Adsorption Science And Technology Prodeedings Of The Second Pacific Basin Conference On Adsorption

ICSSCCET 2015 will be the most comprehensive conference focused on the various aspects of advances in Systems, Science, Management, Medical Sciences, Communication, Engineering, Technology, Interdisciplinary Research Theory and Technology. This Conference provides a chance for academic and industry professionals to discuss recent progress in the area of Interdisciplinary Research Theory and Technology. Furthermore, we expect that the conference and its publications will be a trigger for further related research and technology improvements in this important subject. The goal of this conference is to bring together the researchers from academia and industry as well as practitioners to share ideas, problems and solutions relating to the multifaceted aspects of Interdisciplinary Research Theory and Technology.

This volume comprises the proceedings of the TOCAT 2 Conference. The papers are grouped in three categories: plenary lectures, oral presentations and papers presented in the industrial poster sessions.

Due to their unique porous properties, zeolites (also referred to as molecular sieves) are used in a variety of applications - major uses are in petrochemical cracking, ion-exchange (water softening and purification), and in the separation and removal of gases and solvents. Molecular Sieves: From Basic Research to Industrial Applications, Volume 158 A,B presents over 265 worldwide contributions on the latest developments in zeolitic research. Readers will find this book, which is divided into five sections: Synthesis, Characterization, Adsorption, Catalysis, and Novel applications, ideal for staying up to date on current research on porous materials. * Comprehensive overview of current research on porous materials * Contains experimental as well as theoretical input, reflecting the increasing overlap between theory and experiment * Contributions from the world's leading authorities

Focusing on layered compounds at the core of materials intercalation chemistry, this reference comprehensively explores clays and other classes of materials exhibiting the ability to pillar, or establish permanent intracrystalline porosity within layers. It offers an authoritative presentation of their fundamental properties as well as summaries of

Proceedings of the 5th Pacific Basin Conference on Adsorption Science and Technology (PBAST 5)Adsorption Science and TechnologyProceedings of the Second Pacific Basin Conference on Adsorption Science and Technology : Brisbane, Australia, 14-18 May 2000World Scientific

May 17-18, 2018 Rome, Italy Key Topics : Materials Science and Chemistry, Materials Science and Engineering, Materials Chemistry in Developing Areas, Materials Synthesis and Characterization, Analytical Techniques and Instrumentation in Materials Chemistry, Polymeric Materials, Nanomaterials, Inorganic Materials Chemistry, Organic Materials Chemistry, Applied Materials Chemistry, Materials Chemistry and Physics, Science and Technology of Advanced Materials,

Volume is indexed by Thomson Reuters CPCI-S (WoS). Collection of selected, peer reviewed papers from the 2014 International Conference on Material Science and Engineering, 8-9 August, 2014, Xi’an, Shanxi, China. The 97 papers are grouped as follows: Chapter 1: Energy, Environment Materials and Carbon-based materials, Chapter 2: Structural Materials and Functional Materials, Chapter 3: Nano-scale Materials Science, Chapter 4: Electrical Material Science and Technologies, Chapter 5: Optical, Magnetic and Spintronic Materials and Technologies.

This biannual conference in Pahang, Malaysia, is a clearing house for many of the latest research findings in a highly multidisciplinary field. The contributions span a host of academic disciplines which are themselves rapidly evolving, making this collection of 90 selected papers an invaluable snapshot of an arena of pure and applied science that produces many versatile innovations. The book covers a multitude of topics ranging from the sciences (pure and applied) to technology (computing and engineering), and on to social science disciplines such as business, education, and linguistics. The papers have been carefully chosen to represent the leading edge of the current research effort, and come from individuals and teams working right around the globe. They are a trusted point of reference for academicians and students intending to pursue higher-order research projects in relevant fields, and form a major contribution to the international exchange of ideas and strategies in the various technological and social science disciplines. It is the sheer scope of this volume that ensures its relevance in a scientific climate with a marked trend towards disciplinary synthesis.

