

Ionic Liquids: From Fundamental Properties to Practical Applications

Faraday Discussion



11-13 September
2017
Cambridge, UK

Monday 11 September

11:00	Registration, Tea and Coffee	
12:00	Lunch	
12:45	Welcome and Introductions Christopher Hardacre, <i>Chair of Scientific Committee</i>	
12:55	Outline of Discussion Format Chris Goodall and James Moore, <i>Royal Society of Chemistry Publishing Editors</i>	
13:00	Introductory Lecture (Session Chair: Christopher Hardacre) Doug MacFarlane <i>Monash University, Australia</i>	
	Session 1: Phase Behaviour and Thermodynamics (Session Chair: Margarida Costa Gomes)	
14:00	How ionic species structure influences phase structure and transitions from protic ionic liquids to liquid crystals to crystals Tamar L. Greaves, Hayden Broomhall, Asoka Weerawardena, Dale A. Osborne, Bastien A. Canonge, <u>Calum J. Drummond</u> <i>RMIT University, Australia</i>	Paper 14389
14:05	Low-temperature and high-pressure phases of a room-temperature ionic liquid and polyiodides: 1-Methyl-3-propylimidazolium iodide <u>Hiroshi Abe</u> , Hroaki Kishimura, Mayumi Takaku, Mai Watanabe, Nozomu Hamaya <i>National Defense Academy, Japan</i>	Paper 14224
14:10	Exfoliation of graphene and fluorographene in molecular and ionic liquids Émilie Bordes, Joanna Szala-Bilnik, <u>Agilio A. H. Padua</u> <i>Blaise Pascal University & CNRS, France</i>	Paper 14024
14:15	Discussion	
15:30	Afternoon tea	
	Session 1: Phase Behaviour and Thermodynamics (Session Chair: Tristan Youngs)	
16:00	Selective separation of furfural and hydroxymethylfurfural from an aqueous solution using a supported hydrophobic deep eutectic solvent liquid membrane <u>Carin H. J. T. Dietz</u> , Maaïke C. Kroon, Michela Di Stefano, Martin van Sint Annaland, Fausto Gallucci <i>Petroleum Institute, Abu Dhabi, United Arab Emirates</i>	Paper 14022
16:05	Low cost ionic liquid-water mixtures for effective extraction of carbohydrate and lipid from algae Trang Q. To, Kerry Procter, Blake A. Simmons, Suresh Subashchandrabose, Rob Atkin <i>University of Newcastle, Australia</i>	Paper 14020
16:10	Discussion	
17:00	Lightning presentations (by invitation of the scientific committee)	
17:30	Poster Session and Wine Reception	

19:00	Close of session – free evening
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Tuesday 12 September

	Session 2: Structure and Dynamics of Ionic Liquids (Session Chair: Chris Hardacre)	
09:00	Molecular scale structure and dynamics at an ionic liquid/electrode interface Peter Reichert, Kasper Skov Kjær, Tim Brandt van Driel, Julian Mars, Jannis Walter Ochsmann, Diego Pontoni, Moshe Deutsch, Martin Meedom Nielsen, <u>Markus Mezger</u> <i>Max Planck Institute for Polymer Research, Germany</i>	Paper 14023
09:05	Design principles from multiscale simulations to predict nanostructure in self-assembling ionic liquids Benjamin T. Nebgen, Harsah D. Magurudeniya, Kevin W. C. Kwock, Bryan S. Ringstrand, Towfiq Ahmed, Sönke Seifert, Jian-Xin Zhu, Sergi Tretiak, <u>Millicent Firestone</u> <i>Los Alamos National Laboratory, USA</i>	Paper 14428
09:10	Atomic charges of sulfur in ionic liquids: experiments and calculations Richard Fogarty, Rebecca Rowe, Richard Paul Matthews, Matthew Clough, Claire Ashworth, Agnieszka Brandt, Paul Joseph Corbett, Robert Palgrave, Emily F. Smith, Richard Bourne, Thomas W. Chamberlain, Paul Thompson, Patricia Hunt, <u>Kevin R.J. Lovelock</u> <i>University of Oxford, UK</i>	Paper 14422
09:15	ILs through the looking glass: Electrostatics and structure probed using charge-inverted ionic liquid pairs Tiago F. C. Cruz, Karina Shimizu, José M. S. S. Esperança, Luís Paulo N. Rebelo, Pedro T. Gomes, <u>José N. Canongia Lopes</u> <i>University of Lisbon, Portugal</i>	Paper 14335
09:20	Discussion	
11:00	Morning Tea	
	Session 2: Structure and Dynamics of Ionic Liquids (Session Chair: James Wishart)	
11:30	Structures and lifetimes in ionic liquids and their mixtures Sascha Gehrke, Michael von Domaros, Ryan Clark, Oldamur Hollóczki, Martin Brehm, Tom Welton, Alenka Luzar, <u>Barbara Kirchner</u> <i>University of Bonn, Germany</i>	Paper 14021
11:35	Applying neutron diffraction with isotopic substitution to the structure and proton-transport pathways in protic imidazolium bis{(trifluoromethyl)sulfonyl}imide ionic liquids Adam H. Turner, S. Imberti, Małgorzata Swadźba-Kwaśny, <u>John D. Holbrey</u> <i>Queen's University Belfast, UK</i>	Paper 14260
11:40	Exploring the bulk-phase structure of ionic liquid mixtures using small-angle neutron scattering Christopher P. Cabry, Lucia D'Andrea, Karina Shimizu, Isabelle Grillo, Peixun Li, Sarah E. Rogers, Duncan W. Bruce, José N. Canongia Lopes, <u>John M. Slattery</u> <i>University of York, UK</i>	Paper 14450
11:45	Discussion	
13:00	Lunch	
	Session 3: Electrochemistry	

