
Download File PDF Pdf 1973 Press Academic Engineering Biochemical Aiba S

Recognizing the habit ways to get this book **Pdf 1973 Press Academic Engineering Biochemical Aiba S** is additionally useful. You have remained in right site to start getting this info. acquire the Pdf 1973 Press Academic Engineering Biochemical Aiba S belong to that we come up with the money for here and check out the link.

You could buy guide Pdf 1973 Press Academic Engineering Biochemical Aiba S or acquire it as soon as feasible. You could quickly download this Pdf 1973 Press Academic Engineering Biochemical Aiba S after getting deal. So, similar to you require the books swiftly, you can straight get it. Its thus very easy and therefore fats, isnt it? You have to favor to in this tell

KEY=PDF - MONROE FRENCH

Risk Management of Non-Renewable Energy Systems

Springer This book describes the basic concepts of risk and reliability with detailed descriptions of the different levels of probabilistic safety assessment of nuclear power plants (both internal and external). The book also maximizes readers insights into time dependent risk analysis through several case studies, whilst risk management with respect to non renewable energy sources is also explained. With several advanced reactors utilizing the concept of passive systems, the reliability estimation of these systems are explained in detail with the book providing a reliability estimation of components through mechanistic model approach. This book is useful for advanced undergraduate and post graduate students in nuclear engineering, aerospace engineering, industrial engineering, reliability and safety engineering, systems engineering and applied probability and statistics. This book is also suitable for one-semester graduate courses on risk management of non renewable energy systems in all conventional engineering branches like civil, mechanical, chemical, electrical and electronics as well as computer science. It will also be a valuable reference for practicing engineers, managers and researchers involved in reliability and safety activities of complex engineering systems.

Kent and Riegel's Handbook of Industrial Chemistry and Biotechnology

Springer Science & Business Media This substantially revised and updated classic reference offers a valuable overview and myriad details on current chemical processes, products, and practices. No other source offers as much data on the chemistry, engineering, economics, and infrastructure of the industry. The two volume Handbook serves a spectrum of individuals, from those who are directly involved in the chemical industry to others in related industries and activities. Industrial processes and products can be much enhanced through observing the tenets and applying the methodologies found in the book's new chapters.

WMD Terrorism

Science and Policy Choices

MIT Press This collection of essays is a current and comprehensive review of what scientists and scholars know about WMD terrorism and America's options for confronting it. Complete with mathematical methods for analyzing terrorist threats and allocating defense resources, this multidisciplinary perspective addresses all forms and defenses of WMD, and the role of domestic U.S. politics in shaping defense investments and policies. Also identified are multiple instances in which the conventional wisdom is incomplete or misleading.

Engineering Principles in Biotechnology

John Wiley & Sons This book is a short introduction to the engineering principles of harnessing the vast potential of microorganisms, and animal and plant cells in making biochemical products. It was written for scientists who have no background in engineering, and for engineers with minimal background in biology. The overall subject dealt with is process, but the coverage goes beyond the process of biomanufacturing in the bioreactor, and extends to the factory of cell's biosynthetic machinery. Starting with an overview of biotechnology and organism, engineers are eased into biochemical reactions and life scientists are exposed to the technology of production using cells. Subsequent chapters allow engineers to be acquainted with biochemical pathways, while life scientist learn about stoichiometric and kinetic principles of reactions and cell growth. This leads to the coverage of reactors, oxygen transfer and scale up. Following three chapters on biomanufacturing of current and future importance, i.e. cell culture, stem cells and synthetic biology, the topic switches to product purification, first with a conceptual coverage of operations used in bioseparation, and then a more detailed analysis to provide a conceptual understanding of chromatography, the modern workhorse of bioseparation. Drawing on principles from engineering and life sciences, this book is for practitioners in biotechnology and bioengineering. The author has used the material within this book for a course for advanced students in both engineering and life sciences. To this end, problems are provided at the end of each chapter.

