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Official Gazette of the United States Patent and Trademark Office

Trademarks

Engineering Solutions for Sustainability

Materials and Resources II

Springer *With impending and burgeoning societal issues affecting both developed and emerging nations, the global engineering community has a responsibility and an opportunity to truly make a difference and contribute. The papers in this collection address what materials and resources are integral to meeting basic societal sustainability needs in critical areas of energy, transportation, housing, and recycling. Contributions focus on the engineering answers for cost-effective, sustainable pathways; the strategies for effective use of engineering solutions; and the role of the global engineering community. Authors share perspectives on the major engineering challenges that face our world today; identify, discuss, and prioritize engineering solution needs; and establish how these fit into developing global-demand pressures for materials and human resources.*

Surface Tension and Related Thermodynamic Quantities of Aqueous Electrolyte Solutions

CRC Press *Surface tension provides a thermodynamic avenue for analyzing systems in equilibrium and formulating phenomenological explanations for the behavior of constituent molecules in the surface region. While there are extensive experimental observations and established ideas regarding desorption of ions from the surfaces of aqueous salt solutions, a more successful discussion of the theory has recently emerged, which allows the quantitative calculation of the distribution of ions in the surface region. Surface Tension and Related Thermodynamic Quantities of Aqueous Electrolyte Solutions provides a detailed and systematic analysis of the properties of ions at the air/water interface. Unifying older and newer theories and measurements, this book emphasizes the contributions of simple ions to surface tension behavior, and the practical consequences. It begins with a general discussion on Gibbs surface thermodynamics, offering a guide to his theoretical insight and formulation of the boundary between fluids. The text then discusses the thermodynamic formulae that are useful for practical experimental work in the analysis of fluid/fluid interfaces. Chapters cover surface tension of pure water at air/water and air/oil interfaces, surface tension of solutions and the thermodynamic quantities associated with the adsorption and desorption of solutes, and surface tension of simple salt solutions. They also address adsorption of ions at the air/water interface, surface tension of solutions and the effect of temperature, adsorption from mixed electrolyte solutions, and thermodynamic properties of zwitterionic amino acids in the surface region. Focusing on the thermodynamic properties of ions at air/fluid interfaces, this book gives scientists a quantitative, rigorous, and objectively experimental methodology they can employ in their research.*

Introduction to the Physical Chemistry of Foods

CRC Press *Introduction to the Physical Chemistry of Foods provides an easy-to-understand text that encompasses the basic principles of physical chemistry and their relationship to foods and their processing. Based on the author's years of teaching and research experience in the physical chemistry of food, this book offers the necessary depth of information and mathematical bases presented in a clear manner for individuals with minimal physical chemistry background. The text begins with basic physical chemistry concepts, building a foundation of knowledge so readers can then grasp the physical chemistry of food, including processes such as crystallization, melting, distillation, blanching, and homogenization as well as rheology and emulsion and foam stability. The chapters cover thermodynamic*

systems, temperature, and ideal gases versus real gases; chemical thermodynamics and the behavior of liquids and solids, along with phase transitions; and the thermodynamics of small molecule and macromolecule dispersions and solutions. The text describes surface activity, interfaces, and adsorption of molecules. Attention is paid to surface active materials, with a focus on self-assembled and colloidal structures. Emulsions and foams are covered in a separate chapter. The book also introduces some of the main macroscopic manifestations of colloidal (and other) interactions in terms of rheology. Finally, the author describes chemical kinetics, including enzyme kinetics, which is vital to food science. This book provides a concise, readable account of the physical chemistry of foods, from basic thermodynamics to a range of applied topics, for students, scientists, and engineers with an interest in food science.

