Pharmaceutical Engineering By C V S Subrahmanyam

This book includes recent advances in the use of clays in the design of medicinal products and medicinal devices. The pharmaceutical applications of nanoclays are far ranging, because of their distinct advantages: they are versatile (possess a wide range of mechanical, chemical and physical properties) and available at reasonable costs. Some special clays (mainly kaolinite, halloysite, montmorillonite, saponite, hectorite, palygorskite and sepiolite), as well as semi-synthetic (organoclays) or synthetic (double layer hydroxides) derivatives, are very useful materials for modulating drug delivery. In the last decade, several actives have been loaded onto nanoclays and similar inorganic excipients to increase solubility, improve stability, reduce toxicity, and enhance bioavailability, with a consequent increase in therapeutic response. Polymer/clay nanocomposites with synergic properties have been developed, showing improved mechanical properties with respect to the pristine polymer matrices and allowing modified release of loaded actives. Moreover, nanoclays have very recently demonstrated positive effects on the proliferation and migration of fibroblasts. The development of clay-based medicinal products and medicinal devices requires experience in the fields of both clay structure and properties and pharmaceutical technology design.

Established in 1960, Advances in Heterocyclic Chemistry is the definitive serial in the area-one of great importance to organic chemists, polymer chemists, and many biological scientists. Written by established authorities in the field, the comprehensive reviews combine descriptive chemistry and mechanistic insight and yield an understanding of how the chemistry drives the properties.

This edited volume brings together the expertise of numerous specialists on the topic of particles – their physical, chemical, pharmacological and toxicological characteristics – when they are a component of pharmaceutical products and formulations. The book discusses in detail properties such as the composition, size, shape, surface properties and porosity of particles with respect to how they impact the formulations and products in which they are used and the effective delivery of pharmaceutical active ingredients. It considers all dosage forms of pharmaceuticals involving particles, from powders to tablets, creams to ointments, and solutions to dry-powder inhalers, also including the latest nanomedicine products. Further, it discusses examples of particle toxicity, as well as the important subject of pharmaceutical industry regulations, guidelines and legislation. The book is of interest to researchers and practitioners who work on testing and developing pharmaceutical dosage and delivery systems.

This timely guide covers all aspects of litigation involving drugs, medical devices, vaccines and other FDA-regulated prescription products.

New Scientist magazine was launched in 1956 "for all those men and women who are interested in scientific discovery, and in its industrial, commercial and social consequences". The brand's mission is no different today - for its consumers, New Scientist reports, explores and interprets the results of human endeavour set in the context of society and culture.

Pharmaceutical EngineeringUnit Operations - IIPharmaceutical EngineeringPrinciples and PracticesPractical Pharmaceutical EngineeringWiley

A practical guide to all key the elements of pharmaceuticals and biotech manufacturing and design Engineers working in the pharmaceutical and biotech industries are routinely called upon to handle operational issues outside of their fields of expertise. Traditionally the competencies required to fulfill those tasks were achieved piecemeal, through years of self-teaching and on-the-job experience—until now. Practical Pharmaceutical Engineering provides readers with the technical information and tools needed to deal with most common engineering issues that can arise in the course of day-to-day operations of pharmaceutical/biotech research and manufacturing. Engineers working in pharma/biotech wear many hats. They are involved in the conception, design, construction, and operation of research facilities and manufacturing plants, as well as the scale-up, manufacturing, packaging, and labeling processes. They have to implement FDA regulations, validation assurance, quality control, and Good Manufacturing Practices (GMP) compliance measures, and to maintain a high level of personal and environmental safety. This book provides readers from a range of engineering specialties with a detailed blueprint and the technical knowledge needed to tackle those critical responsibilities with confidence. At minimum, after reading this book, readers will have the knowledge needed to constructively participate in contractor/user briefings. Provides pharmaceutical industry professionals with an overview of how all the parts fit together and a level of expertise that can take years of on-the-job experience to acquire Addresses topics not covered in university courses but which are crucial to working effectively in the pharma/biotech industry Fills a gap in the literature, providing important information on pharmaceutical operation issues required for meeting regulatory guidelines, plant support design, and project engineering Covers the basics of HVAC systems, water systems, electric systems, reliability, maintainability, and quality assurance, relevant to pharmaceutical engineering Practical Pharmaceutical Engineering is an indispensable “tool of the trade” for chemical engineers, mechanical engineers, and pharmaceutical engineers employed by pharmaceutical and biotech companies, engineering firms, and consulting firms. It also is a must-read for engineering students, pharmacy students, chemistry students, and others considering a career in pharmaceuticals.

