inactive lifestyle or whose effects can be ameliorated by increasing physical activity and physical fitness. The book explores physiological aspects of obesity and diabetes before moving on to cardiac disease, lung disease, arthritis and back pain, ageing and older people, bone health, the female participant, neurological and neuromuscular disorders, and spinal chord injury. The author team includes many of the UK’s leading researchers and exercise science and rehabilitation practitioners that specialise in each of the topic areas.

A comprehensive account of the modern instruments and techniques used in astronomy and astrophysics. Drawing together an ever-diverging array of observational techniques, using the common thread of detection-imaging-ancillary instruments pattern, the book provides a unified view of astrophysical investigation. The text starts form first principles and explains each method up to the point at which the reader can begin practical work with the equipment and even start designing it. Exercises with answers are used to reinforce the ideas presented in each chapter.

Each and every organization needs to develop a good strategy for public affairs. Public affairs have received such kind of importance in today's world because no organization can survive in isolation. Every institution requires other institutions as well as the public that act as the customer, the decision-maker as well as the employees that can make or break the image of an organization. With the advent of technology, this task has become easier for managers. The information could be disseminated at a very low cost with the use of mass media and socializing websites. Creating a good image for an institution has become relatively much easier, but this comes with the negative fact that the dissolution of the image has also become an easy task. Public affairs have been increasingly given importance in the corporate world as increased competition has resulted in excess marketing and advertising campaigns that are used to create a Goodwill for the company. There are various tools under public affairs that are used by various organizations in order to fulfill their objectives and goals in the long run.

Have fun with electricity, magnetism and light; learn about machines and technology with hands-on activities and experiments. This fascinating series for grades 3 through 8 covers studies in motion, energy and technology.

The optical fiber based supercontinuum source has recently become a significant scientific and commercial success, with applications ranging from frequency comb production to advanced medical imaging. This one-of-a-kind book explains the theory of fiber supercontinuum broadening, describes the diverse operational regimes and indicates principal areas of applications, making it a very important guide for researchers and graduate students. With contributions from major figures and groups who have pioneered research in this field, the book describes the historical development of the subject, provides a background to the associated nonlinear optical processes, treats the generation mechanisms from continuous wave to femtosecond pulse pump regimes and highlights the diverse applications. A full discussion of numerical methods and comprehensive computer code are also provided, enabling readers to confidently predict and model supercontinuum generation characteristics under realistic conditions.

The past decade has seen an exponential increase in our knowledge and understanding of adipose tissue biology. This has coincided with the continued rise in obesity across all generations. Clearly despite substantial advances in research into adipose tissue this still has had limited impact on the on-going obesity epidemic across a majority of countries in the world. This book brings together many leading experts in the field to provide an up to date and comprehensive review of the key aspects of adipose tissue. It therefore includes chapters on evolution, development and inflammation together with a detailed review of brown and beige adipose tissue biology and their potential significance in preventing or combating obesity. These chapters are complemented by those on genetics and gender influences, together with nutrition through the life cycle. Ultimately the book provides an overview of the complexities of adipose tissue biology and the continuing challenge to combat obesity in the 21st century.

Forfatteren er født i Ukraine. I mange år journalist i Argentina. Arresteredes og udvistes til Israel. Med anledning i Israels invasion i Libanon retter han en stærk anklage mod Israels regerings katastrofale politik, som har ført direkte til massakren i Beirut.

Originally published in the midst of the cold war, Is This Tomorrow is a classic example of red scare propaganda. The story envisions a scenario in which the Soviet Union orders American communists to overthrow the US Government. Charles Schulz contributed to the artwork throughout the issue. Reprinted here for the first time in 70 years.

The book examines potentially important factors that may have affected the Hadley and Walker Circulations and evaluates changes in the Hadley Circulation and the monsoons as simulated by coupled models of past climate conditions, and predicted future conditions under an enhanced greenhouse effect. This book is meant to serve as a fundamental reference work for current and future researchers, graduate students in the atmospheric sciences and geosciences, and climate specialists involved in interdisciplinary research.

