Final Program

Wednesday, January 30, 2019

10:50 AM
(ICACC-S2-032-2019) Development of bioinspired SiC/Al coatings with superwettability
P. Hernandez*, E. Lopez-Honorato*
1. CONESTAV, Mexico

11:10 AM
(ICACC-S2-033-2019) Tunable functionality of high entropy carbide thin films via carbon stoichiometry
1. University of Virginia, Mechanical & Aerospace Engineering, USA
2. The Pennsylvania State University, Materials Science & Engineering, USA
3. North Carolina State University, Materials Science & Engineering, USA

11:30 AM
(ICACC-S2-034-2019) Influence of pulsed high-intensity ion and electron beams on the optical and mechanical properties of Al-Si-N nanocomposite coatings
1. Tomsk Polytechnic University, Russian Federation
2. University of West Bohemia, Czechia

11:50 AM
(ICACC-S2-035-2019) Tailoring the wettability of hydrophobic ceramic coatings fabricated by solution precursor plasma spray process
P. Xu*, T. W. Coyle*, L. Pershin, J. Mostaghimi
1. University of Toronto, Department of Mechanical and Industrial Engineering, Canada
2. University of Toronto, Department of Materials Science and Engineering, Canada

Multifunctional Protective Coatings: Processing, Microstructure and Properties II
Room: Tomoka B
Session Chair: Eugene Medvedovski, Consultant

1:30 PM
(ICACC-S2-036-2019) Titanium dioxide coatings engineered by HVSPFS processing with optimized injectors and combustion chambers
M. H. Blum*, R. Gadov*, A. Killinger
1. University of Stuttgart, Institute for Manufacturing Technologies of Ceramic Components and Composites, Germany

1:50 PM
(ICACC-S2-037-2019) Two-step Fabrication of F-Plasma Resistant YOF coating with uniform chemical composition
S. Lee*, Y. Oh, S. Park
1. Korea Institute of Ceramic Engineering and Technology (RICET), Republic of Korea

2:10 PM
(ICACC-S2-038-2019) Processing of an organosilazane-based glass/ZrO2 composite coating system by laser pyrolysis
1. University of Bayreuth, Ceramic Material Engineering, Germany
2. Bayerisches Laserzentrum GmbH, Germany

2:30 PM
(ICACC-S2-039-2019) Sintering and hardness of glass–zircon GMC coatings
J. Amorós*, A. Moreno*, E. Blasco
1. University Jaume I, Instituto de Tecnología Cerámica, Spain

2:50 PM
(ICACC-S2-040-2019) Fabrication and Microstructure Development of Dense Double-layer γ-Y2Si2O7/Y2O3-Al2O3-SiO2 Glass Coating on Porous SiN_x Substrate
X. Fan*, H. Wang, M. Niu, Y. Wang
1. Xian Jiaotong University, China

S3: 16th International Symposium on Solid Oxide Cells (SOC): Materials, Science and Technology

Air Electrode Performance and Durability
Room: Crystal
Session Chair: Alexander Opitz, Vienna University of Technology
9:00 AM
(ICACC-S3-023-2019) Enhancing SOFC Electrochemical Performance with Nanocarbon Prepared via in situ Carbon Templating
S. B. Lee*, S. Lee*, M. D. Gross*
1. Wake Forest University, Chemistry, USA
2. Wake Forest University, Engineering, USA
3. DOE National Energy Technology Lab, USA

9:20 AM
(ICACC-S3-024-2019) Degradation Mechanism Studies of Ba-Fe-O infiltrated LSM/YSZ Solid Oxide Fuel Cell Operated Under Humidified Air
1. DOE National Energy Technology Laboratory, AECOM, USA
2. West Virginia University, Department of Mechanical and Aerospace Engineering, USA
3. DOE National Energy Technology Laboratory, USA

9:40 AM
(ICACC-S3-025-2019) Electrochemical impedance spectroscopy of (La, Sr)Ni0.5Mn1.5O4+δ
Y. Sada*, S. Skinner
1. Ben-Gurion University of the Negev, Material Engineering, Israel
2. Imperial College, Material Engineering, United Kingdom

10:00 AM
Break

Fuel Electrode Performance and Durability
Room: Crystal
Session Chair: Scott Barnett, Northwestern Univ

10:20 AM
(ICACC-S3-026-2019) Revisiting hydrogen oxidation kinetics on Ni/YSZ: Bridging the gap between pattern and cermet electrodes (Invited)
A. K. Opitz*
1. Vienna University of Technology, