An Analytical Formulation For Sizing And Estimating The

The rapid advances in recombinant DNA technology and the increasing availability of peptides and proteins with therapeutic potential are a challenge for pharmaceutical scientists who have to formulate these compounds as drug products. Pharmaceutical Formulation Development of Peptides and Proteins, Second Edition discusses the development of therap

This textbook is related to a course that the author taught for many years at University of California, Berkeley. The course was originally intended for graduate students in the biological and health sciences. But it attracted students from other departments on the campus as well. In order for the book to serve the interest of a larger audience, the author made revisions of the outline, added new topics, and provided more examples for illustrations wherever needed. This invaluable book systematically presents fundamental methods of statistical analysis: from basic probability and statistical distributions, through fundamental concepts of statistical inference, to a collection of methods of analysis useful for scientific research. The text is rich in tables, diagrams, and examples, in addition to theoretical justification of the methods of analysis introduced. Each chapter has a section entitled "Exercises and Problems, " to accompaning the text. There are altogether about 300 exercises, whoseanswers are given. A section entitled "Proof of the Results in This Chapter" in each chapter provides interested readers with material for further study.

Pharmaceutical Preformulation and Formulation: A Practical Guide from Candidate Drug Selection to Commercial Dosage Form reflects the mounting pressure on pharmaceutical companies to accelerate the new drug development and launch process, as well as the shift from developing small molecules to the growth of biopharmaceuticals. The book meets the need for advanced information for drug preformulation and formulation and addresses the current trends in the continually evolving pharmaceutical industry. Topics include: Candidate drug selection Drug discovery and development Preformulation predictions and drug selections Product design to commercial dosage form Biopharmaceutical support in formulation Development The book is ideal for practitioners working in the pharmaceutical arena—including R&D scientists, technicians, and managers—as well as for undergraduate and postgraduate courses in industrial pharmacy and pharmaceutical technology.

There are unique challenges in the formulation, manufacture, analytical chemistry, and regulatory requirements of low-dose drugs. This book provides an overview of this specialized field and combines formulation, analytical, and regulatory aspects of low-dose development into a single reference book. It describes analytical methodologies like dissolution testing, solid state NMR, Raman microscopy, and LC-MS and presents manufacturing techniques such as granulation, compaction, and compression. Complete with case studies and a discussion of regulatory requirements, this is a core reference for pharmaceutical scientists, regulators, and graduate students.

The Foundry Trade Journal

17th International Symposium, SAS 2010, Perpignan, France, September 14-16, 2010, Proceedings

Oral Controlled Release Formulation Design and Drug Delivery

DIETSYS Version 3.0 User's Guide

Specialised Pharmaceutical Formulation

Pharmaceutical Preformulation and Formulation

Formulation is a key step in the drug design process, where the active drug is combined with other substances that maximise the therapeutic potential, safety, and stability of the final medicinal product. Regulatory and quality demands, in addition to advances in processing technologies, result in growing challenges as well as possibilities for the field. Following on from Pharmaceutical Formulation, which covered traditional dosage forms such as tablets and capsules, this volume expands upon those formulations to cover a more diverse range of less common dosage forms. No inhalational, dermal and transdermal formulations to ocular, oral suspensions, vaccines and nanoparticle drug delivery. The methods through which these formulations are processed and manufactured is also covered, providing essential knowledge to ensure quality, efficiency, and acceptable costing. Specialised Pharmaceutical Formulation is an essential, up to date resource for students and researchers working in academia and in the pharmaceutical industry and will equip readers with the ability to effectively and reliably produce products which can be approved, manufacte patients.

This title is intended to assist pharmaceutical scientists in the development of stable protein formulations during the early stages of the product development process, providing a comprehensive review of mechanisms and causes of protein instability in formulation development, coverage of accelerated stability testing methods and relevant analytica

This report summarizes the theory, verification, and validation of a new sizing tool for wind turbine drivetrain components, the Drivetrain Systems Engineering (DriveSE) tool. DriveSE calculates the dimensions and mass properties of the hub, main shaft, main bearing(s), gearbox, bedplate, transformer if up-tower, and yaw system. The level of fi¬ delity for each component varies depending on whether semiempirical parametric or physics-based models are used. The physics-based models have internal iteration schemes based on system constraints and design criteria. Every data or finite-element analysis. The verification and validation results show that the models reasonably capture primary drivers for the sizing and design of major drivetrain components.

