

PUBLIKATIONEN, PATENTE, VORTRÄGE UND PREISE  
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GOOGLE SCHOLAR CITATIONS

**Veröffentlichungen in wissenschaftlichen Journalen**

**2024**

- *In situ cell for grazing-incidence x-ray diffraction on thin films in thermal catalysis*; L. Thum, M. Arztmann, I. Zizak, R. Grüneberger, A. Steigert, N. Grimm, D. Wallacher, R. Schlatmann, D. Amkreutz, A. Gili, Rev. Sci. Instrum. 95, 033904 (2024)
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- *Small-pore hydridic frameworks store densely packed hydrogen*, H. Oh , N. Tumanov , V. Ban , X. Li , B. Richter , M. Hudson , C. Brown , G. Iles , D. Wallacher , S. Jorgensen , L. Daemen , R. Balderas-Xicohtencatl , Y. Cheng , A. Ramirez-Cuesta , Michael Heere , S. Posada-Pérez , G. Hautier , M. Hirscher , T. Jensen, Y. Filinchuk, Nature Chemistry 16, 809 (2024)

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- *Reactor design for thin film catalyst activity characterization*, C. Trinh, A. Yadav, M. Muske, N. Grimm, Z. Li, L. Thum, D. Wallacher, R. Schlögl, K. Skorupska, R. Schlatmann, D. Amkreutz, Chemical Engineering Journal 477, 146926 (2023)
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- *Effects of Cr Doping and Water Content on the Crystal Structure Transitions of Ba<sub>2</sub>In<sub>2</sub>O<sub>5</sub>*, R. Finger, M. Widenmeyer, T.C. Hansen, D. Wallacher, S. Savvin, M. Bertmer, A. Weidenkaff and H. Kohlmann, crystals 11, 1548 (2021)
- *CO<sub>2</sub> Adsorption Enhanced by Tuning the Layer Charge in a Clay Mineral*, W.B. Hunvik, P. Loch, D. Wallacher, A. Kirch, L. Cavalcanti, M. Riess, M. Daab, V. Josvanger, S. Grätz, F. Yokaichiya, K. Knudsen, C. Rodrigues Miranda, J. Breu, J.O. Fossum, Langmuir 37, 14491 (2021)
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- *Experimental Evidence of Confined Methane Hydrate in Hydrophilic and Hydrophobic Model Carbons*, M.E. Casco, E. Zhang, S. Grätz, S. Krause, V. Bon, D. Wallacher, N. Grimm, D. Többens, T. Hauss, and L. Borchardt, J. Phys. Chem. C 123, 24071 (2019)
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## Vorträge und Konferenzbeiträge

- 12<sup>th</sup> International workshop on sample environment, Nasu (Japan), Talk: *In operando sample environment dedicated to studies in gas- and electro-catalytic processes using x-ray spectroscopy*
- SNI 2022 German Conference for Research with Synchrotron Radiation, Neutrons and Ion Beams at Large Facilities, Berlin 2022, Poster: *Sample Environment at BESSY-II*
- 10<sup>th</sup> International workshop on sample environment, Berlin, 2018, Talk: *Sample Environment at BESSY-II: Gas Atmospheres and More ...*
- 10<sup>th</sup> International workshop on sample environment, Berlin, 2018, Poster: *Cryostat for High-Resolution X-ray Emission spectroscopy*
- SNI 2018 German Conference for Research with Synchrotron Radiation, Neutrons and Ion Beams at Large Facilities, München-Garching 2018, Poster: *Specialized Sample Environment at BESSY-II*
- 30<sup>th</sup> European Crystallographic Meeting, 28th August - 1st September 2016, Congress Center Basel, Switzerland: *FALCON - A Laue diffractometer for ambient and non-ambient neutron structural analysis*, M. Tovar, L. Diestel, H.-J. Bleif, K. Fritsch, K. Habicht, D. Wallacher, G.N. Iles and S. Schorr, Acta Cryst A. A72, 415, (2016)
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- 8<sup>th</sup> International Workshop on Sample Environment at Neutron Scattering Facilities, Eynsham Hall – Oxfordshire (UK), 2014, Talk: *The next generation humidity chamber for neutron scattering*
- Workshop Innovative Methoden der Sorptionsmessung, Fraunhofer IWS Dresden, 2014, Invited Talk: *In-situ Gasadsorptionsmethoden kombiniert mit Röntgen- und Neutronenstreuung*
- ICNS 2013, Edinburgh (Scotland), 2013, Talk: *Innovations in Sample Environment for Soft Matter Science and Material Research at HZB*

- ESS Science Symposium: Neutrons for Future Energy Strategy, PSI-Switzerland, 2013, Invited Talk: *Dedicated Sample Environment for Energy Research*
- DN 2012, Bonn, 2012, Poster: *Standard, Advanced and Complementary Sample Environment at the Helmholtz-Centre Berlin*
- ESS Science Symposium: Time-resolved, in-situ Chemistry using neutrons, Gothenburg, Sweden 2012, Invited Talk: *Sample Environment and investigations under controlled gas atmospheres and humidity*
- Science and Scientists @ ESS, Berlin, 2012, Poster: *Standard, Advanced and Complementary Sample Environment at the Helmholtz-Centre Berlin*
- PNI in-house research “2nd Soft Matter & Life Science Workshop”, Potsdam 2012, Talk: *Soft Matter SANS Sample Environment at the HZB*
- ESS Science Symposium: The Future of Soft Matter SANS, Lund, Sweden 2012, Poster: *Soft Matter SANS Sample environment at the Helmholtz-Zentrum Berlin*
- 5<sup>th</sup> European Conference on Neutron Scattering, Prague, 2011, Talk: *In-situ Gas Adsorption Techniques in Neutron Scattering*
- 6<sup>th</sup> International workshop on sample environment, Munich, 2010, Talk: *Multi-purpose gas handling for automated in-situ gas adsorption measurements*
- ICNS 2009, Knoxville (Tennessee), 2009, Invited Talk: *Methods and Instrumentation for Neutron Scattering combined with In-Situ Gas Adsorption*
- 21. Deutsche Zeolith-Tagung, Kiel, 2009, Poster: *Combined Neutron Scattering and Gas Adsorption at the Berlin Neutron Scattering Centre*
- MOF08 - 1st International Conference on Metal Organic Frameworks, Augsburg 2008, Poster
- DN 2008, München, 2008, Poster: *Neutron Scattering under Controlled Gas Atmospheres - The CGA-Sample Environment*
- 20. Deutsche Zeolith-Tagung, Halle, 2008, Poster: *In-situ-SANS investigations of C<sub>5</sub>F<sub>12</sub> condensation in mesoporous silicas with a hierarchical pore structure Scattering; Poster: Experiments under controlled gas pressure: New*

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- Fundamental of Adsorption (FOA 9), Giardini Naxos, Italy, 2007, Vortrag: *On the Nitrogen Sorption Mechanism in Silica with hierarchical mesoporosity studied by in-situ Small-Angle Neutron Scattering*
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- Dynamics in Confinement 2003, Grenoble, France, 2003, Poster: *Dielectric investigations of some pore condensates*
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## Preise

- Universität des Saarlandes, Saarbrücken, Oktober 2007:  
Dr. Eduard-Martin-Preis für die beste Dissertation im akademisch Jahr 2006 in der Naturwissenschaftlich-Technischen Fakultät II der Universität des Saarlandes