Air Pollution Control Engineering Noel De Nevers

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Sustainable Nuclear Power provides non-nuclear engineers, scientists and energy planners with the necessary information to understand and utilize the major advances in the field. The book demonstrates that nuclear fission technology has the abundance and attainability to provide centuries of safe power with minimal greenhouse gas generation. It also addresses the safety and disposal issues that have plagued the development of the nuclear power industry and scared planners and policy makers as well as the general public for more than two decades. No need for a background in nuclear science! This book guides engineers, scientists and energy professionals through a concise and easy-to-understand overview of key safety and sustainability issues affecting their work. Details the very latest information about today's safest and most energy-efficient reactor designs and reprocessing procedures. Brings to light the fears and hesitation of using nuclear energy and explains that technologies and procedures for safe production and processing are available today.
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Suitable for undergraduates, postgraduates and professionals, this is a comprehensive text on physical and chemical equilibrium. De Nevers is also the author of Fluid Mechanics for Chemical Engineers.
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The atmosphere may be our most precious resource. Accordingly, the balance between its use and protection is a high priority for our civilization. While many of us would consider air pollution to be an issue that the modern world has resolved to a greater extent, it still appears to have considerable influence on the global environment. In many countries with ambitious economic growth targets the acceptable levels of air pollution have been transgressed. Serious respiratory disease related problems have been identified with both indoor and outdoor pollution throughout the world. The 25 chapters of this book deal with several air pollution issues grouped into the following sections: a) air pollution chemistry; b) air pollutant emission control; c) radioactive pollution and d) indoor air quality.
There is nothing more devastating to baseless opinions than good numbers. Air Contaminants, Ventilation, and Industrial Hygiene Economics: The Practitioner's Toolbox and Desktop Handbook helps you obtain "good numbers" on your quest to squash shabby opinions with sound advice. It details real-world applications of good numbers to foster improvements in industrial hygiene, preventing inhalation toxicity and promoting better environmental air quality. Divided into four parts, the book includes: Tips on preparing for the board certification examinations for Certified Industrial Hygienist (CIH), Certified Safety Professional (CSP), Certified Hazardous Materials Manager (CHMM), and Diplomate of the American Board of Toxicology (DABT) 726 solved problems in industrial hygiene, ventilation, occupational-environmental toxicology, occupational health risk management, and chemical safety engineering 154 economic persuasion techniques based on actual case studies to help feather one’s career bed and assist installation of industrial hygiene control methods Tips and guiding principles for professional career development This book provides industrial hygienists with a reference containing the equations, conversions, and formulas they encounter in their day-to-day duties. A study aid to those taking the certification exams (CIH, CSP, CHMM, and DABT), it also includes business economic case studies demonstrating how to preserve your clients' financial resources, promote industrial hygiene, foster worksite safety, learn the financial ropes of business economics, and help control your clients' potential adverse environmental impact and, in so doing, greatly enhance career progress.
What does free market environmentalism have to say about Love Canal, Cleveland's burning Cuyahogo River, golf course pollution, EPA's Toxic Release Inventory Requirement, nonpoint source pollution and river basin associations? In this revealing book Bruce Yandle has compiled eleven essays that address these concerns and provide the reader with an in-depth, market-based analysis of evolving environmental institutions and regulations. This book is essential reading for students and scholars of environmental economics, politics, and law.
Pollution control at Army installations has become a key element in the management process as changing policies stringently dictate the treatment and storage or disposal of wastes harmful to public health and the environment. It is the responsibility of installation personnel to ensure that manufacturing wastes emitted to the environment are minimized. One of the means of controlling manufacturing wastes is to use pollution control equipment (PCE) that is an integral part of the manufacturing process. A team of researchers at the U.S. Army Construction Engineering Research Laboratories (USACERL) researched commercially available PCE and identified critical PCE components. Research results were incorporated into a guideline report for installation personnel responsible for designing and purchasing PCE, so that they can procure the most efficient and cost-effective equipment.
Point Sources of Pollution: Local Effects and their Control is a component of Encyclopedia of Environmental and Ecological Sciences, Engineering and Technology Resources in the global Encyclopedia of Life Support Systems (EOLSS), which is an integrated compendium of twenty one Encyclopedias. Point sources of pollution are the major causes of degradation of ecosystems, and may have significant effects on human health if they are not properly controlled. They can be classified in terms of sources, the discharged media, and the pollutants themselves. Broadly speaking, the sources include municipal and industrial sector activities, and the media include water, air, and solids. Noise is also an important form of pollution. Pollutant compositions from point sources can be vast, varied, and complex, and can vary between different countries and regions. The Theme discusses matters of great relevance to our world such as: Vehicular Emissions; Industrial Pollution; Domestic Pollution; Environmental Pollutants and Their Control; Technologies for Air Pollution Control; and Technologies for Water Pollution Control. These two volumes are aimed at the following five major target audiences: University and College students Educators, Professional practitioners, Research personnel and Policy analysts, managers, and decision makers and NGOs.
Nuclear Energy ebook Collection contains 6 of our best-selling titles, providing the ultimate reference for every nuclear energy engineer’s library. Get access to over 3500 pages of reference material, at a fraction of the price of the hard-copy books. This CD contains the complete ebooks of the following 6 titles: Petrangeli, Nuclear Safety, 9780750667234 Murray, Nuclear Energy, 9780750671361 Bayliss, Nuclear Decommissioning, 9780750677448 Suppes, Sustainable Nuclear Power, 9780123706027 Lewis, Fundamentals of Nuclear Reactor Physics, 9780123706317 Kozima, The Science of the Cold Fusion Phenomenon, 9780080451107 *Six fully searchable titles on one CD providing instant access to the ULTIMATE library of engineering materials for nuclear energy professionals *3500 pages of practical and theoretical