Integration and Optimization of Unit Operations

Review of Unit Operations from R&D to Production: Impacts of Upstream and Downstream Process Decisions

Elsevier The chemical industry changes and becomes more and more integrated worldwide. This creates a need for information exchange that includes not only the principles of operation but also the transfer of practical knowledge. Integration and Optimization of Unit Operations provides up-to-date and practical information on chemical unit operations from the R&D stage to scale-up and demonstration to commercialization and optimization. A global collection of industry experts systematically discuss all innovation stages, complex processes with different unit operations, including solids processing and recycle flows, and the importance of integrated process validation. The book addresses the needs of engineers who want to increase their skill levels in various disciplines so that they are able to develop, commercialize and optimize processes. After reading this book, you will be able to acquire new skills and knowledge to collaborate across disciplines and develop creative solutions. Shows the impacts of upstream process decisions on downstream operations Provides troubleshooting strategies at each process stage Asks challenging questions to develop creative solutions to process problems

Handbook of Industrial Chemistry and Biotechnology

Springer Science & Business Media Substantially revising and updating the classic reference in the field, this handbook offers a valuable overview and myriad details on current chemical processes, products, and practices. No other source offers as much data on the chemistry, engineering, economics, and infrastructure of the industry. The Handbook serves a spectrum of individuals, from those who are directly involved in the chemical industry to others in related industries and activities. It provides not only the underlying science and technology for important industry sectors, but also broad coverage of critical supporting topics. Industrial processes and products can be much enhanced through observing the tenets and applying the methodologies found in chapters on Green Engineering and Chemistry (specifically, biomass conversion), Practical Catalysis, and Environmental Measurements; as well as expanded treatment of Safety, chemistry plant security, and Emergency Preparedness. Understanding these factors allows them to be part of the total process and helps achieve optimum results in, for example, process development, review, and modification. Important topics in the energy field, namely nuclear, coal, natural gas, and petroleum, are covered in individual chapters. Other new chapters include energy conversion, energy storage, emerging nanoscience and technology. Updated sections include more material on biomass conversion, as well as three chapters

covering biotechnology topics, namely, Industrial Biotechnology, Industrial Enzymes, and Industrial Production of Therapeutic Proteins.

Biochemical Engineering

A Textbook for Engineers, Chemists and Biologists

John Wiley & Sons Completely revised, updated, and enlarged, this second edition now contains a subchapter on biorecognition assays, plus a chapter on bioprocess control added by the new co-author Jun-ichi Horiuchi, who is one of the leading experts in the field. The central theme of the textbook remains the application of chemical engineering principles to biological processes in general, demonstrating how a chemical engineer would address and solve problems. To create a logical and clear structure, the book is divided into three parts. The first deals with the basic concepts and principles of chemical engineering and can be read by those students with no prior knowledge of chemical engineering. The second part focuses on process aspects, such as heat and mass transfer, bioreactors, and separation methods. Finally, the third section describes practical aspects, including medical device production, downstream operations, and fermenter engineering. More than 40 exemplary solved exercises facilitate understanding of the complex engineering background, while self-study is supported by the inclusion of over 80 exercises at the end of each chapter, which are supplemented by the corresponding solutions. An excellent, comprehensive introduction to the principles of biochemical engineering.

Biochemical Engineering

Microbial Reactions

Springer

Enzyme Technology

Springer Science & Business Media [Publisher Description](#)

Bioprocess Engineering

Basic Concepts

For Senior-level and graduate courses in Biochemical Engineering, and for programs in Agricultural and Biological Engineering or Bioengineering. This concise yet comprehensive text introduces the essential concepts of bioprocessing-internal structure and functions of different types of microorganisms, major metabolic pathways, enzymes, microbial genetics, kinetics and stoichiometry of growth and product information to traditional chemical engineers and those in related disciplines. It explores the engineering principles necessary for bioprocess synthesis and design, and illustrates the application of these principles to modern biotechnology for production of pharmaceuticals and biologics, solution of environmental problems, production of commodities, and medical applications.

