



Accepted Poster Presentations

Molecular mechanisms of water intrusion and extrusion in hydrophobic nanopores

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Temperature-Dependent V-Type Isotherm Models: Applied to Water Vapor Adsorption on Metal-Organic Frameworks

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Effect of extra-framework cations on gas sorption behaviour in chabazite zeolites

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Predicting the pore-structure transport relationship in disordered alumina using hyperpolarized xenon MRI and NMR cryodiffusometry

Stefano Marc Collins, Sean Rigby, Huw Williams, Galina Pavlovskaya, Thomas Meersmann, Arthur Harrison, Christophe Vallée, Thibaud Chevalier, Dina Lofficial
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Molecular simulation of separation of C60 and coronene in silica nanopores

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Densification and Validation of Binderless MOF Monoliths Based On Temperature-Pressure Swing Hydrogen Storage and Delivery Conditions

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Anomalous phase transition behavior of dilute electrolyte solutions in nanoconfinement under cryogenic environment

Shaoheng Wang, Michael Steiger
University of Hamburg

Composite Boron Nitride-based Immobilized Nanohydride Toward Self-Accelerated Reversible Hydrogen Storage

Maxwell Tsipoaka, Fateme Rezaei

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The limits of surface and pore volume characterization

Sebastian Ehrling

Facile Characterization of Pore Accessibility in Metal-Organic Framework/Polymer Composites

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The Effect of Carbon Nanotube Diameter on Hydration of Critical Material Ions from E-waste

Zachary Baker, Qing Shao

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Characterization of hydroxyl groups in zeolite defects using advanced temperature-programmed desorption

Shunsuke Shimizu, Hirotomo Nishihara, Ryota Osuga, Takeharu Yoshii

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A Novel Method for Obtaining Carbon Molecular Sieves for N₂/O₂ Separation

Koki Urita, Kaito Marubayashi, Miyu Hamasaki, Hideki Tanaka, Takashi Ishida, Yasuyuki

Yamane, Jin Miyawaki, Hiroo Notohara, Isamu Moriguchi

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Mechanical Properties of Gases Adsorbed in Micropores from the Fluctuation Theory

Santiago Flores Roman, Alina Emelianova, Gennady Gor

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Molecular Simulation of Adsorption of Sarin and Simulants on Metal-Organic Frameworks

Elizaveta Basharova, Alina Emelianova, Allen Reed, Gennady Gor, Andrei Kolesnikov

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Characterization of Mycelium-Based Leather Using Sorption-Ultrasonic Experiments

Gunel Nabiyeva, Ashoka Karunaratne, Christopher Rasmussen, Naila Assem, Jonathan

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Self-template Synthesis of Nanoporous Carbons from π-conjugated Ionic Liquids with Molecular Nanocarbon Functionalities

Ryusuke Futamura, Toshinori Seki, Kento Nakamura, Ryuta Sekiguchi, Taku Iiyama
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Validation of pore size distribution from a new GCMC kernel based on a slit-pore model with carbon surface heterogeneity

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Investigating the effect of the extra-framework cation on propane / propylene adsorption in LTA zeolites

Claessens Benjamin, Mohammed-El Amine Benchaabane, Emily Bloch, Sandrine Bourrelly,
Gerald Chaplais, Jean Daou, Jean-Louis Paillaud, Gabriel Trierweiler-Conçalves
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INFRAsorp & MULTIport Rapid surface analysis by optical calorimetry

Stefan Kaskel, Felix Spranger

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Unique dissolution/precipitation phenomena in microspace induced by physisorption

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Development of in situ X-ray diffraction techniques for accessing the kinetics of guest-induced structural dynamics in MOFs

Volodymyr Bon, Azat Khadiev, Jonas Weiß, Stefan Kaskel

Technische Universität Dresden

Reference Isotherms for Water Vapor Sorption on Nanoporous Carbon: Results of an Interlaboratory Study

Huong Giang Nguyen, Blaza Toman, Roger van Zee, Matthias Thommes

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Kinetics of Adsorption-Induced Deformation in Microporous Materials

