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The scientific program are now available in PDF format and online. Please click the links below to view the program.

Scientific Program: PDF Format

[Sessions Schedule](#)

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Scientific Program: Online

Oral Sessions	24 MON	25 TUE	26 WED	27 THU	28 FRI
Poster Sessions	24 MON	25 TUE			

Please note that the program is tentative and subject to change without notice.

Sunday: May 23, 2010

15:00-18:00	Registration
17:00-18:00	Opening Ceremony (Main Hall) - Puppet Theater of Awaji
18:00-20:00	Welcome Reception (Lobby)

Monday: May 24, 2010

Keynote - 1

Room: Main Hall / Chair: G. V. Baron

8:40-9:20	On the Equilibrium Theory of Chromatography; Marco Mazzotti
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Plenary M1: Chromatography & Liquid Phase Adsorption

Room: Main Hall / Chair: C.-H. Lee

9:20	Optimization of Simulated Moving Bed Chromatography with Enriched Fractionation and Feedback; Suzhou Li, Yoshiaki Kawajiri , Jorg Raisch and Andreas Seidel-Morgenstern
9:40	The Intermittent Simulated Moving Bed (I-SMB) Process; Shigeharu Katsuo , Christian Langel, Matthias Babler and Marco Mazzotti

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- 10:00 Kinetic Mechanisms for Protein Adsorption in Polymer-Grafted Ion Exchangers;
Giorgio Carta
- 10:20 Adsorption of Arsenic (V) onto Activated Carbons Produced from Agricultural By-Products: Focus on Sorption Mechanism;
Jonatan Torres Perez, Claire Gerente, Yves Andres and Gordon McKay

10:40-11:00 Coffee Break (Reception Hall B)

Session M1: Separation Process - SMB/Chromatography

Room: Main Hall / Chair: Y. Brun & Y. Kawajiri

- 11:00 Comparison of FeedCol Strategy Performances in Various SMB Processes;
Hyeon-Hui Lee, Kyung-Min Kim and Chang-Ha Lee
- 11:20 Optimization of Simulated Moving Bed Reactor for Paraxylene Production;
Ghislain Bergeot, Damien Leinekugel-le-Cocq, Laurence Muhr and Michel Bailly
- 11:40 'Cycle to Cycle' Optimizing Control of Simulated Moving Beds for a Nonlinear Chiral Separation-Experimental Implementation;
Christian Lange, Cristian Grossmann, Simon Jermann, Marco Mazzotti, Manfred Morari and Massimo Morbidelli
- 12:00 Equilibrium Theory of Chromatography for the Generalized Langmuir Isotherm: From Fundamentals to Process Design;
Marco Mazzotti and Arvind Rajendran
- 12:20 Surface Diffusion in Reversed-Phase Liquid Chromatography;
Kanji Miyabe and Georges Guiochon
- 12:40 Preparative Separation of Ternary Mixtures using Multiple Stationary Phases;
Balamurali Sreedhar and Andreas Seidel-Morgenstern
- 13:00 Polymer Chromatography as a Tool for Analyzing Adsorption of Macromolecules and Polymer-Based Nanocomposites in Porous Media;
Yefim Brun

Session M2: MOFs - Synthesis & Characterization

Room: Event Hall / Chair: T. J. Bandoz & S. Kaskel

- 11:00 A new Mesoporous Metal-Organic Framework: DUT-6;
Nicole Klein, Irena Senkowska, Kristina Gedrich, Ulrich Stoeck, Antje Henschel, Uwe Mueller and Stefan Kaskel
- 11:20 Type-V Isotherms: Another Example of Unusual Adsorption Behaviour Observed in MOFs;
David Fairen-Jimenez, Nigel A. Seaton and Tina Duren
- 11:40 Computational Study of Alkene Adsorption in a Metal-Organic Framework with Open Metal Sites;
Miguel Jorge, Jose Richard Gomes and Alirio E. Rodrigues
- 12:00 Thermodynamics of Guest-Induced Structural Transitions in Hybrid Organic-Inorganic Frameworks;
Alain H. Fuchs, Francois-Xavier Coudert, Caroline Mellot-Draznieks and Anne Boutin
- 12:20 MOF Graphene Composites: Exploring the New Concept of Adsorbents and Catalysts;
Teresa J. Bandoz and Camille Petit

- Elaboration and Properties of Hierarchically Structured Optical Thin Films of MOFs;
 12:40 Aude Demessence, Patricia Horcajada, Christian Serre, Cedric Boissiere, David Grosso, Clement Sanchez and Gerard Ferey
- Using Calorimetry to Characterise Adsorption in Metal-Organic Frameworks;
 13:00 Philip L. Llewellyn, Sandrine Bourrelly, Jean Rouquerol, Andrew Wiersum, Guillaume Maurin, Thomas Devic, Vincent Guillerm, Patricia Horcajada, Christian Serre, Stuart Miller, Paul A. Wright and Gerard Ferey

Session M3: Diffusion & Separation

Room: Amphitheater / Chair: J. P. B. Mota & A. V. Neimark

- Adsorption and Diffusion of Polymers in Nanopores;
 11:00 Alexander V. Neimark, Shuang Yang, Yang Kan, Aleksey Vishnyakov and Yefim Brun
- Modeling Adsorption and Diffusion in Microporous Carbons;
 11:20 Jeremy C. Palmer, Joshua D. Moore, John K. Brennan and Keith E. Gubbins
- Adsorption and Transport Properties of Humid CO₂ - Methane Mixtures in Nanoporous Carbons and Membranes by Molecular Simulation;
 11:40 Alaaeldin Salih and Erich A. Muller
- Molecular Modelling of Transport in Nanoporous Materials: Bridging Theory and Experiment;
 12:00 Suresh Kumar Bhatia
- Anomalous Diffusion in Ordered and Disordered Microporous Carbons;
 12:20 Joshua D. Moore, Jeremy C. Palmer, Ying C. Liu, Thomas J. Roussel, John K. Brennan and Keith E. Gubbins
- Monte Carlo Simulation of Polymer Adsorption;
 12:40 Chris Rasmussen, Aleksey Vishnyakov and Alexander V. Neimark
- Adsorption Thermodynamics of Light Organics in Single-walled Carbon Nanotube Bundles;
 13:00 Fernando J. A. L. Cruz, Erich A. Muller and Jose P. B. Mota
- 13:20-15:20 Lunch & Free Time
- 15:20-16:20 IAS Meeting (Main Hall)

Keynote - 2

Room: Main Hall / Chair: P. A. Monson

- 16:20-17:00 Flexible Porous Coordination Polymers;
Susumu Kitagawa

Plenary M2: MOFs

Room: Main Hall / Chair: K. Kaneko

- 17:00 Insights on Adsorption Characterization of Novel Open Metal Organic Frameworks (MOFs);
 J. Moellmer, R. Luebke, A. J. Cairns, Dirk Wallacher, R. Staudt, M. Eddaoudi and M. Thommes
- 17:20 Adsorption on Coordination Polymers with Open Metal Sites: Strong Interaction between Sorbate and Metal Cation;
Pascal D. C. Dietzel and Richard Blom
- 17:40 Adsorption of Water in Metal-Organic Frameworks: Insight from Molecular Simulation;

Francois-Xavier Coudert, Selvarengan Paranthaman, Anne Boutin, Caroline Mellot-Draznieks and Alain H. Fuchs

18:00-19:00 Dinner

Poster Session 1 - with refreshments

19:00-20:40 At the Connecting Corridor to the Hotel / Chair: N. Sano

20:40- Hospitality (JAPAN NIGHT at Room 405)

