

GDCh Conference on Inorganic Chemistry

of the Divisions of Solid-state Chemistry & Materials Research and

Wöhler Association for Inorganic Chemistry

at Technische Universität München, Forschungscampus Garching,



September 16th-18th, 2024

Held in the "Maschinenwesen" Building of

School of Engineering and Design (Site-Map on Page 11)



Scientific Programme

| MONDAY, SEP 16 th , 2024 | |
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| time | Location: HS 0001 (GPS: 48°15'56"N 11°40'15"E) |
| 10:00 | START REGISTRATION (office: next to HS 0350) |
| 10:30 | WORKSHOPS: DFG & Wiley/Chemistry Europe: "A Brisk Ride through the DFG's Review Process" (D. Pursche) & "Current Trends and Challenges in Scientific Publishing" (S. González-Gallardo) |
| 11:30 | COFFEE BREAK at Hof 3 |
| 12:00 | OPENING by T. Fässler & S. Inoue |
| 12:15 | AWARD CEREMONY: Marianne Baudler Prize presented by S. Dehnen |
| 12:30 | AWARD LECTURE |
| 13:15 | "Lebenswerke in der Chemie" (E. Wille / H. Schmidbaur) |
| 13:30 | PLENARY LECTURE: G. Bertrand, University of San Diego "Carbenes as Powerful Transition-Metal Surrogates" (Chair: D. Scheschkewitz) |
| 14:15 | PLENARY LECTURE: J. Janek, Justus-Liebig-Universität Giessen "Solid-State Reactions in Solid-State Batteries" (Chair: T. Fässler) |
| 15:00 | COFFEE BREAK at Hof 3 |
| 15:30 | PLENARY LECTURE: V. Deringer, University of Oxford "Machine-learning-driven simulations for materials chemistry" (Chair: M. Ruck) |
| 16:15 | PLENARY LECTURE: E. Hevia, Universität Bern "Exploiting Chemical Cooperativity for Arene Functionalisation" (Chair: C. Limberg) |
| 17:00 | POSTER FLASH TALKS (Chair: JungeFeste & JuWöV) |
| 18:00 | SHORT BREAK |
| 18:15 | AWARD CEREMONY: Chemistry Europe Fellows presented by T. Kinzel |
| 18:25 | GENERAL MEETING: Wöhler Association for Inorganic Chemistry |
| 19:15 | POSTER SESSION (Odd Poster Numbers) with fingerfood & drinks (at Hof 1&4, see Pages 5-9 of this Brochure for the Poster List) |
| 22:00 | END of Monday's program |

