

Program: 2nd ELSICS Conference

Energy Landscapes and Structure in Ion Conducting Solids (ELSICS)

26.-28. September 2022, Göttingen

Monday, 26. September 2022

Time	Name	Title	
9.30	Welcome remarks	Chairman: Karl-Michael Weitzel	
10.00 – 10.45	Invited # 1 Harald Schmidt	Diffusion Experiments with SIMS and Neutrons: From Lithium Metal Oxides to Amorphous Semiconductors	O1
10.45 – 11.15	Reona Miyazaki	Dominant Li* conduction in Li*-doped NaI	O2
11:15 – 12:00	Invited # 2 Ainara Aguadero	“The importance of interface chemistries in ion dynamics for all solid state batteries”	O3
12.00 – 13.00	Lunch		
13.00 – 13.45	Invited # 3 Steve Martin	Loose Ions on a Disordered Landscape: Towards a More Complete Understanding of Conduction Energetics	O4
13.45 – 14.15	Gin Jose	High level doping in silica/silica on silicon with femtosecond laser induced plasma	O5
14.15 – 14.45	Jincheng Du	Insights on energy landscape and ion transport mechanisms in solid state electrolytes from atomistic computer simulations	O6
14.45 – 15.15	Coffee break		
15.15 – 15.45	Julian Eigen	Fe ₂ NiO ₄ /YSZ composite as redox mass for rechargeable oxide batteries (ROBs)	O7
15.45 – 16.15	Ashutosh Goel	Turning Nuclear Waste to Glasses in the United States: Current Status and Future Challenges	O8
16.15 – 16.45	Kristin Griebenow	Phosphate Glasses and their Potential Applications	O9
17.00 – 18.30	Poster Session		
ab 18.30	Dinner (on your own)		

Tuesday, 27. September 2022

Time	Name	Title	
8.30 – 9.15	Invited # 4 Baptiste Gault	Facilitating routine nanoscale analysis of battery anode and cathode materials by using (cryo-) atom probe tomography	O10
9.15 – 9.45	Cynthia Volkert / Jan-Erik Rybak	The effect of Measurement Parameters on Atom Probe Analysis of a Lithium Borate Glass	O11
9.45 – 10.30	Invited # 5 Tong Li	Atomic-scale insights into Co- and Ir-based electrocatalysts during oxygen evolution reaction	O12
10.30 – 11.00	Coffee break		
11.00 – 11.45	Invited # 6 Yuichi Ikuhara	Grain Boundary and Surface Atomic Structures and Diffusion in Li-Ion Battery Related Crystals	O13
11.45 – 12.15	Christian Jooss	High resolution holography for studying electrical potentials at interfaces	O14
12.15 – 12.45	Janek Bernzen / Qian Ma / Carmen Fuchs	Transport of potassium and cobalt ions in strontium titanate (STO)	O15
12.45 – 13.45	Lunch		
13.45 – 14.30	Invited # 7 Alfonso Pedone	Ionic Transport in Oxide Glasses	O16
14.30 – 15.00	Timo Jacob	Fundamental Electrochemical Studies on Diffusion Processes: Combining Experiment and Theory	O17
15.00 – 15.30	Christian Dressler	A Multiscale Approach from Proton Conductivity Simulations in (Nanostructured) Solid Acid Materials	O18
15.30 – 16.00	Knut Nikolas Lausch	Predicting oxidation and spin states by high-dimensional neural networks	O19
16.00 – 16.30	Coffee break		
16.30 – 19.00	Free Time for Discussion and Sightseeing		
19:00-22:00	Conference Dinner	AMAVI	

Wednesday, 28. September 2022

Time	Name	Title	
	Session: NMR		
9.00 – 9.45	Invited # 8 Martin Wilkening	Descriptors to identify fast ion transport in solids as probed by broadband conductivity spectroscopy and NMR	O20
9.45 – 10.15	Michael Vogel	NMR Relaxometry and Diffusometry Studies of Fast Lithium Ion Transport in Glass Ceramics.	O21
10.15 – 11.00	Invited # 9 Hellmut Eckert	Modern solid-state NMR techniques for the study of lithium ion dynamics in lithium ion battery components	O22
11:00 – 11:30	Coffee Break		
11:30 – 12:15	Invited # 10 Sossina Haile	Expanding the Phase Space of Superprotonic Electrolytes	O23
12.15 – 12.45	Igor Lubomirsky	Quantitative determination of space charge at the grain boundaries	O24
12.45 – 13.45	Lunch		
13.45 – 14.30	Invited # 11 Neil Allan	Ion diffusion – new insights and some surprises from simulations	O25
14.30 – 15.00	Philipp Maass	Understanding Ion Transport in Glasses based on Energy Landscapes: Achievements and Challenges	O26
15.00 – 15.30	Victor Gunawan / Schäfer / Bosi	Alkali Ion Transport in Lithium Borate Glass – New insights into the site energy distribution	O27
15.30	Closing remarks	Karl-Michael Weitzel	
15.45 – 16.15	Coffee to go		