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Tuesday: May 25, 2010

Plenary T1: Adsorption Equilibrium & Dynamics

Room: Main Hall / Chair: S. K. Bhatia

- 8:40 A Novel Method for Reporting Adsorption Equilibria: Net Adsorption;
Orhan Talu and Sasidhar Gumma
- 9:00 Spontaneous Imbibition in Disordered Porous Solids: A Theoretical Study of Helium in Silica Aerogels;
Martin Luc Rosinberg, Fabio Leoni, Edouard Kierlik and Gilles Tarjus
- 9:20 Modulation of Pore Condensation and Hysteresis Behavior in Ordered Mesoporous SBA-15 Silica as a Function of Synthesis Parameters;
Freddy Kleitz, Remy Guillet-Nicolas, Francois Berube and Matthias Thommes
- 9:40 The Role of Cavitation in Adsorption Hysteresis;
Alexander V. Neimark, Christopher Rasmussen, Aleksey Vishnyakov, Matthias Thommes, Bernd Smarsly and Freddy Kleitz
- 10:00 Modeling Relaxation Processes for Fluids in Porous Materials using Dynamic Mean Field Theory;
John R. Edison and Peter A. Monson
- 10:20 Unprecedented Wealth of Information on Guest Dynamics from Transient Concentration Profiles in Nanoporous Materials;
Jorg Karger
- 10:40-11:00 Coffee Break (Reception Hall B)

Session T1: MOFs - Flexible Structure

Room: Main Hall / Chair: M. Thommes & R. Matsuda

- 11:00 Multi-step Adsorption of Flexible Porous Coordination Polymers Investigated by Coincident Measurement of Adsorption and X-ray Powder Diffraction;
Ryotaro Matsuda, Sareeya Bureekaew, Joobeom Seo, Hiroshi Sato and Susumu Kitagawa
- 11:20 Organic Functionalization in Flexible MOFs: Effects on the Pore Opening, Flexible Character and Adsorption Properties;
Thomas Devic, Patricia Horcajada, Christian Serre, Daniela Heurtaux, Fabrice Salles, Guillaume Maurin, Thuy Khuong Trung, Naseem Ramsahye, Philippe Trens, Beatrice Moulin, Guillaume Clet, Alexandre Vimont, Marco Daturi, Sandrine Bourrelly, Philip Llewellyn and Gerard Ferey

- 11:40 Adsorption Control of O₂ and N₂ on a LPC via Magnetic-field Induced Gate Shift;
Koichi Hashikawa, Shigeru Ogata, Atom Hamasaki and Sumio Ozeki
- 12:00 Microcalorimetric Characterisation of Polar Vapour Adsorption on the Flexible Metal Organic Frameworks MIL-88 and MIL-53;
Sandrine Bourrelly, Philip L. Llewellyn, Renaud Denoyel, Isabelle Beurroies, Guillaume Maurin, Sabine Devautour-Vinot, Guillaume Clet, Alexandre Vimont, Thomas Devic, Patricia Horcajada, Christian Serre and Gerard Ferey
- 12:20 Flexible Structures and Functions of Elastic Layer-structured MOFs (ELMs);
Hirofumi Kano, Atsushi Kondo, Hiroshi Kajiro, Chi Song, Hiroshi Noguchi, Tomonori Ohba and Katsumi Kaneko
- 12:40 Free Energy Analysis for Adsorption-Induced Structural Transition of a Doubly Interpenetrating PCP;
Hayato Sugiyama, Satoshi Watanabe, Hideki Tanaka and Minoru Miyahara

Session T2: Diffusion

- Room: Event Hall / Chair: C. L. Cavalcante Jr. & M. Petkovska
- 11:00 Nonlinear Frequency Response Experiments for Investigation of Adsorption of Pure Gases;
Danica Brzic, Frank Poplow and Menka Petkovska
- 11:20 Characterization of Gas Diffusion in Nanopores by Frequency Response Method;
Akihiko Matsumoto and Shigeki Nakano
- 11:40 The Influence of Molecule Size on Its Transport Properties through a Porous Medium;
Veronique Wernert, Renaud Bouchet and Renaud Denoyel
- 12:00 Binary Diffusion of n-Heptane and Toluene in SBA-15 Materials;
Qinglin Huang and Mladen Eic
- 12:20 Intracrystalline Diffusion of Linear and Branched Alkanes in Beta and Silicalite Zeolites;
Artemis P. Guimaraes, Karen K. N. Ribeiro, Diana C. S. Azevedo and Celio L. Cavalcante Jr.
- 12:40 Modeling of Diffusion in Adsorbents near Saturation;
Elsa Jolimaitre, Damien Leinekugel-le-Cocq and Melaz Tayakout

Session T3: Multicomponent Adsorption

- Room: Amphitheater / Chair: S. Farooq & C. A. Grande
- 11:00 Adsorption Measurements for Nitrogen, Carbon Dioxide, Methane at Cryogenic Temperatures and High Pressures by the Volumetric Method;
Guillaume C. Y. Watson, E. F. May, N. K. Jensen, P. S. Hofman, M. A. Trebble, R. D. Trengove and K. I. Chan
- 11:20 Experimental and Theoretical Study of the Adsorption of Pure Molecules and Binary Systems Containing N₂, CH₄ and CO₂: Application to the Syngas Generation;
Nicolas Heymans, Bruno Alban, Serge Moreau and Guy De Weireld
- 11:40 Multicomponent Adsorption Experiments and PSA Testing for Hydrogen Purification Applications;
Filipe V. S. Lopes, Carlos A. Grande and Alirio E. Rodrigues

- 12:00 Experimental Evaluation on Post-combustion CO₂ Capture by Electric Swing Adsorption Using Carbonaceous Materials;
Hui Liang, Ping Li, Zhen Liu, Xingfu Song and Jianguo Yu
- 12:20 Kinetically Controlled CO₂ Capture from Post-Combustion Flue Gas on a Carbon Molecular Sieve;
Reza Haghpanah, Arvind Rajendran and Shamsuzzaman Farooq
- 12:40 Dynamic Column Breakthrough Measurements of Nitrogen, Carbon Dioxide and Methane for Improved LNG Processing;
Paul S. Hofman, E. F. May, G. Watson, B. F. Graham, M. A. Trebble, R. D. Trengove and K. I. Chan

13:00-16:00 Lunch & Free Time

Session T4: Characterization of Porous Materials

Room: Main Hall / Chair: A. P. Terzyk & D. D. Do

- 16:00 A Novel and Consistent Method to Characterize An Arbitrary Porous Solid for Its Accessible Volume, Accessible Geometrical Surface Area and Accessible Pore Size;
Duong Dang Do, Luis Herrera, Chunyan Fan, Ha D. Do and David Nicholson
- 16:20 Two-Dimensional Models of Adsorption in Finite Pores of Porous Carbons. Density Functional Theory Approach.;
Jacek Jagiello and James P. Olivier
- 16:40 Modeling Adsorption in Complex Structures: Use of Finely-Discretized Lattice-Gas DFT to Study the Effects of Pore Shape and Surface Roughness on Adsorption of Simple Gases;
Daniel W. Siderius and Lev D. Gelb
- 17:00 Can Carbon Surface Oxidation Change the Dubinin- Astakhov Porosity Parameters Calculated from CO₂ Adsorption Isotherms? Simulation Results for Realistic Carbon Model;
Artur Piotr Terzyk, Sylwester Furmaniak, Piotr Antoni Gauden and Peter J. F. Harris
- 17:20 Relationship between BET Specific Surface Area, DR- and t-plot Pore Volume;
Gudrun Reichenauer, Christian Scherdel, Matthias Wiener, Nathalie Job and Cedric Gommès
- 17:40 Additional Crucial Information of Microporous Materials by Monitoring the Adsorption Kinetics;
Gudrun Reichenauer, Christian Scherdel and Stephan Braxmeier

Session T5: Inorganic Porous Materials

Room: Event Hall / Chair: A. S. T. Chiang & T. Ohkubo

- 16:00 Synthesis and Porous Structure of Synthetic Nitrogen-Containing Carbons on a Basis of Styrene-Divinylbenzene Copolymer;
Sergei Viktorovich Zhuravsky and Mykola Tymofiyovych Kartel
- 16:20 Nanopore Characterization of Double-Walled Carbon Nanotubes of Different Bundle Structures Using Gas Adsorption Measurements;
Yousheng Tao, Hiroyuki Muramatsu, Takuya Hayashi, Yoong Ahm Kim, Morinobu Endo, Mauricio Terrones, Mildred S. Dresselhaus and Katsumi Kaneko

