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Göttingen and the Development of the Natural Sciences Pan Macmillan South africa
The past ten years in South Africa has seen many changes in education - the creation of a single department of education; common examinations for all learners in public schools in the country, a new outcomes based education curriculum which was introduced to learners in the general education and training phase since 1998 and will be introduced to the further education and training phase from 2006. To evaluate the success of these changes South African researchers still use the indicator of student achievement. The matriculation examination is the visible, high profile and public performance indicator. Every year parents, learners, teachers, researchers, government officials, policymakers, and the general public get involved in the debate around the matric examination with the most frequently asked questions being - Did the pass rate go up? Are standards dropping? Are the results real or have they been manipulated? How is our education system doing? Are we meeting the development goals? What should the matriculation examination of the future look like? participants from government (national and provincial),

Geometric Science of Information Springer Nature
This latest addition to the Studies in Geophysics series explores in scientific detail the phenomenon of lightning, cloud, and thunderstorm electricity, and global and regional electrical processes. Consisting of 16 papers by outstanding experts in a number of fields, this volume compiles and reviews many recent advances in such research areas as meteorology, chemistry, electrical engineering, and physics and projects how new knowledge could be applied to benefit mankind.

The Dream House Charles Scribner's Sons
Philanthropic societies funded by the Rockefeller family were prominent in the social history of the twentieth century, for their involvement in medicine and applied science. This book provides the first detailed study of their relatively brief but nonetheless influential foray into the field of mathematics.

Solid State Properties John Wiley & Sons
This book addresses how economic spaces dynamically change within the context of the global knowledge-based economy. Specifically, it centers the discussion on integrated views of understanding and conceptualizing dynamic changes of global economy under the global megatrends of globalization, knowledge-based economy, information society, service world, climate change, and population aging. Focusing on East Asia, especially on Korea, it deals with case studies regarding the processes and patterns of these global dynamics, looking at economic spaces of various spatial scales and types of economic actors. This book develops a theoretical model for understanding and analysing the dynamics of economic spaces that are being reshaped within the larger global economy. It also emphasizes the analysis of empirical studies at the level of firm, region, and state by considering an evolutionary perspective over time. In developing its theoretical framework, this book examines regional resilience, intangible assets, service innovation, path dependence, and other notions related to the evolution of economic spaces, and incorporates these elements into real-world case studies. The integrated theoretical framework examined here contributes a new perspective on spatial disparities in the global economy. An integral model of service innovation; the integration of path dependence and regional resilience; the interaction between firm and region for the accumulation of intangible assets; and the roles of governments and global firms: these are all essential to understanding the dynamics of economic spaces in East Asia. The theoretical model and case studies in this book suggest policy implications for developing countries, especially in the Asian and African regions, with regard to regional development and innovation policies.

J. Robert Oppenheimer and the American Century Markham, Ont. : Fitzhenry & Whiteside
Throughout most of the twentieth century, electric propulsion was considered the technology of the future. Now, the future has arrived. This important new book explains the fundamentals of electric propulsion for spacecraft and describes in detail the physics and characteristics of the two major electric thrusters in use today, ion and Hall thrusters. The authors provide an introduction to plasma physics in order to allow readers to understand the models and derivations used in determining electric thruster performance. They then go on to present detailed explanations of: Thruster principles Ion thruster plasma generators and accelerator grids Hollow cathodes Hall thrusters Ion and Hall thruster plumes Flight ion and Hall thrusters Based largely on research and development performed at the Jet Propulsion Laboratory (JPL) and complemented with scores of tables, figures, homework problems, and references, Fundamentals of Electric Propulsion: Ion and Hall Thrusters is an indispensable textbook for advanced undergraduate and graduate students who are preparing to enter the aerospace industry. It also serves as an equally valuable resource for professional engineers already at work in the field.