A derivation is presented for the calculation of the interelement mutual coupling in a finite-size planar array of waveguide-fed apertures covered by a multilayered dielectric and/or plasma. The general mutual admittance expression is evaluated for circular apertures and the mutual coupling calculations are verified experimentally for two transverse electric (TE11) circular waveguide mode excited apertures. A parametric study of higher order mode aperture fields indicates that the only significant change in the circular aperture mutual coupling is due to the transverse magnetic (T additional phase shift. Qualitative agreement between calculations for a 183-element array of circular apertures and an infinite array establishes the validity of the finite-array theoretical model.

IAPSM's Textbook of Community Medicine

Low-Dimensional Systems: Theory, Preparation, and Some Applications

Analysis of the Allocation Formula for Federal Mass Transit Subsidies

Methods of Meta-Analysis

Statistical Methods of Analysis

A Practical Guide from Candidate Drug Selection to Commercial Dosage Form

Volume 2 of Formulation Science and Technology is a survey of the different types of formulations used in the chemical industry and offers numerous real-world examples of foams, gels, latexes etc. It offers in-depth explanations for research scientists, universities, and industry practitioners looking for a complete understanding of which type formulation works best for a certain application and why.

This book is concerned with strategy formulation issues in the relatively neglected field of entrepreneurial firms. It raises questions, such as what is the strategic role of entrepreneurship in small businesses? How does the top management in small firms perceive the processes associated with strategy formulation? How are business strategies formulated and implemented in SMEs and importantly, are there lessons that can be learnt by large corporations from the smaller ones? Using a sample covering a wide range of entrepreneurial firms in the UK, the author addresses the lack of strategic thinking in the management of small firms and provides recommendations for effective strategic management processes.

Written with an emphasis on health services delivery and management, Health Services Research Methods balances classic and current models and methodology. It showcases approaches to measuring the relevant structure, process, and outcome variables that can be used to address efficiency and equity issues in health care services delivery. Emerging health services research tools and skills are included as well as implications for practice. Important Notice: Media content referenced within the product description or the product text may not be available in the ebook version.

Harness the full power of the behavioral data in your company by learning tools specifically designed for behavioral data analysis. Common data science algorithms and predictive analytics tools treat customer behavioral data, such as clicks on a website or purchases in a supermarket, the same as any other data. Instead, this practical guide introduces powerful methods specifically tailored for behavioral data analysis. Advanced experimental design helps you get the most out of your A/B tests, while causal diagrams allow you to tease out the causes of behaviors even when you can't run experiments. Written in an accessible style for data scientists, business analysts, and behavioral scientists, thispractical book provides complete examples and exercises in R and Python to help you gain more insight from your data--immediately. Understand the specifics of behavioral data Explore the differences between measurement and prediction Learn how to clean and prepare behavioral data Design and analyze experiments to drive optimal business decisions Use behavioral data to understand and measure cause and effect Segment customers in a transparent and insightful way

An Analysis of Proposals for Change and Their Impact on States

WIC and the Retail Price of Infant Formula

Formulation and Analytical Development for Low-Dose Oral Drug Products

Water-Insoluble Drug Formulation

Mechanical Tolerance Stackup and Analysis, Second Edition

Analytical Formulation for Sizing and Estimating the Dimensions and Weight of Wind Turbine Hub and Drivetrain Components