| TUESDAY, SEP 17 th , 2024 | | | |
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| time | HS 1801 (Plenary Lectures) | | |
| 9:00 | PLENARY LECTURE: S. Dehnen , Karlsruhe Institut für Technologie (KIT) "The Diversity of Multinary Cluster Compounds" (Chair: M. Scheer) | | |
| 9:45 | PLENARY LECTURE: A. Möller , Johannes Gutenberg-Universität Mainz "Let's Talk About Iron" (Chair: T. Nilges) | | |
| 10:30 | COFFEE BREAK at Hof 3 | | |
| | HS 1801 ("Wöhler Session") | | HS 0350 (S.-S. Chem. & Mat. Res.) |
| | Session Chair: L. Greb | | Session Chair: R. Niewa |
| 11:00 | F. Meyer , Georg-August-Universität Göttingen "Cooperativity of Spin Crossover and Charge Transfer Induced Spin Transitions in Fe ₄ Grid Complexes and Fe ₂ Co ₂ Prussian Blue Analogues" | H. Huppertz , Universität Innsbruck "Advancements in the High-Pressure/High-Temperature Chemistry of Oxonitridoborates" | |
| 11:30 | H. Helten , Julius-Maximilians-Universität Würzburg "Boron-Doped Porphyrinoids: Combining Lewis Acidity with Redox-Switchable Aromaticity" | C. Feldmann , Karlsruhe Institut für Technologie (KIT) "Hollow Nanospheres and Nanospheres: High-Surface-Area Supports for Oxidation Catalysis" | |
| 12:00 | F. Hennersdorf , Rigaku Europe SE "Illuminating the World of Sub-micron Crystal Structures with 3D electron diffraction" | H. M. R. Wilkening , Technische Universität Graz "NMR Down to Cryogenic Temperatures: Accessing the Rate-Limiting Step of Li Transport in Argyrodite-Type Electrolytes" | |
| 12:30 | Session Chair: H. Helten | LUNCH BREAK at Hof 3 | Session Chair: M. Weinmann |
| 13:30 | S. Schneider , Georg-August-Universität Göttingen "From Metallonitrenes and -carbenes to Catalytic Nitrogen Atom Transfer" | F. Schmidt , Evonik Industries AG "Evoniks Fumed Metal Oxides in Lithium-Ion Batteries" | |
| 14:00 | F. Dielmann , Universität Innsbruck "Replacing sp ² Carbon Atoms with Phosphorus Cations: New Stages for Bond Metathesis Reactions" | S. Barth , Goethe-Universität Frankfurt a.M. "Direct-Writing of Inorganic Nanostructures using Single-Source Precursors" | |
| 14:30 | C. Lichtenberg , Philipps-Universität Marburg "Reactive Bismuth Compounds: Intriguing Newcomers in Small-Molecule Activation and CH Activation" | 14:30 | S. Henke , TU Dortmund "Stimuli-Responsive Multiphase Stability and Aperiodicity in Flexible Metal-Organic Frameworks" |
| | | 14:45 | H. A. Schwartz , Universität Innsbruck "Polarity Profiling of Metal-Organic Frameworks – Utilizing Solvatochromic Dyes as Polarity Sensors inside MOFs" |
| 15:00 | S. Hohloch , Universität Innsbruck "Coordination and Activation of the Phosphorus and Arsenic Analogues of the Thiocyanate Anion" | H. Bunzen , Universität Augsburg "MOFs meet ¹⁹ F MRI" | |
| 15:15 | R. S. Ghadwal , Universität Bielefeld "Heavier Main-Group Aromates and Diradical(oid)s beyond Carbene Analogues" | H. Terraschke , Christian-Albrechts-Universität zu Kiel "UV-emitting nanostructured materials: from synchrotron-based in situ analysis to controlled morphology" | |
| 15:30 | Session Chair: T. Hadlington | COFFEE BREAK at Hof 3 | Session Chair: A. Weidenkaff |
| 16:00 | L. Greb , Universität Heidelberg "Molecular Gymnastics: By Structural Constraints to New Reactivity" | M. S. Wickleder , Universität zu Köln "Pseudo-halido-sulfates and halide-methanesulfonates" | |
| 16:15 | A. Hinz , Karlsruhe Institut für Technologie "Modular access to acyclic silylenes: Effects of heteroatom substitution" | J. Bruns , Universität zu Köln "Tuning the photoluminescence of Mn ²⁺ by weakly coordinating borosulfate anions" | |
| 16:30 | M. Haas , Technische Universität Graz "The chemistry behind main group-based photoinitiators" | M. Suta , Heinrich-Heine-Universität, Düsseldorf "The journey into the invisible: Design principles of new NIR-emitting phosphors" | |
| 16:45 | J. Bauer , Universität Regensburg "Between Frustration and Cooperation: Towards C ₂ -Symmetric Lewis Acids and Asymmetric Hydrogenation Catalysts Using Silicon-Based Systems" | F. Tambornino , Philipps-Universität Marburg "Quasibinary Selenocyanates" | |
| 17:00 | S. Klementyeva , Karlsruhe Institut für Technologie "Main group element clusters with Ln-E exo-bonds" | S. Gärtner , Universität Regensburg "A pinch of heavy alkali metal: Ternary alkali metal thallides of potassium and rubidium or cesium" | |
| 17:15 | F. F. Mulks , RWTH Aachen, "Stabilising Divalent Carbocations Through Donor-Coordination" | J. Heine , Philipps-Universität Marburg "Complex Cation Behavior in Halogenido Metalates" | |
| 17:30 | Wöhler-Promotionspreis & Award Lecture presented by P. Roesky | Taniobis-Promotionspreis & Award Lecture presented by K. Müller-Buschbaum & M. Weinmann | |
| 18:00 | SHORT BREAK | | |
| 18:15 | General Meeting: Solid-State Chemistry & Materials Research at HS 1801 | | |
| 19:15 | POSTER SESSION (Even Poster Numbers) with fingerfood & drinks at Hof 1&4 | | |
| 22:00 | END of Tuesday's program | | |

