Microparticulate Systems For The Delivery Of Proteins And Vaccines Drugs And The Pharmaceutical Sciences

Colloids in Drug DeliveryControlled Drug DeliveryDrug Targeting and Stimuli Sensitive Drug Delivery SystemsMicrocapsules and Nanoparticles in Medicine and PharmacyDelivery Technologies for BiopharmaceuticalsSmart Colloidal MaterialsEngineering Polymer Systems for Improved Drug DeliveryDrug Delivery Nanoparticles Formulation and CharacterizationStrategies to Modify the Drug Release from Pharmaceutical SystemsAdvances in Blood SubstitutesFilled Elastomers Drug Delivery SystemsHandbook of Polyester Drug Delivery SystemsApplication of Nanotechnology in Drug DeliveryDelivery of DrugsControlled Drug DeliveryTargeting Chronic Inflammatory Lung Diseases Using Advanced Drug Delivery SystemsHandbook of Pharmaceutical Controlled Release TechnologyOphthalmic Drug Delivery SystemsSurface Modification of Nanoparticles for Targeted Drug DeliveryAdvances in Biotechnology Research and Application: 2013 EditionBioadhesives in Drug DeliveryNanoparticle- and Microparticle-based Delivery SystemsPolymeric Drugs and Drug Delivery SystemsBioadhesive Drug Delivery SystemsDrug Delivery Systems in Cancer TherapyMucosal Delivery of Drugs and Biologics in NanoparticlesPolymer Science and Innovative ApplicationsMicroparticulate Systems for the Delivery of Proteins and VaccinesCharacterization of Liquids, Nano- and Microparticulates, and Porous Bodies using UltrasoundPulmonary NanomedicineMicroencapsulationEngineering Foods for Bioactives Stability and DeliveryHandbook of Encapsulation and Controlled ReleaseMicroencapsulationDrug Delivery in OncologyNanoparticulate Drug Delivery SystemsHandbook of Pharmaceutical Controlled Release TechnologyDirected Drug DeliveryInterpenetrating Polymer Network: Biomedical ApplicationsTargeting Chronic Inflammatory Lung Diseases Using Advanced Drug Delivery Systems

Colloids in Drug Delivery

Drug Targeting and Stimuli Sensitive Drug Delivery Systems covers recent advances in the area of stimuli sensitive drug delivery systems, providing an up-to-date overview of the physical, chemical, biological and multistimuli-responsive nanosystems. In addition, the book presents an analysis of clinical status for different types of nanoplatforms. Written by an internationally diverse group of researchers, it is an important reference resource for both biomaterials scientists and those working in the pharmaceutical industry who are looking to help create more effective drug delivery systems. Shows how the use of nanomaterials can help target a drug to specific tissues and cells Explores the development of stimuli-responsive drug delivery systems Includes case studies to showcase how stimuli responsive nanosystems are used in a variety of therapies, including camptothecin delivery, diabetes and cancer therapy

Controlled Drug Delivery

This volume contains selected papers presented at the 42nd Biennial Meeting of the Kolloid-Gesellschaft held at the RWTH Aachen University September 26-28, 2005. The contributions in this volume represent the diversity of research topics in colloid and polymer science. They include the investigation of synthesis and properties of advanced temperature sensitive particles and their biomedical applications, drug delivery systems, foams, capsules, vesicles and gels, polyelectrolytes, nanoparticles surfactants and hybrid materials.

Drug Targeting and Stimuli Sensitive Drug Delivery Systems

This unique book is the only one to discuss various new techniques developed to enhance the application of nanoparticulate drug delivery systems using surface modification of nanoparticles. The understanding of the surface characteristics nano-particles is growing significantly with the advent of new analytical techniques. Polymer chemistry is contributing to the development of many new versatile polymers which have abilities to accommodate many different, very reactive chemical groups, and can be used as a diagnostic tool, for better targeting, for more effective therapeutic results as well as for reducing the toxic and side effects of the drugs. Surface modification of such polymeric nanoparticles has been found by many scientists to enhance the application of nanoparticles and also allows the nano particles to carry specific drug molecule and disease /tumor specific antibodies which refine and improve drug delivery. Surface Modification of Nanoparticles for Targeted Drug Delivery is a collection essential information with various applications of surface modification of nanoparticles and their disease specific applications for therapeutic purposes.

