DECHEMA
Gesellschaft für Chemische Technik
und Biotechnologie e.V.

PROGRAMM

21. – 23. Februar 2023 · Universität Wien, Österreich

34. Deutsche Zeolith-Tagung

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34. DZT in Vienna

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3P INSTRUMENTS Characterization of particles · powders · pores

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VERANSTALTUNGSORT

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PROGRAMMÜBERSICHT

Dienstag, 21. Februar 2023

17:00 Registrierung

18:00 **BEGRÜSSUNG**
F. Kleitz[1]; [1] Universität Wien, Wien/A

Chair: J. Chin[1]; [1] Universität Wien, Wien/A

18:15 **PLENARVORTRAG**
Looking Beyond Crystallinity in Metal-Organic Frameworks
T. Bennett[1]; [1] University of Cambridge/UK

19:00 **Begrüßungsabend / Ausstellung**

PROGRAMM

Mittwoch, 22. Februar 2023

08:00 Registrierung

08:30 **ERÖFFNUNG**
Chair: F. Kleitz[1]; [1] Universität Wien, Wien/A

Chair: J. Florek[1]; [1] Universität Wien, Wien/A

08:45 **PLENARVORTRAG**
Connecting nanoparticle surface chemistry to biointeraction modulation: Possibilities and pitfalls
M. Lindén[1]; [1] Universität Ulm/D

MESOPOROUS MATERIALS I

Chair: C. von Baeckmann[1]; [1] Catalan Institute of Nanoscience and Nanotechnology (ICN2), Bellaterra (Barcelona)/E

09:30 **Adjusting core size and magnetic properties of magnetic nanoporous core-shell silica nanoparticles**
T. Herrmann[1]; J. Reifenrath[2]; J. Meißner[3]; M. Prediger[1]; P. Behrens[1]; [1] Leibniz Universität Hannover, Hannover/D; [2] Medizinische Hochschule Hannover/D; [3] Stiftung Tierärztliche Hochschule Hannover/D

09:50 **Delivery by Dendritic Mesoporous Silica Nanoparticles Enhances the Antimicrobial Activity of a Napsin-derived Peptide Against Intracellular Mycobacterium tuberculosis**
B. Beitzinger[1]; F. Gerbl[2]; T. Vomhof[1]; R. Schmid[1]; R. Noschka[2]; A. Rodriguez[1]; S. Wiese[1]; G. Weidinger[1]; L. Ständker[1]; P. Walther[1]; J. Michaelis[1]; M. Lindén[1]; S. Stenger[2]; [1] Ulm University, Ulm/D; [2] Ulm University Hospital, Ulm/D

10:10 **Composites of Plasmonic Metal Nanoparticles on Ordered Mesoporous Titanium Dioxide for Photocatalytic Reductions**
H. Vocke[1]; D. Taffa[1]; M. Wark[1]; [1] Carl von Ossietzky University of Oldenburg/D

10:30 Kaffeepause / Ausstellung

MESOPOROUS MATERIALS II

Chair: J. Gallego[1]; [1] Justus-Liebig-Universität Gießen, Gießen/D

11:00 **Effects of periodic pore ordering on photocatalytic hydrogen generation with mesoporous semiconductor oxides**
T. Weller[1]; J. Timm[1]; L. Deilmann[2]; A. Cherevan[2]; D. Eder[2]; R. Marschall[1]; [1] Universität Bayreuth/D; [2] TU Wien/A

11:20 **Mesoporous Copper-Ceria (Cu-CeO_2) Gas Sensors: Selectivity to CO over H_2**
D. Baier[1]; T. Priamushko[2]; C. Weinberger[1]; F. Kleitz[2]; M. Tiemann[1]; [1] Universität Paderborn/D; [2] University of Vienna/A

11:40 **Mesoporous Carbon Thin Films as Electrocatalyst Support for the Oxygen Evolution Reaction**
L. Wagner[1]; J. Schober[1]; B. Smarsly[1]; [1] Justus-Liebig-Universität Gießen/D

12:00 Mittagspause / Poster / Ausstellung

Mittwoch, 22. Februar 2023

Chair: E. Saraçi[1]; [1]Karlsruher Institut für Technologie (KIT), Eggenstein-Leopoldshafen/D

13:30 **PLENARVORTRAG**
Zeolites as hosts for single site catalysts
M. Sánchez-Sánchez[1]; [1] TU Wien, Vienna/A

ADSORPTION AND POROSITY CHARACTERIZATION

Chair: C. Weinberger[1]; [1]Universität Paderborn, Paderborn/D

14:15 **Influence of cation type on π-complex formation during adsorption on zeolites**
C. Bläker[1]; V. Mauer[1]; C. Pasel[1]; D. Bathen[1]; [1] Universität Duisburg-Essen, Duisburg/D

14:35 **Characterization of Hierarchically Structured Zeolite by Gas Sorption**
E. Turrini[1]; K. Cychosz Struckhoff[2]; [1] Anton Paar GmbH, Graz/A; [2] Anton Paar Quantatec, Boynton Beach/FL/USA

14:55 **Reliable Surface Area Assessment of Solvated Nanoporous Materials by NMR Relaxometry**
C. Schlumberger[1]; L. Sandner[1]; M. Thommes[1]; [1] Friedrich Alexander Universität Erlangen Nürnberg, Erlangen/D

15:15 **In-situ SAXS investigation of the evolution of hierarchical porosity of a soft carbon precursor during heat treatment**
M. Rauscher[1]; M. Seyffertitz[1]; R. Kohns[2]; H. Amenitsch[3]; N. Huesing[2]; O. Paris[1]; [1] Montanuniversität Leoben/A; [2] Paris Lodron Universität Salzburg/A; [3] Elettra Sincrotrone Trieste/I