| Wednesday, SEP 18 th , 2024 | | |
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| time | HS 0001 (Plenary Lectures) | |
| 9:00 | PLENARY LECTURE: M. Ruck , Technische Universität Dresden "New Inorganic Materials through Selective Reactivity of Solids" (Chair: F. Kraus) | |
| 9:45 | PLENARY LECTURE: C. C. Lu , Universität Bonn "Harnessing Metal-Metal Interactions for Catalysis" (Chair: S. Schneider) | |
| 10:30 | COFFEE BREAK at Hof 3 | |
| | HS 0001 ("Wöhler Session") Session Chair: F. Meyer | HS 0350 (S.-S. Chem. & Mat. Res.) Session Chair: A. Möller |
| 11:00 | C. Limberg , Humboldt-Universität zu Berlin "Faithful Structural and Functional Models for the Cysteine/Cysteamine dioxygenases" | F. Kraus , Philipps-Universität Marburg "RuF ₆ , a stronger Oxidizing Agent than PtF ₆ : Oxidation of Halogen Pentafluorides with RuF ₆ " |
| 11:30 | N. W. Mitzel , Universität Bielefeld "Poly-Lewis acids with classical and non-classical acid functions" | 11:30 J. Breu , Universität Bayreuth "1D Dissolution: A Generally Applicable Route for Spontaneous Delamination of Ionic Layered Materials Yielding Nematic Suspensions of Monolayer Nanosheets" |
| | | 11:45 D. Friedrich , Universität Bayreuth "Delamination of MoS ₂ via a thermodynamically driven 1D dissolution route" |
| 12:00 | B. Sarkar , Universität Stuttgart "Triazole-Based Anionic Mesoionic Carbenes and Metallo Mesoionic Imines" | 12:00 B. Rasche , Universität Stuttgart "Alkaline Metal Intercalates of VSe ₂ by Electrochemical Intercalation" |
| | | 12:15 E. Kroke , TUB Freiberg "Etching Silicon Wafer Surfaces with Nitric Acid-less HF-based Solutions: Surface Reactions, Morphologies and Applications" |
| 12:30 | Session Chair: P. Coburger | LUNCH BREAK at Hof 3 Session Chair: G. Kieslich |
| 13:30 | U. Schatzschneider , J.-M.-Universität Würzburg "iClick reactions for modular and combinatorial metal complex synthesis: Novel approaches to bioactive and luminescent molecules" | H. A. Höpfe , Universität Augsburg "Sulfatungstates and Sulfatoborates—New Silicate-Analogous Materials" |
| 14:00 | W. Weigand , Friedrich-Schiller-Universität Jena "[FeFe]-Hydrogenase Mimics for Catalytic Hydrogen Evolution Reactions" | C. Hoch , Ludwig-Maximilians-Universität München "Subvalent metalates - pathway to low-dimensional metals?" |
| 14:30 | A. J. Plajer , Universität Bayreuth "Ring-Opening Terpolymerisation of Elemental Sulfur Waste via Lithium Catalysis" | V. V. Romaka , IFW Dresden, "Structure, bonding, and properties of compounds in the Sc-rich part of the Sc-{Mn,Fe,Co,Ni,Pd,Pt}-Ga systems" |
| 14:45 | P. Liebing , Friedrich-Schiller-Universität Jena "Amino-Acid Derived Dithiocarbamates – Building Blocks For Hard/Soft-Heterobimetallic Coordination Networks" | S. D. Kloß , Ludwig-Maximilians-Universität München "Of high-pressure synthesis and transition metal nitrides" |
| 15:00 | S. Hanf , Karlsruhe Institut für Technologie "d-block/p-block element phases at the boundary of homo- and heterogeneous catalysts" | G. Thiele , Freie Universität Berlin "Molten Salt Reactions towards Sulfido Metalates as Sustainable Materials" |
| 15:15 | K. Y. Monakhov , Leibniz-Institut für Oberflächenmodifizierung, Leipzig "From 0D metal–oxygen coordination clusters to 2D metal–oxo/oxide layers – Responsible switching materials by chemical design" | S. G. Ebbinghaus , Martin-Luther-Universität Halle-Wittenberg "Anionic Ordering and Antiferromagnetism in Ruddlesden-Popper Oxyfluorides" |
| 15:30 | COFFEE BREAK (Next Session: Award Ceremonies in HS 0001) | |
| 16:00 | VCI-Literaturpreis 2024 (presented by S. Dehnen) | |
| 16:10 | Wöhler-BASF Nachwuchspreis & Award Lecture (presented by P. Roesky & F. Seeler) | |
| 16:50 | Rudolf-Hoppe-Vorlesung & Award Lecture (presented by A. Weidenkaff & K. Müller-Buschbaum) | |
| 17:30 | Break for Transfer to Augustiner Stammhaus (48°08'18"N 11°34'08"E, We recommend: Public Transport) | |
| 19:00 | AWARD CEREMONY: Four Nations Quartett (a capella) & Poster Prizes Dinner & Social Evening at Augustiner Stammhaus (Special Registration Required) | |
| | Augustiner Stammhaus Closes at 24:00 h | |



| Thursday, SEP 19 th , 2024 | |
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| 10:00 | Networking Breakfast by JungeFeste & Junge Wöhler-Vereinigung Location: Bohne & Malz am Stachus (GPS: 48°08'17"N 11°33'58"E) “All young and young-at-heart inorganic chemists are welcome” |
| | THE (OPEN) END |

List of Exhibitors (in Alphabetical Order)

abcr GmbH, Karlsruhe/DE

Bruker AXS, Karlsruhe/DE

Carl Roth GmbH + Co. KG, Karlsruhe/DE

ChemPur Feinchemikalien und Forschungsbedarf GmbH, Karlsruhe/DE

Evonik Industries AG, Essen/DE

HPC SYSTEMS Inc., Tokyo/JP

M. Braun Inertgas-Systeme GmbH, Garching/DE

Rigaku Europe SE, Neu-Isenburg/DE

STOE & Cie GmbH, Darmstadt/DE

The Chemical Society of Japan, Tokyo/JP