- Preparation of Macroporous Carbon Foam Using Emulsion Templating Method;
16:40 Napawon Thongprachan, Takuji Yamamoto, Jintawat Chaichanawong, Takao Ohmori and Akira Endo
- The Preparation of Activated Carbon with Super-High Surface Area from Sucrose and Its Characterization;
17:00 Jar-hon Shu, Anthony Shiaw-Tseh Chiang, Hsien-Ming Kao and Ming-Sheng Yu
- Pore Accessibility of SiC- and Ti₃SiC₂-derived Carbons and their Heat-treated Forms;
17:20 Jun-Seok Bae, Thanh Xuan Nguyen and Suresh Kumar Bhatia
- Dynamics of One-Dimensional Water through Nanogates Fabricated on Single Wall Carbon Nanohorn;
17:40 Tomonori Ohba, Hirofumi Kanoh, Masako Yudasaka, Sumio Iijima and Katsumi Kaneko

Session T6: Adsorptive Separation

Room: Amphitheater / Chair: G. McKay & C. O. Ania

- Adsorption Equilibria of Sugars in Single and Multicomponent Liquid Solutions;
16:00 Jadwiga Joanna Nowak, Dorota Antos and Andreas Seidel-Morgenstern
- Adsorption of Aleuritate Ions on Strongly Basic Macroporous Ion Exchange Resin (Tulsion A-27 MP);
16:20 Navdeep Kaur, A. K. Gupta, H. M. Chawla, V. K. Srivastava and Shantanu Roy
- Understanding Phenol Adsorption Mechanisms on Activated Carbons;
16:40 Leticia Fernandez Velasco, Jose B. Parra and Conchi O. Ania
- Equilibrium and Kinetic of Lead Adsorption onto Tyre Char;
17:00 Oi Sum Chan, Wai Hung Cheung and Gordon McKay
- Safety of the Adsorbers Used to Remove Volatile Organic Compounds onto Activated Carbons - A Model to Predict the Heat and Mass Transfers;
17:20 Sylvain Giraudet, Pascaline Pre, Olivier Baudouin, Stephane Dechelotte and Pierre Le Cloirec
- Molecular Mechanisms of Adsorption, Desorption and Surface Chemical Reactions of Thiophenes with Deep and Ultradeep Desulfurization Sorbents Based on Doped Metal Oxides, by Multiple Surface and Bulk-Sensitive Temperature-Dependent Spectroscopies;
17:40 Alexander Samokhvalov, Eduardus C. Duin, Ahm S. Hussain, Sachin Nair and Bruce J. Tatarchuk

18:00-19:00 Dinner

Poster Session 2 - with refreshments

19:00-20:40 At the Connecting Corridor to the Hotel / Chair: T. Ohkubo

20:40- Hospitality (MICROMERITICS NIGHT at Room 405)

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Wednesday: May 26, 2010Session W1: Materials - SiO₂ & Related Materials

Room: Main Hall / Chair: Y. Kuroda & P. L. Llewellyn

- 8:40 Adsorption of CO and CO₂ Using Microcalorimetry in Au@SiO₂ and Ag@SiO₂ Nanocomposites;
Emily Bloch, Virginie Hornebecq and Philip L. Llewellyn
- 9:00 Selectivity Enhancement for Geometrical Isomers of PAHs by Controlled Adsorption in HPLC;
Abul Khayer Mallik, T. Sawada, M. Takafuji and H. Ihara
- 9:20 Studies on the Growth of Ice Crystal Templates during the Synthesis of a Monolithic Silica Microhoneycomb Using the Ice Templating Method;
Shin R. Mukai, Kazufusa Onodera and Izumi Yamada
- 9:40 Synthesis-Structure-Property Relationships of Hyperbranched Aminosilica Adsorbents for the Capture of CO₂ from Simulated Flue Gas;
Jeffrey H. Drese, Sunho Choi, Ryan P. Lively, William J. Koros, Daniel J. Fauth, McMahan L. Gray and Christopher W. Jones
- 10:00 Prominent Surface Properties of MCM-41 Prepared by Template-ion Exchange Method;
Yasushige Kuroda, Toshinori Mori, Takahiro Ohkubo, Hisayoshi Kobayashi, Shigeharu Kittaka and Masakazu Iwamoto

Session W2: Adsorption for Biochemistry

Room: Event Hall Chair: A. Jungbauer & R. Denoyel

- 8:40 Colloidal Microbial Transport in Subsurface Porous Media;
Chittaranjan Ray and Tushar Kanti Sen
- 9:00 Porous Iron Carboxylates as New Drug Carriers;
Aude Demessence, Patricia Horcajada, Christian Serre, Ruxandra Gref, Tamim Chalati, Denise Paula da Cunha, Tarek Baati, Guillaume Maurin, Christelle Vagner, Renaud Denoyel, Patrick Couvreur and Gerard Ferey
- 9:20 Modeling Protein Binding and Elution Over a Chromatographic Surface Probed by Surface Plasmon Resonance;
Tiago Vicente, Jose P.B. Mota, Cristina Peixoto, Paula Alves and Manuel J. T. Carrondo
- 9:40 Adsorption Properties of DNA on Charged Surfaces;
Alois Jungbauer and Tina Paril
- 10:00 The Influence of Surface Chemistry and Pore Size on the Adsorption of Proteins on Nanostructured Carbon Materials;
Roger Gadiou, Munusamy Vijayaraj, Karine Anselme, Camelia Ghimbeu, Cathie Vix-Guterl, Hironori Orikasa and Takashi Kyotani

Session W3: Separation Process - PSA/TSA

Room: Amphitheater / Chair: A. Sakoda & L. Zhou

- 8:40 An Experimental Study of a Two-Step Ultra-Rapid Cycle Pulsed Pressure-Swing Adsorption Oxygen Concentrator;
Vemula Rama Rao, Shamsuzzaman Farooq and William Bernard Krantz
- 9:00 Enrichment of Coalbed Methane by PSA with CO₂ Replacement;
Congmin Liu, Yaping Zhou, Wei Su, Yan Sun and Li Zhou

- 9:20 CO₂ Capture from Flue Gas with Layered Vacuum Swing Adsorption;
Dong Xu, Jun Zhang, Penny Xiao, Gang Li, Paul A. Webley and Yuchun Zhai
- 9:40 Pre-combustion CO₂ Capture by PSA for IGCC Plants;
Nathalie Casas, Johanna Schell and Marco Mazzotti
- 10:00 Improvement of the Recycle Technologies for C5/C6 Isomerization by Layered PSA;
Patrick S. Barcia, Jose A. C. Silva and Alirio E. Rodrigues
- 10:20 Experimental Investigation on VTSA Cycle for CO₂ Capture;
Marc Clausse, Francois Guilhamasse and Francis Meunier
- 10:20-11:00 Coffee Break (Reception Hall B)

Plenary W1: Materials

Room: Main Hall / Chair: H. Kanoh

- 11:00 MFI Zeolite Nanosheets of Single-Unit-Cell Thickness Pillared to a Uniform and Tunable Interlayer Spacing;
Kyungsu Na, Minkee Choi, Changbum Jo, Woojin Park, Yasuhiro Sakamoto, Osamu Terasaki and Ryong Ryoo
- 11:20 Amplified Metal Ion Detection by Periodic Mesoporous Organosilica Chemosensor;
Minoru Waki, Morihiro Mizoshita, Yoshifumi Maegawa, Takeru Hasegawa, Takao Tani, Toyoshi Shimada and Shinji Inagaki
- 11:40 Direct Capture of CO₂ from Ambient Air: A Carbon Negative Approach;
Christopher W. Jones, Sunho Choi, Wen Li, Jeffrey H. Drese and Peter M. Eisenberger
- 12:00 Adsorption of Hydrogen in Boron Substituted Carbon-Based Porous Materials;
Lucyna Firlej, Bogdan Kuchta, Peter Pfeifer and Carlos Wexler
- 12:20 Presentation on FOA11 by P. A. Monson (Main Hall)
- 12:30 Conference-Photo Shoot (Main Hall)
- 13:15-22:00 Conference Excursion (Boxed sandwich lunches served, Dinner at Kobe at own your expense)
- 22:00- Hospitality (Another JAPAN NIGHT at Room 405)

