



European Materials Research Society



# Spring Meeting 2018

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## SYMPOSIUM R

**Solid state ionics:  
advanced functional materials for solid state devices**

Symposium Organizers :

**Albert TARACON**, IREC, Barcelona, Spain

**David S. MEBANE**, West Virginia University, USA

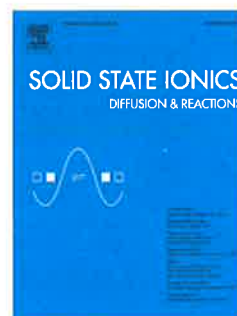
**Mónica BURRIEL**, LMGP, CNRS, Grenoble-INP, France

**Regina DITTMANN**, Forschungszentrum Juelich, Germany

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# SURFACE

*UHV+PLD+Laser technology - always one step ahead*



- 14:00 **Identification of Actual Strain-induced Effect on Fast Ion Conduction in Thin Film Electrolyte** R P2.9  
Jong-Ho Lee, Junsung Ahn, Ho Won Jang, Si-Won Kim, Mansoo Park, Hoil Ji, Hyoungchul Kim, Kyung Joong Yoon, Ji-Won Son  
J-H Lee, J. Ahn, S.-W. Kim, M. Park, H. Ji, H. Kim, K. J. Yoon, J.-W. Son (High-temperature Energy Materials Research Center, KIST, Seoul 02792, Korea), H. W. Jang (Department of Materials Science & Engineering, Seoul National University, Seoul 08826, Korea)
- 14:00 **The cluster-assembled nanowires based on X12Y12 (X=Zn, Ga, Al, Y=O, N) clusters as high performance gas sensors** R P2.10  
Yongliang Yong  
1 College of Physics and Engineering, Henan Key Laboratory of Photoelectric Energy Storage Materials and Applications, Henan University of Science and Technology, Luoyang 471023, China 2 Kathleen Lonsdale Materials Chemistry, Department of Chemistry, University College London, 20 Gordon Street, London WC1H 0AJ, United Kingdom
- 14:00 **Investigation of the ultra-low conductivity in Fe:SrTiO<sub>3</sub> thin films prepared by pulsed laser deposition** R P2.11  
Maximilian Morgenbesser, Stefanie Taibl, Markus Kubicek, Alexander Viernstein, Andreas Limbeck, Jürgen Fleig  
TU Vienna, Institute of Chemical Technologies and Analytics, Getreidemarkt 9/164EC, 1060 Vienna, Austria
- 14:00 **Enhanced interface reactivity with nano-wrinkled functional layer for intermediate temperature solid oxide fuel cells** R P2.12  
Jongseo Lee, Sangyeon Hwang, Minwoo Ahn, Mingi Choi, Doyoung Byun\*, and Wonyoung Lee\*  
Departments of Mechanical Engineering, Sungkyunkwan University 2066 Seobu-ro, Jangan-gu, Suwon-si, Kyunggi-do, 16419, South Korea
- 14:00 **Effects of the clay loading on conductivity behavior of sulfonated polyetheretherketone (s-PEEK) electrolyte films** R P2.13  
Arbi FATTOUM, Amira SENDI, Alessandra CARBONE, Rolando PEDICINI  
RU: Materials Environment and Energy, faculty of sciences of Gafsa, Sidi Ahmed Zaroug 2180 Gafsa, Tunisia, CNR-ITAE, Polymer Electrolyte Fuel Cells and Hydrogen Storage, S. Lucia sopra Contesse, 5 - 98126 Messina, Italy
- 14:00 **Routes of oxygen diffusion in oxide ceramic materials La<sub>0.8</sub>Sr<sub>0.2</sub>MnO<sub>3</sub>±?** R P2.14  
Natalia Porotnikova (a, b), Lev Putilov (a), Vadim Eremin(a, b), Anna Khodimchuk(a, b), Maxim Ananyev(a, b)  
(a) Institute of High Temperature Electrochemistry, Laboratory of Solid Oxide Fuel Cells, Russia (b) Ural Federal University named after the first President of Russia B.N.Yeltsin, Russia
- 14:00 **Influencing the Oxygen Surface Exchange Reaction on Ceria by Selected Dopants** R P2.15  
Maximilian Schaub, Rotraut Merkle, Joachim Maier  
MPI for Solid State Research, Heisenbergstr. 1, 70569 Stuttgart, Germany
- 14:00 **Influence of B-site doping with Ti and Nb on microstructural characteristics and phase constitution of BSCF** R P2.16  
Virginia Wilde<sup>1</sup>, Lana-Simone Unger<sup>2</sup>, Matthias Meffert<sup>1</sup>, Lukas Grünewald<sup>1</sup>, Heike Störmer<sup>1</sup>, Stefan Wagner<sup>2</sup>, Ellen Ivers-Tiffée<sup>2</sup>, Dagmar Gerthsen<sup>1</sup>  
<sup>1</sup>Karlsruhe Institute of Technology (KIT), Laboratory for Electron Microscopy (LEM), Engesserstraße 7, 76131 Karlsruhe, Germany, <sup>2</sup>Karlsruhe Institute of Technology (KIT), Institute for Applied Materials (IAM-WET), Adenauerring 20b, 76131 Karlsruhe, Germany
- 14:00 **Ca<sub>3</sub>Co<sub>4</sub>O<sub>9</sub> ? electrodes for intermediate temperature fuel cells with BaCe(Zr)O<sub>3</sub> proton-conducting electrolytes** R P2.17  
E. Pikalova (a,b), M. Koroleva (c), A. Kolchugin (a,b), D. Osinkin (a,b), J. Lyagaeva (a,b)  
(a) Institute of High-Temperature Electrochemistry, UB RAS, 620137, Yekaterinburg, Russia, (b) Ural Federal University, 620002, Yekaterinburg, Russia, (c) Institute of chemistry, Komi SC UB RAS, 167982, Syktyvkar, Russia,
- 14:00 **Effect of Bi<sub>2</sub>O<sub>3</sub> on sealing interface of BaO-SiO<sub>2</sub>-B<sub>2</sub>O<sub>3</sub> glass-ceramics in solid oxide fuel cells** R P2.18  
Jiratchaya Ayawanna<sup>1\*</sup>, Nattapol Laorodphan<sup>2</sup>, Kamonwan Ruangsrijan<sup>2</sup>  
1 School of Ceramic Engineering, Suranaree University of Technology, Muang, Nakhon Ratchasima 30000, Thailand, 2 Department of Industrial Chemistry and Textile Technology, Faculty of Science, Maejo University, 63 Moo 4, Nongharn, Sansai, Chiang Mai 50290, Thailand.