^{1,2,3}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 **Porous Materials for Isotope Separation**
09:45–10:15	Tanja Gulder **Electrochemical Hydrogen–Deuterium Exchange: Towards Sustainable Approaches for Late-Stage Isotope Labeling**
10:15–10:30	Junsu Ha **High-temperature hydrogen isotope separation enabled by locally flexible gates in tightly confined microporous metal-organic frameworks**
10:30–11:00	Coffee Break
11:00–11:30	Hyunchul Oh **Advanced MOF Strategies for Hydrogen Isotope Separation**
11:30–11:45	Sibo Chetry **Structural Determinants of Dihydrogen Adsorption and Isotopologues Separation in Metal-Organic Frameworks**
11:45–12:00	Hrittik Karmakar **Infrared Photodissociation Spectroscopy of $Cu_2(OAc)_2(D_2)_n^+$ and its Isotopologues**
12:00–12:30	Michael Hirscher **Adsorption-Based Separation of Gaseous Hydrogen Isotopologue Mixtures Investigated by Thermal Desorption Spectroscopy**
12:30–13:30	Lunch
13:30–14:00	Daniel Obenchain **Ligand Exchange in Gas-Phase Molecular Hydrogen Complexes Influenced by Isotopic and Spin-Isomer Effects**
14:00–14:15	Dennis El Mouzawak **Ion Soft-Landing of Undercoordinated Metal Complexes: Spatial Profiling, Ion Beam Control, and Stabilization**
14:15–14:30	Maria Chiara Crimella **Deposition of Charged Microdroplets to Quantify Charge Separation of Salts in the ESI Process**
14:30–15:00	Martin Beyer **Hydrogen-Deuterium Exchange in Charged Water Clusters**
15:00–15:30	Coffee Break
15:30–16:00	Linda Zhang **Distinct Lattice Responses and Adsorption Dynamics of Hydrogen Isotopologues in a Flexible Triazolate MOF**
16:00–16:15	Pranjit Das **Hydrogen Isotope Adsorption in V-Doped MIL-53(Al) Using *In Situ* EPR Spectroscopy**
16:15–16:30	Akira Taguchi **H_2-D_2 Separation in 8-membered Ring Zeolites (CHA, RHO, and LTA (4A)) at Mild Temperatures**
16:30–17:00	Irena Senkovska **Particle Size Tuning of Responsive MOFs as a Tool to Achieve Efficient Gas Separation Performance**
17:30–19:30	**Poster Session**

^{1,2,3}H: Interdisciplinary Perspectives on Hydrogen Isotopes

23 – 25 March 2026, Leipzig, Germany

Tuesday 24 March (timings are CET)

09:00–09:45	Volker Derdau **Hydrogen Isotope Exchange of Biologicals - a Real Challenge**
09:45–10:15	Inez Weidinger **The Role of Protons in Electrocatalysis**
10:15–10:30	Kwangjin An **Catalyst Design for Liquid Organic Hydrogen Carriers (LOHCs)**
10:30–11:00	Coffee Break
11:00–11:30	Cornelius Fischer **Hydrogen Isotope (^{1}H, ^{2}H, ^{3}H) Interactions with Microporous Materials: Experimental and Analytical Insights**
11:30–11:45	Alexander Feige **Electron Diffraction as an Alternative to Neutron Methods for Hydrogen Isotope Identification**
11:45–12:00	David Egloff **From Experience to Engineering: The Evolution of Safe and Refined Tritium Handling**
12:00–12:30	Genrich Zeller **Raman Spectroscopy and Microscopy of Tritiated Samples**
12:30–13:30	Lunch
13:30–14:00	Olga García Mancheño **Late-Stage Photocatalytic Hydrogen Isotope Exchange and H-Isotope Effects Towards Selective Reduction Reactions**
14:00–14:15	Hannah Buttkus **Hydrogen Isotope Effects Used to Reveal Vibrational Signatures of a Microsolvated Hexafluorophosphate Anion**
14:15–14:30	Erik Butenschön **What ^{1}H & ^{2}H NMR Reveals About Enzymatic PET-Degradation**
14:30–15:00	Detlev Belder **Integrated Chemical Microlaboratories: A Key Technology for Automated, Safe, and Sustainable Reaction Processing**
15:00–15:30	Coffee Break
15:30–16:00	Jörg Meyer **New Insights into the Volume Isotope Effect of Ice Ih from Polarizable Many-Body Potentials**
16:00–16:15	Muhammad Fernadi Lukman **Local Structure Insight of Flexible Cu^{2+} doped ZIF-8 and Its Application to Hydrogen Isotopologues Detection**
16:15–16:30	Nils Hertl **Mode Selectivity in Electron Promoted Vibrational Relaxation of Chemisorbed Hydrogen on Molybdenum and Tungsten Surfaces**
16:30–17:00	Alexandra Becker **Preparation and Characterization of Solid Low-Activity Tritium-Loaded Samples**
18:00–22:00	**Conference Dinner**

^{1,2,3}H: Interdisciplinary Perspectives on Hydrogen Isotopes

23 – 25 March 2026, Leipzig, Germany

Wednesday 25 March (timings are CET)

09:00–09:45	Melanie Schnell **H-Isotope Dependent Effects Revealed with High-Resolution Molecular Spectroscopy**
09:45–10:15	Anne B. McCoy **Deciphering Spectral Signatures of Proton Delocalization in Hydrogen-Bonded Complexes**
10:15–10:30	Milena Barp **Vibrational Signature of Shared Hydron in Deprotonated HFIP Dimer and Trimer**
10:30–11:00	Coffee Break
11:00–11:30	Grégory Schneider **Graphene and its Interactions with Protons and Hydrons**
11:30–11:45	Maria Judith Caisachana Lozada **Effects of Mechanical Strain and Local Curvature on Hydrogen Isotope Selectivity in Graphene Membranes**
11:45–12:00	Dario Calvani **Enhanced and Selective Unidirectional Proton Transport via Covalent Benzenesulfonic Functionalized Nanoporous and Pristine Graphene**
12:00–12:30	Thomas Kühne **Quantum Mechanics in a Glass of Water**
12:30–13:30	Lunch
13:30–14:00	Thomas Heine **Thermodynamic Limits of Chemical Affinity Sieving**
14:00–14:15	Felix Moncada **Nuclear Orbitals within the Born-Oppenheimer Approximation**
14:15–14:30	Daniela Mondonico **Design Principles for Isotopologue-Selective Membranes in Aqueous Environment: The Interplay Between Pore Size and Functional Group Chemistry**
14:30–15:00	Hoi Ri Moon **Metal–Organic Frameworks as Quantum Sieving Platforms for Next-Generation Hydrogen Isotope Separation**
15:00–15:30	Closing
15:30–17:30	**Lab tour**