Gennady Gor, Andrei Kolesnikov

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Small-angle neutron scattering reveals high-density adsorbed hydrogen in carbon micropores at low pressures and supercritical temperature

Sebastian Stock, Malina Seyffertitz, Nikolaos Kostoglou, Max Valentin Rauscher, Bruno

Demé, Christian Mitterer, Oskar Paris

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High sensitivity analysis of nitrogen in carbon materials using temperature-programmed desorption up to 2100 °C

Takeharu Yoshii, Hirotomo Nishihara, Ginga Nishikawa

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Carbon Dioxide Capture in NaOH-Impregnated Activated Carbon

Prapatsorn Borisut, Atichat Wongkoblap, Chaiyot Tangsathitkulchai, Aroonsri Nuchitprasitchai, Krittamet Phothong
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A unified approach for bridging the gap between cDFT and equation of state for confined fluids

Dárley Carrijo de Melo, Amaro Gomes Barreto Jr., Felipe Rocha Pinto, Vítor Sermoud, Frederico Wanderley Tavares
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Sorption-Ultrasonic Characterization of Water-Filled Xerogels

Ashoka Karunaratne, Stephan Braxmeier, Gennady Gor, Alexei Khalizov, Gudrun Reichenauer
New Jersey Institute of Technology

Metal Organic Framework Hollow Fibers for CO₂ adsorption and Chemical Warfare Agent Degradation

John Landers
Apollodyne

Scalable Continuous Flow Hydrogenation Using Structured Catalyst Reactor

Andrea Adamo, John Holcombe, James Mannino, Lorenzo Milani, Vladimiros Nikolakis, Steve Stark
W.L. Gore & Associates Inc.

Mechanical Stress due to Adsorption of Benzene in Carbon Pore Towards an Understanding of Atmospheric Soot

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Hydrogen storage: predicting at room temperature in a series of activated carbons

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Hydrophobic metal-organic frameworks with new fluorinated ligands

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Analysis protocol for quantitative structure-property understanding of adsorptive separation.

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Development of novel porous geopolymers monoliths based on Moroccan oil shale for effective removal of heavy metals (Zn (II), Cu (II), Pb (II)) from wastewater.

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Mass Transfer Studies for Air Separation by Frequency Response Methods

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Sustainable Synthesis of adaptable MOFs Using PET Waste for Efficient Phosphate Removal

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Tuning Hierarchical Porosity in a Zr-Based Metal-Organic Framework Using Template Assisted and Template-Free Conditions

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Uric Acid Adsorption by Amine Functionalized Mesoporous Silica

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Sorption of SF₆ and SO₂ on Modified Zeolites Materials

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Functional porous physisorbent materials from phosphorite waste: Advanced characterizations and applications

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Trapped in the CO₂ Loop: A Study of Carbon/MOF Composites for Direct Air Capture (DAC)

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AGH University of Krakow al. Adama Mickiewicza 30 30-059 Kraków

Solid-State Hydrogen Storage: Advancements in Nanoporous Materials and Neutron Scattering Techniques

Oana Ghita, Xiayi Hu, Mi Tian, Valeska Ting, Haihua Wang
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Assessment of the Specific Surface Area by Small-Angle X-ray Scattering

Andreas Keilbach, Heike Ehmann, Armin Moser
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Applications of MOFs for the chemical warfare agents (CWAs) simulant adsorption

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MOFs for indoor contaminant capture and detection: a combined experimental-computational strategy

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Exploring the Adsorption Properties of functionalized UiO-66 derivatives on Volatile Organic Compounds

Adrian Hannebauer, Peter Behrens, Erik Rohloff, Andreas Schaate, Andreas Michael Schneider

Study of Crystallization Pressure by Molecular Simulation

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Evaluation of cellulosic fiber pore structure with thermoporosimetry

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3D-printed hybrid zeolite structures constructed by a phase inversion process

Ben Sutens, Yoran De Vos, Steven Mullens, Marleen Rombouts

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Understanding wetting and drying of nanoporous media through optical and dilatometry experiments

Juan Sanchez, Laura Gallardo, Yannick Tetzner, Patrick Huber

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CH₄/H₂O Competitive adsorption in Nano porous materials under clathrate hydrate formation conditions

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Monitoring dispersion and heat effects in dynamic column breakthrough experiments using the Digital Adsorption method

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Incorporating material flexibility effects into adsorption modeling using non-local Density Functional Theory

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Novel nanoporous composites for hydrogen storage

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Revisit the Molecular Sieving Mechanism in LTA Zeolites: Does Size Really Matter?

