IST AUSTRIA
Institute of Science and Technology

Physical Sciences Seminar

Molecules, Materials, and Methods for Advanced Electrocatalysis, Sustainable Synthesis, and Energy Storage

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Host: Björn Hof

Facing the continuously growing population, energy demand, and environmental damage, sustainability in all facets is the overarching challenge for our society towards a livable future. From a chemistry and materials science perspective, this implies to develop innovative catalysts, to improve large scale chemical processes, and to enable fluctuating renewable energies by efficient energy storage technology. This seminar will cover, how the systematic development of the first uranium electrocatalyst, active for H2O reduction to H2, might enable a broad variety of hitherto elusive uranium catalysis; thereby, converting currently stockpiled only mildly radioactive depleted uranium waste into a valuable resource. Furthermore, porous metal-organic framework materials will be showcased as a solution for the challenges associated with H2 storage for its use as a carbon free energy carrier. Finally, future applications of electrocatalysis for the sustainable, atom economic, and redox efficient direct synthesis of usable products via electrochemical CH, CC, C=O, CN, NH, and NO bond formations will be introduced.

Wednesday, January 22, 2020 10:00am - 11:00am

IST Austria Campus Mondi Seminar Room 2, Central Building

This invitation is valid as a ticket for the IST Shuttle from and to Heiligenstadt Station. Please find a schedule of the IST Shuttle on our webpage: https://ist.ac.at/en/campus/how-to-get-here/ The IST Shuttle bus is marked IST Shuttle (#142) and has the Institute Logo printed on the side.