Microcapsules and Nanoparticles in Medicine and Pharmacy

This practical guide offers concise coverage of the scientific and pharmaceutical aspects of protein delivery from controlled release microparticulate systems-emphasizing protein stability during encapsulation and release.

Delivery Technologies for Biopharmaceuticals

First published in 1992: This book provides a comprehensive look at the design and production of microcapsules, microspheres, and nanoparticles. It discusses the diverse aspects and skills that must be mastered to prepare and test products that will work correctly and be clinically acceptable for human or animal use.

Smart Colloidal Materials

The second edition of this text assembles significant ophthalmic advances and encompasses breakthroughs in gene

therapy, ocular microdialysis, vitreous drug disposition modelling, and receptor/transporter targeted drug delivery.

Engineering Polymer Systems for Improved Drug Delivery

In this first authoritative overview on modern cancer chemotherapy 121 international specialists have contributed their experience and recent data for what is likely to become the gold standard in the field. The authors summarize knowledge gained over the past decade, from basic concepts to successful applications in the clinic, covering active and passive targeting strategies as well as tissue-specific approaches. All current and future targeted delivery systems are discussed, from ligand-based to antibody-based polymer-based systems, right up to micro- and nanoparticulate systems. A special section covers the delivery of nucleic acid therapeutics, such as siRNA, miRNA and antisense nucleotides. In each case, a description of the basic technique is followed by a discussion of the latest preclinical and clinical developments in the field. By virtue of its clear and didactic structure, rich illustrative material and summary chapters, this handbook and ready reference enables the efficient transfer of knowledge between different disciplines, from basic research to the clinician and vice versa. It is equally well suited for professionals, researchers and students in medical oncology and cancer biology, and is also excellent for teaching medical students the foundations of 21st century cancer chemotherapy.

Drug Delivery Nanoparticles Formulation and Characterization

This book is based on the proceedings of the symposium entitled "Di rected Drug Delivery: A Multidisciplinary Problem," which was held in Lawrence, Kansas on October 17-19, 1984. The purpose of the sym posium and this book is to focus on the multidisciplinary nature of drug delivery. Development of a successful drug delivery system re quires contributions from various scientific disciplines, including pharmaceutical chemistry, analytical chemistry, medicinal chemistry, biochemistry, pharmacology, toxicology, and clinical medicine. The contents of this volume illustrate the importance of the various disci plines in identifying the problems and approaches for the develop ment of a rational and effective drug delivery system. Thus the infor mation provided herein will be of value not only to the pharmaceutical chemists who are responsible for dosage form design, but also to the pharmacokineticists, pharmacologists, and clinicians involved in bio logical evaluation of drug delivery systems. The volume should also be of interest to the analytical chemists who must provide technology to quantitcltively evaluate drug delivery. Additionally, this work will also interest the biochemists and medicinal chemists involved in drug dis covery, since the drug delivery system often plays a major role in determining the success or failure of a new drug entity. Each speaker at the symposium was requested to contribute a chapter reviewing the contribution of their major discipline to the de velopment of a successful drug delivery system.

Strategies to Modify the Drug Release from Pharmaceutical Systems

Understanding the phenomenon of bioadhesion i.e. its theories or mechanism(s) are of critical importance in developing optimum bioadhesive polymers (used in bioadhesives). Such bioadhesive polymers are the key for exhibiting the process of bioadhesion, controlled/sustained release of drugs, and drug targeting. The use of bioadhesives restricts the delivery system to the site of interest and thus offers a useful and efficient technique for targeting a drug to the desired location for a prolonged duration. This book addresses the various relevant aspects of bioadhesives in drug delivery in an easily accessible and unified manner. The book containing 12 chapters written by eminent researchers from many parts of the globe is divided into three parts: Part 1: Fundamental Aspects; Part 2: Bioadhesive Formulations; Part 3: Drug Delivery Applications. The topics covered include: Theories and mechanisms of bioadhesion; bioadhesive polymers for drug delivery applications; methods for characterization of bioadhesiveness of drug delivery systems; bioadhesive films and drug delivery applications; bioadhesive nanoparticles; and bioadhesive hydrogels and applications ocular biodhesive drug delivery systems; buccal bioadhesive drug delivery systems; gastrointestinal bioadhesive drug delivery systems ; nasal bioadhesive drug delivery systems; vaginal drug delivery systems; pulmonary bioadhesive drug delivery systems.