15:35 Kaffeepause / Ausstellung

Chair: M. Reithofer[1]; [1] Universität Wien, Wien/A

16:05 **GEORGE KOKOTAILO AWARD LECTURE**
Solid-state NMR spectroscopic investigation of supported ionic liquids for catalytic applications
C. Tavera Méndez[1]; M. Frosch[1]; A. Bergen[1]; K. Meyer[1]; D. Wisser[1]; M. Hartmann[1]; [1] Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen/D

MOF SYNTHESIS

Chair: A. Knebel[1]; [1] Friedrich-Schiller-Universität Jena, Jena/D

16:35 **Dynamic motorized nanoporous framework materials**
S. Krause[1]; [1] Max Planck Institute for Solid State Research, Stuttgart/D

16:55 **Tuning the Switchability of the pillared layer MOF DUT-128 by amino functionalization**
N. Bönisch[1]; I. Senkovska[1]; V. Bon[1]; P. Petkov[2]; S. Kaskel[1]; [1] Technische Universität Dresden/D; [2] Sofia University "St. Kl. Ohridski", Sofia/BG

17:15 **Porous Salts Containing Unprecedented Cationic Al_{24}-Hydroxide Clusters from a Scalable, Green Synthesis Route**
B. Achenbach[1]; E. Svensson Grape[2]; M. Wahiduzzaman[3]; S. Pappler[4]; R. Siegel[4]; J. Senker[4]; G. Maurin[3]; A. Ken Inge[2]; N. Stock[1]; [1] Kiel University, Kiel/D; [2] Stockholm University, Stockholm/S; [3] Université Montpellier/F; [4] Universität Bayreuth/D

17:35 **Trimetallic MIL-53-NH_2 materials with tunable properties**
A. Ouissa[1]; C. Wilhelm[1]; W. Kleist[1]; [1] RPTU Kaiserslautern-Landau, Kaiserslautern/D

19:00 **Conference Dinner** im Melker Stiftskeller, Schottengasse 3, 1010 Wien

PROGRAMM

Donnerstag, 23. Februar 2023

Chair: T. Grüne[1]; [1] Universität Wien, Wien/A

09:00 **PLENARVORTRAG**
New electron crystallographic techniques for structural elucidation of porous materials
X. Zou[1]; [1] Stockholm University, Stockholm/S

MOF / COF SYNTHESIS

Chair: I. Senkovska[1]; [1] TU Dresden, Dresden/D

09:45 **Stepwise Assembly of Heterometallic, Heteroleptic "Triblock Janus-type" Metal-Organic Cages**
C. von Baeckmann[1]; [1] Catalan Institute of Nanoscience and Nanotechnology (ICN2), Bellaterra (Barcelona)/E

10:05 **Electrically conductive carbazole and thienoisoindigo-based COFs showing fast and stable electrochromism**
K. Muggli[1]; [1] Ludwig-Maximilians Universität München (LMU), München/D

10:25 **The Rapid Mechanochemical Synthesis of Microporous Covalent Triazine Networks**
A. Krusenbaum[1]; S. Grätz[1]; L. Borchardt[1]; [1] Ruhr-Universität Bochum, Bochum/D

10:45 Kaffeepause / Ausstellung

MOF /COF APPLICATIONS

Chair: P. Iacomi[1]; [1] Surface Measurement Systems, London/UK

11:15 **Selective ligand removal as a powerful strategy towards advanced photocatalysis and water purification using metal organic frameworks**
S. Naghdi[1]; [1] TU Wien, Vienna/A

11:35 **The Effect of Pore Functionality in Multicomponent Covalent Organic Frameworks for Stable Long-term H_2 Production**
P. Das[1]; A. Thomas[1]; [1] TU Berlin, Berlin/D

11:55 **Noval Synthesis Methods of ZIF-71 and ZIF-93 for Sorption Based Applications**
C. Byrne[1]; K. Vodlan[2]; A. Golobič[2]; N. Zabukovec Logar[1]; [1] National Institute of Chemistry and University of Nova Gorica, Ljubljana; Nova Gorica/SLO; [2] University of Ljubljana, Ljubljana/SLO

12:15 **Gas Transport in Liquid-Processable Metal-Organic Frameworks for Gas Separations**
A. Knebel[1]; O. Smirnova[1]; S. Hwang[2]; J. Gascon[3]; J. Caro[4]; J. Kärger[2]; L. Wondraczek[1]; [1] Friedrich-Schiller-University of Jena, Jena/D; [2] Universität Leipzig, Leipzig/D; [3] King Abdullah University of Science and Technology (KAUST), Thuwal/SAR; [4] Leibniz University Hannover, Hannover/D

12:35 Mittagspause / Poster / Ausstellung

Chair: H. Richter[1]; [1] Fraunhofer IKTS, Hermsdorf/D

14:00 **PLENARVORTRAG**
Accounting for mechanistic and structural sources of complexity in the atomic scale simulation of Brønsted acidic zeolite catalysts
C. Chizallet[1]; [1] IFP Energies nouvelles (IFPEN), Solaize/F

PROGRAMM

Donnerstag, 23. Februar 2023

ZEOLITES

Chair: A. Kornas[1]; [1] Czech Academy of Science, Prague/CZ

14:45 **Location and Quantification of Hydrogen-Bonded Brønsted Acid Sites in Several Zeolite Structures**
C. Schröder[1]; M. Hansen[2]; C. Mück-Lichtenfeld[2]; M. Hunger[3]; C. Lew[4]; S. Zones[4]; H. Koller[2]; [1] TU Wien, Wien/A; [2] Westfälische Wilhelmsuniversität Münster/D; [3] Universität Stuttgart/D; [4] Chevron Technical Center, Richmond, California/USA

