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Solution Driven by Solar Heated Air Air Pollution Control

Liquid Extraction

1963

a process for the removal of iron from crude beryllium sulfate solutions as obtained from beryl ore by means of liquid liquid solvent extraction is described this method consists of the extraction of the ferric thiocyanate complex from aqueous beryllium sulfate solution of the proper ph with a mixture of tributylphosphate and kerosene studies on mixer settler and column operations are discussed a column design for production use is presented along with expected construction material and operating costs for a plant installation

Mass-transfer Operations

1980

advances in chemical engineering

Iron Removal from Beryllium Solutions by Solvent Extraction Methods

1953

thermochemical process engineering the latest edition in the advances in chemical engineering provides up to date information comprehensively presenting updates in a systematic fashion that has made the series of great importance to organic chemists polymer chemists and many biological scientists since its inception in 1960 the series includes contributions from established authorities in the field who combine descriptive chemistry and mechanistic insight to create an understanding on how the chemistry drives the properties contains reviews by leading authorities in their respective

areas presents up to date reviews of the latest techniques in the modeling of catalytic processes includes a broad mix of us and european authors as well as academic industrial and research institute perspectives provides discussions on the connections between computation and experimental methods

Design Requirements for Uranium Ion Exchange from Ammonium Bicarbonate Solutions in a Fluidized System

1978

focusing mesoscales of multiscale problems in chemical engineering a volume in the advances in chemical engineering series provides readers with the personal views of recognized authorities who present assessments of the state of the art in the field and help readers develop an understanding of its further evolution subjects covered in the book are not limited to the classical chemical engineering disciplines contributions connecting chemical engineering to related scientific fields either providing a fundamental basis or introducing new concepts and tools are encouraged this volume aims to create a balance between well developed areas such as process industry transformation of materials energy and environmental issues and areas where applications of chemical engineering are more recent or emerging contains reviews by leading authorities in their respective areas provides up to date reviews of the latest techniques in the modeling of catalytic processes includes a broad mix of us and european authors as well as academic industrial research institute perspectives provides discussions on the connections between computation and experimental methods

Nuclear Science Abstracts

1960

heterogeneous catalysis and mathematical modeling are essential components of the continuing search for better utilization of raw materials and energy with reduced impact on the environment numerical modeling of chemical systems has progressed rapidly due to increases in computer power and is used extensively for analysis design and development of catalytic reactors and processes this book presents reviews of the state of the art in modeling of heterogeneous catalytic reactors and processes reviews by leading authorities in the respective areas up to date reviews of latest techniques in modeling of catalytic processes mix of us and european authors as well as academic industrial research institute perspectives connections between computation and experimental methods in some of the chapters

Radon daughter mixture distributions in uranium mine atmospheres

1978

mesoscale modeling in chemical engineering a volume in the advances in chemical engineering series provides the reader with personal views of authorities in the field subjects covered are not limited to the classical chemical engineering disciplines with contributions connecting chemical engineering to related scientific fields thus providing new ideas for additional thought the book balances well developed areas such as process industry transformation of materials energy and environmental issues with areas where applications of chemical engineering are more recent or emerging contains reviews by leading authorities in the respective areas presents up to date reviews of latest techniques in modeling of catalytic processes includes a mix of us and european authors as well as academic industrial research institute perspectives contains the critical connections between computation and experimental methods

Official Gazette of the United States Patent Office

1967-06

biomass has received considerable attention as a sustainable feedstock that can replace diminishing fossil fuels for the production of energy and chemicals at the present moment in the oil refining petrochemical and chemical industry after fractionation of crude oil various fractions are upgraded either to fuels or functionalized to produce intermediates and specialty chemicals an analogous concept of biorefining is based on the utilization of biomass as a renewable source of carbon which could be transformed to valuable chemicals although various aspects of biomass transformations are frequently discussed in the literature chemical engineering aspects of such transformations are commonly not considered the aim of the present book is to fill this void updates and informs the reader on the latest research findings using original reviews written by leading industry experts and scholars reviews and analyzes developments in the field

Analysis of Steelmaking Slags by Atomic Absorption Spectrophotometry Using Pressure Dissolution