nuclear energy information in one portable package. *Incredible value at a fraction of the cost of the print books

A 25-year tradition of excellence is extended in the fourth edition of this highly regarded text. In clear, authoritative language, the authors discuss the philosophy and procedures for the design of air pollution control systems. Their objective is twofold: to present detailed information on air pollution and its control, and to provide formal design training for engineering students.

Engineers in multiple disciplines—environmental, chemical, civil, and mechanical—contribute to our understanding of air pollution control. To that end, Noel de Nevers has incorporated these multiple perspectives into an engaging and accessible overview of the subject. While based on the fundamentals of chemical engineering, the book is accessible to any reader with only one year of college chemistry. In addition to detailed discussions of individual air pollutants and the theory and practice of air pollution control devices, de Nevers devotes seven chapters to topics that influence device selection and design, such as atmospheric models and U.S. air pollution law. The Third Edition's many in-text examples and end-of-chapter problems provide a more complex treatment of the concepts presented. Significant updates include more discussion on the problem of greenhouse gas emissions and a thorough look at the Volkswagen diesel-emission scandal.

Fundamentals of Environmental and Toxicological Chemistry: Sustainable Science, Fourth Edition covers university-level environmental chemistry, with toxicological chemistry integrated throughout the book. This new edition of a bestseller provides an updated text with an increased emphasis on sustainability and green chemistry. It is organized based on the five spheres of Earth's environment: (1) the hydrosphere (water), (2) the atmosphere (air), (3) the geosphere (solid Earth), (4) the biosphere (life), and (5) the anthrosphere (the part of the environment made and used by humans). The first chapter defines environmental chemistry and each of the five environmental spheres. The second chapter presents the basics of toxicological chemistry and its relationship to environmental chemistry. Subsequent chapters are grouped by sphere, beginning with the hydrosphere and its environmental chemistry, water pollution, sustainability, and water as nature's most renewable resource. Chapters then describe the atmosphere, its structure and importance for protecting life on Earth, air pollutants, and the sustainability of atmospheric quality. The author explains the nature of the geosphere and discusses soil for growing food as well as geosphere sustainability. He also describes the biosphere and its sustainability. The final sphere described is the anthrosphere. The text explains human influence on the environment, including climate, pollution in and by the anthrosphere, and means of sustaining this sphere. It also discusses renewable, nonpolluting energy and introduces workplace monitoring. For readers needing additional basic chemistry background, the book includes two chapters on general chemistry and organic chemistry. This updated edition includes three new chapters, new examples and figures, and many new homework problems.