Section headings and selected papers: -- I. Plenary Lectures. -- Metallocene catalysts for olefin polymerization (W. Kaminsky). -- Advances in deep desulfurization (H. Tops øe et al.). -- New horizons for the use of porous materials as catalysts (M.E. Davis). New direction of research for industrial catalysis -- an example of Mitsubishi Chemical Corporation (T. Onoda). -- Synthetic or reformulated fuels; a challenge for catalysis (P. Chaumette et al.). -- II. Oral Presentations. -- New acetyls technologies from BP Chemicals (M.J. Howard et al.). -- Ammoxidation of ethane to acetonitrile over co-beta zeolite (Y. Li, J.N. Armor). -- Designing heterogeneous oxidation catalysts (G.J. Hutchings et al.). -- The Chiyoda/UOP Acetica ™ Process: A novel acetic acid technology (N. Yoneda et al.). -- Two-phase catalytic oxidation by macromolecule-metal complexes (E. Karakhanov et al.). -- Recent advance in zeolite-based catalytic process in People's Republic of China (Z. Gao). -- Re ...

"Molecular Sieves - Science and Technology" covers, in a comprehensive manner, the science and technology of zeolites and all related microporous and mesoporous materials. The contributions are grouped together topically in such a way that each volume deals with a specific sub-field. Volume 7 treats fundamentals and analyses of adsorption and diffusion in zeolites including single-file diffusion. Various methods of measuring adsorption and diffusion are described and discussed.

This book is a compilation of selected papers from the 1st Indo-China Research Series in Geotechnical and Geoenvironmental Engineering held in May 2020 online. The webinar series was held at a time of COVID-19 pandemic, when there is lack of physical connectivity. The cutting-edge research topics in Civil and Environmental Engineering ranging from bio-geotechnology, methane gas hydrates, frozen soils, rock testing, and related high-rise buildings response under wind loading will be covered. The contents make valuable contributions to academic researchers and engineers in the industry and provide a platform for demonstrating joint research between scientists from India and China. These are the first proceedings of its kind to demonstrate and motivate more joint research cooperation in Civil and Environmental Engineering between two countries. It was done mainly to motivate youth research scholars to understand each other and develop long-term cooperation.

Recent Advances in Science and Technology of Zeolites and Related Materials is a collection of oral and poster communications, presented during the 14th International Zeolite Conference

(IZC). The conference was hosted by the Catalysis Society of South Africa. In the tradition of the IZC series, this Conference provides a forum for the presentation of new knowledge in the science and technology of zeolites and related materials. Papers presented cover a wide range of topics that include synthesis, structure determination, characterisation, modelling, and catalysis. This highly visual book is a must for readers looking to stay up-to-date on zeolite science. * This three-part volume provides valuable information on zeolites and related materials * Includes papers that cover topics such as structure determination, modelling and separation processes * Contains new and exciting developments in the field

This book contains papers presented in the 3rd International Conference on Separation Technology 2020 (ICoST 2020) held from 15 to 16th August 2020 at Johor, Malaysia. This proceeding contains papers presented by academics and industrial practitioners showcasing the latest advancements and findings in field of separation technology. The papers are categorized under the following tracks and topics of research: Environment Engineering Biotechnology Absorption and Adsorption Technology Wastewater Treatment ICoST 2020 covers multidisciplinary perspectives on separation research and aims to promote scientific information interchange between academics, researchers, graduates and industry professionals worldwide. This conference provides opportunities for the delegates to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration.

Modern Petrochemical Technology A text that explores the essence of petrochemicals and petrochemical technology Modern Petrochemical Technology: Methods, Manufacturing and Applications is a comprehensive resource that provides an overview of the uses for common petrochemical building blocks, a review of the marketplaces, and offers a survey of the technology used to make the key petrochemical building blocks. The book contains both critical information the technologies used to produce petrochemicals, how the various petrochemicals are applied in industry, and provides illustrative examples and problems designed to reinforce the learning about the basic science, engineering, and use of petrochemicals. The book explores three seprate petrochemical building block—olefin complexes, aromatic complexes and synthesis gas complexes—and examines the “interconnected” nature of these building blocks. The authors also include information on the olefins productions using steam cracking, paraffin dehydrogenation, and methanol to olefins technologies and describes various methods, commercial processes to produce aromatics such as benzene, toluene and xylene, and much more. This important book: Offers a guide to the critical information on petrochemical producing technologies Includes material on various petrochemicals from the industrial point-of-view Explores the separation processes, membrane technology, absorption technology, liquid-liquid extraction, and more Contains material from a team of noted experts Provides a survey of examples of commercialization applications of petrochemicals Written for chemical engineers, chemists in industry, membrane scientists, and process engineers, Modern Petrochemical Technology provides an overview of markets and uses for common petrochemical building blocks as well as includes a survey of the technology used to make the key petrochemical building blocks.