South African national bibliography Wallstein Verlag
The DSST Physical Science Passbook(R) prepares candidates for the DSST exam, which enables schools to award credit for knowledge acquired outside the normal classroom environment. It provides a series of informational texts as well as hundreds of questions and answers in the areas that will likely be covered on your upcoming exam, including but not limited to: physics; electricity and magnetism; Glossyr; chemical reactions; atomic structure; and more.

Advantage Physics Springer Science & Business Media
A farmhouse is being reproduced a dozen times, with slight variations, throughout a valley. Three small graves have been dug in the front garden, the middle one lying empty. A woman in a wheelchair sorts through boxes while her husband clambers around the old demolished buildings, wondering where the animals have gone. A young woman – called ‘the barren one’ behind her back – dreams of love, while an ageing headmaster contemplates the end of his life. At the entrance to the long dirt driveway, a car appears and pauses – pointed towards the house like a silver bullet, ticking with heat. So begins The Dream House, Craig Higginson’s riveting and unforgettable novel set in the Midlands of KwaZulu-Natal. Written with dark wit, a stark poetic style and extraordinary tenderness, this is a story about the state of a nation and a deep meditation on memory, ageing, meaning, family, love and loss. This updated 2016 edition contains new content, with Craig Higginson exploring the background to The Dream House, his varied experiences in a farmhouse in KwaZulu-Natal and the subsequent and poignant motivations for this moving novel.

The Circulation of science and technology Springer Science & Business Media
Classified list with author and title index.

Antiviral Agents John Wiley & Sons
The safety of the U.S. undersea pipeline system is a major national interest and concern, whether the concern focuses on risk to human life or the potential for environmental pollution and damage. Focusing primarily on the Gulf of Mexico system, this book reviews historical examples of pipeline failure, assesses the potential for future pipeline failures and the means of mitigating them, and considers the efficacy of existing safety systems and inspection procedures. It also identifies alternatives for improvements in the regulatory framework and in lawmaking.

Concise Dictionary of Scientific Biography Springer
This is an in-depth study of one of the most important and prominent Hua-ch''iao (Overseas Chinese) of twentieth-century Southeast Asian and China OCo Tan Kah-kee (1874OCo1961).For a Chinese immigrant in South-East Asia to make good is not unique, but what is unique in Tan Kah-kee''s case is his enormous contribution to employment and economic development in Singapore and Malaya. He was the only Chinese in history to have single-handedly founded a private university in Amoy and

financially maintained it for sixteen years. He was the only Hua-ch''iao of his generation to have led the Chinese in South-East Asia to help China to resist the Japanese invasion in a concerted and coordinated manner. Moreover, he was the only Hua-ch''iao leader to have played both Singapore and China politics and affairs in close quarters, rubbing shoulders with British governors, Chinese officials and commanders. Finally, it is important to point out that Tan Kah-kee was the only Hua-ch''iao in his times to have combined his Pang, community and political power and influences for the advancement of community, regional and national goals.This is an in-depth study of not just Tan Kah-kee per se but also the making of a legend through his deeds, self-sacrifices, fortitude and foresight. This revised edition sheds new light on his political agonies in Mao''s China over campaigns against capitalists and intellectuals. Moreover, it analyses more comprehensively the varied legacies of Tan Kah-kee, including his successors, the style of his non-partisan political leadership, his educational strategy for nation-building, social change and OC the Spirit of Tan Kah-keeOCO, currently in vogue in his home province, Fukien.

Title List of Documents Made Publicly Available Routledge
This compendium of physics covers the key equations and fundamental principles that are taught in graduate programs. It offers a succinct yet systematic treatment of all areas of physics, including mathematical physics, solid state physics, particle physics, statistical mechanics, and optics. In one complete, self-contained volume, author Charles P. Poole provides both review material for students preparing for PhD qualifying examinations and a quick reference for physicists who need to brush up on basic topics or delve into areas outside their expertise. In this second edition the author devotes two chapters to such regularly needed information as trigonometric and vector identities and special functions. The remaining chapters incorporate less frequently summoned concepts, including Lagrangians, parity, dispersion relations, chaos, free energies, statistical mechanical ensembles, and elementary particle classification. A brand new chapter on entanglement and quantum computing has been added, making this an indispensable resource for graduate students and physicists in both industry and academia.

Historical Studies in the Physical Sciences Harvard University Press
Encyclopedia of Renewable and Sustainable Materials, Five Volume Set provides a comprehensive overview, covering research and development on all aspects of renewable, recyclable and sustainable materials. The use of renewable and sustainable materials in building construction, the automotive sector, energy, textiles and others can create markets for agricultural products and additional revenue streams for farmers, as well as significantly reduce carbon dioxide (CO_2) emissions, manufacturing energy requirements, manufacturing costs and waste. This book provides researchers, students and professionals in materials science and engineering with tactics and information as they face increasingly complex challenges around the development, selection and use of construction and manufacturing materials. Covers a broad range of topics not available elsewhere in one resource Arranged thematically for ease of navigation Discusses key features on processing, use, application and the environmental benefits of renewable and sustainable materials Contains a special focus on sustainability that will lead to the reduction of carbon emissions and enhance protection of the natural environment with regard to sustainable materials

Physical Sciences IOS Press
This volume presents an up-to-date review of modern materials and concepts, issues, and recent advances in analytical and physical chemistry. Distinguished scientists and engineers from key institutions worldwide have contributed chapters that provide a deep analysis of their particular subjects. The chapters discuss the composition and properties of complex materials as well as mixtures, processes, and the need for new and improved analytical technology.

Fundamentals of Electric Propulsion HSRC Press
The purpose of this book is to provide the reader with a self-contained treatment of fundamen tal solid state and semiconductor device physics. The material presented in the text is based upon the lecture notes of a one-year graduate course sequence taught by this author for many years in the ·Department of Electrical Engineering of the University of Florida. It is intended as an introductory textbook for graduate students in electrical engineering. However, many students from other disciplines and backgrounds such as chemical engineering, materials science, and physics have also taken this course sequence, and will be interested in the material presented herein. This book may also serve as a general reference for device engineers in the semiconductor industry. The present volume covers a wide variety of topics on basic solid state physics and physical principles of various semiconductor devices. The main subjects covered include crystal structures, lattice dynamics, semiconductor statistics, energy band theory, excess carrier phenomena and recombination mechanisms, carrier transport and scattering mechanisms, optical properties, photoelectric effects, metal-semiconductor devices, the p--n junction diode, bipolar junction transistor, MOS devices, photonic devices, quantum effect devices, and high speed III-V semiconductor devices. The text presents a unified and balanced treatment of the physics of semiconductor materials and devices. It is intended to provide physicists and mat erials scientists with more device backgrounds, and device engineers with a broader knowledge of fundamental solid state physics.

Intelligible Design Wiley-VCH
Students who have mastered calculus, physics, physics, chemistry and algebra all talk of that breakthrough moment when what had seemed impenetrable was replaced with understanding, when suddenly what they had perceived as enormously difficult became incredibly clear. The straightforward instructions in each of these valuable companions are designed to augment in-class learning. The tutorials and solved problems are there to clarify difficult concepts giving students the Advantage they need to achieve full understanding.

The Earth's Electrical Environment Passbooks
The life of Niels Bohr spanned times of revolutionary change in science itself as well as its impact on society. Along with Albert Einstein, Bohr can be considered to be this century's major driving force behind the new philosophical and mathematical descriptions of the structure of the atom and the nucleus. Abraham Pais, the acclaimed biogrpaher of Albert Einstein, here traces Bohr's progress from his well-to-do origins in late nineteenth-century Denmark to his position at centre stage in the world political scene, particularly during the Second World War and the development of atomic weapons. Pais' description moves through the science as it was before Bohr, as it became because of Bohr, and thence to Bohr's scientific and philosophical legacy. That legacy is contained both in theory as it is now universally enshrined, as well as in its practice in such great Danish institutions as Riso. But more than that, Pais captures the essence of Bohr, the intensely private family figure who, despite appalling personal tragedy, became one of the most loved cultural figures of recent times.

Physical Science Institut d'Estudis Catalans
KREYSZIG The Wiley Classics Library consists of selected books originally published by John Wiley & Sons that have become recognized classics in their respective fields. With these new unabridged and inexpensive editions, Wiley hopes to extend the life of these important works by making them available to future generations of mathematicians and scientists. Currently available in the Series: Emil Artin Geometnc Algebra R. W. Carter Simple Groups Of Lie Type Richard Courant Differential and Integrai Calculus. Volume I Richard Courant Differential and Integral Calculus. Volume II Richard Courant & D. Hilbert Methods of Mathematical Physics, Volume I Richard Courant & D. Hilbert Methods of Mathematical Physics. Volume II Harold M. S. Coxeter Introduction to Modern Geometry. Second Edition Charles W. Curtis, Irving Reiner Representation Theory of Finite Groups and Associative Algebras Nelson Dunford, Jacob T. Schwartz unear Operators. Part One. General Theory Nelson Dunford. Jacob T. Schwartz Linear Operators, Part Two. Spectral Theory—Self Adjant Operators in Hilbert Space Nelson Dunford, Jacob T. Schwartz Linear Operators. Part Three. Spectral Operators Peter Henrici Applied and Computational Complex Analysis. Volume I—Power Senes-Integrauon-Contormal Mapping-Locatvon of Zeros Peter Hilton, Yet-Chiang Wu A Course in Modern Algebra Harry Hochstadt Integral Equations Erwin Kreyszig Introductory Functional Analysis with Applications P. M. Prenter Splines and Variational Methods C. L. Siegel Topics in Complex Function Theory. Volume I —Elliptic Functions and Uniformizatton Theory C. L. Siegel Topics in Complex Function Theory. Volume II —Automorphic and Abelian Integrals C. L. Siegel Topics In Complex Function Theory. Volume III —Abelian Functions & Modular Functions of Several Variables J. J. Stoker Differential Geometry

The Chemical News and Journal of Physical Science Thames River Press
This book fills a gap between many of the basic solid state physics and materials sciencebooks that are currently available. It is written for a mixed audience of electricalengineering and applied physics students who have some knowledge of elementaryundergraduate quantum mechanics and statistical mechanics. This book, based on asuccessful course taught at MIT, is divided pedagogically into three parts: (I) ElectronicStructure, (II) Transport Properties, and (III) Optical Properties. Each topic is explainedin the context of bulk materials and then extended to low-dimensional materials whereapplicable. Problem sets review the content of each chapter to help students to understandthe material described in each of the chapters more deeply and to prepare them to masterthe next chapters.

The Financial History of Cambridge University Plunkett Lake Press
This book constitutes the proceedings of the 6th International Conference on Geometric Science of Information, GSI 2023, held in St. Malo, France, during August 30-September 1, 2023. The 125 full papers presented in this volume were carefully reviewed and selected from 161 submissions. They cover all the main topics and highlights in the domain of geometric science of information, including information geometry manifolds of structured data/information and their advanced applications. The papers are organized in the following topics: geometry and machine learning; divergences and computational information geometry; statistics, topology and shape spaces; geometry and mechanics; geometry, learning dynamics and thermodynamics; quantum information geometry; geometry and biological structures; geometry and applications.

Marking Matric CRC Press
The unfortunate appearance of AIDS, the manifold problems with herpesviruses and other viruses attacking humans have led to an enormous dynamism of worldwide research and to an immense increase in the corresponding literature. With this first Special Topic of the monograph series Progress in Drug Research, the editor and the publishers undertake an effort to supply concise reviews on virus research, especially on the development of new and future antiviral agents in some important and widespread viral diseases. Latest Progress in Drug Research articles dealing with new chemotherapeutics for the treatment of the most threatening viral diseases are presented. These very well received articles were upgraded and supplemented with new chapters to form this actual overview of the achievements in the respective fields of virus research. This special volume contains six review articles covering the latest studies on the HIV and hepatitis C and B viruses...