Bioprocess Engineering Principles

Elsevier The emergence and refinement of techniques in molecular biology has changed our perceptions of medicine, agriculture and environmental management. Scientific breakthroughs in gene expression, protein engineering and cell fusion are being translated by a strengthening biotechnology industry into revolutionary new products and services. Many a student has been enticed by the promise of biotechnology and the excitement of being near the cutting edge of scientific advancement. However, graduates trained in molecular biology and cell manipulation soon realise that these techniques are only part of the picture. Reaping the full benefits of biotechnology requires manufacturing capability involving the large-scale processing of biological material. Increasingly, biotechnologists are being employed by companies to work in co-operation with chemical engineers to achieve pragmatic commercial goals. For many years aspects of biochemistry and molecular genetics have been included in chemical engineering curricula, yet there has been little attempt until recently to teach aspects of engineering applicable to process design to biotechnologists. This textbook is the first to present the principles of bioprocess engineering in a way that is accessible to biological scientists. Other texts on bioprocess engineering currently available assume that the reader already has engineering training. On the other hand, chemical engineering textbooks do not consider examples from bioprocessing, and are written almost exclusively with the petroleum and chemical industries in mind. This publication explains process analysis from an engineering point of view, but refers exclusively to the treatment of biological systems. Over 170 problems and worked examples encompass a wide range of applications, including recombinant cells, plant and animal cell cultures, immobilised catalysts as well as traditional fermentation systems. * * First book to present the principles of bioprocess engineering in a way that is accessible to biological scientists * Explains process analysis from an engineering point of view, but uses worked examples relating to biological systems * Comprehensive, single-authored * 170 problems and worked examples encompass a wide range of applications, involving recombinant plant and animal cell cultures, immobilized catalysts, and traditional fermentation systems * 13 chapters, organized according to engineering sub-disciplines, are grouped in four sections - Introduction, Material and Energy Balances, Physical Processes, and Reactions and Reactors * Each chapter includes a set of problems and exercises for the student, key references, and a list of suggestions for further reading * Includes useful appendices, detailing conversion factors, physical and chemical property data, steam tables, mathematical rules, and a list of symbols used * Suitable for course adoption - follows closely curricula used on most bioprocessing and process biotechnology courses at senior undergraduate and graduate levels.

Bioprocess Technology

Kinetics and Reactors

Springer Science & Business Media This book is based on a 1981 German language edition published by Springer Verlag, Vienna, under the title Bioprozesstechnik. Philip Manor has done the translation, for which I am deeply grateful. This book differs from the German edition in many ways besides language. It is substantially enlarged and updated, and examples of computer simulations have been added together with other appendices to make the work both more comprehensive and more practical. This book is the result of over 15 years of experience in teaching and research. It stems from lectures that I began in 1970 at the Technical University of Graz, Austria, and continued at the University of Western Ontario in London, Canada, 1980; at the Free University of Brussels, 1981; at Chalmers Technical University in G6teborg, Sweden; at the Academy of Sciences in Lena, East Germany; at the "Haus der Technik" in Essen, West Germany, 1982; at the Academy of Science in Sofia, Bulgaria; and at the Technical University of Delft, Netherlands, 1986. The main goals of this book are, first, to bridge the gap that always exists between basic principles and applied engineering practice, second, to enhance the integration between biological and physical phenomena, and, third, to contribute to the internal development of the field of biotechnology by describing the process-oriented field of bioprocess technology.

Biohydrogen

For Future Engine Fuel Demands

Springer Science & Business Media Biohydrogen: For Future Engine Fuel Demands covers the production, purification, storage, pipeline transport, usage, and safety of biohydrogen. Hydrogen promises to be the most significant fuel source of the future, due to its global availability and the fact that water is its only by-product. Biofuels such as bioethanol, biodiesel, bio-oil, and biohydrogen are produced using technologies for thermochemically and biologically converting biomass. Hydrogen fuel production technologies can make use of either non-renewable sources, or renewable sources such as wind, solar, and biorenewable resources. Biohydrogen: For Future Engine Fuel Demands reviews all of the modern biomass-based transportation fuels, including bioethanol, biodiesel, biogas, biohydrogen, and fuel cells. The book also discusses issues of biohydrogen economy, policy and environmental impact. Biohydrogen looks set to be the fuel of choice in the future, replacing both fossil fuels and biorenewable liquid fuels.

