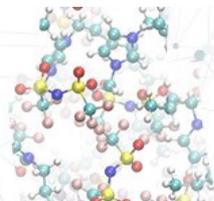


Dense ionic fluids

8 - 10 July 2024 | London, UK



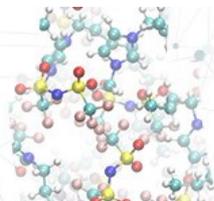
Faraday Discussions

Monday 8 July 2024 (timings are BST)

12:00	Registration and lunch
12:45	Welcome and introductions Tom Welton <i>Imperial College London, UK</i>
12:55	Outline of Discussion format Catherine Au and Harriet Brewerton <i>Royal Society of Chemistry Publishing Editors</i>
13:00	Introductory lecture (Session chair: Tom Welton) Claudio Margulis University of Iowa, USA
	Session 1: Structure and dynamics in dense ionic fluids Session chair: Susan Perkin
14:00	Cationic micelles in deep eutectic solvents: effects of solvent composition Karen Edler <i>Lund University, Sweden</i>
14:05	Speciation and dipole re-orientation dynamics of glass-forming liquid electrolytes: Li[N(SO₂CF₃)₂] mixtures of 1,3-propanesultone or tetrahydrothiophene-1,1-dioxide Yasuhiro Umebayashi <i>Niigata University, Japan</i>
14:10	Chain-length dependent organisation in mixtures of hydrogenous and fluorous ionic liquids John Slattery <i>The University of York, UK</i>
14:15	Discussion
15:30	Refreshments
	Session chair: Benjamin Rotenberg
16:00	Chemical models for dense solutions Jean-François Dufrêche <i>University of Montpellier, France</i>
16:05	Overdetermination method for accurate dynamic ion correlations in highly concentrated electrolytes Bernhard Roling <i>Philipps University of Marburg, Germany</i>
16:10	Exploring the structure of type V deep eutectic solvents by Xenon NMR Spectroscopy Franca Castiglione <i>Politecnico di Milano, Italy</i>
16:15	Machine learning-driven investigation of the structure and dynamics of the BMIMBF₄ room temperature ionic liquid Fabian Zills <i>University of Stuttgart, Germany</i>
16:20	Discussion
18:00	Flash poster presentations (by invitation of the scientific committee)
18:30	Poster session and wine reception
19:30	Close of sessions

Dense ionic fluids

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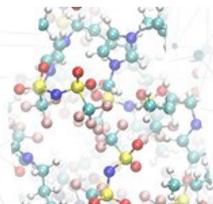
Faraday Discussions

Tuesday 9 July 2024 (timings are BST)

	Session 2: Ionic fluids at equilibrium: thermodynamics, nanostructure, phase behaviour, activity Session chair: John Slattery
10:00	Revisiting the driving force inducing phase separation in PEG-phosphate aqueous biphasic systems Alexis Grimaud <i>Boston College, UK</i>
10:05	Wave mechanics in an ionic liquid mixture Timothy Groves <i>University of Oxford, UK</i>
10:10	Stability and structure of the aqueous LiTFSI/LiCl interface Paola Carbone <i>The University of Manchester, UK</i>
10:15	Discussion
11:30	Refreshments
	Session chair: Patricia Hunt
12:00	Tailored carbon dioxide capacity in carboxylate-based ionic liquids Margarida Costa-Gomes <i>CNRS / ENS Lyon, France</i>
12:05	Unravelling the complex speciation of halozincate ionic liquids using X-ray spectroscopies and calculations Kevin Lovelock <i>University of Reading, UK</i>
12:10	Deep eutectic solvents on a tightrope: balancing the entropy and enthalpy of mixing Adriaan van den Bruinhorst <i>École Normale Supérieure, France</i>
12:15	Discussion
13:30	Lunch
	Session 3: Ionic fluids out of equilibrium: electrodeposition, dissolution, electron transfer, driving forces Session chair: Andy Abbott
14:30	Stabilization of lithium metal in concentrated electrolytes: effects of electrode potential and solid electrolyte interphase formation Yuki Yamada <i>University of Osaka, Japan</i>
14:35	Overcoming passivation through improved mass transport in dense ionic fluids Jennifer Hartley <i>University of Leicester, UK</i>
14:40	Discussion
15:30	Refreshments

Dense ionic fluids

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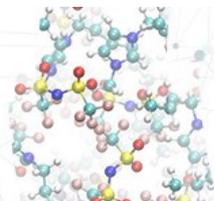


**Faraday
Discussions**

	Session chair: Margarida Costa Gomes
16:00	Heterogeneous Li coordination in solvent-in-salt electrolytes enables high Li transference numbers Monika Schönhoff <i>University of Münster, Germany</i>
16:05	Electric field induced associations in the double layer of salt-in-ionic-liquid electrolytes Daniel Markiewitz <i>Massachusetts Institute of Technology, USA</i>
16:10	Linear ether-based highly concentrated electrolytes for Li-sulfur batteries Kazuhide Ueno <i>Yokohama National University, Japan</i>
16:15	Discussion
17:30	Close of sessions
18:30	Conference dinner

Dense ionic fluids

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Faraday Discussions

Wednesday 10 July 2024 (timings are BST)

	Session 4: New directions in experiment and theory, interfaces, and interactions Session chair: Claudio J. Margulis
09:00	Ion transport in polymerized ionic liquids: a comparison of polycation and polyanion systems Joshua Sangoro <i>Ohio State University, USA</i>
09:05	Dispersions of magnetic nanoparticles in water/ionic liquid mixtures Emmanuelle Dubois <i>PHENIX, Sorbonne University, France</i>
09:10	Observation of cavitation dynamics in viscous deep eutectic solvents during power ultrasound sonication Ben Jacobson <i>University of Glasgow, UK</i>
09:15	Speciation of the proton in water-in-salt electrolytes Kateryna Goloviznina <i>Sorbonne University, France</i>
09:20	Discussion
11:00	Refreshments
11:30	Concluding remarks lecture (Session chair: Tom Welton) Rob Atkin <i>University of Western Australia, Australia</i>
12:15	Acknowledgements Tom Welton <i>Imperial College London, UK</i>
12:30	Close of meeting and lunch