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Plenary Th1: Molecular Modeling

Room: Main Hall / Chair: K. E. Gubbins

- 8:40 Comparison of Nanoporous Structure of Activated Carbons and C-Faujasite Using Small Angle Neutron Scattering and Empirical Potential Structure Refinement;
Guillaume Huchet, Pascaline Pre, Dominique Jeulin, Jean-Noel Rouzaud, Alain Thorel, Mohammed Sennour, Matthieu Faessel, and Daniel Bowron
- 9:00 X-Ray-Aided Structural Analysis of Capacitor-Related Electrolytic Solution Confined in Carbon Nanopores;

- Akimi Tanaka, Taku Iiyama, Sumio Ozeki, Tomonori Ohba, Julie Segalini, Patrice Simon, Hirofumi Kanoh and Katsumi Kaneko
- 9:20 Modelling Selective Gas Adsorption Mechanisms in Metal-Organic Frameworks;
Brad A. Wells and Alan L. Chaffee
- 9:40 Dynamics of H₂ Molecules on Graphite by Molecular Dynamics Simulation and Quasi-Elastic Neutron Scattering;
Ole-Erich Haas, Jean-Marc Simon and Signe Kjelstrup
- 10:00-10:20 Coffee Break (Reception Hall B)

Session Th1: Zeolites & Related Materials

Room: Main Hall / Chair: J. P. Bellat & S. Calero

- 10:20 Aluminum Siting in Cationic Zeolites: A New Molecular Simulation Method to Predict Both Aluminum and Cation Location.;
Marie Jeffroy, Carlos Nieto-Draghi and Anne Boutin
- 10:40 Enantioselective Adsorption Characteristics of Aluminum Substituted MFI Zeolites;
T. P. Caremans, T. S. van Erp, D. Dubbeldam, J. M. Castillo, J. Martens and S. Calero
- 11:00 Adsorption and Activation of C₂H₂ by Cu⁺ in CuMFI at 300 K;
Atsushi Itadani, Kengo Takahara, Takashi Yumura, Takahiro Ohkubo, Hisayoshi Kobayashi and Yasushige Kuroda
- 11:20 Statistical Analysis and Partial Least Square Regression as New Tools for Modelling and Understanding the Adsorption Properties of Zeolites;
Philibert Leflaive, Gerhard Pirngruber, Catherine Laroche, Abdelaziz Faraj, Pierre Martin, Gino V. Baron and Joeri F. M. Denayer
- 11:40 Purification of Saccharides by Adsorption on BEA-Zeolites and Extrudates - Properties, Kinetics and Process Concepts -;
Manuel Holtkamp and Stephan Erich Scholl
- 12:00 Novel Adsorbent Hollow Fibres for Oxygen Concentration;
James Mark Nevell, Semali Perera and Colin Billiet
- 12:20 In Situ FTIR Spectroscopy Study of Ethylene or Trichlorethylene on Silicalite-1 at 298 K;
Anthony Ballandras, Guy Weber, Maud Rotger and Jean Pierre Bellat

Session Th2: MOFs - Storage & Separation

Room: Event Hall / Chair: J. F. M. Denayer & H. Jobic

- 10:20 Coadsorption of CO₂ and H₂O on MOFs: Adsorption Equilibrium, Rates of CO₂ Adsorption, and Comparisons with Zeolites;
Jian Liu, Yu Wang, M. Douglas LeVan, Annabelle I. Benin, Paulina Jakubczak and Richard R. Willis
- 10:40 Effect of Lithium Doping into Porous Materials on Hydrogen Adsorption Properties;
Masaru Kubo, Keisuke Ishiyama, Hiroshi Ushiyama, Atsushi Shimojima and Tatsuya Okubo
- 11:00 Diffusion of H₂, Alkanes and CO₂ in Rigid and Flexible Metal-Organic Framework Materials Using a Combination of Molecular Dynamics and Neutron Scattering Measurements;

- Fabrice Salles, Herve Jobic, Aziz Ghoufi, Thomas Devic, Christian Serre, Gerard Ferey and Guillaume Maurin
- 11:20 The Use of Metal-Organic Frameworks as Sorbents for Gas Separations: Study of CO₂/CH₄ Separation for PSA Applications; Lomig Hamon, Elsa Jolimaitre and Gerhard Pirngruber
- 11:40 Molecular Modeling of Enantioselective Adsorption in Homochiral Metal-Organic Frameworks; Xiaoying Bao, Linda J. Broadbelt and Randall Q. Snurr
- 12:00 Effect of Framework Breathing on Column Breakthrough Separations using Flexible Metal Organic Frameworks; Sarah Couck, Tom Remy, Luc Alaerts, Michael Maes, Christine Kirschhock, Dirk De Vos, Gino V. Baron and Joeri F. M. Denayer
- 12:20 Liquid Phase Separations on MOFs: Unsaturated vs Saturated Alkylaromatics; Michael Maes, Luc Alaerts and Dirk E. De Vos

Session Th3: Characterization of Adsorption Phenomena

Room: Amphitheater / Chair: R. Valiullin & K. Morishige

- 10:20 Effect of Confinement on the Phase Diagram of NaCl-Water System; Shigeharu Kittaka, Yasutaka Fujii and Tsukasa Kataoka
- 10:40 Hydration Structure of Zinc Ion Restricted in Hydrophobic Nanospaces; Takahiro Ohkubo and Yasushige Kuroda
- 11:00 Neck Size of Ordered Cage-Type Mesoporous Silica FDU-12 Determined by Successive Adsorption of Water and Nitrogen; Kunimitsu Morishige, Kenzi Yoshida and Tsubasa Yasuki
- 11:20 Adsorption and Dynamics of Cyclohexane in Native and Silanized Controlled Pore Glasses; Muslim Dvoyashkin, R. Valiullin, E. Romanova, J. Karger, W.-D. Einicke and Roger Glaser
- 11:40 Disorder Effects during Freezing in Linear Pores; Daria Kondrashova and Rustem Valiullin
- 12:00 Fluid Behavior in Macroscopically Long Hierarchical Porous Materials; Rustem Valiullin, Daria Kondrashova, Jorg Karger, Peter A. Monson and Matthias Thommes
- 12:20 High Pressure Calorimetry of Water Intrusion in Silicalite-1; Thomas Karbowski, Christian Paulin, Anthony Ballandras, Guy Weber and Jean Pierre Bellat

12:40-14:00 Lunch (Boxed lunches served at the entrance lobby)

Session Th4: Molecular Modeling for Micro & Meso Porous Materials

Room: Main Hall / Chair: L. D. Gelb & R. J.-M. Pellenq

- 14:00 Adsorption of CO₂ and CO₂/CH₄ in 3D-Covalent Organic Framework - A Molecular Simulation Study; Yujun Zhu, Shengchi Zhuo, Yongmin Huang, Jun Hu and Honglai Liu
- 14:20 Computer Simulations and Experiments of Normal and Branched Alkane Adsorption in Complex Carbonaceous Materials; Jose M. C. Pinto da Costa, Roger Cracknell, Nigel A. Seaton and Lev Sarkisov