Pembangunan dunia yang begitu pesat telah menyebabkan peningkatan pencemaran alam sekitar, terutamanya pencemaran udara yang telah memberikan pelbagai kesan negatif. Sehubungan ini kawalan pencemaran udara perlu diusahakan dan dipertingkatkan untuk mencegah pembebasan bahan pencemar berbahaya ke dalam atmosfera. Pengetahuan tentang bahan pencemar, konsep metereologi dan isu pencemaran udara dan iklim sejagat semestinya perlu difahami terlebih dahulu, diikuti kaedah pengukuran kadar pembebasan bahan pencemar serta perkembangan teknologi terkini bagi merealisasikan usaha ini. Senario pencemaran udara ini juga perlu dilihat daripada aspek undang-undang dan peraturan kawalan udara. Buku Pengenalan Kepada Pencemaran Udara ini amat sesuai dijadikan rujukan dan panduan para pelajar, jurutera dan mereka yang berminat tentang masalah dan kawalan pencemaran udara. Gaya penyampaian buku yang ringkas namun padat sememangnya menjadi hasrat penulis agar memudahkan pemahaman pembaca. Kes kajian bahan pencemar daripada sektor tenaga, iaitu arang batu turut dibincangkan untuk memberi gambaran sebenar tentang situasi yang berlaku. Universiti Sains Malaysia, Penerbit Universiti Sains Malaysia

Mathematical probability and statistics are an attractive, thriving, and respectable part of mathematics. Some mathematicians and philosophers of science say they are the gateway to mathematics' deepest mysteries. Moreover, mathematical statistics denotes an accumulation of mathematical discussions connected with efforts to most efficiently collect and use numerical data subject to random or deterministic variations. Currently, the concept of probability and mathematical statistics has become one of the fundamental notions of modern science and the philosophy of nature. This book is an illustration of the use of mathematics to solve specific problems in engineering, statistics, and science in general.

Introduction to equilibrium - Basic thermodynamics - The simplest phase equilibrium examples and some simple estimating rules - Minimization of Gibbs Free energy - Vapor pressure, the clapeyron equation, and single pure chemical species phase equilibrium - Partial molal properties - Fugacity, ideal solutions, activity, activity coefficient - vapor-liquid equilibrium (VLE) at low pressures - Correlating and predicting nonideal VLE - Vapor-liquid equilibrium (VLE) at high pressures - Liquid-liquid, liquid-solid, and gas-solid equilibrium -Chemical equilibrium - Equilibrium in complex chemical reactions - Equilibrium with gravity or centrifugal force, osmotic equilibrium, equilibrium with surface tension - The phase rule.

Air Pollution Control EngineeringThird EditionWaveland Press

This book contains updated results of both theoretical and applied research in the field of sensors and methods for environmental control, mainly with regard to the detection of pollutant species in gaseous and liquid ambients.The main arguments are related to: development of new nanostructured materials as sensing layers and new detection mechanisms; development of micro- and nano-systems and their integration in miniaturised instruments; application of innovative devices in the detection of contaminant chemical species and their monitoring.The proceedings have been selected for coverage in: ? Index to Scientific & Technical Proceedings (ISTP CDROM version / ISI Proceedings)

????:Industrial water pollution control

This handbook provides information for professionals attempting to reduce and eliminate air pollution problems. It contains information on all aspects of air pollution, and also examines the technical aspects of air pollution control equipment. Many practical applications are provided, and the text is referenced to assist the reader in further research. The major scientific areas of air pollution are brought together with practical engineering solutions, and will help air quality and pollution control managers to reduce maintenance costs and prevent deterioration of installations.

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