This volume contains papers presented at the NATO Advanced Research Workshop (ARW) Dynamic Interactions in Quantum Dot Systems held at Hotel Atrium in Puszczykowo, near Poznan, Poland, May 16-19,2002. The term low-dimensional systems, which is used in the title of this volume, refers to those systems which contain at least one dimension that is intermediate between those characteristic ofatoms/molecules and those ofthe bulk material. Depending on how many dimensions lay within this range, we generally speak of quantum wells, quantum wires, and quantum dots. As such an intermediate state, some properties of low-dimensional systems are very different to those of their molecular and bulk counterparts. These properties generally include optical, electronic, and magnetic properties, and all these are partially covered in this book. The main goal of the workshop was to discuss the actual state of the art in the broad area ofnanotechnology. The initial focus was on the innovative synthesis of nanomaterials and their properties such as: quantum size effects, superparamagnetism, or field emission. These topics lead us into the various field based interactions including plasmon- magnetic spin- and exciton coupling. The newer, more sophisticated methods for characterization of nanomaterials were discussed, as well as the methods for possible industrial applications. In general, chemists and physicists, as well as experts on both theory and experiments on nanosized regime structures were brought together, to discuss the general phenomena underlying their fields ofinterest from different points ofview.

This volume contains the proceedings of the 10th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2004). TACAS 2004 took place in Barcelona, Spain, from March 29th to April 2nd, as part of the 7th European Joint Conferences on Theory and Practice of Software (ETAPS 2004), whose aims, organization, and history are detailed in a foreword by the ETAPS Steering Committee Chair, Jos´ e Luiz Fiadeiro. TACAS is a forum for researchers, developers, and users interested in ri- rously based tools for the construction and analysis of systems. The conference serves to bridge the gaps between di?erent communities including, but not - mited to, those devoted to formal methods, software and hardware veri?cation, static analysis, programming languages, software engineering, real-time systems, and communication protocols that share common interests in, and techniques for, tool development. In particular, by providing a venue for the discussion of common problems, heuristics, algorithms, data structures, and methodologies, TACAS aims to support researchers in their quest to improve the utility, rel- bility, ?exibility, and e?ciency of tools for building systems.

TACASseekstheoreticalpaperswithaclearlinktotoolconstruction,papers describingrelevantalgorithmsandpracticalaspectsoftheirimplementation,- pers giving descriptions of tools and associated methodologies, and case studies with a conceptual message.

Analytical Formulation for Sizing and Estimating the Dimensions and Weight of Wind Turbine Hub and Drivetrain Components

Covering the most important developments in meta-analysis from 1990 to 2004, this text presents new patterns in research findings as well as updated information on existing topics.

Systems of Nanovesicular Drug Delivery

6th High Pressure School : Proceedings of Symposium I, European Materials Research Society, Fall Meeting, Warsaw University of Technology, 5th-9th September, 2005

A Computer-Aided Design and Synthesis Environment for Analog Integrated Circuits

The Science and Technology of Dosage Forms

Strategy Formulation in Entrepreneurial Firms

High Pressure Technology of Nanomaterials

Systems of Nanovesicular Drug Delivery provides a thorough insight into the complete and up-to-date discussions about the preparation, properties and drug delivery applications of various nanovesicles. This volume discusses cubosomes, proniosomes and niosomes, dendrimerosomes and other new and effective approaches for drug delivery. It will be a valuable title and resource for academics and pharmaceutical scientists, including industrial pharmacists, analytical scientists, health care professionals and regulatory scientists actively involved in pharmaceutical products and process development of tailor-made polysaccharides in drug delivery applications. Recently, there have been a number of outstanding nanosystems in nanovesicular carrier-forms (such as nanoemulsions, self-nanoemulsifying systems, nanoliposomes, nanotransferosomes, etc.), that have been researched and developed for efficient drug delivery by many formulators, researchers and scientists. However, no previously published books have covered all these drug delivery nanovesicles collectively in a single resource. Provides thorough insights and up-to-date discussions about the various systems of nanovesicular drug delivery Covers advanced trigger-assisted systems (such as iontophoresis, ultra-sound triggering, etc.) and how they have been used for improved drug delivery by nanovesicles Presents recent advances in drug delivery fields by global leaders and experts from academia, research, industry and regulatory agencies Includes an updated literature review of relevant key topics, good quality illustrations, chemical structures, attractive flow charts and well-organized tables

Originally published in 1971, this volume contains papers invited for a conference on economic research relevant to national urban development held in September of the same year. The conference pulled together researchers from both the United Kingdom and the United States who were interested in economic research on key issues of both countries' management of their urban areas. Papers are varied from those in the early stages of research to those whose research has been completed and all provide an insight into the increase of urbanisation present in the first world. This title will be of interest to students of environmental studies and economics.