Elasto-Hydrodynamic Lubrication deals with the mechanism of elasto-hydrodynamic lubrication, that is, the lubrication regime in operation over the small areas where machine components are in nominal point or line contact. The lubrication of rigid contacts is discussed, along with the effects of high pressure on the lubricant and bounding solids. The governing equations for the solution of elasto-hydrodynamic problems are presented. Comprised of 13 chapters, this volume begins with an overview of elasto-hydrodynamic lubrication and representation of contacts by cylinders, followed by a discussion on equations relevant to lubrication, including the Reynolds equation. The reader is then introduced to lubrication of rigid cylinders; the importance of film thickness in highly loaded rigid contacts; the elasticity of solids in contact; and the theory of elasto-hydrodynamic lubrication. Subsequent chapters focus on apparatus and measurements of film thickness and film shape; friction and viscosity; and lubrication of gears and roller bearings. This book will be of interest to tribologists.

“The Dynamic Universe, Toward a unified picture of physical reality” opens a fresh, holistic perspective for a harmonious picture of physical reality. The Dynamic Universe theory relies on an overall zero-energy balance in space and the conservation of the total energy in interactions in space. The Dynamic Universe describes physical nature from a minimum amount of postulates. In the Dynamic Universe, conservation of total energy links local interactions to the rest of space – providing a solid theoretical basis to Mach's principle and a natural explanation for the relativity of observations. Not least, the model accurately explains observed physical and cosmological phenomena and offers a coherent framework uniting the entire domain of physical reality from cosmology to relativity and non-local quantum phenomena.

An investigative approach to Cambridge IGCSE Geography, written in partnership with the Geographical Association. Encourage students to make links between case studies and their own local contexts as well as exploring the core themes and skills of the 0460 syllabus in the context of global case studies and processes. Prepare for exam success with full coverage of the core themes of Paper 1 (Population and Settlement, The Natural Environment, Economic Development and the Use of Resources) as well as the geographical and fieldwork skills elements of Papers 2, 3 and 4. Help students focus on achieving the best grades with excellent exam support for each Paper, with exam-style questions, answers at different levels and accompanying comments. Be confident in the content and approach - this resource is written by highly experienced Geography teachers, consulted edited by a CIE Principal Examiner, and produced in partnership with the UK Geographical Association - the home of best practice in Geography teaching.

This volume presents standard approaches and the most recent technical advances used to study innate immune activation. Chapters detail the assessment of macrophage activation, measuring innate immune responses to bacterial viability, quantification of secreted proteins, reporter systems, protocols examining specific innate immune activation by TLRs, RLRs, cGAS, and inflammasomes. Written in the highly successful Methods in Molecular Biology series format, chapters include introductions to their respective topics, lists of the necessary materials and reagents, step-by-step, readily reproducible laboratory protocols, and tips on troubleshooting and avoiding known pitfalls. Authoritative and practical, Innate Immune Activation: Methods and Protocols aims to be a useful and informative reference tool for further study into this vital field.

Handbook of Generation IV Nuclear Reactors presents information on the current fleet of Nuclear Power Plants (NPPs) with water-cooled reactors (Generation III and III+) (96% of 430 power reactors in the world) that have relatively low thermal efficiencies (within the range of 32 36%) compared to those of modern advanced thermal power plants (combined cycle gas-fired power plants – up to 62% and supercritical pressure coal-fired power plants – up to 55%). Moreover, thermal efficiency of the current fleet of NPPs with water-cooled reactors cannot be increased significantly without completely different innovative designs, which are Generation IV reactors. Nuclear power is vital for generating electrical energy without carbon emissions. Complete with the latest research, development, and design, and written by an international team of experts, this handbook is completely dedicated to Generation IV reactors. Presents the first comprehensive handbook dedicated entirely to generation IV nuclear reactors Reviews the latest trends and developments Complete with the latest research, development, and design information in generation IV nuclear reactors Written by an international team of experts in the field

An indispensable international resource, The SAGE Handbook of Criminological Theory provides readers with a clear overview of criminological theory, enabling them to reflect critically upon the traditional, emergent and desirable theoretical positions of the discipline.This handbook is essential for libraries and scholars of all levels studying the rapidly developing, interdisciplinary field of criminology.