Aamir Hanif, Mingzhe Sun, Zeyu Tao, Tianqi Wang

In situ pXRD monitoring of compliant MOFs under combined mechanical and gas pressure

Paul IACOMI, Pascal Yot, Christian Serre, Frederico Alabarse, Sujing Wang, Guillaume Maurin
Surface Measurement Systems

Acoustic Response of Fluid Adsorption in Nanoporous Materials

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Impact of Carbon Content in Single-Wall Carbon Nanotube-Titanium Dioxide Composites Interfacial Modulation and Catalytic Behavior

Coset Abreu Jauregui, Antonio Sepúlveda-Escribano, Joaquín Silvestre-Albero
University of Alicante

Extruding diffusion constants from your extrudates: PFG-NMR and chromatography

Sean McIntyre, Paul IACOMI, Paola Sáenz-Cavazos, Daryl Williams
Surface Measurement Systems

Creation of Surface Mesopores in Macroporous Silica via Partial Pseudomorphic Transformation

Arooj Ahmed, Benjamin Zuberi, Carlos Collados, Erdmann Spiecker, Martin Hartmann, Matthias Thommes, Nicolas Vogel, Tadahiro Yokosawa, Alexandra Inayat
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Analysis of Sorption Isotherms of Zeolites with the Excess Surface Work - Thermodynamical and Quantum Mechanical Description

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Supercritical fluid activation and in-situ adsorption-microcalorimetric system to directly measure the gas adsorption amount, heat and kinetic data

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Nanostructuring titanium 3D printed monoliths

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***Impact of Crystal Structure on Methanol Vapor Adsorption in MFI-Type Zeolites:
Equilibrium Isotherms and Kinetic Insights***

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Evaluation of a Commercial Chabazite-Type Zeolite Aging in the Industrial Process of Dehydration of Natural Gas CO₂-Enriched

Kalil Kashefi, Marcos Anacleto da Silva, Vera M.M. Salim, Frederico W. Tavares, NEUMAN SOLANGE DE RESENDE, Amaro G. Barreto
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Tailoring the Adsorption Properties of Hierarchical Porous Silicas for High-Capacity Water Sorbents

Pasquale Fulvio, JiaJi Lin, Krista Walton
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PyCOSMOS: A Python Tool for Compartmentalization of Unit Cells of Metal-Organic Frameworks

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Modelling Kerogen Flexibility in Response to Hydrocarbon Adsorption using Hybrid Molecular Dynamics/Monte Carlo

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Modeling Adsorption of Simple Fluids and Alkanes on 3D Nanoporous Carbons

Nicholas Corrente, Elizabeth Hinks, Aastha Kasera, Raleigh Gough, Peter I. Ravikovitch, Alexander Neimark
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SAFT-DFT Studies of Nanoporous Carbon Deformation Induced by Multicomponent Adsorption

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Characterization of Nanoporous Carbons Using Generative Models

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Quantifying Structural Rigidity in Metal-Organic Frameworks with Increased Linker Dimensionality

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Disjoining interactions between flat and spherical surfaces cause by adsorption of surfactants with long soluble segments

Dmitry Beloborodov, Dmitry Tsygankov, Aleksey Vishnyakov
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Quantification of Copolymer Microstructure from Liquid Chromatography using a Statistical Interaction Model

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Estimation of porous media transport properties solely based on mercury intrusion porosimetry

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Obtaining pore volume and pore size distribution of ordered silica materials through adsorption isotherms at 77 K with different gases

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Scanning of the hysteresis loops on water sorption isotherms for the study of pore interconnection in CMK-8 carbonaceous materials

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The influence of confinement effects on the thermophysical properties of 4-methoxyazobenzene

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