Food Process Engineering and Technology

Academic Press Food Process Engineering and Technology, Third Edition combines scientific depth with practical usefulness, creating a tool for graduate students and practicing food engineers, technologists and researchers looking for the latest information on transformation and preservation processes and process control and plant hygiene topics. This fully updated edition provides recent research and developments in the area, features sections on elements of food plant design, an introductory section on the elements of classical fluid mechanics, a section on non-thermal processes, and recent technologies, such as freeze concentration, osmotic dehydration, and active packaging that are discussed in detail. Provides a strong emphasis on the relationship between engineering and product quality/safety Considers cost and environmental factors Presents a fully updated, adequate review of recent research and developments in the area Includes a new, full chapter on elements of food plant design Covers recent technologies, such as freeze concentration, osmotic dehydration, and active packaging that are discussed in detail

Growing Fungus

Springer Science & Business Media This book is about the growth and differentiation processes underlying the growth and differentiation of filamentous fungi. The impetus for this work stems from our perception that the coverage of adequate source references for further information, this highly diverse and important group of organisms has been neglected in recent years, despite the fact that more than 1.5 million species of fungi - more than five times the number of vascular plants and second only to the insects. The extreme diversity of form in the fungi has always been a source of inspiration for mycologists. This book is primarily concerned with those systems that have themselves as the model eukaryote for the analysis of the cell cycle, and basic studies of biochemical and physiological or genetic points of view. Although genetic regulation, this book does not deal with it has not been possible to illustrate the breadth of the detailed growth physiology of S.

Bioreaction Engineering Principles

Second Edition

Springer This is the second edition of the text "Bioreaction Engineering Principles" by Jens Nielsen and John Villadsen, originally published in 1994 by Plenum Press (now part of Kluwer). Time runs fast in Biotechnology, and when Kluwer Plenum stopped reprinting the first edition and asked us to make a second, revised edition we happily accepted. A text on bioreactions written in the early 1990's will not reflect the enormous development of experimental as well as theoretical aspects of cellular reactions during the past decade. In the preface to the first edition we admitted to be newcomers in the field. One of us (JV) has had 10 more years of job training in biotechnology, and the younger author (IN) has now received international recognition for his work with the hottest topics of "modern" biotechnology. Furthermore we are happy to have induced Gunnar Liden, professor of chemical reaction engineering at our sister university in Lund, Sweden to join us as co-author of the second edition. His contribution, especially on the chemical engineering aspects of "real" bioreactors has been of the greatest value. Chapter 8 of the present edition is largely unchanged from the first edition. We wish to thank professor Martin Hjortso from LSU for his substantial help with this chapter.

Organic Waste Recycling: Technology, Management and Sustainability

IWA Publishing This fourth edition of Organic Waste Recycling is fully updated with new material to create a comprehensive and accessible textbook: - New chapter on constructed wetlands for wastewater and faecal sludge stabilization. - New sections on: waste recycling vs. climate change and water; faecal sludge and its characteristics; hydrothermal carbonization technology; up-to-date environmental criteria and legislation and environmental risk assessment. - New case studies with emphasis on practices in both developed and developing countries have been included, along with more exercises at the end of chapters to help the readers understand the technical principles and their application. - Novel concepts and strategies of waste management are presented. - Up-to-date research findings and innovative technologies of waste recycling program are provided. This textbook is intended for undergraduate and graduate students majoring in environmental sciences and engineering as well as researchers, professionals and policy makers who conduct research and practices in the related fields. It is essential reading for experts in environmental science and engineering and sustainable waste reuse and recycling in both developed and developing countries.

Metabolic Engineering

Springer Metabolic engineering is a rapidly evolving field that is being applied for the optimization of many different industrial processes. In this issue of Advances in Biochemical Engineering/Biotechnology, developments in different areas of metabolic engineering are reviewed. The contributions discuss the application of metabolic engineering in the improvement of yield and productivity - illustrated by amino acid production and the production of novel compounds - in the production of polyketides and extension of the substrate range - and in the engineering of *S. cerevisiae* for xylose metabolism, and the improvement of a complex biotransformation process.

Fundamentals of Food Process Engineering

Springer Science & Business Media Ten years after the publication of the first edition of Fundamentals of Food Process Engineering, there have been significant changes in both food science education and the food industry itself. Students now in the food science curriculum are generally better prepared mathematically than their counterparts two decades ago. The food science curriculum in most schools in the United States has split into science and business options, with students in the science option following the Institute of Food Technologists' minimum requirements. The minimum requirements include the food engineering course, thus students enrolled in food engineering are generally better than average, and can be challenged with more rigor in the course material. The food industry itself has changed. Traditionally, the food industry has been primarily involved in the canning and freezing of agricultural commodities, and a company's operations generally remain within a single commodity. Now, the industry is becoming more diversified, with many companies involved in operations involving more than one type of commodity. A number of formulated food products are now made where the commodity connection becomes obscure. The ability to solve problems is a valued asset in a technologist, and often, solving problems involves nothing more than applying principles learned in other areas to the problem at hand. A principle that may have been commonly used with one commodity may also be applied to another commodity to produce unique products.

