2014 Spring Meeting

May 26th - 30th

Lille - France

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SYMPOSIUM C

Solid state ionics: thin films for energy and information applications

Symposium Organizers:

Jennifer L.M. Rupp, Electrochemical Materials, Zurich, Switzerland

Wolfgang Preis, Montanuniversitaet Leoben, Austria

Roger A. De Souza, Institute of Physical Chemistry, Aachen, Germany

Igor Lubomirsky, Department of Materials and Interfaces, Rehovot, Israel

Erik M. Kelder, Faculty of Applied Sciences, Delft, The Netherlands
14:00 Lithium-ion batteries: the role of passivation films in ageing processes of high energy systems
Rémi DÉDRYVERE, a Lucille BODENES, a Dominique FOIX, a Hervé MARTINEZ, a Danielle GONBEAU, a Florent FISCHER, b Cécile TESSIER, b Jean-Frédéric MARTIN, c Sébastien PATOUX c a IPREM, University of Pau, Hélioparc, 2 av. Pierre Angot, 64000 Pau, France b SAF, 111/113 bd Alfred Daney, 33074 Bordeaux cedex, France c CEA/DRT/LITEN, 17 rue des Martyrs, 38054 Grenoble cedex 9, France

14:30 Surface science investigations on the interface formation between thin film lithium ion conductors and electrode materials
André Schwöbel, René Hausbrand, Wolfram Jaegermann Technische Universität Darmstadt, Materials Science Department, Surface Science Division, Jovanka-Bonchitsch-Straße 2, 64287 Darmstadt, Germany

14:50 Systematic design of thiophosphate-based all-solid-state batteries
S. Adams, R. Prasada Rao, M.H. Chen, H.M. Chen National University of Singapore, Department of Materials Science and Engineering, Singapore

15:10 Electrical characterization of LiAlO2 thin films prepared by Atomic Layer Deposition (ALD)
Yang Hu, Amund Ruud, Ville Miikkulainen, Truls Norby, Oia Nilsen, Helmer Fjellvåg Centre for Materials Science and Nanotechnology, Department of Chemistry, University of Oslo P.O. Box 1033, Blindern, N-0315 Oslo, Norway

15:30 Organic electrode material for all-solid-state Li-ion batteries: Investigations using UHV-based model approach
R. Frecht, R. Hausbrand, W. Jaegermann Darmstadt University of Technology Department of Material Sciences Surface Science Division Jovanka-Bonchitsch-Straße 2 64287 Darmstadt Germany

15:50 Pore filling ion conducting membranes for vanadium redox flow batteries
Young-Woo Choi, Mi-Soon Lee, Kyong-Hee Shin Korea Institute of Energy Research, South Korea

16:10 BREAK

Mixed Conducting Perovskites II : Prof. J.L.M. Rupp and Dr. N.H. Perry

16:40 Investigating the Role of Electronic Structure in Oxygen Exchange Kinetics Using Model Thin Film (Sr,Ba,La)(Ti,Fe)O3-α Fuel Cell Cathodes
Nicola H. Perry, Jaejin Kim, Melanie Kuhn, John W. Duce, Takeshi Daio, Sean R. Bishop, and Harry L. Tuller Department of Materials Science and Engineering, MIT, Cambridge MA USA & I2CNER, University of Kyushu, Fukuoka, Japan, Department of Materials Science and Engineering, MIT, Cambridge MA USA, Department of Materials Science and Engineering, MIT, Cambridge MA USA, I2CNER, University of Kyushu, Fukuoka, Japan, I2CNER, University of Kyushu, Fukuoka, Japan, Department of Materials Science and Engineering, MIT, Cambridge MA USA & I2CNER, University of Kyushu, Fukuoka, Japan, Department of Materials Science and Engineering, MIT, Cambridge MA USA & I2CNER, University of Kyushu, Fukuoka, Japan

17:10 Long-term stability of the IT-SOFC cathode materials La0.6Sr0.4CoO3-δ and La2NiO4+δ against chromium poisoning
Nina Schrödl, Edith Bucher, Andreas Egger, Patrice Kreiml, Christian Teichert, Werner Sitte Chair of Physical Chemistry, Montanuniversitaet Leoben, Franz-Josef-Straß e 18, A-8700 Leoben, Austria

17:30 Identifying, Quantifying and Modifying Reaction Pathways of Oxygen Reduction on Lanthanum Manganite (LSM) Model Electrodes
T. M. Huber (1), A. K. Opitz (1), M. Kubicek (1), A. Welzl (1), G. Holzlechner (1), E. Navickas (1), Y. Chen (2), H. Hutter (1), B. Yildiz (2), J. Fleig (1) (1) Vienna University of Technology Institute of Chemical Technologies and Analytics Research Division Electrochemistry, (2) MIT Department of Nuclear Science and Engineering Laboratory for Electrochemical Interfaces

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