The aim of the celebrated High Pressure School (HPS) is to provide a platform where both young and experienced researchers can meet and exchange their experiences in high-pressure research techniques.

This is a print on demand edition of a hard to find publication. Contents: (1) The House of Representatives Apportionment Formula: An Analysis of Proposals for Change and Their Impact on States: Introduction; Background; Apportionment Methods Defined: Hamilton-Vinton: Ranking Fractional Remainders; Rounding Methods; Changing the Formula: The Impact in 2011; (2) A Framework for Evaluating Apportionment Methods: Alternative Kinds of Tests; Fairness and Quota: Quota Representation; Fair Share; Implementing the ¿Great Compromise¿; (3) Summary and Overview. Figures and tables.

Microporous and Mesoporous Materials

Understanding the Food Stamp Benefit Formula

Health Services Research Methods

Formulation and Process Development Strategies for Manufacturing Biopharmaceuticals

Behavioral Data Analysis with R and Python

Sales Force Analysis Module Reference for MicroStrategy 9.2.1m

Properties and Formulation: From Theory to Real-World Application Scientists have attributed more than 40 percent of the failures in new drug development to poor biopharmaceutical properties, particularly water insolubility. Issues surrounding water insolubility can postpone or completely derail important new drug development. Even the much-needed reformulation of currently marketed products can be significantly affected by these challenges. More recently it was reported that the percentage increased to 90% for the candidates of new chemical entities in the discovery stage and 75% for compounds under development. In the most comprehensive resource on the topic, this third edition of Water-Insoluble Drug Formulation brings together a distinguished team of experts to provide the scientific background and step-by-step guidance needed to deal with solubility issues in drug development. Twenty-three chapters systematically describe the detailed discussion on solubility theories, solubility prediction models, the aspects of preformulation, biopharmaceutics, pharmacokinetics, regulatory, and discovery support of water-insoluble drugs to various techniques used in developing delivery systems for water-insoluble drugs. This book includes more than 15 water-insoluble drug delivery systems or technologies, illustrated with case studies and featuring oral and parenteral applications. Highlighting the most current information and data available, this seminal volume reflects the significant progress that has been made in nearly all aspects of this field. The aim of this book is to provide a handy reference for pharmaceutical scientists in the handling of formulation issues related to water-insoluble drugs. In addition, this book may be useful to pharmacy and chemistry undergraduate students and pharmaceutical and biopharmaceutical graduate students to enhance their knowledge in the techniques of drug solubilization and dissolution enhancement.

Investment projects are increasingly designed to provide multiple benefits. Some of these benefits are easily quantified through market-valuation methods while others are measured for their nonmarket values. The contingent valuation method (CVM) is one of the most widely used techniques to quantify and value benefits from nonmarket goods and services, such as improvement in air and water quality, and protection of ecosystems. This reference book provides a comprehensive guide to CVM. It aims to help improve future CVM studies and estimation of willingness to pay to inform economic analysis at the Asian Development Bank and beyond.

This book describes the theories, applications, and challenges for different oral controlled release formulations. This book differs from most in its focus on oral controlled release formulation design and process development. It also covers the related areas like preformulation, biopharmaceutics, in vitro-in vivo correlations (IVIVC), quality by design (QbD), and regulatory issues.