- 14:40 Adsorption Induced Swelling of Coal - Importance of Micropores and Extension of Usual Poromechanics to Microporous Adsorption;
Laurent Brochard, Matthieu Vandamme, Olivier Coussy and Roland J.-M. Pellenq
- 15:00 Competitive Adsorption of Carbon Dioxide and Propane in Porous Silica: a Molecular Simulation Study;
Sergey M. Melnikov and Andreas Seidel-Morgenstern
- 15:20 Freezing of Simple Fluids in Regular and Disordered Carbon Nanotubes;
Benoit Coasne, Keith E. Gubbins and Malgorzata Sliwinska-Bartkowiak
- 15:40 Understanding the Structure of Functional Mesoporous Materials Through Simulations;
Alessandro Patti, Allan D. Mackie and Flor R. Siperstein
- 16:00 Computational Studies of Capillary Phenomena: The Effects of Aerogel Compliance on Adsorptive Behavior;
Lev D. Gelb

Session Th5: Adsorption/Separation for Bioenergy

Room: Event Hall / Chair: F. H. Tezel & P. Pre

- 14:00 Molecular Simulations for Adsorption and Separation of Natural Gas in IRMOF-1 and Cu-BTC Metal-Organic Frameworks;
Ana Martin Calvo, Elena Garcia Perez, Juan Manuel Castillo and Sofia Calero Diaz
- 14:20 Upgrading of Synthetic Natural Gas (bio-SNG) by a Pressure Swing Adsorption Process for Injection into Natural Gas Grid;
Thangavelu Jayabalan, Agnes Rochereau, Pascaline Pre, Olivier Guerrini and Agathe Jarry
- 14:40 The Added Value of ACFC to Reach High-Grade Methane from Biogas;
Benoit Boulinguez and Pierre Le Cloirec
- 15:00 Reducing Heat Effects in PSA Processes for CO₂ Removal;
Monica P. Santos, Carlos A. Grande and Alirio E. Rodrigues
- 15:20 Sorbents with Bronsted Acid Centers as Desulfurization Agents for Liquid Hydrocarbon Fuels at Ambient Conditions;
Sachin Nair and Bruce J. Tatarchuk
- 15:40 Separation of Bioethanol from Fermentation Broth by Liquid-phase Adsorption;
Qingrong Qian, Hirotaka Fujita, Takao Fujii, Kazuhiro Mochizuki and Akiyoshi Sakoda
- 16:00 Enhanced Production of Bio-ethanol Using E.Coli KO11 with Online Ethanol Extraction by Adsorption;
Rudy A. Jones, Julie-Anne Gandier, F. Handan Tezel and Jules Thibault

Session Th6: Water & Ion Adsorption

Room: Amphitheater / Chair: L. Zhong & T. Iiyama

- 14:00 Hydrogen-Bonding Structure of Water Assemblies in Hydrophobic Space: Experimental Investigation by X-ray and Neutron Diffractions;
Taku Iiyama, Fumika Fujisaki, Ryusuke Futamura, Atom Hamasaki, Sumio Ozeki, A. Hoshikawa and T. Ishigaki
- 14:20 Hydration Structure of Ca²⁺ Ions Confined in Carbon Slit-Pores;
Natsuko Kojima, Tomonori Ohba, Hirofumi Kanoh and Katsumi Kaneko

- 14:40 Thermodynamics of Water Intrusion in Nanoporous Hydrophobic Zeolites;
Alain H. Fuchs, Fabien Cailliez, Francois-Xavier Coudert, Thomas Karbowiak, Jean-Pierre Bellat, Michel Soulard, Joel Patarin and Anne Boutin
- 15:00 Investigation of Multi-component Adsorption in Nano-space by Large Angle and Small Angle X-ray Scattering Methods;
Ryusuke Futamura, Taku Iiyama, Atom Hamasaki and Sumio Ozeki
- 15:20 Characterisation and Improvement of Sorption Materials with Molecular Modeling for the Use in Heat Transformation Applications;
Stefan Kai Henninger, Ferdinand Paul Schmidt and Hans-Martin Henning
- 15:40 Molecular Dynamics Simulation of Organic Adsorption from Aqueous Solutions in Carbon Slit-Like Pores;
Piotr A. Gauden, Artur P. Terzyk, Sylwester Furmaniak and Radoslaw P. Wesolowski
- 16:00 Thermodynamic and Structural Properties of Water Film Adsorbed on MgO (100) Ionic Surface.;
Jean Paul Coulomb, Benjamin Demirdjian, Daniel Ferry and Moshen Trabelsi
- 16:20-16:40 Coffee Break (Reception Hall B)

Session Th7: Adsorption on Carbons

Room: Main Hall / Chair: S. Deng & F. Rodriguez-Reinoso

- High Surface Area Carbon Molecular Sieves Prepared from Mesophase Pitch;
- 16:40 Jose Manuel Ramos-Fernandez, Anass Wahby, Joaquin Silvestre-Albero, Manuel Martinez-Escandell, Antonio Sepulveda-Escribano and Francisco Rodriguez-Reinoso
- 17:00 Adsorption of CO₂ and Water Vapor in Carbon Molecular Sieves (CMS 3K);
Rui P. P. L. Ribeiro, Carlos A. Grande and Alirio E. Rodrigues
- 17:20 Gas Adsorption onto Platelet Carbon Nanofibers and Its Applications to Gas Sensing;
Yusuke Takahashi, Hiroataka Fujita, Takao Fujii, Akiyoshi Sakoda, Wan-Hua Lin and Yuan-Yao Li
- 17:40 Novel Properties of Methylene Blue Adsorption-Functionalized Single Wall Carbon Nanotubulites;
Fitri Khoerunnisa, T. Ohba, H. Kanoh, M. Yudasaka, S. Iijima and Katsumi Kaneko
- 18:00 Hydrogen Adsorption on Partially Truncated C60 Fullerene Molecules;
Dipendu Saha and Shuguang Deng

Session Th8: Separation Technology - PSA

Room: Event Hall / Chair: P. A. Webley & K. Chihara

- 16:40 Cancelled
- 17:00 Development of PSA System for the Recovery of Carbon Dioxide and Carbon Monoxide from Blast Furnace Gas in Steel Works;
Hitoshi Saima, Y. Mogi, T. Haraoka and K. Hayashi
- 17:20 Process Intensification in PSA processes;
Spoorthi Gadde, Anup Issac, Raghendra Singh Thakur, Nitin Kaistha and D. P. Rao

- Development of Adsorbents for High Temperature CO₂ Separation from Real
 17:40 Coal Gasification Syngas;
Gongkui Xiao, Ranjeet Singh, Alan L. Chaffee and Paul A. Webley
 18:00 Cancelled

Session Th9: New Apparatus/Methods

- Room: Amphitheater / Chair: K. Hellgardt & A. Bourgeois
 Ellipsometric Porosimetry: Fast and Non Destructive Characterization
 16:40 Method of Porous Thin Films;
Alexis Bourgeois, Ch. Walsh, Ch. Defranoux and J. Ph. Piel
 A Semi-Automated ZLC System for Rapid Screening of Adsorbents for
 17:00 Carbon Capture;
Stefano Brandani, Xiayi Hu, Annabelle I. Benin and Richard R. Willis
 17:20 ESIXE-Electrical Swing Ion Exchange;
 Wei Lu, Laurence Muhr and Georges Grevillot
 Magnetic Suspension Balance for Nanogram Resolution Adsorption
 17:40 Measurements;
Frieder Dreisbach, Hans W. Losch, Reza Seif, Heinrich Baur and Bernard
 Bourdon
 FRT: A New in situ Technique for Total Molar Balances: Ammonia
 18:00 Adsorption on Zeolites;
 Candice Palmer and Klaus Hellgardt
- 19:00-22:00 Banquet (Grand Ballroom "Stella") / Student Banquet (Reception Hall B)
 22:00- Hospitality (Final JAPAN NIGHT at Room 405)