15:05 **Understanding the active nature of Fe-sites in Fe/MFI for upgrading bio-based vicinal diols**
P. Treu[1]; B. Sarma[1]; J. Grunwaldt[2]; E. Saraçi[1]; [1] Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen/D; [2] Karlsruhe Institute of Technology (KIT), Karlsruhe/D

15:25 **Hydrogen Activation on NaY-encapsulated Mixed Transition Metal Sulfide Clusters**
R. Khare[1]; R. Weindl[1]; C. Gross[1]; A. Jentys[1]; J. Lercher[1]; [1] TU München, Garching/D

15:45 Kaffeepause / Ausstellung

APPLIED MATERIALS

Chair: S. Naghdi[1]; P. Guggenberger[2]; [1] TU Wien, Wien/A; [2] Universität Wien/A

16:15 **Investigation of the Carbonization Process in Resorcinol-Formaldehyde Xerogel**
P. Sharma[1]; A. Bilican[1]; W. Schmidt[1]; C. Weidenthaler[1]; [1] Max-Planck-Institut für Kohlenforschung, Mülheim an der Ruhr/D

16:35 **Investigating of an industrial adsorbent for Direct Air Capture by gas flow methods**
S. Ehrling[1]; [1] 3P Instruments GmbH & Co. KG, Odelzhausen/D

16:55 **Covalent organic framework and ionic-liquid composite electrolyte for directional ion transport in sodium-ion batteries**
A. Singh[1]; T. Bein[1]; [1] University of Munich (LMU), Department of Chemistry and Center for NanoScience (CeNS), Munich/D

17:15 **Activated Carbon/Ni-MOF-74 Composite with Outstanding H_2S and NH_3 Capture Capacity**
C. Piscopo[1]; A. Polyzoidis[1]; M. Ahlhelm[2]; H. Richter[2]; D. Werner[2]; [1] Fraunhofer ICT, Pfinztal/D; [2] Fraunhofer IKTS, Dresden/D

17:35 **Porous Tin-Organic Frameworks for Heterogeneous Catalytic Conversion of Carbohydrates and Ketones**
V. Toussaint[1]; M. Seebach[2]; I. Delidovich[1]; M. Rose[2]; [1] TU Wien/A; [2] TU Darmstadt/D

17:55 **SCHLUSSWORT / PREISVERLEIHUNG**
W. Kleist[1]; [1]RPTU Kaiserslautern-Landau, Kaiserslautern/D

POSTER

P 001 **Emergence of Hierarchical Porosity in Hard Carbon Microspheres**
M. Wortmann[1]; W. Keil[2]; B. Brockhagen[3]; J. Biedinger[1]; M. Westphal[1]; C. Weinberger[2]; E. Diestelhorst[3]; W. Hachmann[1]; Y. Zhao[2]; M. Tiemann[2]; G. Reiss[1]; B. Hüsgen[3]; C. Schmidt[2]; K. Sattler[4]; N. Frese[1]; [1] Universität Bielefeld, Bielefeld/D; [2] Universität Paderborn, Paderborn/D; [3] Fachhochschule Bielefeld, Bielefeld/D; [4] University of Hawaii, Honolulu/USA

P 002 **Effects of Hydrothermal Treatment on Mesopore Structure and Connectivity in Doped Ceria Zirconia Mixed Oxides**
E. Prates da Costa[1]; U. Göbel[1]; A. Hofmann[1]; B. Smarsly[2]; [1] Umicore AG & Co. KG, Hanau-Wolfgang/D; [2] Justus-Liebig-Universität Gießen, Gießen/D

P 003 **Enhanced Water Adsorption Kinetics in Ball-Milled C_2N-type Materials Investigated by Optical Calorimetry**
S. Du[1]; E. Troschke[1]; M. Oschatz[1]; [1] Friedrich-Schiller-Universität Jena, Jena/D

P 004 **Contribution of nitrogen to the creation of porosity in carbon materials obtained by KOH activation**
S. Ghomsi Wabo[1]; O. Klepel[1]; [1] BTU Cottbus-Senftenberg, Senftenberg/D

P 005 **Straightforward adsorptive drug loading and PEGylation of mesoporous silica nanoparticles**
N. Neffgen[1]; R. Schmid[1]; M. Lindén[1]; [1] Universität Ulm, Institut für Anorganische Chemie II, Ulm/D

P 006 **Topological design of highly porous frameworks by systematic variation of ligand geometry in tetracarboxylate ligands**
B. Felsner[1]; V. Bon[1]; I. Senkovska[1]; S. Kaskel[1]; [1] Technische Universität Dresden, Dresden/D

P 008 **Effects of Hydrothermal Ageing on the Dynamic Nature of Active Sites in Cu-exchanged Small Pore Zeolites**
R. Khare[1]; M. Wenig[1]; A. Jentys[1]; J. Lercher[1]; [1] TU München, Garching/D

P 009 **CAU-61 – A New Highly Stable -COOH Functionalized Metal-Organic Framework as Potential Membrane Material**
M. Poschmann[1]; N. Stock[2]; K. Lillerud[3]; [1] Christian-Albrechts-Universität, Kiel/D; [2] Christian-Albrechts Universität, Kiel/D; [3] University of Oslo, Oslo/N

P 010 **The Water Vapor Physisorption– A Powerful Method to Determine the Hydrophobicity of Porous Materials**
S. Schwake[1]; M. Fröba[1]; [1] Universität Hamburg, Hamburg/D