Use Tolerance Analysis Techniques to Avoid Design, Quality, and Manufacturing Problems Before They Happen Often overlooked and misunderstood, tolerance analysis is a critical part of improving products and their design processes. Because all manufactured products are subject to variation, it is crucial that designers predict and understand how these changes can affect form, fit, and function of parts and assemblies—and then communicate their findings effectively. Written by one of the developers of ASME Y14.5 and other geometric dimension and tolerancing (GD&T) standards, Mechanical Tolerance Stackup and Analysis, Second Edition offers an overview of techniques used to assess and convey the cumulative effects of variation on the geometric relationship between part and assembly features. The book focuses on some key components: it explains often misunderstood sources of variation and how they contribute to this deviation in assembled products, as well as how to model that variation in a useful manner. New to the Second Edition: Explores ISO and ASME GD&T standards—including their similarities and differences Covers new concepts and content found in ASME Y14.5-2009 standard Introduces six-sigma quality and tolerance analysis concepts Revamps figures throughout The book includes step-by-step procedures for solving tolerance analysis problems on products defined with traditional plus/minus tolerancing and GD&T. This helps readers understand potential variations, set up the problem, achieve the desired solution, and clearly communicate the results. With added application examples and features, this comprehensive volume will help design engineers enhance product development and safety, ensuring that parts and assemblies carry out their intended functions. It will also help manufacturing, inspection, assembly, and service personnel troubleshoot designs, verify that in-process steps meet objectives, and find ways to improve performance and reduce costs.

Particulate Interactions in Dry Powder Formulation for Inhalation

A Guide to Good Practice

Basic Principles of Formulation Types

Analysis of Finite-size Phased Arrays of Circular Waveguide Elements

Health Habits and History Questionnaire, Diet History and Other Risk Factors : Dietary Analysis System

Static Analysis

In the first part the AMGIE analog synthesis system is described. AMGIE is the first analog synthesis system that automates the full design process from specifications down to verified layout. It is targeted to the design of moderate-complexity circuits. It relies on design and circuit knowledge stored in the tool's libraries and can be used by both novice and experienced analog designers as well as system-level designers. The inner workings are explained in detail, with (practical) examples to demonstrate how the implemented algorithms and techniques work. Experimental results obtained with the AMGIE system are reported, including actual fabricated and measured circuits. The second approach, i.e. the systematic design of high-performance analog circuits, is discussed in the second part of the book. This approach is supported by tools to boost the productivity of the designer. An example of such a tool is Mondriaan, that is targeted towards the automatic layout generation of highly regular analog blocks. The proposed systematic design methodology is then applied to the design of high-accuracy current-steering digital to analog converters (DACs). The full design path is discussed in detail. Both complementary approaches increase analog design productivity. Design times of the different design experiments undertaken are reported throughout the book to demonstrate this.

This book constitutes the refereed proceedings of the 16th International Symposium on Static Analysis, SAS 2010, held in Perpignan, France in September 2010. The conference was co-located with 3 affiliated workshops: NSAD 2010 (Workshop on Numerical and Symbolic Abstract Domains), SASB 2010 (Workshop on Static Analysis and Systems Biology) and TAPAS 2010 (Tools for Automatic Program Analysis). The 22 revised full papers presented together with 4 invited talks were carefully reviewed and selected from 58 submissions. The papers address all aspects of static analysis including abstract domains, bug detection, data flow analysis, logic programming, systems analysis, type inference, cache analysis, flow analysis, verification, abstract testing, compiler optimization and program verification.

Explore possible new approaches for overcoming poorly soluble drugs - a challenge to drug formulation work and an increasing problem. Many newly developed drugs are poorly soluble, very often simultaneously in aqueous and in organic media. Emulsions and Nanosuspensions for the Formulation of Poorly Soluble Drugs aims to: review the possibilities, limitations and future perspectives of emulsions as drug carriers considering technology from other than the phamaceutical industry (i.e food industry). show the production technology of nanosuspensions, explain the special dissolution properties (i.e. increased saturation solubility) and increased dissolution velocity (theory), and cover the possible applications. present the theory of high pressure homogenization and high pressure extrusion in dispersion techniques, including examples of applications and size measurements in concentrated dispersions.

