

Solid electrolyte interphases in next-gen batteries

13–15 July 2026 | London, UK



Faraday Discussions

Day 1

11:00	Registration and refreshments
11:30	Lunch
12:15	Welcome and introductions Mauro Pasta, <i>Co-Chair of Scientific Committee</i>
12:25	Outline of Discussion format <i>Royal Society of Chemistry Publishing Editors</i>
12:30	Introductory Lecture – Spiers Memorial Lecture (Session chair: TBC) Emanuel Peled <i>Tel Aviv University, Israel</i>
	Session 1: Lithium anodes with liquid electrolytes (Session chair: TBC)
13:30	SEI chemistry enlightened by liquid Madelung potential and MLFF-MD simulation Atsuo Yamada <i>University of Tokyo, Japan</i>
13:35	Operando Surface Enhanced Infrared Spectroscopy Reveals Electric Double Layer Evolution During Solid Electrolyte Interphase Formation Jeffrey Lopez <i>University of Oxford, UK</i>
13:40	Thermodynamic effects of solid electrolyte interphase formation from solvation and ionic association in water-in-salt electrolytes Zachary Goodwin <i>University of Oxford, UK</i>
13:45	Discussion
15:00	Refreshments
15:30	Solvation-derived amorphous motifs in lithium-metal SEI Enyuan Hu <i>Brookhaven National Laboratory, USA</i>
15:35	Multiscale testing of mechanical properties of lithium anodes in conventional electrolytes in comparison to ionic liquids Florian Hausen <i>Forschungszentrum Jülich GmbH, Germany</i>
15:40	Role of Tin Seed Layers in SEI Evolution and Lithium Electrodeposition Ewelina Wiśniewska <i>University of Cambridge, UK</i>
16:45	Discussion
18:00	Lightning presentations (by invitation of the Scientific Committee)
18:30	Poster session and wine reception
20:00	Close of sessions

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Day 2

	Session 2: Lithium anodes with solid electrolytes (Session chair: TBC)
09:30	TBC Jürgen Janek <i>Justus-Liebig-University Gießen, Germany</i>
09:35	Methodological Optimisation and Interpretation of Coulometric Titration Time Analysis Matthew Burton <i>University of Oxford, UK</i>
09:40	Discussion
10:30	Refreshments
11:00	Detailed analysis of $\text{Li}_6\text{PS}_5\text{Cl}/\text{LiNi}_{0.5}\text{Mn}_{0.3}\text{Co}_{0.2}\text{O}_2$ composite electrode before electrochemical cycling Claire Villevieille <i>CNRS, France</i>
11:05	Understanding Solid Electrolyte Interphase Formation in Hydroborate-Based All-Solid-State Batteries Corsin Battaglia <i>EMPA, Switzerland</i>
11:10	Discussion
12:00	Lunch
	Session 3: Beyond lithium chemistries (Session chair: TBC)
13:00	Decoupling interfacial processes in the formulation of fluorine-free lithium metal batteries Lauren Marbella <i>Columbia University, USA</i>
13:05	Chemical vs. electrochemical solid electrolyte interphase formation in potassium-ion batteries Ben Jagger <i>University of Oxford, UK</i>
13:10	The non-SEI nature of the magnesium metal anode interphase in chloride-based glyme electrolytes Sara Drvarič Talian <i>National Institute of Chemistry, Slovenia</i>
13:15	Discussion
14:30	Refreshments
15:00	Understanding the stability of the solid electrolyte interphase formed by vinylene carbonate and fluoroethylene carbonate in sodium-ion batteries Jan Felix Schuster <i>Uppsala University, Sweden</i>
15:05	Real-time gas evolution analysis of SEI formation in sodium-ion batteries using chip based electrochemistry mass spectrometry Shivam Sharma <i>Imperial College London, UK</i>
15:10	Discussion
16:00	Poster session
17:30	Close of sessions
19:00	Conference dinner

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Day 3

	Session 4; Characterisation techniques (Session chair: TBC)
09:00	Engineering the solid electrolyte interphase as a solid-state electrolyte Yuzhang Li <i>UCLA, USA</i>
09:05	NMR spectroscopic investigation of LiNO₃-induced SEI modification in Li–S batteries: A concentration-dependent study Jana B. Fritzke <i>Luleå University of Technology, Sweden</i>
09:10	Evaluating Electrochemical Impedance Spectroscopy for SEI Characterization in Lithium and Sodium Metal Batteries Mohammed Ahmed Zabara <i>University of Cambridge, UK</i>
09:15	Solid-liquid electrolyte interphases in quasi-solid-state lithium-sulfur batteries with argyrodite-type solid electrolyte separators Jaimini Jessica Mistry <i>University of Birmingham, UK</i>
09:20	Discussion
11:00	Refreshments
11:30	Atomic force nanorheology for <i>in-situ</i> exploration of nanoscale SEI layers in real-life rechargeable batteries electrodes Oleg Kosolov <i>Lancaster University, UK</i>
11:35	<i>Operando</i> studies of solid electrolyte interphase (SEI) formation with the electrochemical-surface force balance (e-SFB) Neave Taylor <i>University of Oxford, UK</i>
11:40	Discussion
12:30	Concluding Remarks Lecture (Session chair: TBC) Shirley Meng <i>University of Chicago, USA</i>
13:15	Acknowledgements and presentation of poster prizes Betar Gallant, Co-Chair of Scientific Committee
13:30	Close of meeting and lunch

The affiliation is for the presenting author. If the presenting author of your paper has changed since abstract selection please email events@rsc.org. Please note that this is a draft programme and timings may change.