



Program

Wednesday 11 May

08:30	Registration	
10:00	Welcome and Introductions George Chen, Chair of Scientific Committee Amy Lam, Royal Society of Chemistry General Manager, China Mike George, UNNC Vice Provost for Research and Knowledge Exchange Ningbo Association of Science and Technology	
10:25	Outline of Discussion Format Royal Society of Chemistry Publishing Editors	
10:30	Introductory Lecture (Session Chair: George Chen) <u>Derek Fray</u> <i>University of Cambridge</i>	
11:15	Discussion	
11:30	Photograph	
	Session 1: Benefits to Energy Efficiency and Environmental Impact Session Chair: George Chen	
11:40	Development of a Doped Titania Inert Anode for Titanium Electrowinning <u>Kathie McGregor</u> , Graeme Snook, Andrew Urban, Marshall Lanyon, Richard Donelson, Mark Pownceby <i>CSIRO</i>	Paper 9893
11:45	Solid oxide membrane-assisted controllable electrolytic fabrication of metal carbides in molten salt <u>Xingli Zou</u> , Kai Zheng, Xionggang Lu, Qian Xu, Zhong-fu Zhou <i>Shanghai University</i>	Paper 9928
11:50	Discussion	
12:40	Lunch	
	Session 1 continued: Benefits to Energy Efficiency and Environmental Impact Session Chair: Qian Xu	
13:45	Natural Gas Anodes for Aluminium Electrolysis in Molten Fluorides <u>Geir Martin Haarberg</u> , Babak Khalaghi, Tommy Møkkelbost <i>Norwegian University of Science and Technology</i>	Paper 10170
13:50	Electrolysis of Metal Oxides in $MgCl_2$ based molten salts with an inert graphite anode <u>Yating Yuan</u> , Wei Li, Hualin Chen, Zhiyong Wang, Xianbo Jin, George Zheng Chen <i>Wuhan University</i>	Paper 10113
13:55	Template-free electrodeposition of Al-Fe alloy nanowires from a room-temperature ionic liquid as anode materials for Li-ion batteries <u>Gang Chen</u> , Yuqi Chen, Heng Wang, Qingjun Guo, Bing Li <i>East China University of Science and Technology</i>	Paper 9937
14:00	Discussion	

15:15	Afternoon tea	
	Session 1 continued: Benefits to Energy Efficiency and Environmental Impact Session Chair: Xianbo Jin	
15:45	Direct Oxygen Removal Technique for Recycling Titanium and Its Alloys by Utilizing MgCl₂ Molten Salt Toru Okabe, Yuki Hamanaka, Yu-ki Taninouchi <i>University of Tokyo</i>	Paper 9895
15:50	Developing Energy Efficient Lignin Biomass Processing – Towards Understanding Mediator Behaviour in Ionic Liquids Majd Eshtaya, Andinet Ejigu, Gill Stephens, Darren Walsh, George Chen, Anna Croft <i>University of Nottingham</i>	Paper 10165
15:55	Molten-salt treatment of waste biomass for preparation of carbon with enhanced capacitive properties and electrocatalytic activity towards oxygen reduction Wei Xiao, Jing Zhou, Beihu Lu, Hailong Wang, Yuqiao Song, Dihua Wang <i>Wuhan University</i>	Paper 9918
16:00	Discussion	
17:15	Lightning presentations (Session Chair: George Chen)	
17:30	Poster Session	
18:45	Close of sessions	

Thursday 12 May

	Session 2: Improvements of Energy Conversion and Storage Session Chair: John Slattery	
09:00	Temperature dependence of the electrode potential of cobalt-based redox couples in ionic liquid electrolytes for thermal energy harvesting Jenny Pringle, Jiangjing He, Danah Al-Masri, Doug MacFarlane <i>Deakin University</i>	Paper 9896
09:05	Immobilization of rhodium catalyst by using diphosphine-functionalized ionic liquid in RTIL for efficient and recyclable biphasic hydroformylation of 1-octene Ye Liu, Yong-Qi Li, Huan Liu, Peng Wang, Da Yang, Xiao-li Zhao <i>East China Normal University</i>	Paper 10134
09:10	High energy supercapattery with an ionic liquid solution of LiClO₄ Linpo Yu, George Chen <i>The University of Nottingham Ningbo China</i>	Paper 10126
09:15	Discussion	
10:30	Morning Tea	
	Session 2 continued: Improvements of Energy Conversion and Storage Session Chair: Geir Martin Haarberg	
11:00	Molten salt CO₂ capture and electro-transformation (MSCC-ET) into capacitive carbon at medium temperature: effect of the electrolyte composition Dihua Wang, Bowen Deng, Zhigang Chen, Muxing Gao, Yuqiao	Paper 9897