1978

photobioreaction engineering the latest edition in the advances in chemical engineering series a serial that was established in 1960 and remains one of great importance to organic chemists polymer chemists and many biological scientists includes contributions from established authorities in the field who combine descriptive chemistry and mechanistic insight to create an understanding of how the chemistry drives the properties presents reviews by leading authorities in their respective areas includes up to date reviews of

the latest techniques provides a mix of us and european authors as well as academic industrial research institute perspectives

Advances in Chemical Engineering

1956-01-01

advances in chemical engineering was established in 1960 and is the definitive serial in the area it is one of great importance to organic chemists polymer chemists and many biological scientists written by established authorities in the field the comprehensive reviews combine descriptive chemistry and mechanistic insight and yield an understanding of how the chemistry drives the properties this volume focuses on control and optimisation of process systems advances in chemical engineering was established in 1960 and is the definitive serial in the area it is one of great importance to organic chemists polymer chemists and many biological scientists written by established authorities in the field the comprehensive reviews combine descriptive chemistry and mechanistic insight and yield an understanding of how the chemistry drives the properties focuses on control and optimization of process systems

Chemical Engineering Education

1980

established in 1960 advances in heterocyclic chemistry is the definitive serial in the area one of great importance to organic chemists polymer chemists and many biological scientists written by established authorities in the field the comprehensive reviews combine descriptive chemistry and mechanistic insight and yield an understanding of how the chemistry drives the properties

Graduating Engineer

1980

this thematic volume of advances in chemical engineering presents the latest advances in the exciting interdisciplinary field of nanostructured materials written by chemical engineers chemists physicists materials scientists and bioengineers this volume focuses on the molecular engineering of materials at the nanometer scale for unique size dependent properties it describes a bottom up approach to designing nanostructured systems for a variety of chemical physical and biological applications

Summaries of Projects Completed in Fiscal Year ...

1977

advances in chemical engineering

Summaries of Projects Completed

1977

the theme of the present volume multiscale analysis has been introduced about a decade ago and is now reaching a stage where a first balance can be made and further research directions should be decided contributions have been carefully selected to ensure the reader will not be confronted with quantum mechanics at one side of the spectrum nor with chemical plants or even the environment on the other side maintaining a strong connection with reality i e experimental data was another selection criterion experimental validation remains the corner stone of any theoretical development and very powerful experimentel techniques are emerging areas covered include discussing in depth an important example of experimental techniques coming from the medical world magnetic resonance

techniques can now provide even quantitative answers to problems our community is faced with the modeling issue is discussed further finally the limitations of the classic reactor engineering models are outlined original reviews leading chemical engineers as authors update on biomaterials use novel subject on use of biomaterials in drug delivery and gene therapy mathematical modeling

Summaries of Projects Completed in Fiscal Year ...

1979

this latest volume in the advances in chemical engineering series is a contemporary analysis of the preparation structure and properties of biomaterials with emphasis on the molecular design and material polymer interactions the book addresses cell biomaterials adhesion biomaterials and gene therapy protein adsorption platelet and white cell activation processes molecular design and surface modification of novel biomaterials original reviews leading chemical engineers as authors update on biomaterials use novel subject on use of biomaterials in drug delivery and gene therapy mathematical modeling

Engineering Education

1980

this volume of advances in chemical engineering presents the latest developments in microsystems and devices for biochemical processes updates and informs the reader on the latest research findings using original reviews written by leading industry experts and scholars reviews and analyzes developments in the field

Mass-transfer Operations

2016-11-24

volumes 21 and 22 of advances in chemical engineering contain ten prototypical paradigms which integrate ideas and methodologies from artificial intelligence with those from operations research estimation andcontrol theory and statistics each paradigm has been constructed around an engineering problem e g product design process design process operations monitoring planning scheduling or control along with the engineering problem each paradigm advances a specific methodological theme from ai such as modeling languages automation in design symbolic and quantitative reasoning inductive and deductive reasoning searching spaces of discrete solutions non monotonic reasoning analogical learning empirical learning through neural networks reasoning in time and logic in numerical computing together the ten paradigms of the two volumes indicate how computers can expand the scope type and amount of knowledge that can be articulated and used in solving a broad range of engineering problems sets the foundations for the development of computer aided tools for solving a number of distinct engineering problems exposes the reader to a variety of ai techniques in automatic modeling searching reasoning and learning the product of ten years experience in integrating ai into process engineering offers expanded and realistic formulations of real world problems