Advances in Blood Substitutes

Since the earliest dosage forms to modern drug delivery systems, came a great development and growth of knowledge with respect to drug delivery. Strategies to Modify the Drug Release from Pharmaceutical Systems will address principles, systems, applications and advances in the field.It will be principally a textbook and a reference source of strategies to modify the drug release. Moreover, the characterization, mathematical and physicochemical models, applications and the systems will be discussed. Addresses the principles, systems, applications and advances in the field of drug delivery Highlights the mathematical and physicochemical principles related to strategies Discusses drug release and its possible modifications

Filled Elastomers Drug Delivery Systems

Colloidal drug delivery systems present a range of therapeutic benefits in the treatment of a number of challenging conditions, allowing researchers to cross barriers that have previously prevented efficient treatment while offering improved and more targeted absorption. Summarizing recent research in the field, Colloids in Drug Delivery assembles

Handbook of Polyester Drug Delivery Systems

Delivery of Drugs: Expectations and Realities of Multifunctional Drug Delivery Systems, Volume Two examines the formulation of micro-nanosized drug delivery systems and recaps opportunities for using physical methods to improve

efficacy via mechano-, electroporation. The book highlights innovative delivery methods like PIPAC, including discussions on the regulatory aspects of complex injectables. Written by a diverse range of international researchers from industry and academia, the chapters examine specific aspects of characterization and manufacturing for pharmaceutical applications as well as regulatory and policy aspects. This book connects formulation scientists, regulatory experts, engineers, clinical experts and regulatory stakeholders. This level of discussion makes it a valuable reference resource for researchers in both academia and the pharmaceutical industry who want to learn more about the status of drug delivery systems. Delivery of Drugs examines the fabrication, optimization, scale-up, biological aspects, regulatory and clinical success of various micro and nano drug delivery systems. The volume covers site and organ specific targeting approaches, technologies used in preparation of micro - nanoparticles, challenges of complex type of drug delivery forms and role of physical methods in achieving targeted drug effect. Written by a diverse range of international researchers the chapters examine the specific aspects of characterization and manufacturing of drug delivery system for pharmaceutical application and its regulatory aspects. The series Expectations and Realities of Multifunctional Drug Delivery Systems examines the fabrication, optimization, biological aspects, regulatory and clinical success of wide range of drug delivery carriers. This series reviews multifunctionality and applications of drug delivery systems, industrial trends, regulatory challenges and in vivo success stories. Throughout the volumes discussions on diverse aspects of drug delivery carriers, such as clinical, engineering, and regulatory, facilitate insight sharing across expertise area and form a link for collaborations between industry-academic scientists and clinical researchers. Expectations and Realities of Multifunctional Drug Delivery Systems connects formulation scientists, regulatory experts, engineers, clinical experts and regulatory stake holders. The wide scope of the book ensures it as a valuable reference resource for researchers in both academia and the pharmaceutical industry who want to learn more about drug delivery systems.

Application of Nanotechnology in Drug Delivery

Delivery of Drugs

Presenting breakthrough research pertinent to scientists in a wide range of disciplines-from medicine and biotechnology to cosmetics and pharmacy-this Second Edition provides practical approaches to complex formulation problems encountered in the development of particulate delivery systems at the micro- and nano-size level. Completely revised and e

Controlled Drug Delivery

Polymer Science and Innovative Applications: Materials, Techniques, and Future Developments introduces the science of

innovative polymers and composites, their analysis via experimental techniques and simulation, and their utilization in a variety of application areas. This approach helps to unlock the potential of new materials for product design and other uses. The book also examines the role that these applications play in the human world, from pollution and health impacts, to their potential to make a positive contribution in areas including environmental remediation, medicine and healthcare, and renewable energy. Advantages, disadvantages, possibilities, and challenges relating to the utilization of polymers in human society are included. Presents the latest advanced applications of polymers and their composites and identifies key areas for future development Introduces the simulation methods and experimental techniques involved in the modification of polymer properties, supported by clear and detailed images and diagrams Supports an interdisciplinary approach, enabling readers across different fields to harness the power of new materials for innovative applications