P 011 **Synthesis and Properties of Purely Mesoporous Boron Nitride**
T. Jähnichen[1]; D. Enke[1]; [1] Universität Leipzig, Leipzig/D

P 012 **Enhanced removal of Emerging pollutants on Zr porphyrinic Metal-organic framework**
E. Jin[1]; J. Kim[2]; J. Nam[2]; D. Yang[2]; S. Kim[2]; E. Kang[2]; H. Cho[2]; S. Kaskel[1]; W. Choe[2]; [1] Technische Universität Dresden, Dresden/D; [2] Ulsan National Institute of Science and Technology (UNIST), Ulsan/ROK

P 013 **On the Etching-induced Influence of CeO_2–Incorporated Mesoporous H/ZSM-5 Hybrid Systems in Dynamic MTH**
L. Udofia[1]; T. Friederici[1]; P. Veit[1]; S. Petzold[1]; G. Schmidt[1]; F. Scheffler[1]; M. Schwidder[1]; [1] Otto-von-Guericke-Universität, Magdeburg/D

POSTER

P 014 **Metal-organic framework meets hydrogen technology**
T. Simon[1]; M. Prof. Dr. Fröba[1]; [1] Universität Hamburg (UHH), Hamburg/D

P 015 **Methane Gas Hydrates Formation in Mesoporous Silica**
S. Claas[1]; M. Prof. Dr. Fröba[1]; [1] Universität Hamburg (UHH), Hamburg/D

P 016 **Use of the extended Elution by Characteristic Point method to determine adsorption isotherms on self-packed zeolites columns**
C. Heiduk[1]; [1] Technische Universität Braunschweig, Braunschweig/D

P 017 **Adsorptive Functionalization of Mesoporous Silica Nanoparticles for Photodynamic Therapy**
J. Hald[1]; B. Leutfeldt[1]; C. Ullmann[2]; R. Wittig[2]; M. Lindén[1]; [1] Universität Ulm, Ulm/D; [2] Institut für Lasermedizin und Messtechnik, Ulm/D

P 018 **Bridging the Gap between Molecular and Solid Catalysts: Phosphine-Based Hyper-Crosslinked Polymers as Macroligands for the Activation of CO_2**
A. Nisters[1]; M. Rose[1]; [1] TU Darmstadt, Darmstadt/D

P 019 **Immobilization of a Peptide-based Catalyst on Mesoporous Silica for Heterogeneous Catalysis**
R. Brand[1]; S. Busche[2]; H. Börner[2]; B. Smarsly[1]; [1] Justus-Liebig-Universität Gießen, Gießen/D; [2] Humboldt-Universität zu Berlin, Berlin/D

P 020 **The importance of crystal size for breathing kinetics in MIL-53(Al)**
V. Bon[1]; N. Busov[1]; I. Senkovska[1]; L. Abylgazina[1]; N. Bönisch[1]; S. Kaskel[1]; A. Khadiev[2]; D. Novikov[2]; [1] Technische Universität Dresden, Dresden/D; [2] PETRA III, DESY, Hamburg/D

P 021 **Functionalized Carbon with Crown Ether for Selective Lithium Adsorption in Water**
S. Rezeki[1]; D. Leistenschneider[1]; M. Oschatz[1]; [1] Friedrich-Schiller-Universität Jena, Jena/D

P 022 **One-Pot Synthesis of Ni-MOF/Co-MOF Hybrid as Electrocatalyst for Oxygen Evolution Reaction**
S. Sprengel[1]; M. Amiri[1]; M. Wark[1]; [1] Carl von Ossietzky University of Oldenburg, Oldenburg/D

P 023 **Donor-Acceptor Triphenylamine-Based Covalent Organic Frameworks for Photoelectrochemical Hydrogen Evolution**
R. Guntermann[1]; D. Helminger[1]; L. Frey[1]; D. Medina[1]; T. Bein[1]; [1] Fakultät für Chemie und Pharmazie, LMU München, München/D

P 024 **MOF-808 doped with transition metals and lanthanides for barcode design**
N. Marquardt[1]; F. von der Haar[1]; A. Schaate[1]; [1] Leibniz Universität Hannover , Hannover/D

P 025 **Syntheses and refractive index measurements of MOF single crystals**
A. Deutsch[1]; E. Agócs[1]; R. Fischer[2]; P. Behrens[1]; [1] Leibniz Universität Hannover, Hannover/D; [2] Universität Bremen, Bremen/D

P 026 **Synthesis of metal-organic Frameworks for optic applications using linkers with rotatable dipolar groups**
L. Mönkeberg[1]; A. Schaate[1]; P. Behrens[1]; [1] Leibniz Universität Hannover, Hannover/D

POSTER

P 027 **Functional groups in the linker of UiO-66-MOFs and their effects on the adsorption of volatile organic compounds and water**
A. Hannebauer[1]; K. Hindricks[1]; A. Schaate[1]; P. Behrens[1]; [1] Leibniz University Hannover, Hannover/D

P 028 **Sustainable synthesis of micro-/mesoporous C-SiO_2-composites by chemical activation**
B. Lilli[1]; S. Wassersleben[1]; D. Enke[1]; [1] Universität Leipzig, Leipzig/D

P 029 **In vitro evaluation of the cellular interaction of Dendritic Mesoporous Silica Nanoparticles as a function of the degree of PEGylation**
G. Sivakumaran[1]; [1] Universität Ulm, Ulm/D

P 030 **Highly Crystalline and Fully Conjugate 3D Cyclooctatetraene-Based Covalent Organic Frameworks**
I. Muñoz Alonso[1]; D. Bessinger[1]; S. Reuter[1]; D. Medina[1]; T. Bein[1]; [1] University of Munich (LMU), Department of Chemistry and Center for NanoScience (CeNS), München/D