Thermochemical Process Engineering

2015-11-26

fuel cells are attractive electrochemical energy converters featuring potentially very high thermodynamic efficiency factors the focus of this volume of advances in chemical engineering is on quantitative approaches particularly based on chemical engineering principles to analyze control and

optimize the steady state and dynamic behavior of low and high temperature fuel cells pemfc dmfc sofc to be applied in mobile and stationary systems updates and informs the reader on the latest research findings using original reviews written by leading industry experts and scholars reviews and analyzes developments in the field

Mesoscale Modeling in Chemical Engineering

2014-09-22

due to the increasing importance of multi scale computation in engineering stimulated by the dramatic development of computer technology and understanding of multi scale structures an issue on multi scale simulation and design or so called virtual process engineering is now edited ace published an issue with title of multi scale analysis in 2005 vol 35 the intention of the present volume is different trying to elucidate the bottlenecks and to identify the correct directions for the coming years from the process and product engineering point of view both fundamental and practical contributions will be provided from academia and industry updates and informs the reader on the latest research findings using original reviews written by leading industry experts and scholars reviews and analyzes developments in the field

Modeling and Simulation of Heterogeneous Catalytic Processes

2016-02-16

over the last decade circulating fluidization or fast fluidization has developed rapidly superseding standard bubbling fluidization in many applications for example fast fluidization provides a better means forcontrolling emissions from the combustion of high sulfur fuels and excels when used in boilers in steam plant and power stations china initiated the study of fast fluidization in

the early 1970s focusing on the substantial research cultivated in that country with kwauk at the leading edge this latest volume in the advances in chemical engineering series is written in the context of the international state of the art and addresses some of the most vital issues surrounding this fluidization method

Mesoscale Modeling in Chemical Engineering

2012-12-28

in recent years chemical engineers have become increasingly involved in the design and synthesis of new materials and products as well as the development of biological processes and biomaterials such applications often demand that product properties be controlled with precision molecular modeling simulating chemical and molecular structures or processes by computer aids scientists in this endeavor volume 28 of advances in chemical engineering presents discussions of theoretical and computational methods as well as their applications to specific technologies

Chemical Engineering for Renewables Conversion

2016-01-30

a 25 year tradition of excellence is extended in the fourth edition of this highly regarded text in clear authoritative language the authors discuss the philosophy and procedures for the design of air pollution control systems their objective is twofold to present detailed information on air pollution and its control and to provide formal design training for engineering students new to this edition is a comprehensive chapter on carbon dioxide control perhaps the most critical emerging issue in the field emphasis is on methods to reduce carbon dioxide emissions and the technologies for carbon capture and sequestration an expanded discussion of control technologies for coal fired power plants includes details on the capture of nox and mercury emissions all

chapters have been revised to reflect the most recent information on u s air quality trends and standards moreover where available equations for equipment cost estimation have been updated to the present time abundant illustrations clarify the concepts presented while numerous examples and end of chapter problems reinforce the design principles and provide opportunities for students to enhance their problem solving skills

Photobioreaction Engineering

2013-04-25

Control and Optimisation of Process Systems

1961

Isotopic Power Sources ...

2001-04-02

Advances in Chemical Engineering

2001-12-18

Nanostructured Materials

1999-10-06

Advances in Chemical Engineering

2005-10-24

Advances in Chemical Engineering

2004-07

Advances in Chemical Engineering

2010-08-04

Micro Systems and Devices for (Bio)chemical Processes

1995-11-14

Intelligent Systems in Process Engineering, Part II: Paradigms from Process Operations

2012-08-14

Fuel Cell Engineering

2011-06-27

Multiscale Simulation and Design

1994-12-23

Fast Fluidization

2001-12-18

Molecular Modeling and Theory in Chemical Engineering

1963

Petro/chem Engineer

1965

Current Projects on Economic and Social Implications of Scientific Research and Development

1961

Annual Report of the National Science Foundation

1979

Analysis of a LiCL Open-cycle Absorption Air Conditioner which Utilizes a Packed Bed for Regeneration of the Absorbent Solution Driven by Solar Heated Air

2010-08-25

Air Pollution Control

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