Translating Into Success

Cutting-edge strategies for going multilingual in a global age

John Benjamins Publishing *The boom in international trade has brought with it an increased demand for addressing local consumers in their native language and cultural idiom. Given the complex nature and new media involved in communicating with their constituent markets, companies are developing ever more complex tools and techniques for managing foreign-language communication. This book presents select case studies that illustrate the state-of-the-art of language management. It covers a cross-section of sectors, each of which has particular subtleties in language management: • software localization • finance • medical devices • automotive The book also covers a cross-section of topical and strategic issues: • time-to-market (scheduling challenges; simultaneous release in multiple languages) • global terminology management • leveraging Internet, intranet, and email • centralized versus decentralized management models • financial and budgeting techniques • human factors; management issues unique to language projects • technological innovation in language management (terminology tools, automatic translation) The target audience is language professionals involved with the management aspect of language projects. This includes translators and linguists, managers at language-service providers, language managers at manufacturing/service companies, educators and language/translation students. The heart of the book is the concept of the case study, particularly the Harvard Business School case-study model. Industry leaders and analysts provide some 15 case studies covering the spectrum of language applications. Readable and nonacademic — it can serve both as a text for those studying language and translation, as well as those in the field who need to know the "state-of-the-art" in language management.*

Software Designers in Action

A Human-Centric Look at Design Work

CRC Press *Software Designers in Action: A Human-Centric Look at Design Work examines how developers actually perform software design in their day-to-day work. The book offers a comprehensive look at early software design, exploring the work of professional designers from a range of different viewpoints. Divided into four sections, it discusses various theoretical examinations of the nature of software design and particular design problems, critically assesses the processes and practices that designers follow, presents in-depth accounts of key supporting elements of design, and explores the role of human interaction in software design. With highly interdisciplinary contributions that together provide a unique perspective on software development, this book helps readers understand how software design is performed today and encourages the current community of researchers to push the field forward.*

Solutions Manual: Understanding Physics Like a Nerd Without Becoming One & More

Part I: Mechanics

Emmanuel Light of the World Publishing Company, LLC *This solution manual is a companion book written by the authors of "Understanding Physics like a Nerd without Becoming One &More". The character of the book solves the problems that were assigned at the end of each chapter. The authors believe their readers will be inspired by the tactics employed by Cassie to tackle the problems based on the lessons she learned from Professor James.*

Fluctuation Theory of Solutions

Applications in Chemistry, Chemical

Engineering, and Biophysics

CRC Press *There are essentially two theories of solutions that can be considered exact: the McMillan–Mayer theory and Fluctuation Solution Theory (FST). The first is mostly limited to solutes at low concentrations, while FST has no such issue. It is an exact theory that can be applied to any stable solution regardless of the number of components and their concentrations, and the types of molecules and their sizes. Fluctuation Theory of Solutions: Applications in Chemistry, Chemical Engineering, and Biophysics outlines the general concepts and theoretical basis of FST and provides a range of applications described by experts in chemistry, chemical engineering, and biophysics. The book, which begins with a historical perspective and an introductory chapter, includes a basic derivation for more casual readers. It is then devoted to providing new and very recent applications of FST. The first application chapters focus on simple model, binary, and ternary systems, using FST to explain their thermodynamic properties and the concept of preferential solvation. Later chapters illustrate the use of FST to develop more accurate potential functions for simulation, describe new approaches to elucidate microheterogeneities in solutions, and present an overview of solvation in new and model systems, including those under critical conditions. Expert contributors also discuss the use of FST to model solute solubility in a variety of systems. The final chapters present a series of biological applications that illustrate the use of FST to study cosolvent effects on proteins and their implications for protein folding. With the application of FST to study biological systems now well established, and given the continuing developments in computer hardware and software increasing the range of potential applications, FST provides a rigorous and useful approach for understanding a wide array of solution properties. This book outlines those approaches, and their advantages, across a range of disciplines, elucidating this robust, practical theory.*

Report in Compliance with House Bill No. 2402, Section 9

U.S. Department of Transportation Federal Motor Carrier Safety Administration Register

Extensions of Moser–Bangert

Theory

Locally Minimal Solutions

Springer Science & Business Media *This self-contained monograph presents extensions of the Moser–Bangert approach that include solutions of a family of nonlinear elliptic PDEs on Rn and an Allen–Cahn PDE model of phase transitions. After recalling the relevant Moser–Bangert results, Extensions of Moser–Bangert Theory pursues the rich structure of the set of solutions of a simpler model case, expanding upon the studies of Moser and Bangert to include solutions that merely have local minimality properties. The work is intended for mathematicians who specialize in partial differential equations and may also be used as a text for a graduate topics course in PDEs.*