Erotic memoir

In Tom Kundig: Works, the celebrated Seattle-based architect presents nineteen new projects, from Hawaii to New York City. Kundig's award-winning houses, known for their rugged yet elegant and welcoming style, are showcased in lush photography with drawings and sketches, and appear alongside his commercial work—from multistory complexes to the Tacoma Art Museum to a line of hardware (handles, door pulls, hinges, and more). In firsthand accounts, Kundig describes the projects and his design process with many personal anecdotes, making Tom Kundig: Works as much memoir as monograph. The book also includes an introduction by design editor Pilar Viladas and in-depth conversations with Kundig's frequent collaborators—"gizmologist" Phil

Turner and contractor Jim Dow (Schuchart/ Dow)—and clients (Bigwood Residence and Studhorse).

This book commemorates the 70th birthday of Eugene Morozov, the noted Russian observational oceanographer. It contains many contributions reflecting his fields of interest, including but not limited to tidal internal waves, ocean circulation, deep ocean currents, and Arctic oceanography. Special attention is paid to studies on internal waves and especially those on tidal internal waves in the Global Ocean. These papers describe the most important open problems concerning experimental studies of internal waves and their theoretical, numerical, and laboratory modeling. Further contributions investigate the physics of surface waves and their interaction with internal waves. Here, the focus is on describing interaction processes between internal waves and deep currents in the ocean, especially currents of Antarctic Bottom Water in abyssal fractures. They also touch on the problem of oceanic circulation and related processes in fjords, including those occurring under sea ice. Given its breadth of coverage, the book will appeal to anyone interested in a survey of ocean dynamics, ranging from historic perspectives to modern research topics.

The God's Design Physical World Teacher Guide reveals the wonders of God's creation through the study of physics and the mechanisms of heat, machines, and technology. Each lesson contains at least one hands-on activity to reinforce the concepts being taught and a "challenge" section with extra information and activities designed especially for older students.In addition to the lessons, special features in each book include biographical information on interesting people as well as fun facts to make the subject more engagingTeaches children an understanding that God is our Creator, and the Bible can be trusted.Designed to build critical thinking skills and flexible enough to work with all learning styles, the lessons require minimal teacher preparation, are multi-level for 3rd-5th and 6th-8th grades, as well as being fun and easy-to-use. The course includes a helpful daily schedule, as well as worksheets, quizzes, and tests. The information contains tips on how to teach science, properly contrasting creation vs. evolution, and integrating a biblical worldview.

In this book, the fundamentals of magnetism are treated, starting at an introductory level. The origin of magnetic moments, the response to an applied magnetic field, and the various interactions giving rise to different types of magnetic ordering in solids are presented and many examples are given. Crystalline-electric-field effects are treated at a level that is sufficient to provide the basic knowledge necessary in understanding the properties of materials in which these effects play a role. Itinerant-electron magnetism is presented on a similar basis. Particular attention has been given to magnetocrystalline magnetic anisotropy and the magnetocaloric effect. Also, the usual techniques for magnetic measurements are presented. About half of the book is devoted to magnetic materials and the properties that make them suitable for numerous applications. The state of the art is presented of permanent magnets, high-density recording materials, soft-magnetic materials, Invar alloys and magnetostrictive materials. Many references are given.

First published in 1968, this standard text on Italian nineteenth-century history is reissued, with a new preface, in hardcover and paperback, to meet a continuing demand.

