



European Materials Research Society

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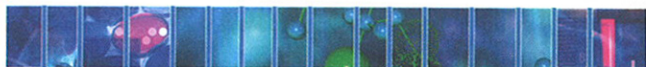
Lille - France

**Spring Meeting**

May 26<sup>th</sup> - 30<sup>th</sup>



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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 **Dynamic Interaction of Surface Point Defects with H<sub>2</sub>O and CO<sub>2</sub> in Cerium Oxide** C.2. 1  
William C. Chueh  
Department of Materials Science & Engineering, Stanford University
- 14:30 **Redox activity of surface lattice oxygen in Fe & Co based perovskites revealed by operando spectroscopy** C.2. 2  
David N. Mueller(1), Michael L. Machala(1), Hendrik Bluhm(2), William C. Chueh(1)  
(1)Department of Materials Science & Engineering, Stanford University, 496 Lomita Mall, Stanford, CA 94305, USA (2) Chemical Sciences Division, Lawrence Berkeley National Laboratory, 1 Cyclotron Road, Berkeley, CA 94720, USA
- 15:00 **Evidence for the formation of higher order Ruddlesden-Popper phases in thin film air electrodes by HS-LEIS** C.2. 3  
Helena Téllez(1,2), Kuan-Ting Wu(2), Mónica Burriel(2), Yan Chen(3), Bilge Yildiz(3), John Kilner(1,2), Stephen Skinner(2), Tatsumi Ishihara(1)  
(1) International Institute for Carbon-Neutral Energy Research, Kyushu University, Japan; (2) Department of Materials, Imperial College London, London, UK; (3) Laboratory for Electrochemical Interfaces, Massachusetts Institute of Technology, US
- 15:20 **The correlation of cation segregation, film morphology and oxygen reduction reaction of La<sub>0.6</sub>Sr<sub>0.4</sub>CoO<sub>3-δ</sub> thin films** C.2. 4  
Rupp G. M., Limbeck A. and Fleig J.  
Rupp G. M., Vienna University of Technology; Limbeck A., Vienna University of Technology; Fleig J., Vienna University of Technology
- 15:40 **Evaluation of Highly Active Perovskites for the Oxygen Reduction Reaction with Single Crystal Thin Films Prepared by Pulsed Laser Deposition** C.2. 5  
Dengjie Chen, Chi Chen, Francesco Ciucci  
Department of Mechanical and Aerospace Engineering, The Hong Kong University of Science and Technology, Hong Kong, SAR China.
- 16:00 **BREAK**
- 16:30 **Ion transport in SrTiO<sub>3</sub> thin films under bias load** C.2. 6  
J. Fleig, S. Huber, K. Langer-Hansel, H. Hutter, G. Fafilek  
Institute of Chemical Technologies and Analytics, TU Vienna, Austria
- 17:00 **Oxygen Transport in Epitaxial Thin Film Cathode for Solid Oxide Fuel Cells** C.2. 7  
Kiyong Ahn, Hyungchul Kim, Ho-Il Ji, Jongsup Hong, Kyung Joong Yoon, Ji-Won Son, Byung-Kook Kim and Jong-Ho Lee  
High-Temperature Energy Materials Research Center, Korea Institute of Science and Technology Seoul 136-791, Republic of Korea
- 17:20 **Enhanced Oxygen Surface Reaction in (Ba<sub>0.5</sub>Sr<sub>0.5</sub>)(Co<sub>0.8</sub>Fe<sub>0.2</sub>)O<sub>3-δ</sub> by Nanoscaled (La<sub>0.6</sub>Sr<sub>0.4</sub>)CoO<sub>3-δ</sub> Functional Layer** C.2. 8  
L.-S. Unger<sup>1</sup>, M. Meffert<sup>2</sup>, C. Niedrig<sup>1</sup>, H. Störmer<sup>2</sup>, W. Menesklou<sup>1</sup>, S. F. Wagner<sup>1</sup>, D. Gerthsen<sup>2</sup>, E. Ivers-Tiffée<sup>1</sup>  
<sup>1</sup> Institut für Werkstoffe der Elektrotechnik (IWE), Karlsruher Institut für Technologie (KIT), 76131 Karlsruhe/Germany <sup>2</sup> Laboratorium für Elektronenmikroskopie (LEM), Karlsruhe Institut für Technologie (KIT), 76131 Karlsruhe/Germany [lan.unger@kit.edu](mailto:lan.unger@kit.edu)

POSTER SESSION 1

- 17:45 **First principles modeling of Ag adsorption on the LMO[001] MnO<sub>2</sub>- and LaO-terminated surfaces.** C/P1 1  
A.U. Abuova<sup>1</sup>, T.M. Inerbaev<sup>1</sup>, A.T. Akilbekov<sup>1</sup>, Yu. A. Mastrikov<sup>2,3</sup>, E. A. Koto-min<sup>2,4</sup>  
<sup>1</sup> L.N. Gumilyov Eurasian National University, Mirzoyan str.2, Astana, Kazakhstan <sup>2</sup> Institute of Solid State Physics, University of Latvia, Kengaraga str. 8, Riga, Latvia <sup>3</sup> Materials Science and Engineering Dept., University of Maryland, College Park, USA <sup>4</sup> Max Planck Institute for Solid State Research, Heisenbergstr.1, Stuttgart, Germany