P 031 **Hard Carbon Microspheres with Binary Size Distribution and Hierarchical Porosity via Hydrothermal Carbonization of Trehalose**
M. Wortmann[1]; W. Keil[2]; E. Diestelhorst[3]; M. Westphal[1]; R. Haverkamp[1]; B. Brockhagen[3]; J. Biedinger[1]; C. Weinberger[2]; D. Baier[2]; M. Tiemann[2]; T. Hellweg[1]; G. Reiss[1]; C. Schmidt[2]; K. Sattler[4]; N. Frese[1]; [1] Universität Bielefeld, Bielefeld/D; [2] Universität Paderborn, Paderborn/D; [3] Fachhochschule Bielefeld, Bielefeld/D; [4] University of Hawaii, Honolulu/USA

P 032 **Unraveling the swelling behavior of HCPs by adsorption kinetics of benzene vapor regarding their cross-linking degree**
H. Kraffczyk[1]; M. Rose[1]; [1] Technische Universität Darmstadt, Darmstadt/D

P 033 **Crystal-size dependent guest-selective switchability in pillared-layer metal-organic framework DUT-8(Zn)**
L. Abylgazina[1]; I. Senkovska[1]; R. Engemann[1]; V. Bon[1]; S. Kaskel[1]; [1] TU Dresden, Dresden/D

P 034 **Development of catalytically active DUT-49 analogues by introducing additional metal binding sites to the ligand**
K. Konowski[1]; V. Bon[1]; I. Senkovska[1]; S. Kaskel[1]; [1] Technische Universität Dresden Anorganische Chemie I, Dresden/D

P 035 **Applying NaP1-Fe3O4-La as a Novel Adsorbent for Glyphosate Removal from Contaminated Water**
S. Haghjoo[1]; C. L. Lengauer[2]; H. Kazemian[3]; M. Roushani[4]; [1] University of Vienna, Vienna/A; [2] University of Vienna, Vienna/A; [3] University of Northern British Columbia (UNBC), Prince George/CDN; [4] Ilam University, Ilam/IR

P 036 **MOFs with benzophenone units: 2D structuring and postsynthetic modification of thin films**
K. Hindricks[1]; A. Schaate[1]; P. Behrens[1]; [1] Leibniz Universität Hannover, Hannover/D

P 037 **Promoting alkane cracking by extra-framework clusters in ZSM-5 zeolites**
R. Zhao[1]; Y. Zhang[1]; M. Sanchez-Sanchez[1]; R. Bermejo-Deval[1]; Y. Liu[1]; J. Lercher[1]; [1] Technische Universität München, Garching b. München/D

P 038 **Ultrafast Spectroscopic Investigation of Excited State Dynamics in 2D COF Thin Films**
L. Spies[1]; T. Bein[1]; A. Biewald[1]; Z. Xu[1]; A. Hartschuh[1]; [1] Ludwig Maximilian Universität München, München/D

POSTER

P 039 **Influence of mesoporosity of silica carrier material on the performance of immobilised DMAP in flow catalysis**
E. Trommer[1]; J. Schulze[1]; B. Smarsly[1]; [1] Justus-Liebig-Universität Gießen, Gießen/D

P 040 **In-situ monitoring of molecular sieve synthesis with ultrasonic diagnostic**
R. Reber[1]; W. Schwieger[1]; M. Hartmann[1]; [1] Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/D

P 041 **Towards controlled partial desolvation of guest-responsive Metal-Organic Frameworks for fine porosity control**
K. Maity[1]; V. Bon[1]; S. Kaskel[1]; [1] Technische Universität Dresden (TUD), Dresden/D

P 042 **Tandem Metal Oxide-Zeolite Catalysts for CO_2 Utilization**
C. Schröder[1]; M. Palma[1]; N. Barrabés[1]; M. Sánchez-Sánchez[1]; [1] TU Wien, Wien/A

P 043 **DUT-8(Cu) vs. DUT-8(Ni) – impact of the metal node on the switching behavior**
M. Maliuta[1]; I. Senkovska[1]; S. Ehrling[1]; V. Romaka[1]; V. Bon[1]; S. Kaskel[1]; M. Roslova[2]; P. Petkov[3]; [1] TECHNISCHE UNIVERSITÄT DRESDEN (TUD), Dresden/D; [2] IFW Dresden, Dresden/D; [3] Sofia University "St. Kl. Ohridski", Sofia/BG

P 044 **HPLC analysis of sugar alcohols, mono- and disaccharides over zeolite Y: Diffusion and tautomer separation**
C. Buttersack[1]; M. Shakil[2]; R. Gläser[3]; [1] Universität Leipzig , Leipzig/D; [2] Universität leipzig, Leipzig/D; [3] Universität Leipzig, Leipzig/D

P 045 **PEO-b-PHA Block Copolymers as Templates for Mesoporous Metal Oxides with Tailored Pore Size**
L. Wagner[1]; F. Breckwoldt[1]; B. Smarsly[1]; [1] Justus-Liebig-Universität Gießen, Gießen/D

P 046 **A novel method for the production of MOF-based atmospheric water harvesting materials with a dual mode of regeneration**
L. Wegner[1]; C. Reimerdes[1]; L. Siebert[1]; P. Schadte[1]; N. Stock[1]; [1] Christian-Albrechts-Universität zu Kiel, Kiel/D

P 047 **On the mechanism of formation of dendritic mesoporous silica nanoparticles (DMSN)**
B. Draphoen[1]; B. Beitzinger[1]; M. Nedoklan[1]; S. Scherer[1]; M. Lindén[1]; [1] Ulm University, Ulm/D

