



"It's all about defects" –
A special colloquium on Solid State Electrochemistry



Program • Lecture Hall 2D5

Friday, March 6, 2026

09:00	Bernhard Keimer (Managing Director, MPI for Solid State Research) Introduction
09:15	Harry L. Tuller (MIT) Playing with defects: Inspired by the Maier sandbox
09:40	Roger A. De Souza (RWTH Aachen) A tracer diffusion study of diverse photo-ionic phenomena in SrTiO₃
10:05	Igor Lubomirsky (Weizmann Institute) Field-induced self-organization of vacancies in doped ceria
10:30	Truls Norby (University of Oslo) Defect chemistry – the ultimate sophistication
10:55	Coffee break
11:30	Peter Bruce (University of Oxford) Solid state batteries – what goes around comes around
11:55	Kazunari Sasaki (Kyushu University) Hydrogen economy: How can a defect chemist activate social innovation?
12:20	Jelena Popović-Neuber (University of Stavanger) Battery electrolytes and their contact with alkali metals
	Lunch break
14:20	Rainer Waser (RWTH Aachen) From mobile donor-type ions to energy-efficient AI
14:55	Saiful Islam (University of Oxford) No small matter: Atomistic insights into battery and solar cell materials
15:20	Sossina Haile (Northwestern University) A plethora of defects in perovskite oxyhydrides
15:45	Bilge Yildiz (MIT) Role of lattice dynamics in proton conductors
16:10	Coffee break

16:40	Jürgen Janek (University of Giessen) Maximizing ionic conductivity of sodium solid electrolytes – defect control on all levels
17:05	Palani Balaya (Singapore National University) Introducing design strategies for developing safer Li-ion and Na-ion batteries
17:30 –17:55	Hong Li (Institute of Physics, CAS) Ordered and disordered materials for LIB: not a simple rule
18:15	Reception
18:45	Dinner
	Joachim Maier (MPI for Solid State Research) After dinner talk

Saturday, March 7, 2026

08:50	Beatriz Roldán (FHI Berlin) Catalysts: more alive than previously thought
09:15	Miran Gaberšček (Natl. Inst. Chemistry, Ljubljana) Solid state perspectives on liquid-electrolyte batteries: Insights from impedance spectroscopy
09:40	Xin Guo (Huazhong University) Solid state ionics for information, energy and environmental applications
10:05	Aninda Bhattacharyya (Indian Institute of Science) Network polymer electrolyte for sodium-metal rechargeable batteries
10:30	William Chueh (Stanford University) Intersection of solid state ionics, chemistry and physics
10:55	Coffee break
11:30	Michael Grätzel (EPFL) The central role of materials innovation in perovskite solar cell revolution
11:55	Davide Moia (Fluxim) Towards a defect chemical perspective on halide perovskite solar cells
12:20	Jong-Sook Lee (Chonnam National University) Prospects for defect-chemically effective impedance spectroscopy
12:45	Jürgen Fleig (TU Vienna) From space charge potentials to battery voltages
13:10	Raphaële Clément (UCSB) Impact of defects on redox and Li intercalation processes in layered oxide cathodes