Targeting Chronic Inflammatory Lung Diseases Using Advanced Drug Delivery Systems

With the advent of analytical techniques and capabilities to measure particle sizes in nanometer ranges, there has been tremendous interest in the use of nanoparticles for more efficient methods of drug delivery. Nanoparticulate Drug Delivery Systems addresses the scientific methodologies, formulation, processing, applications, recent trends, and e

Handbook of Pharmaceutical Controlled Release Technology

In the quest for innovative drug delivery systems attempting to meet the unmet needs in pharmaceutical space, research has taken a much more complicated path that poses a significant challenge for translation. Despite the progress made with novel materials, polyesters still remain at the helm of drug delivery technologies. This book provides a single source of reference of polyester drug delivery systems that covers a broad spectrum of materials design, manufacturing techniques, and applications.

Ophthalmic Drug Delivery Systems

Leading experts survey the currently available technologies designed to improve the delivery of today's cancer chemotherapeutic agents. The authors review both the theoretical and practical considerations governing conventional and nonconventional methods of drug administration, and identify promising opportunities for product development. In their outline and discussion of the use of novel formulation technologies-including synthetic polymers and biomaterials for prolonged or sustained drug release to achieve potentially greater therapeutic effect-they profile those technologies that have resulted in a number of approved and late-stage clinical products.

Surface Modification of Nanoparticles for Targeted Drug Delivery

This invaluable reference presents a comprehensive review of the basic methods for characterizing bioadhesive materials and improving vehicle targeting and uptake-offering possibilities for reformulating existing compounds to create new pharmaceuticals at lower development costs. Evaluates the unique carrier characteristics of bioadhesive polymers and their power to enhance localization of delivered agents, local bioavailability, and drug absorption and transport! Written by over 50 international experts and reflecting broad knowledge of both traditional bioadhesive strategies and novel clinical applications, Bioadhesive Drug Delivery Systems discusses mechanical and chemical bonding, polymer-mucus interactions, the effect of surface energy in bioadhesion, polymer hydration, and mucus rheology analyzes biochemical properties of mucus and glycoproteins, cell adhesion molecules, and cellular interaction with two- and three-dimensional surfaces covers microbalances and magnetic force transducers, atomic force microscopy, direct measurements of molecular level adhesions, and methods to measure cell-cell interactions examines bioadhesive carriers, diffusion or penetration enhancers, and lectin-targeted vehicles describes vaginal, nasal, buccal, ocular, and transdermal drug delivery reviews bioadhesive interactions with the mucosal tissues of the eye and mouth, and those in the respiratory, urinary, and gastrointestinal tracts explores issues of product development, clinical testing, and production and more! Amply referenced with over 1400 bibliographic citations, and illustrated with more than 300 drawings, photographs, tables, and display equations, Bioadhesive Drug Delivery Systems serves as a sound basis for innovation in bioadhesive systems and an excellent introduction to the subject. This unique reference is ideal for pharmaceutical scientists and technologists; chemical, polymer, and plastics engineers; biochemists; physical, surface, and colloid chemists; biologists; and upper-level undergraduate and graduate students in these disciplines.

Advances in Biotechnology Research and Application: 2013 Edition

Recent developments in nanoparticle and microparticle delivery systems are revolutionizing delivery systems in the food industry. These developments have the potential to solve many of the technical challenges involved in creating encapsulation, protection, and delivery of active ingredients, such as colors, flavors, preservatives, vitamins, minera

Bioadhesives in Drug Delivery

Polymers have played a critical role in the rational design and application of drug delivery systems that increase the efficacy and reduce the toxicity of new and conventional therapeutics. Beginning with an introduction to the fundamentals of drug delivery, Engineering Polymer Systems for Improved Drug Delivery explores traditional drug delivery techniques as well as emerging advanced drug delivery techniques. By reviewing many types of polymeric drug delivery systems, and

including key points, worked examples and homework problems, this book will serve as a guide to for specialists and non-specialists as well as a graduate level text for drug delivery courses.