Enzymes

A Practical Introduction to Structure, Mechanism, and Data Analysis

John Wiley & Sons Fully updated and expanded-a solid foundation for understanding experimental enzymology. This practical, up-to-date survey is designed for a broad spectrum of biological and chemical scientists who are beginning to delve into modern enzymology. *Enzymes, Second Edition* explains the structural complexities of proteins and enzymes and the mechanisms by which enzymes perform their catalytic functions. The book provides illustrative examples from the contemporary literature to guide the reader through concepts and data analysis procedures. Clear, well-written descriptions simplify the complex mathematical treatment of enzyme kinetic data, and numerous citations at the end of each chapter enable the reader to access the primary literature and more in-depth treatments of specific topics. This Second Edition of *Enzymes: A Practical Introduction to Structure, Mechanism, and Data Analysis* features refined and expanded coverage of many concepts, while retaining the introductory nature of the book. Important new features include: A new chapter on protein-ligand binding equilibria Expanded coverage of chemical mechanisms in enzyme catalysis and experimental measurements of enzyme activity Updated and refined discussions of enzyme inhibitors and multiple substrate reactions Coverage of current practical applications to the study of enzymology Supplemented with appendices providing contact information for suppliers of reagents and equipment for enzyme studies, as well as a survey of useful Internet sites and computer software for enzymatic data analysis, *Enzymes, Second Edition* is the ultimate practical guide for scientists and students in biochemical, pharmaceutical, biotechnical, medicinal, and agricultural/food-related research.

Extracellular Microbial Polysaccharides

A Symposium

Industrial Biotransformations

John Wiley & Sons *Industrial Biotransformations* - a user-friendly and application-oriented up-to-date overview of one-step biotransformations of industrial importance. The data concerning each process is arranged in a convenient format to survey so that the processes can easily be compared. Each set of data is accompanied by key literature citations. As far as flow sheets of the processes are available, these are given reduced to their significant elements. An extensive index classified by substrates, products, enzymes, and companies provides direct access to each process organized in the order of enzyme classes. The reader will find all significant parameters characterizing the biotransformation itself and the process.

Fundamentals of Biochemical Engineering

Springer The biology, biotechnology, chemistry, pharmacy and chemical engineering students at various universities and engineering institutions are required to take the Biochemical Engineering course either as an elective or compulsory subject. This book is written keeping in mind the need for a text book on afore subject for students from both engineering and biology backgrounds. The main feature of this book is that it contains the solved problems, which help the students to understand the subject better. The book is divided into three sections: Enzyme mediated bioprocess, whole cell mediated bioprocess and the engineering principle in bioprocess. Dr. Rajiv Dutta is Professor in Biotechnology and Director, Amity Institute of Biotechnology, Lucknow. He earned his M. Tech. in Biotechnology and Engineering from the Department of Chemical Engineering, IIT, Kharagpur and Ph.D. in Bioelectronics from BITS, Pilani. He has taught Biochemical Engineering and Biophysics to B.E., M.E. and M.Sc. level student carried out advanced research in the area of Ion channels at the Department of Botany at Oklahoma State University, Stillwater and Department of Biological Sciences at Purdue University, West Lafayette, IN. He also holds the position of Nanion Technologies Adjunct Research Professor at Research Triangle Institute, RTP, NC. He had received various awards including JCI Outstanding Young Person of India and ISBEM Dr. Ramesh Gulrajani Memorial Award 2006 for outstanding research in electro physiology.

Biopolymers from Renewable Resources

Springer Science & Business Media The beneficial aspects of utilizing polymers from renewable resources, when considering synthesis, processing, disposal, and overall material lifecycle issues, suggests that this will continue to be an important and growing area of interest. The focus on greener chemistries in industry can be in part satisfied by exploring the range of polymers available from Nature. The information for each type of polymer includes aspects of synthesis, processing and properties. The wide range of polymers and their properties, including polyamides, polysaccharides, polyesters and polyphenols, among others, illustrates this diversity of materials. The reader will have a single volume which provides a resource from which to gain initial insights into this diverse field and from which key references and contacts can be drawn.