Designed to provide researchers clear and informative insight into techniques of meta-analysis, the Third Edition of Methods of Meta-Analysis: Correcting Error and Bias in Research Findings is the most comprehensive text on meta-analysis available today. It is the only book that presents a full and usable treatment of the role of study artifacts in distorting study results, as well as methods for correcting results for such biases and errors. Meta-analysis is arguably the most important methodological innovation in the last thirty-five years, due to its immense impact on the development of cumulative knowledge and professional practice. This text, now in its updated Third Edition, has been revised to cover the newest developments in meta-analysis methods, evaluation, correction, and more. This reader-friendly book is the definitive resource on meta-analysis. "This text is the primary source text for psychometric meta-analysis methods." —Emily E. Tanner-Smith, Vanderbilt University "The key strength of the book is the complete and thorough coverage of psychometric meta-analysis. This technique is not covered in any other meta-analysis text, and is a major contribution to the literature...The meta-analysis field needs to find ways to integrate Hunter and Schmidt's methods into current meta-analysis practice." —Terri D. Pigott, Loyola University of Chicago "This is an important text. It is the only book that presents adequate coverage of psychometric meta-analysis. In addition to its use as a textbook, it is an invaluable resource for anyone involved in meta-analytic studies." —Steven Pulos, University of Northern Colorado

Report to the Congress

10th International Conference, TACAS 2004, Held as Part of the Joint European Conferences on Theory and Practice of Software, ETAPS 2004, Barcelona, Spain, March 29 - April 2, 2004, Proceedings

Paper Trade Journal

A Tool for Measuring the Component Effects

Protein Formulation and Delivery

Correcting Error and Bias in Research Findings

This fully revised and updated third edition of Pharmaceutical Inhalation Aerosol Technology encompasses the scientific and technical foundation for the rationale, design, componentry, assembly and quality performance metrics of therapeutic inhalers in their delivery of pharmaceutical aerosols to treat symptoms or the underlying causes of disease. It focuses on the importance of pharmaceutical engineering as a foundational element of all inhaler products and their application to pulmonary drug delivery. The expanded scope considers previously unaddressed aspects of pharmaceutical inhalation aerosol technology and the patient interface by including aerosol delivery, lung deposition and clearance that are used as measures of effective dose delivery.

Interactions between drug particulates are crucial in determining drug dispersion and deaggregation, and ultimately delivery efficiency. This book combines principles and factors in pharmaceutical powder technology, critically reviews some of the studies carried out in dry powder formulation development, and proposes possible strategies for improvi

The aim of this book has been to explore the variety of phenomena associated with the major forms of the material, while laying the foundation for a clear and detailed working and understanding of the materials. We tried to present new types of advanced materials, which are currently a hot topic, and provide readers with a selective review of important improvements in the field. I believe that every chapter in this book presents the progress in the subject and describes the latest advances in microporous and mesoporous materials.

A real-world guide to the production and manufacturing of biopharmaceuticals While much has been written about the science of biopharmaceuticals, there is a need for practical, up-to-date information on key issues at all stages of developing and manufacturing commercially viable biopharmaceutical drug products. This book helps fill the gap in the field, examining all areas of biopharmaceuticals manufacturing, from development and formulation to production and packaging. Written by a group of experts from industry and academia, the book focuses on real-world methods for maintaining product integrity throughout the commercialization process, clearly explaining the fundamentals and essential pathways for all development stages. Coverage includes: Research and early development phase–appropriate approaches for ensuring product stability Development of commercially viable formulations for liquid and lyophilized dosage forms Optimal storage, packaging, and shipping methods Case studies relating to therapeutic monoclonal antibodies, recombinant proteins, and plasma fractions Useful analysis of successful and failed products Formulation and Process Development Strategies for Manufacturing Biopharma-ceuticals is an essential resource for scientists and engineers in the pharmaceutical and biotech industries, for government and regulatory agencies, and for anyone with an interest in the latest developments in the field.

Theory to Practice

Pharmaceutical Inhalation Aerosol Technology, Third Edition

Volume 1

Tools and Algorithms for the Construction and Analysis of Systems

Emulsions and Nanosuspensions for the Formulation of Poorly Soluble Drugs

Pharmaceutical Formulation Development of Peptides and Proteins