Nanoparticle- and Microparticle-based Delivery Systems

Exploring fundamental concepts, Drug Delivery Nanoparticles Formulation and Characterization presents key aspects of nanoparticulate system development for various therapeutic applications and provides advanced methods used to file for regulatory approval.This comprehensive guide features:Process Analytical Techniques (PAT) used in manufacturing Na

Polymeric Drugs and Drug Delivery Systems

Targeting Chronic Inflammatory Lung Diseases Using Advanced Drug Delivery Systems explores the development of novel therapeutics and diagnostics to improve pulmonary disease management, looking down to the nanoscale level for an efficient system of targeting and managing respiratory disease. The book examines numerous nanoparticle-based drug systems such as nanocrystals, dendrimers, polymeric micelles, protein-based, carbon nanotube, and liposomes that can offer advantages over traditional drug delivery systems. Starting with a brief introduction on different types of nanoparticles in respiratory disease conditions, the book then focuses on current trends in disease pathology that use different in vitro and in vivo models. The comprehensive resource is designed for those new to the field and to specialized scientists and researchers involved in pulmonary research and drug development. Explores recent perspectives and challenges regarding the management and diagnosis of chronic respiratory diseases Provides insights into how advanced drug delivery systems can be effectively formulated and delivered for the management of various pulmonary diseases Includes the most recent information on diagnostic methods and treatment strategies using controlled drug delivery systems (including nanotechnology)

Bioadhesive Drug Delivery Systems

Nanotechnology has revolutionized the approach to designing and developing novel drug delivery systems. The last two decades have seen a great interest in the use of nanotechnology to offer efficient ways of delivering new and existing drugs and macromolecules. The focus of this book is the application of nanotechnology to deliver drugs and biological agents by the mucosal routes of administration i.e. nasal, pulmonary, buccal, and oral routes. It provides an overview of nanotechnology in drug delivery with a description of different types of nanoparticles, methods of preparation and characterization, and functionalization for site-specific drug delivery. The emphasis is on the use of nanoparticles in treating various cancers and infectious diseases. It broadens the use of nanoparticles by including biologics, including vaccines and

immunotherapies, apart from drugs and acknowledges the concerns around the potential toxicity of nanoparticles to the host; several chapters will discuss the biodistribution of these nanoparticles when mucosal routes of administration are employed. Further, the interaction of nanoparticles with the host's immune cells is discussed. Moreover, it reviews the regulatory aspects of nanotechnology in product development, especially when delivered by the mucosal route of administration. Lastly, discusses the challenges and opportunities to manufacture nanoparticles on an industrial scale. This book is the first of its kind to focus on the design, development and delivery of nanoparticles when administered by different mucosal routes.

Drug Delivery Systems in Cancer Therapy

The book focuses on novel interpenetrating polymer network (IPN)/semi-IPN technologies for drug delivery and biomedical applications. The dynamism of the design and development of interpenetrating network polymers is based on their ability to provide free volume for the easy encapsulation of drugs in the three-dimensional network structure obtained by cross-linking two or more polymer networks. Natural polymer-based IPNs can deliver drugs at a controlled rate over an extended period of time, while novel IPNs ensure better mechanical strength and sustained/ controlled drug-delivery properties. This book presents an overview of the use of this technology to fabricate nanomedicine, hydrogels, nanoparticles, and microparticles, thereby unlocking IPN's potential in the area of drug delivery and biomedical engineering. It also discusses applications of IPN systems in cancer therapy and tissue engineering, and describes the various IPN systems and their wide usage and applications in drug delivery.

Mucosal Delivery of Drugs and Biologics in Nanoparticles

This book collects reviews and original articles from eminent experts working in the interdisciplinary arena of nanotechnology use in drug delivery. From their direct and recent experience, the readers can achieve a wide vision on the new and ongoing potentialities of nanotechnology application of drug delivery. Since the advent of analytical techniques and capabilities to measure particle sizes in nanometer ranges, there has been tremendous interest in the use of nanoparticles for more efficient methods of drug delivery. On the other hand, this reference discusses advances in design, optimization, and adaptation of gene delivery systems for the treatment of cancer, cardiovascular, pulmonary, genetic, and infectious diseases, and considers assessment and review procedures involved in the development of gene-based pharmaceuticals.

