

# <sup>1,2,3</sup>H: Interdisciplinary Perspectives on Hydrogen Isotopes

23 – 25 March 2026, Leipzig, Germany



Monday 23 March (timings are CET)

08:00–08:45	Registration
08:45–09:00	Opening Ceremony
09:00–09:45	Stefan Kaskel <b>Porous Materials for Isotope Separation</b>
09:45–10:15	Tanja Gulder
10:15–10:30	Junsu Ha <b>High-temperature hydrogen isotope separation enabled by locally flexible gates in tightly confined microporous metal-organic frameworks</b>
10:30–11:00	Coffee Break
11:00–11:30	Hyunchul Oh <b>Advanced MOF Strategies for Hydrogen Isotope Separation</b>
11:30–11:45	Sibo Chetry <b>From Pore to Defect Engineering: Cu<sub>2</sub> Triazolyl Isophthalate MOFs for Dihydrogen Adsorption and Isotopologue Separation</b>
11:45–12:00	Hritikk Karmakar
12:00–12:30	Michael Hirscher <b>Adsorption-Based Separation of Gaseous Hydrogen Isotopologue Mixtures Investigated by Thermal Desorption Spectroscopy</b>
12:30–13:30	Lunch
13:30–14:00	Daniel Obenchain <b>Ligand Exchange in Gas-Phase Molecular Hydrogen Complexes Influenced by Isotopic and Spin-Isomer Effects</b>
14:00–14:15	Dennis El Mouzawak <b>Ion Soft-Landing of Undercoordinated Metal Complexes: Spatial Profiling, Ion Beam Control, and Stabilization</b>
14:15–14:30	OC1
14:30–15:00	Martin Beyer <b>Hydrogen-Deuterium Exchange in Charged Water Clusters</b>
15:00–15:30	Coffee Break
15:30–16:00	Martinn Hartmann <b>Novel MOFs for Hydrogen Storage and Separation Applications</b>
16:00–16:15	OC2
16:15–16:45	Irena Senkovska <b>Flexible Metal–Organic Frameworks: Opportunities for Isotope Separation</b>
16:45–17:00	Mahnaz Bakhtian
17:00–17:30	Linda Zhang
18:00–20:00	<b>Poster Session</b>

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Tuesday 24 March (timings are CET)

09:00–09:45	Volker Derdau <b>Chasing the Miracles of Science with Hydrogen Isotopes</b>
09:45–10:15	Inez Weidinger <b>The Role of Protons in Electrocatalysis</b>
10:15–10:30	Maria Chiara Crimella
10:30–11:00	Coffee Break
11:00–11:30	Cornelius Fischer <b>Hydrogen Isotope (<math>^1\text{H}</math>, <math>^2\text{H}</math>, <math>^3\text{H}</math>) Interactions With Microporous Materials: Experimental and Analytical Insights</b>
11:30–11:45	Alexander Feige <b>Electron Diffraction as an Alternative to Neutron Methods for Hydrogen Isotope Identification</b>
11:45–12:00	OC3
12:00–12:30	Genrich Zeller <b>Raman Spectroscopy and Microscopy of Tritiated Samples</b>
12:30–13:30	Lunch
13:30–14:00	Olga García Mancheño <b>Late-Stage Photocatalytic Hydrogen Isotope Exchange and H-Isotope Effects Towards Selective Reduction Reactions</b>
14:00–14:15	Milena Barp
14:15–14:30	Pranjit Das <b>Hydrogen Isotope Adsorption in V-Doped MIL-53(Al) Using <i>In Situ</i> EPR Spectroscopy</b>
14:30–15:00	Detlev Belder <b>Integrated Chemical Microlaboratories: A Key Technology for Automated, Safe, and Sustainable Reaction Processing</b>
15:00–15:30	Coffee Break
15:30–16:00	Jörg Meyer
16:00–16:15	Masoud Sadeghi <b>Experimental Framework for Tritium Breeding Studies in Advanced Ceramic Breeder Materials</b>
16:15–16:45	Alexandra Becker <b>Tritium Loading on Titanium-Based Metal Samples</b>
16:45–17:00	Nils Hertl <b>Mode Selectivity in Electron Promoted Vibrational Relaxation of Chemisorbed Hydrogen on Molybdenum and Tungsten Surfaces</b>
17:00–17:30	Reinhard Maurer <b>Nonadiabatic Effects in Ultrafast Hydrogen Chemistry at Metal Surfaces</b>
18:00–22:00	<b>Conference Dinner</b>

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Wednesday 25 March (timings are CET)

09:00–09:45	Melanie Schnell <b>H-Isotope Dependent Effects Revealed with High-Resolution Molecular Spectroscopy</b>
09:45–10:15	Anne B. McCoy <b>Exploring Spectral Signatures of Hydrogen Bonding and Proton Transport Through Studies of Ionic Clusters</b>
10:15–10:30	Hannah Buttkus <b>Deciphering HFIP's Influence on the Microhydration of Fluorinated Phosphate Anions</b>
10:30–11:00	Coffee Break
11:00–11:30	Grégory Schneider
11:30–11:45	Maria Judith Caisachana Lozada <b>Environmental Factors Governing Proton Flux Through Graphene-Nafion Membranes</b>
11:45–12:00	Dario Calvani <b>Enhanced and Selective Unidirectional Proton Transport via Covalent Benzenesulfonic Functionalized Nanoporous and Pristine Graphene</b>
12:00–12:30	Thomas Kühne
12:30–13:30	Lunch
13:30–14:00	Thomas Heine <b>Hydrogen and Helium Isotope Separation on Open Metal Sites in Framework Materials</b>
14:00–14:15	Felix Moncada <b>Nuclear Orbitals within the Born-Oppenheimer Approximation</b>
14:15–14:30	Erik Butenschön
14:30–15:00	Hoi Ri Moon <b>Metal–Organic Frameworks as Quantum Sieving Platforms for Next-Generation Hydrogen Isotope Separation</b>
15:00–15:30	Closing
15:30–17:30	<b>Lab tour</b>