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A Green Vitruvius Vivienne Brophy 2012-06-25 2000 years ago the roman architect Marcus Vitruvius Pollio wrote the ten books on architecture establishing the concept of the pattern book offering design principles and solutions that is still referred to in every architect's education. A Green Vitruvius is intended as a green pattern book for today. Now fully updated, this well established textbook provides advice suitable for undergraduate and post graduate students on the integration of sustainable practice into the design and construction process, the issues to be considered, the strategies to be adopted, the elements of green design and design evaluation within the process. Classic design elegance is found in the holistic clear solution.

Flavonoids Oyvind M. Andersen 2005-12-09 Advances in the flavonoid field have been nothing short of spectacular over the last 20 years. While the medical field has noticed flavonoids for their potential antioxidant, anticancer and cardioprotectant characteristics, growers and processors in plant sciences have utilized flavonoid biosynthesis and the genetic manipulation of the flavonoid pa

Performance Testing of Textiles Lijing Wang 2016-06-17 Performance Testing of Textiles: Methods, Technology and Applications examines the developed and established methodology for testing performance textiles, also summarizing the material properties for advanced applications. This book emphasizes reproducible tests using commonly used experimental methods reported in scientific literature and internationally recognized testing standards to quantify textile material properties and performance. After an introductory explanation of key fiber and textile properties and testing methods, the book summarizes electronic testing theories, technologies, and instrumentation for performance textiles. Also covered are aspects of military textile, medical textile, sportswear, smart composites, and wearable textiles which, as examples, present the latest research and results related to performance textile testing and applications. Offers up-to-date coverage of new and advanced performance testing techniques for the fiber and textile industries Explores key fiber and textile properties Summarizes electronic testing theories, technologies, and instrumentation for performance textiles Includes contributions from an international team of authors edited by an expert in the field

Carbon Dioxide Utilisation Peter Styring 2014-09-13 Carbon Dioxide Utilisation: Closing the Carbon Cycle explores areas of application such as conversion to fuels, mineralization, conversion to polymers, and artificial photosynthesis as well as assesses the potential industrial suitability of the various processes. After an introduction to the thermodynamics, basic reactions, and physical chemistry of carbon dioxide, the book proceeds to examine current commercial and industrial processes, and the potential for carbon dioxide as a green and sustainable resource. While carbon dioxide is generally portrayed as a "bad" gas, a waste product, and a major contributor to global warming, a new branch of science is developing to convert this "bad" gas into useful products. This book explores the science behind converting CO₂ into fuels for our cars and planes, and for use in plastics and foams for our homes and cars, pharmaceuticals, building materials, and many more useful products. Carbon dioxide utilization is a rapidly expanding area of research that holds a potential key to sustainable, petrochemical-free chemical production and energy integration. Accessible and balanced between chemistry, engineering, and industrial applications Informed by blue-sky thinking and realistic possibilities for future technology and applications Encompasses supply chain sustainability and economics, processes, and energy integration

8th European Medical and Biological Engineering Conference Tomaz Jarm 2020-11-29 This book aims at informing on new trends, challenges and solutions, in the multidisciplinary field of biomedical engineering. It covers traditional biomedical engineering topics, as well as innovative applications such as artificial intelligence in health care, tissue engineering, neurotechnology and wearable devices. Further topics include mobile health and electroporation-based technologies, as well as new treatments in medicine. Gathering the proceedings of the 8th European Medical and Biological Engineering Conference (EMBECE 2020), held on November 29 - December 3, 2020, in Portorož, Slovenia, this book bridges fundamental and clinically-oriented research, emphasizing the role of education, translational research and commercialization of new ideas in biomedical engineering. It aims at inspiring and fostering communication and collaboration between engineers, physicists, biologists, physicians and other professionals dealing with cutting-edge themes in and advanced technologies serving the broad field of biomedical engineering.

Dissertation Abstracts International 1980

Seamless Prediction of the Earth System Gilbert Brunet 2015 "This book collects together White Papers that have been written to describe the state of the science and to discuss the major challenges for making further advances. The authors of each chapter have attempted to draw together key aspects of the science that was presented at WWOSC-2014. The overarching theme of this book and of WWOSC-2014 is 'Seamless Prediction of the Earth System: from minutes to months'. The book is structured with chapters that address topics regarding: Observations and Data Assimilation; Predictability and Processes; Numerical Prediction of the Earth System; Weather-related Hazards and Impacts. This book marks a point in time and the knowledge that has been accumulating on weather science. It aims to point the way to future developments"--Preface.

