



13th Workshop of the International Research Training Group
"Diffusion in Porous Materials"

Environmental Aspects of Pore Diffusion

Leipzig University, 3rd-5th April 2011

Location: GALERIE HOTEL LEIPZIGER HOF
Hedwigstr. 1-3, 04315 Leipzig
For direction see: <http://www.leipziger-hof.de/standort.htm>

Registration: Please send an E-mail to our IRTG administrator Katrin Kunze (katrin.kunze@uni-leipzig.de).
For details see: <http://www.uni-leipzig.de/~pore/workshop13.html>

Programme

Sunday, 3rd April

- 15:30 Welcome coffee / registration
- 16:00 Roger Gläser (Universität Leipzig): Introduction
- 16:15 - 17:00 Reimund Schwarze (UFZ Leipzig): After Cancun: Assessing the State of International Climate Agreements
- 17:00 - 17:45 Rajesh Biniwale (NEERI Nagpur, India): The Role of the National Environmental Engineering Research Institute for the Indian Society
- 17:45 - 18:00 coffee break
- 18:00 - 18:20 Frank Stallmach (Universität Leipzig): Porous Materials in CO₂ Capture and Storage Technologies
- 18:20 - 19:20 **Short presentations of research projects I**
- 18:20 Pablo Serra Crespo (TU Delft): Amino Functionalized MOFs for Gas Separation
- 18:40 Carsten Horch (Universität Leipzig): Measurement of CH₄/CO₂ Adsorption Selectivities in CuBTC by Low-Field NMR Porosimetry at Elevated Gas Pressures
- 19:00 Nico Reuvers (TU Eindhoven): Water Diffusion in Thin Nylon Films
- 19:30 Welcome buffet

Monday, 4th April

- 08:30 - 09:20 Istvan Furo (KTH Stockholm, Sweden): NMR and MRI during Swelling, Release, and Water Uptake in Porous Materials: Clays, Wood, Tablets
- 09:20 - 10:20 **Short presentations of research projects II**
- 09:20 Marcel Gratz (Universität Leipzig): Generation of Super-High-Intensity Magnetic Field Gradient Pulses for NMR Spectroscopy
- 09:40 Thomas Meißner (Universität Leipzig): Nuclear Magnetic Resonance at Pressures up to 100 kbar
- 10:00 Canan Gücüyener (TU Delft): Understanding the Unusual Adsorption Properties of ZIF-7
- 10:20 - 10:40 coffee break
- 10:40 - 11:30 George Papadopoulos (NTU Athens, Greece): Hierarchical Modeling of Molecular Dynamics under Confinement and its Application to Sorption and Transport Phenomena in ZIFs
- 11:30 - 12:30 **Short presentations of research projects III**
- 11:30 Anshu Shukla (Nagpur, India): ZIF's for CO₂ adsorption

- 11:50 Anne-Kristin Pusch (Universität Leipzig): ^{13}C NMR Diffusion Studies with CO_2 Adsorbed at Advanced Materials
- 12:10 Maarten Goesten (TU Delft): Chloromethylation: A Route to Generic Functionalization of Metal-Organic Frameworks
- 12:30 - 13:30 lunch break
- 13:30 - 14:00 Dirk Enke (Universität Leipzig): CO_2 Separation with Porous Glass Membranes - Drawbacks and Opportunities
- 14:00 - 15:15 **Short presentations of research projects IV**
- 14:00 Jens Kullmann (Universität Leipzig): Advanced Nanoporous Monoliths as Model Systems - New Insights through Controlled Microporosity and Varying Degree of Pore Orientation
- 14:20 Christian Reichenbach (Universität Leipzig): Gas Adsorption Volumetry at Porous Glasses
- 14:35 Alberto Martinez Joaristi (TU Delft): Synthesis and Detemplation of big Crystals of ZSM-58
- 14:55 Florian Hibbe (Universität Leipzig): Diffusion and Mass Transport in Ferrierite
- 15:15 - 15:30 coffee break
- 15:30 - 16:15 Klaas Kopinga (TU Eindhoven): Macroscopic Transport in Layered Porous Systems
- 16:30 - 19:00 Excursion "Leipzig and its Environment"
- 19:00 Dinner in the Restaurant of the Hotel "Leipziger Hof"
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Tuesday, 5th April:

- 08:30 - 09:20 Rajesh Biniwale (NEERI Nagpur, India): Trace Level Separations and Conversions for Environmental Applications - Role of Porous Materials
- 09:20 - 10:20 **Short presentations of research projects V**
- 09:20 Tomas Binder (Universität Leipzig): Surface Barriers of MFI-type Zeolites: Revision of well-founded Assumptions
- 09:40 Ahmmed Faiyas Aduvattu Purayil (TU Eindhoven): Open Time of Glue Mortars
- 10:00 Philipp Zeigermann (Universität Leipzig): Sorption Dynamics in Disordered Mesoporous Silicon
- 10:20 - 10:40 coffee break
- 10:40 - 11:10 Istvan Furo (KTH Stockholm, Sweden): Electrokinetic NMR in Fuel Cell Membranes
- 11:10 - 12:10 **Short presentations of research projects VI**
- 11:10 Wycliffe Kipnusu (Universität Leipzig): Molecular Dynamics of Glass Forming Liquids Confined in Nanoporous
- 11:30 Pim Donkers (TU Eindhoven): Water Permeability of Waterborne Coatings Containing Pigments
- 11:50 Steffen Beckert (Universität Leipzig): Self-diffusion of Alkali Metal Chlorides in Aqueous Solution Confined in Porous Materials
- 12:10 - 13:00 lunch break
- 13:00 - 13:30 Siegfried Fritzsche (Universität Leipzig): Self-Diffusion of some Guest Molecules in Flexible Zn(tbip) and ZIF-8
- 13:30 - 14:30 **Short presentations of research projects VII**
- 13:30 Jana Juan Alcañiz (TU Delft): Towards Efficient Polyoxometalate Encapsulation in MOFs: Influence of Synthesis Conditions and Catalytic Performance
- 13:50 Rungroj Chanajaree (Universität Leipzig): The Motions of Water Molecules in Chabazite
- 14:10 Patrick With (Universität Leipzig): Pseudomorphic Transformation of Silica Gels with Protected Porosity
- 14:30 - 15:00 Joint discussion of future IRTG activities, workshop and students exchange schedules
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