Biological Reaction Engineering

Principles, Applications and Modelling with PC Simulation

Wiley-VCH This book is the admirable result of ten years' experience in organizing and teaching courses in biological reaction engineering. It gives engineers and scientists the information they need to analyze the behavior of complex biological reactors using mathematical equations and a dynamic simulation computer language. Part I treats the fundamentals of modelling (mass balance equations, involving reaction kinetics and mass-transfer rates), making them readily understandable to those new in the field. Part II gives 45 example problems, complete with models and programs. This book is the first of its kind to include a diskette with a commercial simulation language. The diskette can be run on any DOS personal computer. Users will appreciate how the simulation runs can be interrupted for interactive parameter changes and instructive plotting.

Principles of Fermentation Technology

Elsevier This second edition has been thoroughly updated to include recent advances and developments in the field of fermentation technology, focusing on industrial applications. The book now covers new aspects such as recombinant DNA techniques in the improvement of industrial micro-organisms, as well as including comprehensive information on fermentation media, sterilization procedures, inocula, and fermenter design. Chapters on effluent treatment and fermentation economics are also incorporated. The text is supported by plenty of clear, informative diagrams. This book is of great interest to final year and post-graduate students of applied biology, biotechnology, microbiology, biochemical and chemical engineering.

Chemical Engineering, Volume 3

Chemical and Biochemical Reactors and Process Control

Elsevier The publication of the third edition of 'Chemical Engineering Volume 3' marks the completion of the re-orientation of the basic material contained in the first three volumes of the series. Volume 3 is devoted to reaction engineering (both chemical and biochemical), together with measurement and process control. This text is designed for students, graduate and postgraduate, of chemical engineering.

Biochemical Reactors

Practical Fermentation Technology

John Wiley & Sons A hands-on book which begins by setting the context:- defining 'fermentation' and the possible uses of fermenters, and setting the scope for the book. It then proceeds in a methodical manner to cover the equipment for research scale fermentation labs, the different types of fermenters available, their uses and modes of operation. Once the lab is equipped, the issues of fermentation media, preservation strains and strain improvement strategies are documented, along with the use of mathematical modelling as a method for prediction and control. Broader questions such as scale-up and scale down, process monitoring and data logging and acquisition are discussed before separate chapters on animal cell culture systems and plant cell culture systems. The final chapter documents the way forward for fermenters and how they can be used for non-manufacturing purposes. A glossary of terms at the back of the book (along with a subject index) will prove invaluable for quick reference. Edited by academic consultants who have years of experience in fermentation technology, each chapter is authored by experts from both industry and academia. Industry authors come from GSK (UK), DSM (Netherlands), Eli Lilly (USA) and Broadley James (UK-USA).

Immobilized Microbial Cells

Applied Biochemistry and Bioengineering

Elsevier Immobilized Microbial Cells, Volume 4 provides an overview of the methods of immobilization, applications, and ways of utilizing immobilized microbial cells and subcellular organelles and chloroplasts as biocatalysts. This volume is comprised of seven chapters. It begins with the historical background of immobilized cell research. Subsequent chapters focus on the methods of immobilization and applications of immobilized microbial cells, living cells, and organelles. The last two chapters discuss gas production of immobilized cells for energy generation and the chemical engineering analysis of immobilized-cell systems. The book will be of great use to chemists and chemical engineers.

Advances in Biochemical Engineering

Springer

Fermentation and Biochemical Engineering Handbook, 2nd Ed.

Principles, Process Design and Equipment

William Andrew This is a well-rounded handbook of fermentation and biochemical engineering presenting techniques for the commercial production of chemicals and pharmaceuticals via fermentation. Emphasis is given to unit operations fermentation, separation, purification, and recovery. Principles, process design, and equipment are detailed. Environment aspects are covered. The practical aspects of development, design, and operation are stressed. Theory is included to provide the necessary insight for a particular operation. Problems addressed are the collection of pilot data, choice of scale-up parameters, selection of the right piece of equipment, pinpointing of likely trouble spots, and methods of troubleshooting. The text, written from a practical and operating viewpoint, will assist development, design, engineering and production personnel in the fermentation industry. Contributors were selected based on their industrial background and orientation. The book is illustrated with numerous figures, photographs and schematic diagrams.