Advances in Ceramics Costas Sikalidis 2011-08-09 The current book contains twenty-two chapters and is divided into three sections. Section I consists of nine chapters which discuss synthesis through innovative as well as modified conventional techniques of certain advanced ceramics (e.g. target materials, high strength porous ceramics, optical and thermo-luminescent ceramics, ceramic powders and fibers) and their characterization using a combination of well known and advanced techniques. Section II is also composed of nine chapters, which are dealing with the aqueous processing of nitride ceramics, the shape and size optimization of ceramic components through design methodologies and manufacturing technologies, the sinterability and properties of ZnNb oxide ceramics, the grinding optimization, the redox behaviour of ceria based and related materials, the alloy reinforcement by ceramic particles addition, the sintering study through dihedral surface angle using AFM and the surface modification and properties induced by a laser beam in pressings of ceramic powders. Section III includes four chapters which are dealing with the deposition of ceramic powders for oxide fuel cells preparation, the perovskite type ceramics for solid fuel cells, the ceramics for laser applications and fabrication and the characterization and modeling of protonic ceramics.

Perception and Discovery Norwood Russell Hanson 2018-05-29 Norwood Russell Hanson was one of the most important philosophers of science of the post-war period. Hanson brought Wittgensteinian ordinary language philosophy to bear on the concepts of science, and his treatments of observation, discovery, and the theory-ladenness of scientific facts remain central to the philosophy of science. Additionally, Hanson was one of philosophy's great personalities, and his sense of humor and charm come through fully in the pages of Perception and Discovery. Perception and Discovery, originally published in 1969, is Hanson's posthumous textbook in philosophy of science. The book focuses on the indispensable role philosophy plays in scientific thinking. Perception and Discovery features Hanson's most complete and mature account of theory-laden observation, a discussion of conceptual and logical boundaries, and a detailed treatment of the epistemological features of scientific research and scientific reasoning. This book is of interest to scholars of philosophy of science, particularly those concerned with Hanson's thought and the development of the discipline in the middle of the 20th century. However, even fifty years after Hanson's early death, Perception and Discovery still has a great deal to offer all readers interested in science.

Google Earth Engine Applications Lalit Kumar 2019-04-23 In a rapidly changing world, there is an ever-increasing need to monitor the Earth's resources and manage it sustainably for future generations. Earth observation from satellites is critical to provide information required for informed and timely decision making in this regard. Satellite-based earth observation has advanced rapidly over the last 50 years, and there is a plethora of satellite sensors imaging the Earth at finer spatial and spectral resolutions as well as high temporal resolutions. The amount of data available for any single location on the Earth is now at the petabyte-scale. An ever-increasing capacity and computing power is needed to handle such large datasets. The Google Earth Engine (GEE) is a cloud-based computing platform that was established by Google to support such data processing. This facility allows for the storage, processing and analysis of

spatial data using centralized high-power computing resources, allowing scientists, researchers, hobbyists and anyone else interested in such fields to mine this data and understand the changes occurring on the Earth's surface. This book presents research that applies the Google Earth Engine in mining, storing, retrieving and processing spatial data for a variety of applications that include vegetation monitoring, cropland mapping, ecosystem assessment, and gross primary productivity, among others. Datasets used range from coarse spatial resolution data, such as MODIS, to medium resolution datasets (Worldview -2), and the studies cover the entire globe at varying spatial and temporal scales.

Holistic Darwinism Peter Corning 2010-08-15 In recent years, evolutionary theorists have come to recognize that the reductionist, individualist, gene-centered approach to evolution cannot sufficiently account for the emergence of complex biological systems over time. Peter A. Corning has been at the forefront of a new generation of complexity theorists who have been working to reshape the foundations of evolutionary theory. Well known for his Synergism Hypothesis—a theory of complexity in evolution that assigns a key causal role to various forms of functional synergy—Corning puts this theory into a much broader framework in Holistic Darwinism, addressing many of the issues and concepts associated with the evolution of complex systems. Corning's paradigm embraces and integrates many related theoretical developments of recent years, from multilevel selection theory to niche construction theory, gene-culture coevolution theory, and theories of self-organization. Offering new approaches to thermodynamics, information theory, and economic analysis, Corning suggests how all of these domains can be brought firmly within what he characterizes as a post-neo-Darwinian evolutionary synthesis.

Water is for Fighting Over John Fleck 2016-09 "Illuminating." --New York Times WIRED's Required Science Reading 2016 When we think of water in the West, we think of conflict and crisis. Yet despite decades of headlines warning of mega-droughts, the death of agriculture, and the collapse of cities, the Colorado River basin has thrived in the face of water scarcity. John Fleck shows how western communities, whether farmers and city-dwellers or U.S. environmentalists and Mexican water managers, actually have a promising record of conservation and cooperation. Rather than perpetuate the myth "Whiskey's for drinkin', water's for fightin' over," Fleck urges readers to embrace a new, more optimistic narrative--a future where the Colorado continues to flow.

Air Conditioning Engineering W.P. Jones 2007-08-31 Designed for students and professional engineers, the fifth edition of this classic text deals with fundamental science and design principles of air conditioning engineering systems. W P Jones is an acknowledged expert in the field, and he uses his experience as a lecturer to present the material in a logical and accessible manner, always introducing new techniques with the use of worked examples.

Sensors in Water Pollutants Monitoring: Role of Material D. Pooja 2019-10-24 This book discusses the sensitivity, selectivity, and response times of different sensor materials and their potential application in the design of portable sensor systems for monitoring water pollutants and remediation systems. Beginning with an overview on water pollutants and analytical methods for their detection, the book then moves on to describing the advances in sensor materials research, and the scope for their use in different types of sensors. The book lays emphasis on techniques such as colorimetric, fluorescence, electrochemical, and biological sensing of conventional and emerging pollutants. This book will serve as a handy guide for students, researchers, and professional engineers working in the field of sensor systems for monitoring water pollutants to address various challenges.

Elastic Light Scattering Spectrometry Cheng Zhi Huang 2018-12-17 This book introduces the basics of light scattering and then presents theoretical methods and applications of elastic light scattering spectrometry in the field of analytical chemistry. Different elastic light scattering probes and how to use elastic light scattering probes for the analysis of inorganic ions, organic molecules, nucleic acids, proteins, biological microparticles, water and the atmospheric environment are discussed in detail.

Troubleshooting Process Plant Control Norman P. Lieberman 2017-03-14 Examines real life problems and solutions for operators and engineers running process controls Expands on the first book with the addition of five new chapters as well as new troubleshooting examples Written for the working operator and engineer, with straightforward instruction not hinged on complex math Includes real-life examples of control problems that commonly arise and how to fix them Emphasizes single and well-established process engineering principles that will help working engineers and operators switch manual control loops to automatic control

Extreme Weather Events and Public Health Responses Wilhelm Kirch 2006-01-16 The global climate is changing. The trend towards warmer average surface temperatures for the period since 1976 is roughly three times that of the past 100 years as a whole. In recent years warming seems to be attributable to human activities (man-made environmental changes) like land-use changes, deforestation, urbanisation and the reduction of wetlands. Global climate change is likely to be accompanied by an increase in frequency and intensity of extreme weather events. This brings with it increased health risks and hence a demand for an adequate response from local health authorities to meet these risks. In 2004, the WHO Regional Office for Europe and the European Environment Agency organized an expert meeting to exchange information and develop recommendations on public health and environmental responses to weather and climate extremes, floods, heat-waves and cold spells. This book reflects a collection of case studies and experiences of experts, ministries and international organizations.

Engine Emissions B. P. Pundir 2007 "Engine Emissions: Pollutant Formation and Advances in Control Technology provides an up to date reference to academics and professionals on emissions from SI and CI engine powered vehicles. - In this text, mechanism of formation of engine emissions, effect of engine design and operation variables, world wide vehicle emission standards and emission measurement and test procedures are presented. Advances in emission control technology that have taken place from those used initially and up to the ones employed on the present day vehicles meeting the stringent emission regulations e.g., Euro 4, ULEV, SULEV standards are discussed. - Newer developments on exhaust aftertreatment such as HC adsorber systems, NO_x traps and other de-NO_x catalysts, and advanced engines like GDI and HCCI engines are covered in the book."--Jacket.

Everything Flows Daniel J. Nicholson 2018 "The majority of the papers herein originated at the workshop 'Process Philosophy of Biology' ... held in Exeter in November 2014."--Page vii.

Science, Strategy and War Frans P.B. Osinga 2007-01-24 John Boyd is often known exclusively for the so-called 'OODA' loop model he developed. This model refers to a decision-making process and to the idea that military victory goes to the side that can complete the cycle from observation to action the fastest. This book aims to redress this state of affairs and re-examines John Boyd's original contribution to strategic theory. By highlighting diverse sources that shaped Boyd's thinking, and by offering a comprehensive overview of Boyd's work, this volume demonstrates that the common interpretation of the meaning of Boyd's OODA loop concept is incomplete. It also shows that Boyd's work is much more comprehensive, richer and deeper than is generally thought. With his ideas featuring in the literature on Network Centric Warfare, a key element of the US and NATO's so-called 'military transformation' programmes, as well as in the debate on Fourth Generation Warfare, Boyd continues to exert a strong influence on Western military thinking. Dr Osinga demonstrates how Boyd's work can help us to understand the new strategic threats in the post- 9/11 world, and establishes why John Boyd should be regarded as one of the most important (post)modern strategic theorists.

Tobacco Smoke and Involuntary Smoking IARC Working Group on the Evaluation of Carcinogenic Risks to Humans 2004 The IARC Monographs series publishes authoritative independent assessments by international experts of the carcinogenic risks posed to humans by a variety of agents, mixtures and exposures. They are a resource of information for both researchers and national and international authorities. This volume is particularly significant because tobacco smoke not only causes more deaths from cancer than any other known agent; it also causes more deaths from vascular and respiratory diseases. This volume contains all the relevant information on both direct and passive smoking. It is organised by first looking at the nature of agent before collecting the evidence of cancer in humans. This is followed by carcinogenicity studies on animals and then any other data relevant to an evaluation.

Superconductivity in Nanowires Alexey Bezryadin 2013-02-19 The importance and actuality of nanotechnology is unabated and will be for years to come. A main challenge is to understand the various properties of certain nanostructures, and how to generate structures with specific properties for use in actual applications in Electrical Engineering and Medicine. One of the most important structures are nanowires, in particular superconducting ones. They are highly promising for future electronics, transporting current without resistance and at scales of a few nanometers. To fabricate wires to certain defined standards however, is a major challenge, and so is the investigation and understanding of these properties in the first place. A promising approach is to use carbon nanotubes as well as DNA structures as templates. Many fundamental theoretical questions are still unanswered, e.g. related to the role of quantum fluctuations. This work is tackling them and provides a detailed analysis of the transport properties of such ultrathin wires. It presents an account of theoretical models, charge transport experiments, and also conveys the latest experimental findings regarding fabrication, measurements, and theoretical analysis. In particular, it is the only available resource for the approach of using DNA and carbon nanotubes for nanowire fabrication. It is intended for graduate students and young researchers interested in nanoscale superconductivity. The readers are assumed to have knowledge of the basics of quantum mechanics and superconductivity.

Progress and Prospects in the Management of Oxyanion Polluted Aqua Systems Nurudeen A. Oladoja 2021-07-01 This book is a compendium of research efforts and findings on the sources, occurrences, hydrochemistry, and several operating variables that influence the presence of oxyanions in aqua system. The content of this book has been designed to provide an insightful account of an array of innovative technologies for the management of the impacts of oxyanions in water, the progress and drawbacks of these technologies and those that have been effectively deployed to transform oxyanions in water to

beneficial species. This book further x-rays global laws and economic policies targeted at effectively curtailing the presence of harmful oxyanions in water, challenges facing these policies, and future perspectives on how best to reduce the level of these harmful oxyanions in water to safe limit. The book is relevant to water professionals, policy makers, academics, and research students.

The Death of Rocketry Joel Dickinson 2012-09-08 The story of the first successful reactionless space drive and how it uncovered the greatest loophole in modern physics. Learn about Bob Cook, a legendary pioneer in the inertial propulsion field who invented and patented the Cook Coriolis (CC) drive and the Cook Inertial Propulsion (CIP) engine. This new 2012 edition updates the original 1980 publication, up to the current CID Engine Project of Bob's son, Rob, Jr. By Joel Dickinson with Bob Cook Updated and Edited by Rob Cook, Jr.

How to Do Science with Models Axel Gelfert 2015-12-21 Taking scientific practice as its starting point, this book charts the complex territory of models used in science. It examines what scientific models are and what their function is. Reliance on models is pervasive in science, and scientists often need to construct models in order to explain or predict anything of interest at all. The diversity of kinds of models one finds in science – ranging from toy models and scale models to theoretical and mathematical models – has attracted attention not only from scientists, but also from philosophers, sociologists, and historians of science. This has given rise to a wide variety of case studies that look at the different uses to which models have been put in specific scientific contexts. By exploring current debates on the use and building of models via cutting-edge examples drawn from physics and biology, the book provides broad insight into the methodology of modelling in the natural sciences. It pairs specific arguments with introductory material relating to the ontology and the function of models, and provides some historical context to the debates as well as a sketch of general positions in the philosophy of scientific models in the process.

Green Separation Processes Carlos A. M. Afonso 2006-05-12 This timely book is the first to provide a comprehensive overview of all important aspects of this modern technology with the focus on the "green aspect". The expert authors present everything from reactions without solvents to nanostructures for separation methods, from combinatorial chemistry on solid phase to dendrimers. The result is a ready reference packed full of valuable facts on the latest developments in the field - high-quality information otherwise widely spread throughout articles and reviews. From the contents: * Green chemistry for sustainable development * New synthetic methodologies and the demand for adequate separation processes * New developments in separation processes * Future trends and needs It is a "must-have" for every researcher in the field.

Sustainable Solutions for Elemental Deficiency and Excess in Crop Plants Kumkum Mishra 2020-11-28 This book covers all aspects of deficiency of essential elements and excess of toxic ones in crop plants. The metal deficiency and toxicity are the two sides of same problem that are threatening to sustainable agricultural growth. The book presents prospective strategies for the management of elemental nutrition of crop plants. Chapters are arranged in a manner so as to develop a lucid picture of the topic beginning from basics to advanced research. The content is supplemented with flow charts and figures to make it convenient for readers to holistically grasp the concepts. It will be a value addition for students, research scholars and professionals in understanding the basics as well latest developments in the area of metal deficiency and excess in crop plants.

Representation and Reality in Humans, Other Living Organisms and Intelligent Machines Gordana Dodig-Crnkovic 2017-08-29 This book enriches our views on representation and deepens our understanding of its different aspects. It arises out of several years of dialog between the editors and the authors, an interdisciplinary team of highly experienced researchers, and it reflects the best contemporary view of representation and reality in humans, other living beings, and intelligent machines. Structured into parts on the cognitive, computational, natural sciences, philosophical, logical, and machine perspectives, a theme of the field and the book is building and presenting networks, and the editors hope that the contributed chapters will spur understanding and collaboration between researchers in domains such as computer science, philosophy, logic, systems theory, engineering, psychology, sociology, anthropology, neuroscience, linguistics, and synthetic biology.

Soot Formation in Combustion Henning Bockhorn 2013-03-08 Soot Formation in Combustion represents an up-to-date overview. The contributions trace back to the 1991 Heidelberg symposium entitled "Mechanism and Models of Soot Formation" and have all been reedited by Prof. Bockhorn in close contact with the original authors. The book gives an easy introduction to the field for newcomers, and provides detailed treatments for the specialists. The following list of contents illustrates the topics under review:

Strategic Latency Unleashed Zachary Davis 2021-01-30 The world is being transformed physically and politically. Technology is the handmaiden of much of this change. But since the current sweep of global change is transforming the face of warfare, Special Operations Forces (SOF) must adapt to these circumstances. Fortunately, adaptation is in the SOF DNA. This book examines the changes affecting SOF and offers possible solutions to the complexities that are challenging many long-held assumptions. The chapters explore what has changed, what stays the same, and what it all means for U.S. SOF. The authors are a mix of leading experts in technology, business, policy, intelligence, and geopolitics, partnered with experienced special operators who either cowrote the chapters or reviewed them to ensure accuracy and relevance for SOF. Our goal is to provide insights into the changes around us and generate ideas about how SOF can adapt and succeed in the emerging operational environment.

Genetic Algorithms in Search, Optimization, and Machine Learning David Edward Goldberg 1989 A gentle introduction to genetic algorithms. Genetic algorithms revisited: mathematical foundations. Computer implementation of a genetic algorithm. Some applications of genetic algorithms. Advanced operators and techniques in genetic search. Introduction to genetics-based machine learning. Applications of genetics-based machine learning. A look back, a glance ahead. A review of combinatorics and elementary probability. Pascal with random number generation for fortran, basic, and cobol programmers. A simple genetic algorithm (SGA) in pascal. A simple classifier system(SCS) in pascal. Partition coefficient transforms for problem-coding analysis.

Calculations in Furnace Technology Clive Davies 2016-05-13 Calculations in Furnace Technology presents the theoretical and practical aspects of furnace technology. This book provides information pertinent to the development, application, and efficiency of furnace technology. Organized into eight chapters, this book begins with an overview of the exothermic reactions that occur when carbon, hydrogen, and sulfur are burned to release the energy available in the fuel. This text then evaluates the efficiencies to measure the quantity of fuel used, of flue gases leaving the plant, of air entering, and the heat lost to the surroundings. Other chapters consider that it is important to determine the amount of carbon discharged with the ashes, the quantity and composition of any tar produced, so that a carbon balance can be applied. The final chapter describes the various reactions within the furnace atmosphere and between charges and atmosphere. This book is a valuable resource for fuel technologists, heating and ventilating engineers, and plant operators.

Nuclear Safety in Light Water Reactors Bal Raj Sehgal 2012 This vital reference is the only one-stop resource on how to assess, prevent, and manage severe nuclear accidents in the light water reactors (LWRs) that pose the most risk to the public. LWRs are the predominant nuclear reactor in use around the world today, and they will continue to be the most frequently utilized in the near future. Therefore, accurate determination of the safety issues associated with such reactors is central to a consideration of the risks and benefits of nuclear power. This book emphasizes the prevention and management of severe accidents, in order to teach nuclear professionals how to mitigate potential risks to the public to the maximum extent possible. Engineers, researchers, students and the personnel of vendors, safety authorities and nuclear power generation organizations require the knowledge offered by this volume's globally renowned experts to ensure they obtain a core competency in nuclear safety. Organizes and presents all the latest thought on LWR nuclear safety in one consolidated volume, provided by the top experts in the field, ensuring high-quality, credible and easily accessible information Explains how developments in the field of LWR severe accidents have provided more accurate determinations of risk, thereby shedding new light on the debates surrounding nuclear power safety, particularly in light of the recent tragedy in Japan Concentrates on prevention and management of accidents, developing methodologies to estimate the consequences and associated risks

The Biomedical Engineering Handbook Joseph D. Bronzino 1995-06-07 Presents the account of the use of mechanical ventilation in critically ill patients. This title features coverage that addresses important scientific, clinical, and technical aspects of the field as well as chapters that encompass the full scope of mechanical ventilation, including the physical basis of mechanical ventilation.

Ground and Flight Evaluation of a Small-Scale Inflatable-Winged Aircraft 2002 A small-scale, instrumented research aircraft was flown to investigate the flight characteristics of inflatable wings. Ground tests measured the static structural characteristics of the wing at different inflation pressures, and these results compared favorably with analytical predictions. A research-quality instrumentation system was assembled, largely from commercial off-the-shelf components, and installed in the aircraft. Initial flight operations were conducted with a conventional rigid wing having the same dimensions as the inflatable wing.

Subsequent flights were conducted with the inflatable wing. Research maneuvers were executed to identify the trim, aerodynamic performance, and longitudinal stability and control characteristics of the vehicle in its different wing configurations. For the angle-of-attack range spanned in this flight program.