Polymer Science and Innovative Applications

Polymeric materials are now playing an increasingly important role in pharmaceuticals, as well as in sensing devices, in situ prostheses and probes, and microparticle diagnostic agents. This new volume consists of twenty-two recent research-based reports on the developments in these areas of pharmaceutical and biomaterials technology. The reports w

Microparticulate Systems for the Delivery of Proteins and Vaccines

This book introduces recovery and stabilization of common bioactive materials in foods as well as materials science aspects of engineering stable bioactive delivery systems. The book also describes most typical unit operations and processes used in recovery and manufacturing of food ingredients and foods with stabilized bioactive components. The 15 chapters of the book discuss in detail substances that need to be protected and delivered via foods and beverages to achieve good stability, bioavailability and efficacy. Dedicated chapters present current and novel technologies used for stabilization and delivery of bioactive components. The material included covers formulation, stability, digestive release, bioaccessability and bioavailability. The text features a special emphasis on the materials science and technological aspects required for stabilization and successful production of foods with bioactive components. Consumer demand for healthier, yet satisfying food products is posing increasingly tough challenges for the food industry. Scientific research reveals new bioactive food components and new functionalities of known components. Food materials science has also developed to a stage where food materials can be designed and produced to protect sensitive components for their delivery in complex food products. Such delivery systems must meet high safety and efficacy requirements and regulations, as well as economic viability criteria and consumer acceptance.

Characterization of Liquids, Nano- and Microparticulates, and Porous Bodies using Ultrasound

This book explores engineered nanomaterials (ENM) pulmonary effects and familiarizes readers with unique aspects of nanomaterial application and research. Focusing on the diagnostic and therapeutic utilities of nanomaterials in different lung diseases, it discusses the novel applications of nanotechnology for the treatment of airway diseases such as asthma, allergy, chronic obstructive pulmonary diseases, cystic fibrosis, and lung cancer. In an attempt to synchronize the efforts of pulmonary biologists, chemists, and clinicians in developing novel nano-based tools for airway diseases, the book also discusses the strategies to overcome the pathophysiological and technical barriers.

Pulmonary Nanomedicine

Drugs and the pharmaceutical sciences.

Microencapsulation

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Engineering Foods for Bioactives Stability and Delivery

Presenting breakthrough research pertinent to scientists in a wide range of disciplines-from medicine and biotechnology to cosmetics and pharmacy-this Second Edition provides practical approaches to complex formulation problems encountered in the development of particulate delivery systems at the micro- and nano-size level. Completely revised and e

Handbook of Encapsulation and Controlled Release

Targeting Chronic Inflammatory Lung Diseases Using Advanced Drug Delivery Systems explores the development of novel therapeutics and diagnostics to improve pulmonary disease management, looking down to the nanoscale level for an efficient system of targeting and managing respiratory disease. The book examines numerous nanoparticle-based drug systems such as nanocrystals, dendrimers, polymeric micelles, protein-based, carbon nanotube, and liposomes that can offer advantages over traditional drug delivery systems. Starting with a brief introduction on different types of nanoparticles in respiratory disease conditions, the book then focuses on current trends in disease pathology that use different in vitro and in vivo models. The comprehensive resource is designed for those new to the field and to specialized scientists and researchers involved in pulmonary research and drug development. Explores recent perspectives and challenges regarding the management and diagnosis of chronic respiratory diseases Provides insights into how advanced drug delivery systems can be effectively formulated and delivered for the management of various pulmonary diseases Includes the most recent information on diagnostic methods and treatment strategies using controlled drug delivery systems (including nanotechnology)

Microencapsulation

The field of encapsulation, especially microencapsulation, is a rapidly growing area of research and product development. The Handbook of Encapsulation and Controlled Release covers the entire field, presenting the fundamental processes involved and exploring how to use those processes for different applications in industry. Written at a level comp