Handbook of Separation Process Technology

John Wiley & Sons Surveys the selection, design, and operation of most of the industrially important separation processes. Discusses the underlying principles on which the processes are based, and provides illustrative examples of the use of the processes in a modern context. Features thorough treatment of newer separation processes based on membranes, adsorption, chromatography, ion exchange, and chemical complexation. Includes a review of historically important separation processes such as distillation, absorption, extraction, leaching, and crystallization and considers these techniques in light of recent developments affecting them.

Handbook of Downstream Processing

Springer Science & Business Media The last two decades have seen a phenomenal growth of the field of genetic or biochemical engineering and have witnessed the development and ultimately marketing of a variety of products—typically through the manipulation and growth of different types of microorganisms, followed by the recovery and purification of the associated products. The engineers and biotechnologists who are involved in the full-scale process design of such facilities must be familiar with the variety of unit operations and equipment and the applicable regulatory requirements. This book describes current commercial practice and will be useful to those engineers working in this field in the design, construction and operation of pharmaceutical and biotechnology plants. It will be of help to the chemical or pharmaceutical engineer who is developing a plant design and who faces issues such as: Should the process be batch or continuous or a combination of batch and continuous? How should the optimum process design be developed? Should one employ a new revolutionary separation which could be potentially difficult to validate or use accepted technology which involves less risk? Should the process be run with ingredients formulated from water for injection, deionized water, or even filtered tap water? Should any of the separations be run in cold rooms or in glycol jacketed lines to minimize microbial growth where sterilization is not possible? Should the process equipment and lines be designed to be sterilized in-place, cleaned-in-place, or should every piece be broken down, cleaned and autoclaved after every turn?

Advances in Chitin/Chitosan Characterization and Applications

MDPI Functional advanced biopolymers have received far less attention than renewable biomass (cellulose, rubber, etc.) used for energy production. Among the most advanced biopolymers known is chitosan. The term chitosan refers to a family of polysaccharides obtained by partial de-N-acetylation from chitin, one of the most abundant renewable resources in the biosphere. Chitosan has been firmly established as having unique material properties as well as biological activities. Either in its native form or as a chemical derivative, chitosan is amenable to being processed—typically under mild conditions—into soft materials such as hydrogels, colloidal nanoparticles, or nanofibers. Given its multiple biological properties, including biodegradability, antimicrobial effects, gene transfectability, and metal adsorption—to name but a few—chitosan is regarded as a widely versatile building block in

various sectors (e.g., agriculture, food, cosmetics, pharmacy) and for various applications (medical devices, metal adsorption, catalysis, etc.). This Special Issue presents an updated account addressing some of the major applications, including also chemical and enzymatic modifications of oligos and polymers. A better understanding of the properties that underpin the use of chitin and chitosan in different fields is key for boosting their more extensive industrial utilization, as well as to aid regulatory agencies in establishing specifications, guidelines, and standards for the different types of products and applications.

Marine Anthropogenic Litter

Springer This book describes how man-made litter, primarily plastic, has spread into the remotest parts of the oceans and covers all aspects of this pollution problem from the impacts on wildlife and human health to socio-economic and political issues. Marine litter is a prime threat to marine wildlife, habitats and food webs worldwide. The book illustrates how advanced technologies from deep-sea research, microbiology and mathematic modelling as well as classic beach litter counts by volunteers contributed to the broad awareness of marine litter as a problem of global significance. The authors summarise more than five decades of marine litter research, which receives growing attention after the recent discovery of great oceanic garbage patches and the ubiquity of microscopic plastic particles in marine organisms and habitats. In 16 chapters, authors from all over the world have created a universal view on the diverse field of marine litter pollution, the biological impacts, dedicated research activities, and the various national and international legislative efforts to combat this environmental problem. They recommend future research directions necessary for a comprehensive understanding of this environmental issue and the development of efficient management strategies. This book addresses scientists, and it provides a solid knowledge base for policy makers, NGOs, and the broader public.

Microplastics in fisheries and aquaculture:

Status of knowledge on their occurrence and implications for aquatic organisms and food safety

Food & Agriculture Org. An overview of the occurrence and effects of microplastics on aquatic organisms, with recommendations regarding seafood safety and security, environmental risk assessment approaches and targeted monitoring of microplastics in the environment.