A New Generation Material Graphene: Applications in Water Technology Mu. Naushad 2018-06-20 This book presents a unique collection of up-to-date applications of graphene for water science. Because water is an invaluable resource and the intelligent use and maintenance of water supplies is one of the most important and crucial challenges that stand before mankind, new technologies are constantly being sought to lower the cost and footprint of processes that make use of water resources as potable water as well as water for agriculture and industry, which are always in desperate demand. Much research is focused on graphene for different water treatment uses. Graphene, whose discovery won the 2010 Nobel Prize in physics, has been a shining star in the material science in the past few years. Owing to its interesting electrical, optical, mechanical and chemical properties, graphene has found potential

applications in a wide range of areas, including water purification technology. A new type of graphene-based filter could be the key to managing the global water crisis. According to the World Economic Forum's Global Risks Report, lack of access to safe, clean water is the biggest risk to society over the coming decade. Yet some of these risks could be mitigated by the development of this filter, which is so strong and stable that it can be used for extended periods in the harshest corrosive environments, and with less maintenance than other filters on the market. The graphene-based filter could be used to filter chemicals, viruses, or bacteria from a range of liquids. It could be used to purify water, dairy products or wine, or in the production of pharmaceuticals. This book provides practical information to all those who are involved in this field.

Air Pollution from Motor Vehicles Asif Faiz 1996-01-01 Contributions by Surhid Gautam and Lit-Mian Chan. This book presents a state-of-the art review of vehicle emission standards and regulations and provides a synthesis of worldwide experience with vehicle emission control technologies and their applications in both industrial and developing countries. Topics covered include: * The two principal international systems of vehicle emission standards: those of North America and Europe * Test procedures used to verify compliance with emissions standards and to estimate actual emissions * Engine and aftertreatment technologies that have been developed to enable new vehicles to comply with emission standards, as well as the cost and other impacts of these technologies * An evaluation of measures for controlling emissions from in-use vehicles * The role of fuels in reducing vehicle emissions, the benefits that could be gained by reformulating conventional gasoline and diesel fuels, the potential benefits of alternative cleaner fuels, and the prospects for using hydrogen and electric power to run motor vehicles with ultra-low or zero emissions. This book is the first in a series of publications on vehicle-related pollution and control measures prepared by the World Bank in collaboration with the United Nations Environment Programme to underpin the Bank's overall objective of promoting transport that is environmentally sustainable and least damaging to human health and welfare.

Merriam-Webster's Vocabulary Builder Mary W. Cornog 1998 The ideal book for people who want to increase their word power. Thorough coverage of 1,200 words and 240 roots while introducing 2,300 words. The Vocabulary Builder is organized by Greek and Latin roots for effective study with nearly 250 new words and roots. Includes quizzes after each root discussion to test progress. A great study aid for students preparing to take standardized tests.

Towards a New Enlightenment? Michelle Baddeley 2019-04-24 Addresses key issues in understanding the decade 2008-2018 and its impact on the societies of the future. Brings together the articles of twenty-two prestigious international experts in different fields of thought. Through an informative approach, the essays form a transversal view of today's thinking. This is the tenth title of the Open Mind essay collection published by BBVA. We are living through years of great importance, marked by the unstoppable evolution of technology, science and the information society. This book brings together twenty-two essays written by prestigious researchers from the world's leading universities on areas as diverse as crucial to our future: climate change, artificial intelligence, economics, cyber-security and geopolitics, democracy, anthropology, new media, astrophysics and cosmology, nanotechnology, biomedicine, globalisation, gender theory and the cities of the future.

A Thesaurus of English Word Roots Horace Gerald Danner 2014-03-27 Horace G. Danner's A Thesaurus of English Word Roots is a compendium of the most-used word roots of the English language. As Timothy B. Noone notes in his foreword: "Dr. Danner's book allows you not only to build up your passive English vocabulary, resulting in word recognition knowledge, but also gives you the rudiments for developing your active English vocabulary, making it possible to infer the meaning of words with which you are not yet acquainted. Your knowledge can now expand and will do so exponentially as your awareness of the roots in English words and your corresponding ability to decode unfamiliar words grows apace. This is the beginning of a fine mental linguistic library: so enjoy!" In A Thesaurus of English Word Roots, all word roots are listed alphabetically, along with the Greek or Latin words from which they derive, together with the roots' original meanings. If the current meaning of an individual root differs from the original meaning, that is listed in a separate column. In the examples column, the words which contain the root are then listed, starting with their prefixes, for example, dysacusia, hyperacusia. These root-starting terms then are followed by terms where the root falls behind the word, e.g., acouesthesia and acoumeter. These words are followed by words where the root falls in the middle or the end, as in such terms as bradyacusia and odyacusis.. In this manner, A Thesaurus of English Word Roots places the word in as many word families as there are elements in the word. This work will interest linguists and philologists and anyone interested in the etymological aspects of English language.