P 048 **MOF nanoparticle dispersions as optically active materials for application in silica hollow-core fibers**
L. Steinbach[1]; A. Schaate[1]; P. Behrens[1]; [1] Leibniz Universität Hannover, Hannover/D

P 049 **A Porous, Crystalline, Thiaborinane Covalent-Organic Framework**
K. Garcia Alvarez[1]; M. Springer[1]; A. Khan[1]; L. Shupletsov[1]; A. De[1]; A. Asteriadis[1]; K. Merkel[2]; S. Haldar[1]; F. Ortmann[2]; E. Brunner[1]; T. Heine[1]; A. Kuc[1]; A. Schneemann[1]; [1] Technische Universität Dresden, Dresden/D; [2] Technische Universität München, Garching/D

P 050 **Systematic assessment of hydrophilicity in partially hydrophobized ordered mesoporous silica materials by Argon and water physisorption techniques**
C. Huber[1]; [1] Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/D

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P 051 **Experimental Validation of Active Targeting by Peptide-Functionalized Mesoporous Silica Nanoparticles in the Presence of Serum Proteins**
T. Rudolf[1]; V. Paramonov[2]; M. Gerstenberg[1]; C. Sahlgren[2]; M. Lindén[1]; A. Rivero-Müller[2]; [1] Universität Ulm, Ulm/D; [2] University of Turku, Turku/FIN

P 052 **Highly Crystalline 2D Conjugated Dibenzo[g,p]chrysene-Based Large-Pore Kagome Covalent Organic Frameworks**
T. Xue[1]; R. Guntermann[1]; D. Medina[1]; T. Bein[1]; [1] University of Munich (LMU), Munich/D

P 053 **Tricationic cobalt-1,4,7-triazacyclononane complex as structure-directing agent for different zeotypes**
J. Höner[1]; A. Schaate[1]; Y. Krysiak[1]; P. Behrens[1]; [1] Leibniz Universität Hannover/D

P 054 **Growth description of layer-like FAU-type zeolite X: The impact of morphology modifying agents**
J. Grass[1]; L. Rupprecht[1]; W. Schwieger[1]; A. Inayat[1]; [1] Friedrich-Alexander-Universität Erlangen-Nürnberg, Erlangen/D

P 055 **Investigation of catalytic COS formation on zeolites**
S. Pfeifer[1]; M. Roehnert[1]; C. Pasel[1]; C. Bläker[1]; T. Eckardt[2]; D. Bathen[1]; [1] Universität Duisburg-Essen, Duisburg/D; [2] BASF Catalysts Germany GmbH, Nienburg/D

P 056 **Binary adsorption of light hydrocarbons on zeolites at low temperatures**
M. Roehnert[1]; C. Pasel[1]; C. Bläker[1]; D. Bathen[1]; [1] Universität Duisburg-Essen, Duisburg/D

P 057 **Controlling molecular sieving properties of zeolitic imidazolate framework glasses by processing**
O. Smirnova[1]; S. Hwang[2]; A. Reupert[1]; V. Nozari[1]; C. Chmelik[2]; J. Kärger[2]; L. Wondraczek[1]; A. Knebel[1]; [1] Friedrich-Schiller-Universität Jena, Jena/D; [2] Universität Leipzig, Leipzig/D

P 058 **In-development method to obtain high surface area and porous exsolvable perovskite-like oxides**
J. Gallego[1]; [1] JLU Universität, Giessen/D

P 059 **Band-like Charge Transport in Porous Organic Semiconductors**
S. Ghosh[1]; [1] , Berlin/D

P 060 **Towards 'Organic Zeolites' – Hybrid Si/Al frameworks from tetravalent silicon and aluminate tectons bridged by organic linkers**
J. Grüneberg[1]; J. Roeser[1]; A. Thomas[1]; [1] Technische Universität Berlin, Berlin/D

P 061 **A Charged Covalent Organic Framework Constructed from Tetrahedral Borate Centers**
D. Asgari[1]; J. Grüneberg[2]; J. Roeser[2]; A. Thomas[2]; [1] Technische Universität Berlin, Berlin/D; [2] Technische Universität Berlin, Berlin/D

P 062 **Low temperature calcination-induced defects in ordered mesoporous mixed metal oxide spinels for optimized oxygen evolution reaction (OER) performance**
P. Guggenberger[1]; T. Priamushko[2]; A. Mautner[1]; J. Čížek[3]; F. Kleitz[1]; [1] Universität Wien, Vienna/A; [2] Helmholtz Institut, Erlangen/D; [3] Charles University, Prague/CZ

P 063 **Breakthrough in the synthesis of functionalized ordered mesoporous silicas**
J. Silva Mora[1]; J. Sialelli[1]; R. Machado[1]; A. Thomas[1]; [1] Technische Universität Berlin/D

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P 064 **Design and Synthesis of Porous Heterojunction Photocatalyst Systems**
H. Küçükkeçeci[1]; M. Bojdys[2]; A. Thomas[1]; [1] Technische Universität Berlin, Berlin/D; [2] Humboldt-Universität zu Berlin, Berlin/D

P 065 **Chichibabin type system as linker in a highly stable Zr MOF: Potential optoelectronic applications**
L. Shupletsov[1]; S. Topal[1]; A. Schieck[1]; S. Helten[1]; V. Bon[1]; I. Senkovska[1]; S. Kaskel[1]; [1] TU Dresden, Dresden/D