Industrial Air Quality and Ventilation

Controlling Dust Emissions

CRC Press *In the field of industrial ventilation and air quality, a lack of adequate analysis for aerodynamic processes, as well as a shortage of properly equipped computer facilities, has forced specialists to rely on an empirical approach to find answers in the past. Commonly based on crude models, practical data, or countertypes, the answers often offered have been imprecise. Summarizing the results of the authors' research conducted over the past 40 years, Industrial Air Quality and Ventilation: Controlling Dust Emissions examines air injection in granular material streams and defines the closed hood capacity widely used in the mechanical reprocessing of minerals. This book introduces a methodological approach (dynamic theory) that broadens the range of granular materials, including inter-heated material. It considers the mechanisms of ejecting air in different variations from uniform air motion processes in closed chutes to the forming of accelerated air streams in a free particles flow. It also provides the scientific basics of calculation for local exhaust ventilation dust production (aspiration), and enables readers to accurately apply these results to the mechanical processing of various materials. • Describes the engineering methods for calculating the amounts of aspirated air for various industries and technological units • Assists in developing new environmentally clean and competitive advanced technologies and equipment for the processing of granular materials • Proposes new technical solutions that are more sanitary and require less energy and water consumption • Looks at specific industry examples of localization of release Industrial Air Quality and Ventilation: Controlling Dust Emissions proposes low power consumption-based technical solutions and outlines more accurate methods of calculating recommended*

performance. Richly illustrated with practical suggestions and techniques, the text includes real-world applications in the field of aerodynamic processes within gravitational fluxes of granular material, and encourages the development of new environmentally clean and competitive advanced technologies and equipment for the processing of granular materials.

Carbon Nanomaterials

CRC Press *This book provides information on synthesis, properties, and applications of carbon nanomaterials. With novel materials, such as graphene (atomically flat carbon) or carbon onions (carbon nanospheres), the family of carbon nanomaterials is rapidly growing. This book provides a state-of-the-art overview and in-depth analysis of the most important ca*

Multilingual Computing & Technology

Methods of Analytical Dynamics

Courier Corporation *Encompassing formalism and structure in analytical dynamics, this graduate-level text discusses fundamentals of Newtonian and analytical mechanics, rigid body dynamics, problems in celestial mechanics and spacecraft dynamics, more. 1970 edition.*

Organic Pollutants in Wastewater II

Methods of Analysis, Removal and Treatment

Materials Research Forum LLC *Wastewater represents an alternative to freshwater if it can be treated successfully for re-use applications. Promising techniques involve photocatalysis, photodegradation, adsorption, bioreactors, nanocomposites, nanofiltration and membranes. Keywords: Wastewater Treatment, Biohydrogen Production, Bioethanol Production, Biological Wastewater, Carbon Nanotubes, Dairy Wastewater, Graphene-based Nanocomposites, Hormones in Wastewater, Malachite Green Removal, Membrane Bioreactors, Nanocomposites, Nanofiltration, Nanomembranes, Nanotubes, Organic Pollutants, Pesticides Removal, Photocatalysis, Photodegradation, Reversed Osmosis, Textile Wastewater.*

Advanced Geotechnical Engineering Soil-Structure Interaction using Computer and Material Models