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Friday: May 28, 2010

Plenary F1: Adsorption for Environment Protection

Room: Main Hall / Chair: M. Mazzotti

- 8:40 Enhanced CO₂ Solubility in Solvents Confined within Porous Solid Materials;
Linh Ngoc Ho, Fabien Porcheron, Benoit Coasne and Roland Pellenq
 9:00 Assessment of CO₂ Capture by Moving Bed TSA;
Kent S. Knaebel
 Adsorption Technology for Direct Recovery of Compressed, Pure CO₂ from
 9:20 a Flue Gas without Pre-compression or Pre-drying;
 Michael G. Beaver and Shivaji Sircar
 Optimization of a VSA Process for CO₂ Capture and Concentration;
 9:40 M. M. F. Hasan, M. I. Hossain, S. Farooq, I. A. Karimi, M. Amanullah and A.
 Rajendran
 CO₂ Capture from Flue Gas by Adsorption- Demonstration Project in
 10:00 Australia;
Jun Zhang, Penny Xiao and Paul A. Webley
 Development of NO_x Recycle System using PSA Method : Verification Test
 10:20 of Practical Use at the Rokkasho Reprocessing Plant;
 Nobuyuki Arai, Naoya Sakagami, Hiroaki Anekawa, Hidenari Yamatoya,
 Itsuo Akazawa, Yoshihiko Tsuchiyama and Toshio Nishi

10:40-11:00 Coffee Break (Reception Hall B)

Plenary F2: Industrial

Room: Main Hall / Chair: K. S. Knaebel

- 11:00 Thermally Enhanced PSA (TEPSA) Adsorption System Air Purification System for New Designs & Debottlenecking of Cryogenic Air Separation (ASU) Systems;
Mohammad Ali Kalbassi
- 11:20 The Activity of TOSOH Zeolite Adsorbents, ZEOLUM;
Shigeru Hirano, Atsushi Harada, and Satoshi Yoshida
- 11:40 Recent Development in Adsorption Technique BEL JAPAN, INC.;
J. Sonoda
- 12:00 On Free Energy, Enthalpy, and Entropy to Assess Surface Area;
Jeffrey Kevlin
- 12:20-12:40 Closing Remarks

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Monday: May 24, 2010

Poster Session 1 - At the Connecting Corridor to the Hotel

Adsorption on MOFs & Flexible Porous Body

- P24-1 Ellipsometric Porosimetry: A Characterization Method to Assess the Flexibility of Porous Thin Films;
Alexis Bourgeois, Ch. Walsh, Ch. Defranoux and J. Ph. Piel
- P24-2 Solvent Treatment-induced Restoration of CO₂ Adsorptivity of a Flexible Cu-MOF;
Yan Cheng, Hiroshi Kajiro, Atsushi Kondo, Hiroshi Noguchi, Tomononi Ohba, Yoshiyuki Hattori, Katsumi Kaneko and Hirofumi Kanoh
- P24-3 Reducible MOFs for Improved Gas Separation;
Jong-San Chang, Christian Serre, Young Kyu Hwang, Alexandre Vimont, Philip L. Llewellyn, Patricia Horcajada, Jean Marc Greneche, Marco Daturi and Gerard Ferey
- P24-4 Identification of Adsorption Sites in Cu-BTC by Experimentation and Molecular Simulation;
Elena Garcia Perez, Jorge Gascon, Victor Morales-Florez, Juan Manuel Castillo, Freek Kapteijn and Sofia Calero
- P24-5 In-situ study of the Structural Changes of Highly Porous Silica upon Adsorption;
Gudrun Reichenauer, Christian Scherdel, Astrid Brandt and Dirk Wallacher
- P24-6 Adsorption of Polar Vapours in the Rigid MIL-47 and Flexible MIL-53 MOFs;
Guillaume Clet, Beatrice Moulin, Alexandre Vimont, Marco Daturi, Thomas Devic, Patricia Horcajada, Christian Serre, Gerard Ferey, Sandrine Bourrelly, Philip Llewellyn, Sabine Devautour-Vinot and Guillaume Maurin
- P24-7 Adsorptivity Regulation of Soft Porous Coordination Polymers through Fine Tuning of Ionic Components;
H. Kajiro, A. Kondo, A. Chinen, T. Nakagawa, H. Noguchi, A. Tohdoh, Y. Hattori, W.-C. Xu, T. Ohba, K. Kaneko and H. Kanoh

- P24-8 Liquid-Phase Adsorption on Metal-Organic Frameworks;
Antje Henschel, Irena Senkowska and Stefan Kaskel
- P24-9 Adsorption Measurements of Pure Gas- and Mixed Gas Isotherms of Light Hydrocarbons on Metal Organic Framework HKUST-1;
Jens Mollmer, Markus Borth, Andreas Moller and Reiner Staudt
- P24-10 Sorption Properties of Mesoporous Chromium(III) Terephthalate MIL-101;
Ji Woong Yoon, Do-Young Hong, Young Kyu Hwang, Dong Won Hwang, Jong-San Chang, Christian Serre, Philip L. Llewellyn and Gerard Ferey
- P24-11 Experimental and Monte Carlo Study of the Energetics, Confinement and Storage of Supercritical Methane in Metal-Organic Framework MIL-53(Al);
Andryl I. Lyubchyk, Isabel A. A. C. Esteves, Fernando J. A. L. Cruz, Sandeep Agnihotri and Jose Paulo Mota
- P24-12 Analysis of the ITQ-12 Zeolite Performance in Propane-Propylene Separations Using a Combination of Experiments and Molecular Simulations;
Juan Jose Gutierrez Sevillano, David Dubbeldam, Fernando Rey, Susana Valencia, Ana Martin Calvo and Sofia Calero
- P24-13 Gas Adsorption Study of Porous Metal-Organic Framework with High Surface Area;
Bin Mu, Yougui Huang, Feng Li and Krista S. Walton
- P24-14 Quasi-Freezing Behavior of Chain Molecules Confined in One Dimensional Channels of Porous Coordination Polymers;
Ryohei Numaguchi, Satoshi Watanabe, Hideki Tanaka and Minoru T. Miyahara
- P24-15 Low Coverage Adsorption Properties of the Amino-MIL-53 Metal-Organic Framework;
Sarah Couck, Gino V. Baron, Tom Remy, Jorge Gascon, Freek Kapteijn and Joeri F. M. Denayer
- P24-16 Post-synthesis Modification of Metal-Organic Frameworks for Selective Carbon Dioxide Separations;
Youn-Sang Bae, Omar K. Farha, Brad G. Hauser, Joseph T. Hupp and Randall Q. Snurr
- P24-17 Adsorption Equilibrium and Kinetics of CO₂ on Chromium Terephthalate MIL-101;
Zhijuan Zhang, Sisi Huang, Qibin Xia, Hongxia Xi and Zhong Li
- Adsorption Equilibria, Kinetics, and Dynamics
- P24-18 Structure of CO₂ Adsorbed in Nanopores of Single Wall Carbon Nanohorns at Low Temperature;
Tomoya Hara, Tomonori Ohba, Hirofumi Kanoh, Masako Yudasaka, Sumio Iijima and Katsumi Kaneko
- P24-19 Liquid phase Diffusivity of Benzene within Porous Materials in Cyclohexane and Iso-propanol Solution;
Yuta Nakasaka, Teruoki Tago, Kazuhisa Yano and Takao Masuda
- P24-20 Adsorption Equilibrium and Kinetics of Copper Ions and Phenol onto Modified Adsorbents;
Tae Young Kim, B. J. Min, Seung Jai Kim and S. Y. Cho
- P24-21 Kinetics of Benzene Adsorption in Activated Carbon;
Supunnee Junpirom, Chaiyot Tangsathitkulchai, Duong Dan Do and Malee Tangsathitkulchai