This book presents the latest achievements of separation science and technology. It highlights the application of separation with regard to problems of current interest, such as the protection of the environment and the development of emerging technology, including chemical engineering, biotechnology, renewable energy sources and recycling of materials. Contents:Plenary Paper:Modeling, Optimization and Control of SMB Processes (S-B Lee et al.)Phase Equilibria, Mass Transfer:Measurement and Calculation of the Solubility of Carbon Dioxide in Ionic Liquid [bmim][PF6] (Y S Kim et al.)Effect of Supercritical Carbon Dioxide on the Thermal Properties of Synthetic Polymers (H Kim et al.)Distillation, Extraction, Absorption:Separation of Isoprene Compounds via ?-Complexation in C5 Mixtures (S-J Son et al.)Effects of Nano-Sized Ag Particles on Heat Transfer in Ammonia-Water Absorption Systems (C H Lee et al.)The Stainless Steel Fiber Recycle from Grinding Swarf by Using Supercritical Fluids (J Y Yang et al.)Adsorption, Chromatography, Ion Exchange:Normal Paraffin Adsorptive-Separation Technology for Naphtha (Z Yao & J Wang)Water Treatment System Using Granular Activated Carbon Bed (M T Ravanchi & T Kaghazchi)Decomposition of NO Gas by Copper Impregnated Activated Carbon Fibers (S K Ryu et al.)Membrane Separation:Morphology and Pervaporation Characteristics of PAA/POLY (BMA-co-MMA) IPN Membranes (S C Kim & B-Y Lim)Carbon-Silica Membranes for Improved Gas Separation (Y M Lee & H B Park)Bio-Separation:Removal of Toluene from Unsaturated Soil by Bioventing (H Sui et al.)Solid–Liquid Extraction of Quercetin from Onion Skin and Concentration by Reverse Osmosis (J Yoon et al.)Study of Separating and Abstracting L-Leucine from Fermentation Liquor (S H Wu et al.)Miscellaneous:Preparation of Ceria Fine Particles by Using Various Supercritical Fluids (E-Y Lee et al.)ASES Crystallization of Biodegradable Polymers Using Supercritical CO2 as an Anti-Solvent (H-S Jung et al.)Transesterification Between Methanol and Ethylene Carbonate Over Fixed-Bed K/MgO Catalyst for Reactive Distillation (B S Ahn et al.)and other papers Readership: Graduate students, academics, researchers and industrialists in chemical engineering and industrial chemistry. Keywords:Separation;Phase Equilibria;Mass Transfer;Distillation;Extraction;Adsorption;Membrane Separation;Bioseparation

In recent decades surface science has experienced a large growth in connection with the development of various experimental techniques which are able to characterize solid surfaces through the observation of the scattering of ions, electrons, photons or atoms. These methods of investigation, known under different labels such as LEED, AES, XPS, UPS, etc. have been extensively applied in describing the structure, morphology, and chemical and physical properties of crystal surfaces and interfaces of a large variety of materials of interest in solid-state physics, electronics, metallurgy, biophysics, and heterogeneous catalysis. Among these methods we wish to emphasize molecular beam scattering from solid surfaces. ~lolecular beam scattering has gone through a large development in the last ten years. In this decade a large number of laboratories have used this method to study various clean and adsorbate-covered surfaces. The technique is nonetheless quite old. It dates back to the beginning of the thirties, when Estermann and Stern performed the first atom diffraction experiment proving the wave nature of atoms. In the following years the entire subject of gas-surface interaction was considered a branch of rarefied gas dynamics and developed in connection with aerospace research. Attention was then given to the integral properties of gas-solid interactions (sticking and energy accomodation, mean momentum transfer) rather than to atom-surface scatter ing from well-characterized surfaces.

The aim of this book is to provide all those involved in designing and running adsorption processes with a guide to adsorption technology and design.

This book presents the latest research on adsorption science and technology. It serves as an excellent reference for research in areas such as fundamentals of adsorption and ion exchange (equilibria and kinetics), new materials, adsorption characterization, novel processes, energy and environmental processes.