CRC Press *Soil-structure interaction is an area of major importance in geotechnical engineering and geomechanics Advanced Geotechnical Engineering: Soil-Structure Interaction using Computer and Material Models covers computer and analytical methods for a number of geotechnical problems. It introduces the main factors important to the application of computer methods and constitutive models with emphasis on the behavior of soils, rocks, interfaces, and joints, vital for reliable and accurate solutions. This book presents finite element (FE), finite difference (FD), and analytical methods and their applications by using computers, in conjunction with the use of appropriate constitutive models; they can provide realistic solutions for soil–structure problems. A part of this book is devoted to solving practical problems using hand calculations in addition to the use of computer methods. The book also introduces commercial computer codes as well as computer codes developed by the authors. Uses simplified constitutive models such as linear and nonlinear elastic for resistance-displacement response in 1-D problems Uses advanced constitutive models such as elasticplastic, continued yield plasticity and DSC for microstructural changes leading to microcracking, failure and liquefaction Delves into the FE and FD methods for problems that are idealized as two-dimensional (2-D) and three-dimensional (3-D) Covers the application for 3-D FE methods and an approximate procedure called multicomponent methods Includes the application to a number of problems such as dams , slopes, piles, retaining (reinforced earth) structures, tunnels, pavements, seepage, consolidation, involving field measurements, shake table, and centrifuge tests Discusses the effect of interface response on the behavior of geotechnical systems and liquefaction (considered as a microstructural instability) This text is useful to practitioners, students, teachers, and researchers who have backgrounds in geotechnical, structural engineering, and basic mechanics courses.*

2014 Oncology Nursing Drug Handbook

Jones & Bartlett Publishers *Written especially for nurses caring for patients with cancer, the 2014 Oncology Nursing Drug Handbook uniquely expresses drug therapy in terms of the nursing process: nursing diagnoses, etiologies of toxicities, and key points for nursing assessment, intervention, and evaluation. Updated annually, this essential reference provides valuable information on effective symptom management, patient education, and chemotherapy administration.Completely revised and updated, the 2014 Oncology Nursing Drug Handbook includes:* New chapter on Chemobiotherapy for Noncancer Diseases* Specific drugs described in*

terms of their mechanism of action, metabolism, drug interactions, laboratory effects/interference, and special considerations* The most important and common drug side effects* Greater discussion of fundamentals of malignant transformation, new molecular targets, and drugs in the pipelineNew drug entries include: enzalutamide, omacetaxine (Synribo), tbo-filgrastim (Netroval), ado-trastuzumab emtansine, aflibercept, bosutinib, cabozantinib, carfilzomib, dabrafenib, pomalidomide, ponatinib, regorafenib, trametinib, abatacept (Orencia), adalimumab (Humira), certolizumab pegol (CIMZA), etanercept (Enbrel), golimumab (Simponi), infliximab (Remicade), tocilizumab (Actemra), and tofacitinib (Xeljanz).

Department of Homeland Security Appropriations for 2015

Hearings Before a Subcommittee of the Committee on Appropriations, House of Representatives, One Hundred Thirteenth Congress, Second Session

Microbial Fuel Cells

Materials and Applications

Materials Research Forum LLC *Microbial fuel cells are very promising as renewable energy sources. They are based on the direct conversion of organic or inorganic materials to electricity by utilizing microorganisms as catalysts. These cells are well suited for applications that require only low power, e.g. ultracapacitors, toys, electronic gadgets, meteorological buoys, remote sensors, digital wristwatches, smartphones and hardware in space and robots. In addition to electricity generation, microbial fuel cells can be used for wastewater treatment, desalination and biofuel production. The book addresses characterization techniques and operating conditions of microbial fuel cells, as well as the usefulness of various types of anode and cathode materials.*

Electro-Osmosis of Polymer Solutions

Linear and Nonlinear Behavior

Springer *This thesis focuses on the theoretical description of electro-osmosis of polymer solutions. In particular, it emphasizes the importance of considering non-uniform profiles of the solution viscosity and polymer concentration near a solid surface. The thesis begins with an introduction to fundamental theories and experimental observations for beginners in this field, concerning electrolyte solutions, electric double layers, and electrokinetics. In Chapter 2, the author discusses the linear response of electro-osmotic flow with respect to applied electric fields in aqueous polyelectrolyte solutions, and predicts a possibility of flow reversal caused by oppositely charged polyelectrolytes adsorbed on a charged surface. In Chapter 3, the author extends the discussion to non-linear electro-osmotic flow driven by applied electric fields in neutral polymer solutions. The dynamics of polymers are modeled and simulated using Brownian dynamics and kinetic theory. Finally, the thesis is summarized in Chapter 4. The introduction provides a comprehensive review of electrokinetics for graduate students and researchers interested in soft matter physics. An additional attraction is that readers can effectively learn various theoretical approaches to electro-osmosis.*

