

MSDG Christmas Meeting 2014 Programme

08:30 Registration and poster-set-up

08:55 Welcome and Introduction from Professor Andrew Abbott

09:00 Invited Lecture

Post-modification of heterogeneous catalysts by coatings with ionic liquids, salts or salt solutions

Peter Wasserscheid

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09:40 Technical Sessions 1 Chair **Professor George Chen**

09:40 **The MBr–EuBr₂ systems (M= alkali metal): physicochemical investigation and thermodynamic assessment**

W. Gong¹, L. Rycerz², S. Gadzuric³, M. Gaune-Escard⁴

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10:00 **Na-Zn liquid metal battery**

J.L. Xu¹, O.S. Kjos², K.S. Osen², A.M. Martinez², A.P. Ratvik² and G.M. Haarberg¹

¹ Department of Materials Science and Engineering, Norwegian University of Science and Technology, NO-7491 Trondheim, Norway, ² SINTEF Materials and Chemistry, NO-7465 Trondheim, Norway
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10:20 **Electrocatalysis in Room Temperature Ionic Liquids**

Darren Walsh

10:40 Morning coffee and Poster Session No. 1

11:10 Technical Sessions 2 Chairs **Professor Geir Martin Haarberg and Dr Trevor R Griffiths**

11:10 **Molten salt capture of CO₂**

E. Olsen, V. Tomkute, Y. Alhaj-Saleh and H. Nygård

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11:30 Alkoxy carbonylation of Alkenes by Ionic Liquids and Supported Ionic Liquid Phase (SILP) Catalysts

Eduardo J. Garcia-Suarez, Santosh G. Khokarale, Anders Riisager and [Rasmus Fehrmann](#)

Centre for Catalysis and Sustainable Chemistry, Building 207, Technical University of Denmark, Lyngby, Denmark.

11:50 Black silicon absorbers for solar photovoltaics

[P. R. Coxon](#)¹, E. Juzeliunas^{1,2} & D. J. Fray¹

¹ Department of Materials Science and Metallurgy, University of Cambridge, 27 Charles Babbage Road, Cambridge, CB3 0FS, UK

² Campus Rectorate, Klaipėda University, Herkaus Manto str. 84, LT-92294 Klaipėda, Lithuania
Contact E-mail: prc39@cam.ac.uk

12:10 Molten salts as heat transfer media in fast pyrolysis of wood

[Heidi S. Nygård](#)¹, Espen Olsen¹

¹ Department of Mathematical Sciences and Technology, Norwegian University of Life Sciences, 1432 Ås, Norway. Contact E-mail: heidi.nygard@nmbu.no

12:30 Roles of alkali metal cation during carbon electrodeposition in molten alkali carbonates

[Happiness V. Ijije](#) and, George Z. Chen *

Department of Chemical and Environmental Engineering, and Energy and Sustainability Research Division,

Faculty of Engineering, University of Nottingham, Nottingham, NG7 2RD, UK.

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12:50 Lunch & Poster Session No. 2

14:00 Annual General Meeting of the MSDG. All members and delegate welcome.

14:30 Technical Session No. 3 Chair **Dr Stuart Mucklejohn**

14:30 Development of robust microelectrodes for electroanalysis in molten salts.

[Damion K Corrigan](#)¹, Ewen Blair², Jonathan G. Terry², Anthony J. Walton² and Andrew R. Mount¹.

¹ School of Chemistry, The University of Edinburgh, Joseph Black Building, The King's Buildings, West Mains Road, Edinburgh, EH9 3JJ, Scotland (UK)

² Institute for Integrated Micro and Nano Systems, School of Engineering, The University of Edinburgh, The King's Buildings, West Mains Road, Edinburgh EH9 3JF, Scotland (UK)

14:50 **Electronic Structure of Ionic Liquids: Experiments vs. Calculations**

Richard M. Fogarty¹, Rebecca Rowe¹, Rob G. Palgrave², Richard A. Bourne³,
Tom W. Chamberlain⁴, Paul Thompson⁵, Emily F. Smith⁴, Nick A. Besley⁴,
Claire R. Ashworth¹, Richard P. Matthews¹, Patricia A. Hunt¹, Kevin R. J. Lovelock¹

¹ Department of Chemistry, Imperial College London, ² Department of Chemistry, University College London

³ School of Chemistry, University of Leeds, ⁴ Department of Chemistry, University of Nottingham ⁵ XMaS beamline, European Synchrotron Radiation Facility (ESRF) Contact E-mail: evin.lovelock@imperial.ac.uk

15:10 **Synthesis of cementitious compounds and electrochemical and calorimetric studies in molten NaCl**

R. A. Sheikh¹, S. J. R. Simons¹, D. Brett, M. Gaune-Escard²

¹ Department of Chemical Engineering, University College London, Torrington Place, London, WC1E 7JE.

² Ecole Polytechnique, Mecanique Energetique, Technopole de Chateau-Gombert, 5 rue Enrico Fermi, 13453 Marseille Cedex 13, France. E-mail: rashed.sheikh@ucl.ac.uk

15:30 **Sliding mechanisms across amphiphilic ionic liquids - what does friction mean at the nanoscale?**

Alexander M. Smith & Susan Perkin

Department of Chemistry, Physical & Theoretical Chemistry Laboratory, University of Oxford, UK
Contact E-mail: alexander.smith@chem.ox.ac.uk

15:50 Afternoon tea and Poster Session No. 3

16:20 Technical Session No. 4 Chair **Professor Marcelle GAUNE-ESCARD**

16:20 **Anode processes during electrowinning of aluminium**

Geir Martin Haarberg

Department of Materials Science and Engineering, Norwegian University of Science and Technology, Trondheim, NO-7491, Norway. Contact E-mail: geir.martin.haarberg@ntnu.no

16:40 **Diamonds for Christmas**

Ali Reza Kamali, Derek J. Fray

Materials Science Department, University of Cambridge

17:00 Wine and Cheese Reception

18:00 Close of Meeting.