

Dynamic Materials, Crystals and Phenomena Conference (DynaMIC23)

Fribourg, Switzerland, 2023 March 22nd - 24th

Conference organizers: Jovana Milic and Simon Krause

Conference Program

March 22nd - Day 1 (Wednesday) 1	
12:00 - 14:00	Conference Registration
14:00 - 14:15	Conference Opening
	Session 1.1 Chair: Simon Krause
14:15 - 15:00	<u>Stephen Loeb</u> (<i>University of Windsor</i>) Designing Mechanically Interlocked Molecules to Function in the Solid-State
1.1-K1	
15:00 - 15:30	<u>Angiolina Comotti</u> (<i>Department of Materials Science, University of Milano Bicocca, Milan, Italy</i>), Silvia Bracco, Jacopo Perego, Charl X. Bezuidenhout, Sergio Piva, Andrea Daolio, Giacomo Prando, Ilaria Rosa, Piero Sozzani
1.1-I1	Benchmark Rotor Dynamics and Light-Driven Motors Engineered in 3D Porous Architectures
15:30 - 16:00	Coffee Break
	Session 1.2 Chair: Jessica Clough
16:00 - 16:30	<u>Claire Hobday</u> (<i>Department of Chemistry, University of Edinburgh, UK.</i>) The Dynamics of Pressure Driven Phase Transitions: A Look into the Future of Solid-State Refrigeration
1.2-I1	
16:30 - 17:00	<u>Sebastian Henke</u> (<i>Technische Universität Dortmund</i>) Non-Crystallinity and Disorder in Dynamic Metal-Organic Frameworks - Responsiveness, Melting and Glass-Formation
1.2-I2	
17:00 - 17:30	<u>Stefano Canossa</u> (<i>Max Planck Institute for Solid State Research</i>), Xiaokun Pei, Ruggero Frison, Hans-Beat Bürgi
1.2-I3	Static and Dynamic Conformational Freedom of ZIF-90 Revealed by Single Crystal Diffuse Scattering
17:30 - 18:30	Welcome Aperero
19:00 - 21:00	Speakers Dinner

March 23rd - Day 2 (Thursday) 2

Session 2.1	
Chair: Jovana Milic	
09:00 - 09:45 2.1-K1	<u>Monique van der Veen</u> (<i>Department of Chemical Engineering, Delft University of Technology Van der Maasweg</i>) Coupled linker and electric field induced dynamics in metal-organic frameworks
09:45 - 10:15 2.1-I1	<u>Nicolas Giuseppone</u> (<i>University of Strasbourg - Institut Charles Sadron</i>) Artificial molecular machines that work on all scales
10:15 - 11:00	Coffee break
Session 2.2	
Chair: José Augusto Berrocal	
11:00 - 11:15 2.2-O1	<u>Ken-ichi Otake</u> (<i>Institute for Integrated Cell-Material Sciences (WPI-iCeMS), Kyoto University</i>), Yifan Gu, Jia-jia Zheng, Susumu Kitagawa Synergistic Exclusive Discrimination Gating for CO ₂ Recognition using Flexible Porous Coordination Polymers with Narrow Soft Corrugated Channels
11:15 - 11:30 2.2-O2	<u>Irena Senkowska</u> (<i>Inorganic Chemistry I, Technische Universität Dresden, Dresden, Germany</i>), Hiroki Miura, Volodymyr Bon, Stefan Kaskel Toward the spatiotemporal design of the switchable Metal-Organic Framework DUT-8.
11:30 - 11:45 2.2-O3	<u>Qi Zhang</u> (<i>University of Groningen</i>) Dynamic disulfide chemistry in polymers and crystals
11:45 - 12:00 2.2-O4	<u>Lukas Pfeifer</u> (<i>Stratingh Institute for Chemistry, University of Groningen, Nijenborgh 4, 9747 AG Groningen, The Netherlands.</i>), Stefano Crespi, Charlotte N. Stindt, Pieter van der Meulen, Johan Kemmink, Ruud M. Scheek, Michiel F. Hilbers, Wybren J. Buma, Ben L. Feringa Dual-Motion Molecular Motors for Advanced Applications
12:15 - 14:00	Lunch
Session 2.3	
Chair: Simon Krause	
14:00 - 14:30 2.3-I1	<u>Jack Evans</u> (<i>University of Adelaide</i>) Approaches To Describe the Dynamics of Molecular Motors Embedded in Framework Materials
14:30 - 15:00 2.3-I2	<u>Veronique Van Speybroeck</u> (<i>Center for Molecular Modeling, Ghent University, Technologiepark 46, 9052 Zwijnaarde, Belgium</i>) Challenges in modeling spatiotemporal phenomena in metal-organic frameworks
15:00 - 15:30	Coffee break
Session 2.4	
Chair: Simon Krause	
15:30 - 16:00 2.4-I1	<u>François-Xavier Coudert</u> (<i>CNRS, Paris, France</i>) Systematic exploration of stimuli-responsive materials: multi-scale modelling and machine learning
16:00 - 18:00	Poster session
19:00 - 21:00	Conference dinner