Enables readers to apply process dynamics and control theory to solve bioprocess and drug delivery problems The control of biological and drug delivery systems is critical to the health of millions of people worldwide. As a result, researchers in systems biology and drug delivery rely on process dynamics and control theory to build our knowledge of cell behavior and to develop more effective therapeutics, controlled release devices, and drug administration protocols to manage disease. Written by a leading expert and educator in the field, this text helps readers develop a deep understanding of process dynamics and control theory in order to analyze and solve a broad range of problems in bioprocess and drug delivery systems. For example, readers will learn how stability criteria can be used to gain new insights into the regulation of biological pathways and lung mechanics. They'll also learn how the concept of a time

constant is used to capture the dynamics of diffusive processes. Readers will also master such topics as external disturbances, transfer functions, and input/output models with the support of the author's clear explanations, as well as: Detailed examples from the biological sciences and novel drug delivery technologies 160 end-of-chapter problems with step-by-step solutions Demonstrations of how computational software such as MATLAB and Mathematica solve complex drug delivery problems Control of Biological and Drug-Delivery Systems for Chemical, Biomedical, and Pharmaceutical Engineering is written primarily for undergraduate chemical and biomedical engineering students; however, it is also recommended for students and researchers in pharmaceutical engineering, process control, and systems biology. All readers will gain a new perspective on process dynamics and control theory that will enable them to develop new and better technologies and therapeutics to treat human disease.

Issues in Artificial Intelligence, Robotics and Machine Learning: 2011 Edition is a ScholarlyEditions™ eBook that delivers timely, authoritative, and comprehensive information about Artificial Intelligence, Robotics and Machine Learning. The editors have built Issues in Artificial Intelligence, Robotics and Machine Learning: 2011 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Artificial Intelligence, Robotics and Machine Learning in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Issues in Artificial Intelligence, Robotics and Machine Learning: 2011 Edition has been produced by the world’s leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.

Peterson's The Best Scholarships for the Best Students-Preparing a Strong Curriculum Vitae/Resume walks students through the process of preparing their resumes or CVs. Examples of actual resumes and CVs are included, along with strategies for selecting what should and should not appear on a resume and/or CV. Peterson's The Best Scholarships for the Best Students provides expert strategies to help successful students apply for and win major academic and experiential awards. For more information see Peterson's The Best Scholarships for the Best Students.

This fully revised and updated edition begins with insights into the scope, importance and continuing growth opportunities in the nutraceutical and functional food industries and explores the latest regulatory changes and their impacts. The book demonstrates the global scenario of the acceptance and demand for these products and explores the regulatory hurdles and claim substantiation of these foods and dietary supplements, as well as addressing the intricate aspects of manufacturing procedures. As the public gains confidence in the quality of these products based on sophisticated quality control, a broad spectrum of safety studies and GRAS, peer-reviewed publications and cutting-edge human clinical studies have emerged. An increasing number of additional populations around-the-world now recognize the efficacy and functions of nutraceuticals and functional foods as established by those scientific research studies. As a result, a number of structurally and functionally active novel nutraceuticals and several new functional beverages have been introduced into the marketplace around the world. Features fully revised and updated information with current regulations from around the world, including GRAS status and DSHEA regulators Offers 45% new content including three new chapters –NSF: Ensuring the Public Health and Safety Aspects of Nutraceuticals and Functional Foods; Role of the United States Pharmacoepia in the Establishment of Nutraceuticals and Functional Food Safety; An Overview on the New Dietary Ingredient (NDI) and Generally Recognized as Safe (GRAS) Status, and the addition of cGMP regulations for dietary supplements Includes insight into working with regulatory agencies, processes and procedures Provides a link to the contact information for most regulatory bodies for readers wishing to gain further knowledge

First multi-year cumulation covers six years: 1965-70.

The sector of fine chemicals, including pharmaceuticals, agrochemicals, dyes and pigments, fragrances and flavours, intermediates, and performance chemicals is growing fast. For obvious reasons chemistry is a key to the success in developing new processes for fine chemicals. However, as a rule, chemists formulate results of their work as recipes, which usually lack important information for process development. Fine Chemicals Manufacture, Technology and Engineering is intended to show what is needed to make the recipe more useful for process development purposes and to transform the recipe into an industrial process that will be safe, environmentally friendly, and profitable. The goal of this book is to form a bridge between chemists and specialists of all other branches involved in the scale-up of new processes or modification of existing processes with both a minimum effort and risk and maximum profit when commercializing the process. New techniques for scale-up and optimization of existing processes and improvements in the utilization of process equipment that have been developed in recent years are presented in the book.