A supplement of 50 more discrepant events over the Second Edition of "INVITATIONS TO SCIENCE INQUIRY," & 100 more discrepant events which is the difference between the First & Second Edition. To each of the chapters of the First & Second Editions more discrepant events have been added.

This is a new release of the original 1927 edition.

Details the many benefits of applying mass spectrometry tosupramolecular chemistry Except as a method for the most basic measurements, massspectrometry (MS) has long been considered incompatible withsupramolecular chemistry. Yet, with today's methods, the disconnectbetween these two fields is not warranted. Mass Spectrometry andGas-Phase Chemistry of Non-Covalent Complexes provides aconvincing look at how modern MS techniques offer supramolecularchemists a powerful investigatory toolset. Bringing the two fields together in an interdisciplinary manner,this reference details the many different topics associated withthe study of non-covalent complexes in the gas phase. The textbegins with brief introductions to supramolecular chemistry andsuch relevant mass spectrometric methods as ionization techniques,analyzers, and tandem MS experiments. The coverage continueswith: How the analyte's transition into the gas phase changes covalentbonding How limitations and pitfalls in analytical methods may producedata misinterpretations Artificial supramolecular aggregates and their examination Biomolecules, their complexes, and their examination After the general remarks making up the first section of thebook, the following sections describe specific experimentalprocedures and are illustrated with numerous examples and shorttutorials. Detailed citations end each chapter. Massspectrometrists, supramolecular chemists, students in these fields,and interested readers from other disciplines involving the studyof non-covalent bonds will all value Mass Spectrometry andGas-Phase Chemistry of Non-Covalent Complexes as an innovativeand practical resource.

Unique in its coverage of all aspects of modern particle physics, this textbook provides a clear connection between the theory and recent experimental results, including the discovery of the Higgs boson at CERN. It provides a comprehensive and self-contained description of the Standard Model of particle physics suitable for upper-level undergraduate students and graduate students studying experimental particle physics. Physical theory is introduced in a straightforward manner with full mathematical derivations throughout. Fully-worked examples enable students to link the mathematical theory to results from modern particle physics experiments. End-of-chapter exercises, graded by difficulty, provide students with a deeper understanding of the subject. Online resources available at www.cambridge.org/MPP feature password-protected fully-worked solutions to problems for instructors, numerical solutions and hints to the problems for students and PowerPoint slides and JPEGs of figures from the book.

A dynamic, new, exam-focused approach to Leaving Certificate Physics

Nanocatalysis, a subdiscipline of nanoscience, seeks to control chemical reactions by changing the size, dimensionality, chemical composition, and morphology of the reaction center and by changing the kinetics using nanopatterning of the reaction center. This book offers a detailed pedagogical and methodological overview of the field. Readers discover many examples of current research, helping them explore new and emerging applications.

What does higher education learning and teaching enable students to do and to become? Which human capabilities are valued in higher education, and how do we identify them? How might the human capability approach lead to improved student learning, as well as to accomplished and ethical university teaching?This book sets out to generate new ways of reflecting ethically about the purposes and values of contemporary higher education in relation to agency, learning, public values and democratic life, and the pedagogies which support these. It offers an alternative to human capital theory and emphasises the intrinsic as well as the economic value of higher learning. Based upon the human capability approach, developed by economist Amartya Sen and

philosopher Martha Nussbaum, the book shows the importance of justice as a value in higher education. It places freedom, human flourishing, and students' educational development at its centre. Furthermore, it takes up the value Sen attributes to education in the capability approach, and demonstrates its relevance for higher education. Higher Education Pedagogies offers illustrative narratives of capability, learning and pedagogy, drawing on student and lecturer voices to demonstrate how this multi-dimensional approach can be developed and applied in higher education. It suggests an ethical approach to higher education practice, and to teaching and learning policy development and evaluation. As such, the book is essential reading for students and scholars of higher education, as well as university lecturers, managers and policy-makers concerned with teaching and learning.