**Symposium**

**New Horizons in Quantum and Energy Materials**

**Program**

**Thursday, November 9, 2023**

9:15–9:30 *Bettina V. Lotsch* (MPI for Solid State Research, Stuttgart)
Opening

9:30–10:10 *Joseph Checkelsky* (Massachusetts Institute of Technology, Cambridge)
Lattice Motif Design of Quantum Materials

10:10–10:50 *Veronika Sunko* (University of California, Berkeley)
Magneto-Optical Probes Reveal a Symmetry-Breaking Pathway to The Unpinned Broken Helix

10:50–11:20 Coffee break

11:20–12:00 *Berit H. Goode* (MPI for Chemical Physics of Solids, Dresden)
Atomic Architecture: designing the next generation of functional materials from the atoms up

12:00–12:40 *Claire Donnelly* (MPI for Chemical Physics of Solids, Dresden)
Three dimensional quantum nanomaterials: tuning properties with nanogeometries

12:40–14:00 Lunch break

14:00–14:40 *Michele Ceriotti* (École polytechnique fédérale de Lausanne)
Integrated machine-learning models for chemistry and materials science

14:40–15:20 *Mariana Rossi* (MPI for the Structure and Dynamics of Matter, Hamburg)
The role of surfaces in the dynamics of weakly-bound systems

15:20–15:50 Coffee break

15:50–16:40 *Kristina Tschulik* (Ruhr-Universität Bochum)
Electrochemical (trans-)formation of nanomaterials for catalysis

16:40–17:20 *Hendrik Utzat* (University of California, Berkeley)
Quantum Interference of Indistinguishable Single Photons from Colloidal Lead-Halide Perovskite Quantum Dots

**Friday, November 10, 2023**

9:30–10:10 *Raphaëlle Clément* (University of California, Santa Barbara)
A spin on redox and structural processes in battery electrodes

10:10–10:50 *Maria Lukatskaya* (ETH Zurich)
Engineering Local Chemical Environments in Electrolytes and at Electrode-Electrolyte Interface for Efficient Aqueous Batteries

10:50–11:20 Coffee break

11:20–12:00 *Bingqing Cheng* (Institute of Science and Technology Austria)
Ab initio thermodynamics and beyond

12:00–12:40 *Alexandre Tkatchenko* (University of Luxembourg)
Noncovalent Quantum Effects in Materials: There is Plenty of Room at the Top

12:40–13:00 Closing remarks

13:00– Lunch break