Rarefied Gas Dynamics

Papers Selected from the Eleventh International Symposium on Rarefied Gas Dynamics, Cannes, France, July 1978, Subsequently Revised for this Volume

Convective Heat Transfer, Third

Edition

CRC Press *Intended for readers who have taken a basic heat transfer course and have a basic knowledge of thermodynamics, heat transfer, fluid mechanics, and differential equations, Convective Heat Transfer, Third Edition provides an overview of phenomenological convective heat transfer. This book combines applications of engineering with the basic concepts of convection. It offers a clear and balanced presentation of essential topics using both traditional and numerical methods. The text addresses emerging science and technology matters, and highlights biomedical applications and energy technologies. What's New in the Third Edition: Includes updated chapters and two new chapters on heat transfer in microchannels and heat transfer with nanofluids Expands problem sets and introduces new correlations and solved examples Provides more coverage of numerical/computer methods The third edition details the new research areas of heat transfer in microchannels and the enhancement of convective heat transfer with nanofluids. The text includes the physical mechanisms of convective heat transfer phenomena, exact or approximate solution methods, and solutions under various conditions, as well as the derivation of the basic equations of convective heat transfer and their solutions. A complete solutions manual and figure slides are also available for adopting professors. Convective Heat Transfer, Third Edition is an ideal reference for advanced research or coursework in heat transfer, and as a textbook for senior/graduate students majoring in mechanical engineering and relevant engineering courses.*

Software Engineering Trends and Techniques in Intelligent Systems

Proceedings of the 6th Computer Science On-line Conference 2017 (CSOC2017), Vol 3

Springer *This book presents new approaches and methods to solve real-world problems as well as exploratory research describing novel approaches in the field of software engineering and intelligent systems. It particularly focuses on modern trends in selected fields of interest, introducing new algorithms, methods and application of intelligent systems in software engineering. The book constitutes the refereed proceedings of the Software Engineering Trends and Techniques in Intelligent Systems Section of the 6th Computer Science On-line Conference 2017 (CSOC 2017), held in April 2017.*

Handbook of Sinc Numerical Methods

CRC Press *Handbook of Sinc Numerical Methods presents an ideal road map for handling general numeric problems. Reflecting the author's advances with Sinc since 1995, the text most notably provides a detailed exposition of the Sinc separation of variables method for numerically solving the full range of partial differential equations (PDEs) of interest to sci*

Handbook of Micromechanics and Nanomechanics

CRC Press *This book presents the latest developments and applications of micromechanics and nanomechanics. It particularly focuses on some recent applications and impact areas of micromechanics and nanomechanics that have not been discussed in traditional micromechanics and nanomechanics books on metamaterials, micromechanics of ferroelectric/piezoelectric, electromagnetic materials, micromechanics of interface, size effects and strain gradient theories, computational and experimental nanomechanics, multiscale simulations and theories, soft matter composites, and computational homogenization theory. This book covers analytical, experimental, as well as computational and numerical approaches in depth.*

Report of the Secretary of the Senate

Digital Signal Processing Handbook on CD-ROM

CRC Press *A best-seller in its print version, this comprehensive CD-ROM reference contains unique, fully searchable coverage of all major topics in digital signal processing (DSP), establishing an invaluable, time-saving resource for the engineering community. Its unique and broad scope includes contributions from all DSP specialties, including: telecommunications, computer engineering, acoustics, seismic data analysis, DSP software and hardware, image and video processing, remote sensing, multimedia applications, medical technology, radar and sonar applications*