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Developing Solid Oral Dosage Forms is intended for pharmaceutical professionals engaged in research and development of oral dosage forms. It covers essential principles of physical pharmacy, biopharmaceutics and industrial pharmacy as well as various aspects of state-of-the-art techniques and approaches in pharmaceutical sciences and technologies along with examples and/or case studies in product development. The objective of this book is to offer updated (or current) knowledge and skills required for rational oral product design and development. The specific goals are to provide readers with: Basics of modern theories of physical pharmacy, biopharmaceutics and industrial pharmacy and their applications throughout the entire process of research and development of oral dosage forms Tools and approaches of preformulation investigation, formulation/process design, characterization and scale-up in pharmaceutical sciences and technologies New developments, challenges, trends, opportunities, intellectual property issues and regulations in solid product development The first book (ever) that provides comprehensive and in-depth coverage of what's required for developing high quality pharmaceutical products to meet international standards It covers a broad scope of topics that encompass the entire spectrum of solid dosage form development for the global market, including the most updated science and technologies, practice, applications, regulation, intellectual property protection and new development trends with case studies in every chapter A strong team of more than 50 well-established authors/co-authors of diverse background, knowledge, skills and experience from industry, academia and regulatory agencies

Collection of Selected, Peer Reviewed Papers from the 2014 International Conference on Frontiers of Energy, Materials and Information Engineering (ICFMEI 2014), August 21-22, 2014, Hong Kong. The 411 papers are grouped as follows: Chapter 1: Materials and Chemical Engineering and Technologies, Chapter 2: Power, Energy and Thermal Engineering,

Environmental and Safety Engineering, Chapter 3: Civil and Building Engineering, Structural and Geotechnical Engineering, Applied Mechanics, Chapter 4: Mechatronics, Measurement and Detection, Control and Automation, Mechanics Applications, Chapter 5: Computer, Communication, Information, Algorithms and Numerical Methods of Data Processing Engineering, Chapter 6: Urban and City Development, Traffic and Transportation Engineering, Chapter 7: New Technologies in Education and Sports, Chapter 8: Engineering Management, Production Management, Business and Economics.

This book elucidates how genetic, biological and medical information can be applied to the development of personalized healthcare, medication and therapies. Focusing on aspects of the development of evidence-based approaches in bioinformatics and computational medicine, including data integration, methodologies, tools and models for clinical and translational medicine, it offers an essential introduction to clinical bioinformatics for clinical researchers and physicians, medical students and teachers, and scientists working with human disease-based omics and bioinformatics. Dr. Xiangdong Wang is a distinguished Professor of Medicine. He is Director of Shanghai Institute of Clinical Bioinformatics, Director of Fudan University Center for Clinical Bioinformatics, Deputy Director of Shanghai Respiratory Research Institute, Director of Biomedical Research Center, Fudan University Zhongshan Hospital, Shanghai, China; Dr. Christian Baumgartner is a Professor of Health Care and Biomedical Engineering at Institute of Health Care Engineering with European Notified Body of Medical Devices, Graz University of Technology, Graz, Austria; Dr. Denis Shields is a Professor of Clinical Bioinformatics at Conway Institute, Belfield, Dublin, Ireland; Dr. Hong-Wen Deng is a Professor at Department of Biostatistics and Bioinformatics, Tulane University School of Public Health and Tropical Medicine, USA; Dr. Jacques S Beckmann is a Professor and Director of Section of Clinical Bioinformatics, Swiss Institute of Bioinformatics, Switzerland.

Now in its 42nd edition, British Qualifications is the definitive one-volume guide to every qualification on offer in the United Kingdom. With full details of all institutions and organizations involved in the provision of further and higher education, this publication is an essential reference source for careers advisors, students and employers. It also includes a comprehensive and up-to-date description of the structure of further and higher education in the UK. The book includes information on awards provided by over 350 professional institutions and accrediting bodies, details of academic universities and colleges and a full description of the current framework of academic and vocational educational. It is compiled and checked annually to ensure accuracy of information.

The Special Issue on “Model-Based Tools for Pharmaceutical Manufacturing Processes” will curate novel advances in the development and application of model-based tools to address ever-present challenges of the traditional pharmaceutical manufacturing practice as well as new trends. This book provides a collection of nine papers on original advances in the model-based process unit, system-level, quality-by-design under uncertainty, and decision-making applications of pharmaceutical manufacturing processes.

Otic Antiinfectives—Advances in Research and Application: 2012 Edition is a ScholarlyBrief™ that delivers timely, authoritative, comprehensive, and specialized information about Otic Antiinfectives in a concise format. The editors have built Otic Antiinfectives—Advances in Research and Application: 2012 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Otic Antiinfectives in this eBook to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Otic Antiinfectives—Advances in Research and Application: 2012 Edition has been produced by the world’s leading scientists, engineers, analysts, research institutions, and companies. All of the content is from peer-reviewed sources, and all of it is written, assembled, and edited by the editors at ScholarlyEditions™ and available exclusively from us. You now have a source you can cite with authority, confidence, and credibility. More information is available at http://www.ScholarlyEditions.com/.