- P24-22 Adsorption of Mixed Organic Solvent by Y Type Zeolite;
Kazuyuki Chihara, Yusuke Suzuki, Shinji Tomita, Kenta Saito and Takashi Matsumoto
- P24-23 Adsorption and Thermodesorption Behaviors of VOCs on Carbon Nanotubes;
Chang-Yel Yang, Sang-Guk Lee, Min-Jin Hwang, Wang Geun Shim and Hee Moon
- P24-24 Adsorption and Transport Behavior of a Binary Liquid in Mesopores;
Philipp Zeigermann, Muslim Dvoyashkin, Rustem Valiullin and Jorg Karger
- P24-25 Predicting Low-Concentration Water Vapor Isotherms on Zeolites and Zeolite Composites Using Polanyi Theory;
Patrick D. Sullivan, Joseph R. Moate, Brenton R. Stone and Jim Knox
- P24-26 Model for Distributed Pore Volumes;
Niklas Borg, Karin Westerberg, Niklas Andersson and Bernt Nilsson
- P24-27 Diffusion of Propane, Propylene and Isobutane in 13X Zeolite by Molecular Dynamics;
Miguel Angelo Granato, Miguel Angelo Jorge, Thijs J. H. Vlugt and Alirio Egidio Rodrigues
- P24-28 Concurrent Dyes Adsorption and Photo-degradation on Fly Ash Based Substrates;
Maria Visa, Luminita Andronic, Dora Lucaci and Anca Duta
- P24-29 Sorbate Densities on 5A Zeolite above and below the Critical Conditions: n Alkane Data Evaluation and Modeling;
Kevin Francis Loughlin and Dana Marie Abouelnasr
- P24-30 Estimation of Fluid Film Mass Transfer Coefficient by Use of the Shallow Bed Technique;
Ken Shinomiya, Junpei Fujiki, Seiji Ishibashi, Noriyoshi Sonetaka and Eiji Furuya
- P24-31 Surface Diffusion of Dimethyl Sulfide on Silica Gel;
John D. Hearn, Richard M. Weber and Michael V. Henley
- P24-32 Problems in the Characterization of Microporous/Mesoporous Materials by Physical Adsorption;
Francisco Rodriguez-Reinoso, Joaquin Silvestre-Albero and Mathias Thommes
- P24-33 Quantum Molecular Sieving Effect in H₂ and D₂ Adsorption on Highly Pure Single-Wall Carbon Nanotubes;
Hirotohi Kagita, Koki Urita, Kenji Hata, Sumio Iijima, Motoo Yumura, Tomonori Ohba, Hirofumi Kanoh and Katsumi Kaneko
- P24-34 Adsorption of Organics on MSC5A in Supercritical CO₂, Chromatographic Measurements & Stop & Go Simulation;
Kazuyuki Chihara, Hideaki Nagashima, M. Hikita and R. Suzuki
- P24-35 Adsorption Behavior of Water Vapor on Polyacrylic Polymer;
Hanane Bahaj, Rabie Benaddi, Mohammad Bakass, Chafiq Bayane, M'barek Benchanaa, Jean Pierre Bellat and Gilles Bertrand
- P24-36 Approximate Solutions to the Adsorption Integral Equation by the Ansatz Method;
Steffen Arnrich, Grit Kalies and Peter Brauer
- P24-37 Effect of Salt on the Adsorption of Reactive Black 5 on to Bamboo Derived Activated Carbon;
A. W. M. Ip, A. C. H. Wong, W. H. Cheung, J. P. Barford and G. McKay

- P24-38 Equilibrium Sorption Studies of Arsenite, As(III) on Chitosans;
Katrina C.M. Kwok and Gordon McKay
- P24-39 A TPD Study of the Adsorption of Ethanol/Cyclohexane Mixture on Activated Carbon with Modified Surface Chemistry;
Camelia Matei Ghimbeu, Roger Gadiou, Joseph Dentzer, Dominique Schwartz and Cathie Guterl Vix
- P24-40 Adsorption Equilibrium Studies of CO₂ on Zeolites and Activated Carbons;
Diogo P. Bezerra, Rodrigo S. Vieira, Celio L. Cavalcante and Diana C. S. Azevedo
- P24-41 Nanoporous Glasses as Novel Model System for Diffusion Studies on the Micrometer Scale;
Tobias Titze, Sergej Naumov, Christian Chmelik, Petrik Galvosas, Cordula Barbel Krause, Jens Kullmann, Dirk Enke and Jorg Karger
- P24-42 Using Statistical Analysis as an Additional Tool in Porous Solids Characterization;
Charis R. Theocharis
- P24-43 Efficient Numerical Simulation of Chromatographic Processes;
Aniruddha Majumder, Vinay Kariwala and Arvind Rajendran
- P24-44 Molecular Dynamics Simulations of Organics Adsorption on Carbon Nanotubes;
Artur Piotr Terzyk, Piotr Antoni Gauden, Sylwester Furmaniak and Radoslaw Piotr Wesolowski
- P24-45 Modelling Diffusion on Inhomogeneous Surfaces: Square Reconstructive Lattice;
Alexander Tarasenko and Lubomir Jastrabik
- P24-46 Phase Behavior of Water Confined in Zeolites;
Akira Endo, Bao-wang Lu, Takuji Yamamoto and Napawon Thongprachan

Molecular Modeling in Adsorption

- P24-47 Adsorption of Electrolytes within Narrow Slit-Shaped Silica Pores: Molecular Dynamics Simulation Results to Design Separation Strategies;
Dimitrios Argyris and Alberto Striolo
- P24-48 Application of the Method of Molecular Dynamics for A Priori Adsorption Isotherms Calculation on Microporous Active Carbons and Topological Analysis of Adsorbates Supramolecular Structures;
Alexey Mikhailovich Tolmachev, Denis Arkadievich Firsov, Konstantin Mikhailovich Anuchin and Georgiy Olegovich Khondar
- P24-49 General Force Field for CO₂ Adsorption Transferable to All Zeolites Structures;
Almudena Garcia-Sanchez, J. B. Parra, C. O. Ania, D. Dubbeldam, T. J.H. Vlugt, R. Krishna and S. Calero
- P24-50 Characteristics of Carbon Dioxide Adsorption on Functionalized SBA-15 Silica;
Arnost Zukal, Jacek Jagiello, Jana Mayerova and Jiri Cejka
- P24-51 Characterization of Carbon Nanopores with Different Molecular Probes and Finite-Length Pore Models;
Atichat Wongkoblap, Chaiyot Tangsathitkulchai and Duong D Do
- P24-52 Adsorption of Simple Gases in Finite-Size Pores;
Lucyna Firlej, Bogdan Kuchta and Jacek Jagiello

- P24-53 Multilayer Structure of Nitrogen Adsorbed on Graphite;
Bogdan Kuchta, Lucyna Firlej and Michael Roth
- P24-54 Characterization of Sub-nm Pores in Carbon by Inelastic Neutron Scattering;
Raina Olsen, Bogdan Kuchta, Lucyna Firlej, Peter Pfeifer, Hak Taub and
Carlos Wexler
- P24-55 Exploring New Materials for Gas Storage and Separations: Molecular
Simulations of Polymers of Intrinsic Microporosity;
Gregory S. Larsen, Flor R. Siperstein and Coray M. Colina
- P24-56 MgO (100) Surface Influence on Physisorbed Composite Bilayer Film
(Krypton (50%) - Methane (50%));
Khadija Madih Ayadi, Isabelle Mirebeau and Jean Paul Coulomb
- P24-57 Developing Forcefields for Molecular Simulation of Adsorption in Metal-
Organic Frameworks;
Marta De Toni, Francois-Xavier Coudert, Pluton Pullumbi and Alain H. Fuchs
- P24-58 Modelling Adsorption of Methane and Carbon Dioxide on Ordered
Mesoporous Organosilicas;
Miguel Jorge and Jose Richard Gomes
- P24-59 Freezing of a Molecular or Electrolyte Film on a Mesopore Surface;
Patrick Alain Bonnaud, B. Coasne and R. J.-M. Pellenc
- P24-60 Membrane Transport of n-butane by a Temperature Gradient;
Isabella Inzoli, Jean-Marc Simon, Sondre Schnell Kvalvag and Signe
Kjelstrup