	(Session Chair: Tristan Youngs)	
14:00	Anomalous electroless deposition of less noble metals on Cu in ionic liquids and its application towards battery electrodes <u>Abhishek Lahiri</u> , Natalia Borisenko, Mark Olschewski, Giridhar Pulletikurthi, Frank Endres <i>Clausthal University of Technology, Germany</i>	Paper 14386
14:05	Amphoteric water as acid and base for protic ionic liquids and their electrochemical activity when used as fuel cell electrolytes Muhammed Shah Miran, Tomohiro Yasuda, Ryoichi Tatara, Md. Abu Bin Hasan Susan, <u>Masayoshi Watanabe</u> <i>Yokohama National University, Japan</i>	Paper 14026
14:10	Discussion	
15:00	Afternoon Tea	
	Session 3: Electrochemistry (Session Chair: Johan Jacquemin)	
15:30	Brønsted acidity in deep eutectic solvents and ionic liquids <u>Andrew P. Abbott</u> , Sahar S. M. Alabdullah, Azhar Y. M. Al-Murshedi, Karl S. Ryder <i>University of Leicester, UK</i>	Paper 14019
15:35	Time-resolved SERS study of the oxygen reduction reaction in ionic liquid electrolytes for non-aqueous lithium-oxygen cells Petar Radjenovic and <u>Laurence J. Hardwick</u> <i>University of Liverpool, UK</i>	Paper 14289
15:40	Biredox ionic liquids: new opportunities toward high performance supercapacitors Charlotte Bodin, Eléonore Mourad, Dodzi Zigah, Steven Le Vot, Stefan A. Freunberger, Fred Favier and <u>Olivier Fontaine</u> <i>ICGM, University of Montpellier, France</i>	Paper 14344
15:45	Discussion	
17:00	Close of sessions	
17:30	Poster Session and Wine Reception	
19:00	Conference Dinner	

Wednesday 13 September

	Session 4: Ionic Liquids at Interfaces (Session Chair: Robert Jones)	
09:00	Interfacial structure and structural forces in mixtures of ionic liquid with a polar solvent Samuel W. Coles, Alexander M. Smith, Maxim V. Fedorov, Florian Hausen, <u>Susan Perkin</u> <i>University of Oxford, UK</i>	Paper 14025
09:05	Nano-mechanics of ionic liquids at dielectric and metallic interfaces Léo Garcia, Léa Jacquot, Elisabeth Charlaix and <u>Benjamin Cross</u> <i>University of Grenoble, France</i>	Paper 14484
09:10	The Au(111)/IL interfacial nanostructure in the presence of precursors and its influence on the electrodeposition process <u>Natalia Borisenko</u> , Abhishek Lahiri, Giridhar Pulletikurthi, Tong Cui, Timo Carstens, Janine Zahlbach, Rob Atkin, Frank Endres <i>Clausthal University of Technology, Germany</i>	Paper 14440
09:15	Discussion	
10:30	Morning Tea	
	Session 4: Ionic Liquids at Interfaces	

	(Session Chair: Andrea Balducci)	
11:00	Interactions and stabilisation of acetone, sulfur dioxide and water with 1-octyl-3-methylimidazolium tetrafluoroborate [OMIM][BF₄] at low temperatures Matthew Buckley, Karen L. Syres, <u>Robert G. Jones</u> <i>University of Nottingham, UK</i>	Paper 14443
11:05	Determining the composition of the vacuum-liquid interface in ionic-liquid mixtures Eric Smoll, Maria Tesa-Serrate, <u>Simon Purcell</u> , Lucia D'andrea, Duncan W. Bruce, John M. Slattery, Matthew Costen, Timothy Minton, Kenneth G. McKendrick <i>Heriot-Watt University, UK</i>	Paper 14396
11:10	Effects of the ether oxygen atom in alkyl side chains on the physical properties of piperidinium ionic liquids T. Nokami, T. Yamashita, T. Komura, N. Handa, M. Shimizu, K. Yamaguchi, Y. Domi, H. Usui, H. Sakaguchi, <u>T. Itoh</u> <i>Tottori University, Japan</i>	Paper 14181
11:15	Impact of SCILL catalysts for the S-S coupling of thiols to disulfides <u>Octavian D. Pavel</u> , Iunia Podolean, Vasile I. Parvulescu, S. F. Rebecca Taylor, Haresh Manyar, Kathryn Ralphs, Peter Goodrich, Christopher Hardacre <i>University of Bucharest, Romania</i>	Paper 14412
11:20	Discussion	
13:00	Concluding Remarks Lecture (Session Chair: Christopher Hardacre) Philip Jessop <i>Queen's University, Canada</i>	
13:40	Acknowledgements	
13:45	Close of meeting and Lunch	

Presenting authors are indicated in the programme by an underline. 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.