	Song, Kaiyuan Zheng, Juanjuan Tang, Wei Xiao, Xuhui Mao <i>Wuhan University</i>	
11:05	An investigation into the carbon nucleation and growth on a nickel substrate in LiCl-Li₂CO₃ melts <u>Shuqiang Jiao</u> , Jianbang Ge, Liwen Hu, Yang Song <i>University of Science and Technology Beijing</i>	Paper 10072
11:10	Application of infiltrated LSCM-GDC oxide anode in direct carbon/coal fuel cells <u>Xiangling Yue</u> , Ana Arenillas, John T.S.Irvine <i>University of St Andrews</i>	Paper 10081
11:15	Discussion	
12:30	Lunch	
	Session 3: Developments for Nuclear Reactors and Spent Fuels Processing Session Chair: Andrew Doherty	
13:45	Advances toward Industrialization of Novel Molten Salt Electrochemical Processes <u>Yasuhiko Ito</u> , Tokujiro Nishikiori, Hiroyuki Tsujimura <i>I'MSEP Co. Ltd</i>	Paper 9891
13:50	Determination and evaluation of the thermophysical properties of alkali carbonate eutectic Jian-Qiang Wang, Xuehui An, Jinhui Cheng, <u>Peng Zhang</u> , Zhongfeng Tang <i>Shanghai Institute of Applied Physics</i>	Paper 10100
13:55	Cathodic processes of Neodymium(III) in LiF-NdF₃ melts Bing Li, Chao Huang, <u>Xiaolong Liu</u> , Yuan Gao, Shizhe Liu <i>East China University of Science and Technology</i>	Paper 9938
14:00	Discussion	
15:15	Afternoon Tea	
	Session 3 continued: Developments for Nuclear Reactors and Spent Fuels Processing Session Chair: Bing Li	
15:45	Advances in electroanalysis, sensing and monitoring in molten salts Andy Mount, Damion Corrigan, Justin Elliott, Ewen Blair, Simon Reeves, Ilka Schmueser, Anthony Walton <i>University of Edinburgh</i>	Paper 9894
15:50	High temperature ³⁵Cl nuclear magnetic resonance study of the LiCl-KCl system and the effect of CeCl₃ dissolution Ian Farnan, Huixing Zhang <i>University of Cambridge</i>	Paper 10211
15:55	Estimation of the intermetallic compounds in LiCl-KCl molten salt by cyclic voltammetry <u>Weiqun Shi</u> , Yalan Liu, Kui Liu, Liyong Yuan, Zhifang Chai <i>Institute of High Energy Physics, Chinese Academy of Sciences</i>	Paper 10106
16:00	Discussion	
17:15	Lightning presentations (Session Chair: George Chen)	
17:30	Poster Session	
18:45	Close of sessions	
19:30	Conference Dinner	

Friday 13 May

	Session 4: Advancement in Knowledge of Phenomena and Processes Session Chair: Wei Xiao	
09:00	The influence of fluoride ions on the equilibrium between titanium ions and titanium metal in fused alkali chloride melts <u>Hongmin Zhu</u> , Jianxun Song, Qiuyu Wang, Jinyu Wu, Shuqiang Jiao <i>University of Science and Technology Beijing</i>	Paper 9898
09:05	Formation of Si Nanowires by the Electrochemical Reduction of SiO₂ with Ni or NiO Additives Han Wang, Sheng Fang, Juanyu Yang, Bing Yu, Shigang Lu <i>General Research Institute for Nonferrous Metals</i>	Paper 9899
09:10	Towards large scale preparation of graphene in molten salts and its use in the fabrication of highly toughened alumina ceramics <u>Ali Kamali</u> , John Feighan, Derek Fray <i>University of Cambridge</i>	Paper 9913
09:15	Discussion	
10:30	Morning Tea	
	Session 4 continued: Advancement in Knowledge of Phenomena and Processes Session Chair: Ye Liu	
11:00	Coordination numbers and physical properties in ionic liquids and their mixtures Paul Madden, Mathieu Salanne, Dario Corradini <i>University of Oxford</i>	Paper 9892
11:05	Effect of C₈mimPF₆ on miniemulsion polymerization for application in new latex coating products <u>Binjie Hu</u> , Yiyang Kong, Rongmeihui Zheng, Jie Dong, Kwang-Leong Choy, Huanhuan Zhao <i>University of Nottingham Ningbo</i>	Paper 10136
11:10	Three dimensional ink-jet printing of biomaterials using ionic liquids and co-solvents <u>Deshani H. A. T. Gunasekera</u> , Szelee Kuek, Denis Hasanaj, Yinfeng He, Christopher Tuck, Ricky D. Wildman, Anna K. Croft <i>University of Nottingham</i>	Paper 10146
11:15	Discussion	
12:30	Concluding remarks (Session Chair: George Chen) John T. S. Irvine <i>St Andrews University</i>	
13:00	Acknowledgements	
13:15	Close of meeting	

Presenting authors are indicated in the programme by an underline. The affiliation is for the presenting author.