P 066 **Promotion Effect of KHCO3 on Palladium Hydride Catalyzed Decarboxylation of Arylaliphatic Acid**
F. Deng[1]; R. Zhao[1]; A. Jentys[1]; Y. Liu[1]; J. Lercher[1]; [1] Technische Universität München, Garching bei München/D

P 067 **An innovative approach to fight bladder infections: Toxicity profiling and mechanism of action of MANNylated mesoporous silica nanoparticles**
M. Hohagen[1]; [1] Universität Wien (University of Vienna), Wien/A

P 068 **Core-Shell-Nanoparticles with Superparamagnetic Properties for Novel Applications as Biomaterials**
V. Hagemann[1]; [1] Leibniz Universität Hannover, Hannover/D

P 069 **Partial conversion of microporous MIL-100(Fe) into mesoporous FePO4 via pseudomorphic transformation**
F. Dietrich[1]; M. Fischer[2]; M. Hartmann[2]; [1] Friedrich Alexander Universität Erlangen Nürnberg, Erlangen/D; [2] Friedrich-Alexander-Universität Erlangen Nürnberg (FAU), Egerlandstraße 3, 910589 Erlangen/D

P 070 **MOF Synthesis Prediction Enabled by Automatic Data Mining and Machine Learning**
Y. Luo[1]; S. Bag[1]; O. Zaremba[2]; A. Cierpka[1]; J. Andreo[2]; S. Wuttke[2]; P. Friederich[1]; M. Tsotsalas[1]; [1] Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen/D; [2] Basque Center for Materials, Applications & Nanostructures, Bizkaia/E

P 071 **First principles calculation of the optical properties of metal-organic frameworks**
M. Treger[1]; P. Behrens[1]; A. Schneider[1]; [1] Leibniz Universität Hannover, Hannover/D

P 072 **Hydrophobicity and VOC Adsorption Studies of Structured Zeolitic Imidazolate Frameworks**
P. Iacomi[1]; [1] Surface Measurement Systems, London/UK

P 073 **Aspects of Gas Storage: Effect of Confinement on Supercritial Adsorption Behaviour of Pure Fluids**
S. Eder[1]; F. Kleitz[2]; M. Thommes[1]; [1] Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen/D; [2] Universität Wien (University of Vienna), Wien/A

P 074 **Designing Hybrid Organosilica Nanomaterials for Selective Rare Earth Elements Recovery**
I. Protsak[1]; A. Brewer[2]; M. Owton[3]; F. Kleitz[4]; [1] Universität Wien (University of Vienna), Wien/A; [2] University of Vienna, Vienna, Austria/A; [3] Independent Scholar, Surrey, UK/UK; [4] Universität Wien (University of Vienna), Vienna/A

P 075 **Physisorption studies about tuning of mesoporosity in silica monoliths controlled by hydrothermal treatment**
U. Ali[1]; [1] Justus Liebig University Glessen, Giessen/D

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P 076 **Solid-state NMR spectroscopic investigation of TiO2 grown on silica nanoparticles by solution Atomic Layer Deposition**
F. Ding[1]; C. Ly Tavera Méndez[1]; J. Grass[1]; R. Crisp[1]; M. K. S. Barr[1]; J. Bachmann[1]; D. Wisser[1]; [1] Friedrich-Alexander-Universität Erlangen-Nürnberg (FAU), Erlangen/D

P 077 **Machine learning optimization in metal-organic framework thin films**
L. Pilz[1]; M. Tsotsalas[1]; [1] Karlsruhe Institute of Technology (KIT), Eggenstein-Leopoldshafen/D

P 078 **Development of Mechanical Adaptive Silicone-Nanocomposites by Embedding Light-degradable Nanoporous Organosilica Filler Particles**
F. Klodwig[1]; L. Finck[2]; V. Hagemann[1]; T. Herrmann[1]; K. Nolte[1]; S. Noyun[1]; H. Menzel[2]; P. Behrens[1]; [1] Leibniz Universität Hannover, Hannover/D; [2] Technische Universität Braunschweig, Braunschweig/D

P 079 **Sustained Drug Release from Mesoporous SiO_2 Membranes**
T. Paul[1]; F. Baumann[1]; A. Aigner[1]; D. Enke[1]; [1] Universität Leipzig, Leipzig/D

P 080 **Spherical polymer-based carbons as catalyst support**
J. Schmidpeter[1]; N. Fleck[2]; C. Wetzel[2]; L. Peña[3]; O. Shimelis[3]; J. Abrahamson[3]; J. Gläsel[1]; M. Schulz[4]; B. Etzold[1]; [1] TU Darmstadt, Darmstadt/D; [2] Merck Electronics KGaA, Darmstadt/D; [3] MilliporeSigma, Bellefonte/USA; [4] Merck Life Science KGaA, Darmstadt/D

P 081 **Inorganic, nanoporous membranes for an efficient drying of hydrogen and biogas**
A. Simon[1]; A. Taherizadeh[1]; S. Kämnitz[1]; K. Böttcher[1]; H. Richter[1]; U. Lubenau[2]; [1] Fraunhofer-Institut für Keramische Technologien und Systeme IKTS, Hermsdorf/D; [2] DBI-GUT GmbH, Leipzig/D

P 082 **The latest X-ray analysis solutions from Anton Paar**
A. Jones[1]; H. Ehmann[1]; A. Keilbach[1]; M. Kremer[1]; T. Müller[1]; B. Puhr[1]; B. Schrode[1]; [1] Anton Paar GmbH, Graz/A

P 083 **CHA-membranes for the treatment of H2 from electrolysis**
H. Richter[1]; A. Taherizadeh[1]; A. Simon[1]; I. Voigt[1]; M. Stelter[2]; [1] Fraunhofer IKTS, Hermsdorf/D; [2] CEEC, Jena/D