Macbook Air M2 User Guide

The Step By Step Macbook Air M2 Manual with Illustrations for Beginners

Independently Published *Did you recently purchase the MacBook Air M2 but unable to explore all the features available on it? Are you looking for a comprehensive user guide that will help you setup and understand your MacBook Air M2? Then, you need to get your hands on this book. The MacBook Air M2 is 11 mm thick and weighs 2.7 lbs featuring the M2 processor. It features a 13.6-inch Liquid Retina display and a FaceTime camera with 1080p resolution housed in a notch. It also has a MagSafe connector, two Thunderbolt ports, and a 3.5mm jack connector. Apple has radically modified the design of the MacBook Air with the newest update. It provides superior performance, more than 14 hours of battery life, and a vivid color display in a pleasantly compact design. If you wish to learn how to use and master your MacBook Air M2 Chip, this guide covers you with all you'll ever need. This guide is written for both beginners, seniors, and experts. The topics featured in this book are: ● Using the Mac ● Transferring documents ● Keyboard shortcuts ● How to find things ● Sorting in finder ● Setting up with ethernet ● Setting up wireless networks ● And many more! The book contains instructions, colorful images, tips, and tricks to master and operate the MacBook Air M2 like a pro. If you're also switching from Windows computers to MacOS for the first time, don't worry! This guide will show you all you need to make the jump smooth and stress-free.*

Plunkett's E-Commerce & Internet Business Almanac 2006: Your Reference Source to All Facets of the Internet Business

Plunkett Research, Ltd. *This new almanac will be your ready-reference guide to the E-Commerce & Internet Business worldwide! In one carefully-researched volume, you'll get all of the data you need on E-Commerce & Internet Industries, including: complete E-Commerce statistics and trends; Internet research and development; Internet growth companies; online services and markets; bricks & clicks and other online retailing strategies; emerging e-commerce technologies; Internet and World*

Wide Web usage trends; PLUS, in-depth profiles of over 400 E-Commerce & Internet companies: our own unique list of companies that are the leaders in this field. Here you'll find complete profiles of the hot companies that are making news today, the largest, most successful corporations in all facets of the E-Commerce Business, from online retailers, to manufacturers of software and equipment for Internet communications, to Internet services providers and much more. Our corporate profiles include executive contacts, growth plans, financial records, address, phone, fax, and much more. This innovative book offers unique information, all indexed and cross-indexed. Our industry analysis section covers business to consumer, business to business, online financial services, and technologies as well as Internet access and usage trends. The book includes numerous statistical tables covering such topics as e-commerce revenues, access trends, global Internet users, etc. Purchasers of either the book or PDF version can receive a free copy of the company profiles database on CD-ROM, enabling key word search and export of key information, addresses, phone numbers and executive names with titles for every company profiled.

Decommissioning Health Physics A Handbook for MARSSIM Users, Second Edition

CRC Press *Experienced Guidance on the Technical Issues of Decommissioning Projects Written by one of the original MARSSIM authors, Decommissioning Health Physics: A Handbook for MARSSIM Users, Second Edition is the only book to incorporate all of the requisite technical aspects of planning and executing radiological surveys in support of decommissioning. Extensively revised and updated, it covers survey instrumentation, detection sensitivity, statistics, dose modeling, survey procedures, and release criteria. New to the Second Edition Chapter on hot spot assessment that recognizes appropriate dosimetric significance of hot spots when designing surveys and includes a new approach for establishing hot spot limits Chapter on the clearance or release of materials, highlighting aspects of the MARSAME manual Revised chapter on characterization survey design to reflect guidance in ANSI N13.59 on the value of data quality objectives (DQOs) Updated regulations and guidance documents throughout Updated survey instrumentation used to support decontamination and decommissioning (D&D) surveys, including expanded coverage of in situ gamma spectrometers Revised statistics chapter that includes an introduction to Bayesian statistics and additional double sampling and ranked set sampling statistical approaches More case studies and examples throughout Implement the Surveys Effectively and Avoid Common Pitfalls With more than 20 years of experience as a practitioner in the decommissioning survey field, author Eric W. Abelquist prepares you for the technical challenges associated with planning and executing MARSSIM surveys. He discusses the application of statistics for survey design and data reduction and*

addresses the selection of survey instrumentation and detection sensitivity. He presents final status survey procedures and covers pathway modeling to translate release criteria to measurable quantities. He also offers solutions for navigating the complexity inherent in designing and implementing MARSSIM and MARSAME surveys. Detailed derivations, thorough discussions of technical bases, and real-world examples and case studies illustrate effective strategies for demonstrating to regulators and stakeholders that contaminated sites can be released for other beneficial uses.