Adsorbent/Membrane Materials

- P24-61 Preparation and Structure of Porous Carbon Nano-sheet;
Rikio Kojima, Yoshiyuki Hattori, Naoto Kawasumi, Atsushi Kondo, Fujio
Okino and Hidekazu Houhara
- P24-62 Study on Local Order and Hydrophilicity-Hydrophobicity of the Pore Surface
of ZSM-5;
Satoshi Yamazaki
- P24-63 Adsorption Characteristics of Pb(II) onto C-4-Hydroxy-Methoxyphenylcalix[4]
resorcinarene in Batch and Fixed Bed Column Systems;
Ratnaningsih Eko Sardjono, Jumina, A. Wawan Nurwahidin, Taufik,
Hardjono Sastrohamidjojo and Sri Juari Santosa
- P24-64 Zeolite Synthesis from Waste Fly Ash and Their Application in CO₂ Capture
from Flue Gas Streams;
Living Liu, Ranjeet Singh, Penny Xiao, Paul A. Webley and Yuchun Zhai
- P24-65 Comparative NMR-¹³C-Spectroscopy of Lignocellulose Sorbents;
Mykola Tymofiyovych Kartel and Alina Anatilivna Nikolaichuk
- P24-66 Low Cost Bagasse Char for Adsorption of Gold Cyanide;
Neilesh Syna, Wai Hung Cheung and Marjorie Valix
- P24-67 Tailoring the Extracellular Mechanisms Contributing to the Uptake of Heavy
Metals on Aspergillus Foetidus Adsorbents;
Weizheng Ge and Marjorie Valix
- P24-68 Supported Chitosan for Heavy Metal Adsorption;
Juliana Queiroz Albarelli, Rodrigo Silveira Vieira and Marisa Masumi Beppu
- P24-69 Porosity Development in Carbon Cryogel Microhoneycomb Prepared by Ice-
Templating;
Hajime Tamon, M. Sakamoto, T. Suzuki and N. Sano

- P24-70 Textural and Structural Properties of a Novel Mesoporous Precipitated Silica;
Ebenezer Twumasi, Peter Norberg, Mikael Forslund and Christer Sjostrom
- P24-71 Chitosan-Based Adsorbent Beads as a Potential Stationary Phase for the
Recovery of Microbial Cellulases;
Gilcenara Oliveira, Ivanildo J. da Silva Jr., Rodrigo Vieira Silveira and Diana
C. S. Azevedo
- P24-72 Adsorption Studies on a New Type of Mesoporous Silica Materials with
Coiled Elliptical Channels;
Chia-Min Yang, Li-Ling Chang, Matthias Thommes and Wei-Chia Huang
- P24-73 Re-growth of Zeolite Microcrystal Monolayer into Continuous Film under
Steaming;
Ray Yu Chan, H. C. Peng, S. L. Cheng, Anthony Shiaw-Tseh Chiang, Thanh
Pham Tung and Kyung Byung Yoon
- P24-74 Fly Ash-based Adsorption Substrates for Complex Wastewater Treatment;
Anca Duta, Maria Visa and Dora Lucaci

Adsorption Processes

- P24-75 Sorption-enhanced Reaction Process for H₂ Production;
Eduardo L. G. Oliveira, Carlos A. Grande and Alirio E. Rodrigues
- P24-76 Variable Desorbent Strength: Influence on SMB Operating Conditions and
Performance;
Catherine Laroche, Philibert Leflaive and Damien Leinekugel-le-Cocq
- P24-77 Breakthrough of the Hydrogen Mixture on an Activated Carbon Bed at a High
Pressure;
Dong-Geun Lee, Sol Ahn and Chang-Ha Lee
- P24-78 Capture of CO₂ by Vacuum Swing Adsorption Process Using Activated
Carbon Beads;
Chunzhi Shen, Jianguo Yu, Ping Li, Carlos A. Grande and Alirio E.
Rodrigues
- P24-79 Two-stage VSA Process for Carbon Capture in Power Plant;
Hyungwoong Ahn and Stefano Brandani
- P24-80 Theoretical and Experimental Study of Ternary Separations via SMB
Chromatography;
Jadwiga Joanna Nowak, Dorota Antos and Andreas Seidel-Morgenstern
- P24-81 Adsorption Mechanism and Its Effect on Selection of Adsorbent for CH₄/N₂
System;
Congmin Liu, Di Wu, Yan Sun, Wei Su, Yaping Zhou and Li Zhou
- P24-82 Role of Adsorption and Swelling on the Dynamics of Methane Displacement
by CO₂ Injection in Coal Seams;
Ronny Pini, Luigi Burlini, Giuseppe Storti and Marco Mazzotti
- P24-83 Simulation of Dual-Reflux PSA for Purge Reduction;
Yoshinari Fujisawa, Tomohiro Yuki, Takuya Chiyoda, Keita Sawada, Takio
Adachi and Kazuyuki Chihara
- P24-84 Analytical and Graphical Approaches to the Simultaneous Heat/Mass
Transfer of Temperature Swing Adsorption in Desiccant Honeycomb Rotors;
Tsutomu Hirose

Developments in Adsorption Technology

- P24-85 Preparation of Composite Activated Carbon with High Thermal Conductivity
and Its Regeneration under Microwave Radiation;

- Pang Nengting, Su Zhanjun, Cai Xianying, Xi Hongxia, Xia Qibin and Li Zhong
- P24-86 Development of Measurement Apparatus of Adsorption Isobar Using Pressure-Feedback System which Applicable to High Pressure Condition; Yuhei Morita, Taku Iiyama, Toshihiro Shigeoka, Atom Hamasaki, Sumio Ozeki, Toshinobu Sueyoshi and Kazuyuki Nakai
- P24-87 Nano-sized Magnesium Oxide for the Adsorption of Toxic Chemical and Biological Agonist; Yo-Han Kim, K. M. Ponvel and Chang-Ha Lee
- P24-88 Direct Measurement of Adsorption Isostere Using Pressure-Feedback Method; Toshihiro Shigeoka, Taku Iiyama, Yuhei Morita, Yuko Matsumura, Atom Hamasaki, Sumio Ozeki, Toshinobu Sueyoshi and Kazuyuki Nakai
- P24-89 CO₂/Steam Adsorption-Induced Structural Rearrangement of Hydrotalcite-Type Materials under Pre-Combustion Decarbonisation Conditions: Correlation with Bench Scale CO₂ Adsorption Experiments.; Stephane Walspurger, Paul D. Cobden, Wim G. Haije, Yinghai Wu and Edward J. Anthony
- P24-90 Sorption Dynamics in a Fixed Bed of Oxygen Selective Sorbent: Barium; Soon H. Cho, Jong H. Park, Young S. Cho, Kwang B. Yi, Sang S. Han and Sung H. Kim
- P24-91 The Hybrid VSA/TSA Process for Post-combustion CO₂ Capture Using Zeolite Molecular Sieves; Ping Li, Hui Liang, Zhen Liu, Jin Wang and Jianguo Yu
- P24-92 CO₂ Capture from Pre-combustion Gases (high temperature) by Pressure Swing Adsorption; Penny Xiao, Andrew Lee, Gongkui Xiao, Ranjeet Singh, Kaustabh Joshi and Paul A. Webley
- P24-93 Electrospun Activated Carbon Nanofibers (ACnF), Properties, Performance, and Proposed Applications in Air Purification; Patrick D. Sullivan, Joseph R. Moate, Brenton R. Stone, John D. Hearn, Mark Rood and Zaher Hashisho
- P24-94 High Resolution Alpha-s Curves I. Nitrogen Alpha-s Curves (77.4 K) for Two Carbon Black Samples of Different Surface Characters; Masayuki Yoshida, Kazuyuki Nakai, Yosuke Senda, Joji Sonoda, Yoko Nakada, Masako Hakuman and Hiromitsu Naono
- P24-95 Occurrence of a Delta-Shock in Nonlinear Chromatography; Marco Mazzotti
- P24-96 Cancelled
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