Drug Delivery in Oncology

Advances in biotechnology have provided scientists with an increasing number of biopharmaceuticals such as novel peptide and protein drugs as well as nucleic acid based drugs for gene therapy. However, successful delivery of these biopharmaceuticals is a major challenge because their molecular properties lead to poor physical and chemical stability in the body and limited membrane permeability. Therefore researchers are developing a range of new delivery technologies and materials to enable these new drugs to be delivered intact to their target sites. Delivery Technologies for Biopharmaceuticals describes strategies to overcome the main barriers for successful delivery of therapeutic peptides, proteins, and nucleic acid-based drugs or vaccines related to the site of administration and the target site. Many of the approaches described are reported in formulations in current clinical trials as well as in marketed products. Contents include: challenges in delivery of biopharmaceuticals novel formulation approaches for peptide and protein injectables non-viral chemical vectors and viral technology for delivery of nucleic acid based drugs immune response, adjuvants and delivery systems for vaccines several examples of delivery systems for different biopharmaceuticals a critical assessment of delivery technologies for biopharmaceuticals Delivery Technologies for Biopharmaceuticals is an essential single-volume introduction to the technologies used by researchers to ensure efficient delivery of this exciting new class of drugs. It will be of value to researchers and students working in drug delivery, formulation, biopharmaceuticals, medicinal chemistry, and new materials development.

Nanoparticulate Drug Delivery Systems

The Handbook of Pharmaceutical Controlled Release Technology reviews the design, fabrication, methodology, administration, and classifications of various drug delivery systems, including matrices, and membrane controlled reservoir, bioerodible, and pendant chain systems. Contains cutting-edge research on the controlled delivery of biomolecules! Discussing the advantages and limitations of controlled release systems, the Handbook of Pharmaceutical Controlled Release Technology covers oral, transdermal, parenteral, and implantable delivery of drugs discusses modification methods to achieve desired release kinetics highlights constraints of system design for practical clinical application analyzes diffusion equations and mathematical modeling considers environmental acceptance and tissue compatibility of biopolymeric systems for biologically active agents evaluates polymers as drug delivery carriers describes peptide, protein, micro-, and nanoparticulate release systems examines the cost, comfort, disease control, side effects, and patient compliance of numerous delivery systems and devices and more!

Handbook of Pharmaceutical Controlled Release Technology

Advances in Biotechnology Research and Application: 2013 Edition is a ScholarlyEditions™ book that delivers timely, authoritative, and comprehensive information about Bioelectronics. The editors have built Advances in Biotechnology

Research and Application: 2013 Edition on the vast information databases of ScholarlyNews.™ You can expect the information about Bioelectronics in this book to be deeper than what you can access anywhere else, as well as consistently reliable, authoritative, informed, and relevant. The content of Advances in Biotechnology Research and Application: 2013 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/.

Directed Drug Delivery

Each chapter of this volume is a contribution from an expert in the field, chosen by the editors to contribute to the 1997 "Current Issues in Blood Substitute Research and Development" course given in San Diego, March 17-19. The contributors were selected because of their expertise in areas which the editors believe to be critical to the advancement of the field, and which reflect activity in "hot" areas of relevant research. While there is a continuity in style for the annual course, each year brings changes in emphasis and content. In previous years, we were often not able to provide time for participants to present their views and opinions. Consequently, this year we encouraged discussion after each presentation. These sessions were recorded, transcribed, and are printed with the chapters herein. We believe that the product is very close to the capturing this year's course in print, and trust readers will enjoy reading the always candid and often provocative remarks from the audience. The price paid for inclusion of the discussion transcriptions was a delay in publication. Each author was allowed to edit his/her discussion section as well as the final version of the chapters prior to publication. The changes are mainly for grammar, and we tried, when possible, not to alter the conversational style of these interchanges.

Interpenetrating Polymer Network: Biomedical Applications

Two key words define the scope of this book: 'ultrasound' and 'colloids'. Historically, there has been little real communication between practitioners in these two fields. Although there is a large body of literature devoted to ultrasound phenomenon in colloids, there is little recognition that such phenomena may be of real importance for both the development and applications of colloid science. On the other side, colloid scientists have not embraced acoustics as an important tool for characterizing colloids. The lack of any serious dialogue between these scientific fields is the biggest motivation behind this book. - Covers in detail this multidisciplinary field combining acoustics, electroacoustics, colloid science, analytical chemistry and rheology - Provides a bibliography with more than 1,000 references - Presents theories and their experimental verification, as well as analysis of the methods and hardware pertaining to applications such as pharmaceuticals, ceramics, and polymers

Targeting Chronic Inflammatory Lung Diseases Using Advanced Drug Delivery Systems

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