P 084 **Cooperative Assembly of 2D-MOF Nanoplatelets into Hierarchical Carpets and Tubular Superstructures for Advanced Air Filtration**
I. Senkovska[1]; F. Schwotzer[1]; J. Horak[1]; S. Kaskel[1]; E. Schade[2]; [1] Technische Universität Dresden, Dresden/D; [2] IWS Dresden, Dresden/D

P 085 **The Mechanochemical Synthesis of Porous Organic Polymers**
A. Krusenbaum[1]; S. Grätz[1]; L. Borchardt[1]; [1] Ruhr-Universität Bochum, Bochum/D

P 086 **XtaLAB Synergy-ED**
K. Truong[1]; [1] Rigaku Europe SE, Neu-Isenburg/D

P 087 **Metal-organic framework-based Mixed Matrix Membranes for monitoring compounds of emerging concern: A step forward into the integration of novel materials into daily analysis applications**
A. Gutiérrez-Serpa[1]; J. Pasán[2]; A. Jiménez-Abizanda[2]; S. Kaskel[1]; I. Senkovska[1]; V. Pino[2]; [1] Technische Universität Dreden (TUD), Dresden/D; [2] Universidad de La Laguna, Tenerife/E

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P 088 **Templating effects during the synthesis of mixed metal oxide catalysts by co-precipitation**
S. Feser[1]; T. Hahn[1]; D. Enke[2]; [1] Martin-Luther-Universität Halle-Wittenberg, Halle (Saale)/D; [2] Universität Leipzig, Leipzig/D

P 090 **Small Changes, Strong Impact: Adsorption of Water and Its Behavior inside the One-Dimensional Pores of CPO-27**
M. Kloß[1]; D. Baier[1]; C. Weinberger[1]; M. Tiemann[1]; [1] Paderborn University, Paderborn/D

P 091 **Proton Conductivity Studies on Functionalized Mesoporous Organosilica**
T. Wagner[1]; M. Tiemann[1]; [1] Universität Paderborn, Paderborn/D

P 092 **Proton Conductivity of Functionalized UiO-66(Zr) MOFs by Defect Design and Mixed-Linker Composition**
Z. Zhao[1]; M. Kloß[1]; T. Wagner[1]; M. Tiemann[1]; [1] Universität Paderborn, Paderborn/D

P 093 **Hierarchical 3D-printed carbon electrodes: photoresin formulation and post-treatments studies**
M. Olvianas[1]; J. Gläsel[1]; B. Etzold[1]; [1] Technische Universitaet Darmstadt, Darmstadt/D

P 094 **2D porous organic frameworks for electrochromic layer in electrochromic devices**
L. Gilmanova[1]; [1] Technische Universität Dresden, Dresden/D

P 095 **Do distant binuclear iron sites contribute to the activation of molecular oxygen? Selective oxidation over zeolite-based catalysis.**
A. Kornas[1]; K. Mlekodaj[1]; E. Tabor[1]; H. Jirglova[1]; M. Lemishka[1]; D. Rutkowska-Zbik[2]; J. Dedecek[1]; [1] Czech Academy of Science, Prague/CZ; [2] Polish Academy of Science, Cracow/PL

P 096 **MOFs with benzophenone units: 2D structuring and postsynthetic modification of thin films**
K. Hindricks[1]; A. Schaate[1]; P. Behrens[1]; [1] Leibniz University Hannover, Hannover/D

P 097 **One-pot synthesis of mesoporous silica with carboxyl and phosphonic functionalities and their application in REEs removal from aqueous solution**
V. Kyshkarova[1]; [1] Institute of Geotechnics, Slovak Academy of Sciences, Košice, Slovakia, Košice, Slovakia/SK

P 098 **Development of tailormade core-shell hard carbon materials as anode materials in sodium ion batteries.**
P. Appel[1]; J. Krug von Nidda[1]; T. Fellinger[1]; [1] Bundesanstalt für Materialforschung und -prüfung, Berlin/D

P 099 **Tailoring carbon xerogels as conductive additive for polymer-based bipolar plates for redox flow batteries**
A. Bilican[1]; P. SHARMA[2]; L. KOPIETZ[3]; C. WEIDENTHALER[2]; W. SCHMIDT[2]; [1] Max-Planck-Institut für Kohlenforschung, Department of Heterogeneous Catalysis, Mülheim/D; [2] Max-Planck-Institut für Kohlenforschung, Department of Heterogeneous Catalysis, Mülheim an der Ruhr/D; [3] Fraunhofer Institute for Environmental, Safety and Energy Technology UMSICHT , Oberhausen/D

P 100 **Bicontinuous composite membranes for direct methanol fuel cell**
H. Hintersatz[1]; N. Tschierschwitz[2]; W. Goedel[2]; [1] Technische Universität Chemnitz, Chemnitz /D; [2] Technische Universität Chemnitz, Chemnitz/D

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P 101 **PolyMOFs - Insight into Synthesis and Application**
S. Spiegel[1]; M. Tsotsalas[1]; [1] Karlsruher Institut für Technologie (KIT), Karlsruhe/D

P 102 **Aspects of a novel sensitive method or meso-macropore analysis based on nitrogen adsorption at the triple point temperature (63K)**
M. Thommes[1]; M. Terlinden[2]; F. Kleitz[3]; [1] Friedrich Alexander Universität Erlangen Nürnberg, Erlangen/D; [2] Friedrich Alexander Universität Erlangen-Nürnberg (FAU), Erlangen /D; [3] Universität Wien (University of Vienna), Vienna /A

P 103 **Development and application of a novel network model for advanced physisorption characterization**
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