Narrative and Discursive Approaches in Entrepreneurship

A Second Movements in Entrepreneurship Book

Edward Elgar Publishing . . . the four books comprising the series would certainly be a valuable addition to any entrepreneurship library. However, each book also stands alone as an individual purchase. Lorraine Warren, International Journal of Entrepreneurial Behaviour and Research The book delivers what it promises: a map of the uses of narrative methods in entrepreneurship studies. It is both an interesting contribution to the field and an important methodological handbook for all entrepreneurship researchers who are thinking of adopting qualitative methods in their inquiries. However, it may also be read with advantage by other researchers using ethnography as their main methodological approach to social studies. . . The aim of the book is to show how narratives can enrich entrepreneurship studies, a goal that in my opinion is aptly fulfilled. Monika Kostera, Scandinavian Journal of Management . . . the contributors in this text breathe fresh and imaginative linguistic resources and narrative/discursive frames of reference into the inquiry of entrepreneurial activities. The anecdote, the narrative, the metaphorical, the discursive and the dramaturgical are significant therefore, not only because they bring to the surface voices, emotions, processes and the relationality of (everyday) entrepreneurial activity that have possibly been previously silenced. But also, to paraphrase Steyaert, these approaches highlight the controversial and interactive aspects of the research process. . . The text is welcome because it treats narrative in a serious and scholarly way. Denise Fletcher, International Small Business Journal In their edited book Narrative and Discursive Approaches in Entrepreneurship, Daniel Hjorth and Chris Steyaert provide a fascinating glimpse into a perspective on entrepreneurship that will be enlightening for many readers. Entrepreneurship authors typically talk about theory, methods, and data as if a straight-forward linear process united them all, and making sense of entrepreneurship was simply a matter of knowing how to interpret one's findings. By contrast, the authors in this volume propose narrative and discursive approaches in which the contributing authors emphasize rich description, reflexive conceptualization, and interpretations offered as part of the story itself. They draw upon an international set of cases, including Russia, Sweden, Denmark, Norway, Venezuela, and North America. The cases themselves make for fascinating reading, quite apart from what we learn about the difficulties of imposing a particular interpretation on a given story. For example, taxi drivers in Caracas, management consultants in Denmark, and women entrepreneurs in northern Norway all make for fascinating narratives from which to understand the entrepreneurial process. Unlike many edited books which have no plot, the editors have included opening and closing sections that link the chapters, offer alternative readings of them, and propose new and expansive ways of thinking about entrepreneurship. Howard Aldrich, University of North Carolina at Chapel Hill, US Daniel Hjorth and Chris Steyaert set out to advance the study of entrepreneurship by refocusing the lens of discovery from economics, management and marketing to other paradigmatic stances in social sciences and humanities like anthropology and literary studies. The result is a provocative collection of chapters that inspire the reader to consider and explore new ideas and research practice that incorporate both the context and place of entrepreneurship. From the perceptive insights of the editors to the rigorous and provocative discourse of the chapters and thoughtful responses in the conclusion emerges a story, in the best of storytelling tradition, about how a linguistic turn can rouse new insights. The editors ask, how do these texts move you? they entice, provoke, challenge, stimulate and guide. Their implications should be far reaching and required reading for any student of t

Enzyme Biocatalysis

Principles and Applications

Springer Science & Business Media This book was written with the purpose of providing a sound basis for the design of enzymatic reactions based on kinetic principles, but also to give an updated vision of the potentials and limitations of biocatalysis, especially with respect to recent applications in processes of organic synthesis. The first two chapters are structured in the form of a textbook, going from the basic principles of enzyme structure and function to reactor design for homogeneous systems with soluble enzymes and heterogeneous systems with immobilized enzymes. The last chapter of the book is divided into six sections that represent illustrative case studies of biocatalytic processes of industrial relevance or potential, written by experts in the respective fields. We sincerely hope that this book will represent an element in the toolbox of graduate students in applied biology and chemical and biochemical engineering and also of undergraduate students with formal training in organic chemistry, biochemistry, thermodynamics and chemical reaction kinetics. Beyond that, the book pretends also to illustrate the potential of biocatalytic processes with case studies in the field of organic synthesis, which we hope will be of interest for the academia and professionals involved in R&D. If some of our young readers are encouraged to engage or persevere in their work in biocatalysis this will certainly be our more precious reward.