This book is the proceedings of the second Pacific Basin Conference on Adsorption Science and Technology that was held May 14-18, 2000 in Brisbane, Australia.

ERMR 2006 included invited speakers, technical presentations, poster presentations, and a student paper competition. At the conference banquet, Dr. David Carlson of Lord Corporation addressed the conference attendees and gave a stirring speech on the history of ER and MR fluids, as well as current and future applications. A unique feature of the ERMR Conferences is that they comprehensively cover issues ranging from physics to chemistry to engineering applications of ER and MR materials held in a general session to enhance the interaction between the scientists and engineers. The sessions in ERMR 2006 were organized based into two Symposia: a) Materials and b) Applications. Topics covered in the Materials Symposium included: mechanisms, preparation, and characterization of ER and MR materials. Topics covered in the Applications Symposium included: ER and MR devices, control systems, system integration,

and applications. This structure was implemented in order to enable interaction between attending scientists and engineers in both the Materials Symposium and the Applications Symposium, and to enhance the free flow of ideas, and the potential collaborative research opportunities.

Fundamentals of Adsorption contains 2 plenary lectures and 96 selected papers from the IVth International Conference, Kyoto, May, 1992. The topics cover a wide range of studies from fundamentals to applications: characterization of porous adsorbents, molecular simulation, adsorption isotherms, diffusion in adsorbents, breakthrough detection, chromatography, pressure swing operation, etc. Model studies on adsorption, surface characterization, microporosimetry, molecular simulations of equilibrium and diffusion, computer simulation of adsorption beds, and many theoretical studies are also included. Special attention is given to: bulk gas separation and purification, solvent recovery, bioproduct separation, environmental pollution control, methane storage, adsorption cooling and resources recovery.

This book presents the latest research on adsorption science and technology. It covers various aspects of materials, solid characterization, equilibria, kinetics determination and new processes. Contents:Cluster Mediated Filling of Water and Alcohol on Microporous Carbon Alloys (K Kaneko et al.)Direct Measurement of Transient Concentration Profiles in Molecular Sieve Particles and Columns by MRI (N Karsten-Bär et al.)Computer Simulation Studies of Wetting on Heterogeneous Surfaces (S Curtarolo et al.)New Adsorbents for Gas Separation by Weak Chemical Bonds (R T Yang)Measurement of Adsorbate Density Profiles in Activated Carbon with the Aid of 1H-MRI (F B Aarden et al.)Interaction Between Adsorption and Condensation Processes in a Pore-Relation Between Condensation Pressure and Pore Width (C Aharoni)Isosteric Heat: A Criterion for Equilibrium Model Selection (A Ahmadpour & D D Do)Adsorption Characteristics and Isotherm Relationships of Activated Carbons Developed from Lignite and Peat (S J Allen et al.)and other papers Readership: Engineers and scientists working in adsorption and separation science and engineering, as well as research students in chemical engineering and physical chemistry. Keywords:

Proceedings of the NATO Advanced Study Institute, Vimeiro, Portugal, July 17-29, 1988

This Purdue volume includes 89 technical papers presented at the 43rd Purdue Industrial Waste Conference, held May 10, 11, and 12, 1988 at Purdue University. The papers address topics within broad categories such as toxic and hazardous wastes; site remediation; landfills; biological systems; sorptive processes; processes and product development; industrial wastes; and laws, regulations, and training. The data and information contained in this volume reflect some of the latest information available on industrial waste and waste management.

The purpose of this Conference was to discuss the results of recent developments and the future prospect in science and technology of the field. The field has been growing and flourishing, while indicating many problems to be uncovered and solved. The conference was structured to encourage interaction and to stimulate the exchange of ideas to accomplish the above purpose. Key issues and materials related to the Conference were included as follows: • Molecular Assemblies in Solutions; • Fine Particles and Colloidal Dispersions; • Supramolecular Organized Films; • Nanostructural Solid Surfaces; • Industrial Applications and Products. The Conference comprised 2 plenary lectures, 42 invited lectures, 150 oral presentations and 266 poster presentations.

1991 International Conference on Coal Science Proceedings

Particle Technology and Applications presents the theoretical and technological background of particle science and explores up-to-date applications of particle technologies in the chemical, petrochemical, energy, mechanical, and materials industries. It looks at the importance of particle science and technology in the development of efficient chemi

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