March 24th - Day 3 (Friday) 3

Session 3.1	
Chair: Simon Krause	
09:00 - 09:45 3.1-K1	<u>Andrew Goodwin</u> (<i>Department of Chemistry, University of Oxford, Oxford, UK</i>) Dynamics and Correlated Disorder in some Framework Materials
09:45 - 10:15 3.1-I1	<u>Susumu Kitagawa</u> (<i>Institute for Integrated Cell-Material Sciences (WPI-iCeMS), Kyoto University</i>) Chemistry and Application of Soft Porous Crystals from PCPs/MOFs
10:15 - 11:00	Coffee Break
11:00 - 12:00	Panel discussion
12:15 - 14:00	Lunch
Session 3.3	
Chair: Jovana Milic	
14:00 - 14:30 3.3-I1	<u>Omer Yaffe</u> (<i>Weizmann Institute of Science, Herzl St. 234, Rehovot 7610001, Israel</i>) Shedding light on phase transformations in amphidynamic crystals
14:30 - 15:00 3.3-I2	<u>Dominik Kubicki</u> (<i>Department of Physics, University of Warwick, CV47AL, Coventry, United Kingdom</i>) Recent Advances in Understanding Structural Dynamics in Metal Halide Perovskites Using Solid-State NMR
15:00 - 15:30 3.3-I3	<u>Tessel Bouwens</u> (<i>Van 't Hoff Institute for Molecular Sciences, University of Amsterdam, Science Park 904, 1098 XH Amsterdam, The Netherlands.</i>) Using Supramolecular Machinery to Enhance the Efficiency of Photoelectrochemical Cells
15:30 - 16:00	Closing ceremony

Poster Contribution

003	<u>Alexandr Marunchenko</u> (<i>ITMO University, St. Petersburg, Russia</i>) Mixed Ionic-Electronic Conduction Facilitates Halide-Perovskite Light-Emitting Photodetector
006	<u>DAZAET GALICIA BADILLO</u> (<i>Instituto de Química, Universidad Nacional Autónoma de México</i>), Aaron Torres Huerta, Braulio Rodríguez Molina A postsynthetically Modified Amphidynamic Metal Organic Framework
022	<u>Noam Pinsk</u> (<i>Weizmann Institute of Science, Herzl St. 234, Rehovot 7610001, Israel</i>), Omer Yaffe The Interplay Between Local H-bond Vibrations and Lattice Dynamics in Organic Crystals
023	<u>Kristina Gjorgjevikj</u> (<i>Nanochemistry Department, Max Planck Institute for Solid State Research, 70569 Stuttgart, Germany</i>), Dr. Stefano Canossa, Dr. Simon Krause Synthesis, structural analysis and dynamics of 3- and 4-fold interpenetrated Zn-Metal-Organic Frameworks
024	<u>Ardehshir Dadgar Yeganeh</u> (<i>Nanochemistry Department, Max Planck Institute for Solid State Research, 70569 Stuttgart, Germany</i>), Simon Krause Stimuli-responsive behavior of mixed-linker Zr-based MOFs with molecular photoswitch backbones
025	<u>Esengul Ciftci</u> (<i>Nanochemistry Department, Max Planck Institute for Solid State Research, 70569 Stuttgart, Germany</i>), Simon Krause Synthesis and swelling behaviour of MIL88B and MIL88D as dynamic framework platforms
026	<u>Timo Manitz</u> (<i>Nanochemistry Department, Max Planck Institute for Solid State Research, 70569 Stuttgart, Germany</i>), Simon Krause, Stefano Canossa Swelling of MIL-88 A (Fe) as a function of solvent composition and crystal size