Solutions!

For People, Processes and Paper

Thin Layer Chromatography in Drug Analysis

CRC Press *Used routinely in drug control laboratories, forensic laboratories, and as a research tool, thin layer chromatography (TLC) plays an important role in pharmaceutical drug analyses. It requires less complicated or expensive equipment than other techniques, and has the ability to be performed under field conditions. Filling the need for an up-to-date, complete reference, Thin Layer Chromatography in Drug Analysis covers the most important methods in pharmaceutical applications of TLC, namely, analysis of bulk drug material and pharmaceutical formulations, degradation studies, analysis of biological samples, optimization of the separation of drug classes, and lipophilicity estimation. The book is divided into two parts. Part I is devoted to general topics related to TLC in the context of drug analysis, including the chemical basis of TLC, sample pleparation, the optimization of layers and mobile phases, detection and quantification, analysis of ionic compounds, and separation and analysis of chiral substances. The text addresses the newest advances in TLC instrumentation, two-dimensional TLC, quantification by slit scanning densitometry and image analysis, statistical processing of data, and various detection and identification methods. It also describes the use of TLC for solving a key issue in the drug market—the presence of substandard and counterfeit pharmaceutical products. Part II provides an in-depth overview of a wide range of TLC applications for separation and analysis of particular drug groups. Each chapter contains an introduction about the structures and medicinal actions of the described substances and a literature review of their TLC analysis. A useful resource for chromatographers, pharmacists, analytical chemists, students, and R&D, clinical, and forensic laboratories, this book can be utilized as a manual, reference, and teaching source.*

Chemistry Success in 20 Minutes a Day

Learning Express Llc *Offers a diagnostic test and twenty lessons covering vital chemistry skills.*

Generating Families in the Restricted Three-Body Problem

Springer Science & Business Media *The classical restricted problem of three bodies is of fundamental importance for its applications to astronomy and space navigation, and also as a simple model of a non-integrable Hamiltonian dynamical system. A central role is played by periodic orbits, of which a large number have been computed numerically. In this book an attempt is made to explain and organize this material through a systematic study of generating families, which are the limits of families of periodic orbits when the mass ratio of the two main bodies becomes vanishingly small. The most critical part is the study of bifurcations, where several families come together and it is necessary to determine how individual branches are joined. Many different cases must be distinguished and studied separately. Detailed recipes are given. Their use is illustrated by determining a number of generating families, associated with natural families of the restricted problem, and comparing them with numerical computations in the Earth-Moon and Sun-Jupiter case.*

American Translators Association Scholarly Monograph Series

Nanomaterials for Alcohol Fuel Cells

Materials Research Forum LLC *Alcohol fuel cells are very attractive as power sources for mobile and portable applications. As they convert the chemical energy of fuels into electricity, much recent research is directed at developing suitable and efficient catalysts for the process. The present book focuses on pertinent types of nanomaterial-based catalysts, membranes and supports.*

Thermal Use of Shallow Groundwater

CRC Press *The thermal use of the shallow subsurface is increasingly being promoted and implemented as one of many promising measures for saving energy.*

A series of questions arises concerning the design and management of underground and groundwater heat extraction systems, such as the sharing of the thermal resource and the assessment of its long-term potential. For the proper design of thermal systems it is necessary to assess their impact on underground and groundwater temperatures. Thermal Use of Shallow Groundwater introduces the theoretical fundamentals of heat transport in groundwater systems, and discusses the essential thermal properties. It presents a complete overview of analytical and numerical subsurface heat transport modeling, providing a series of mathematical tools and simulation models based on analytical and numerical solutions of the heat transport equation. It is illustrated with case studies from Austria, Germany, and Switzerland of urban thermal energy use, and heat storage and cooling. This book gives a complete set of analytical solutions together with MATLAB® computer codes ready for immediate application or design. It offers a comprehensive overview of the state of the art of analytical and numerical subsurface heat transport modeling for students in civil or environmental engineering, engineering geology, and hydrogeology, and also serves as a reference for industry professionals.

D & B Consultants Directory

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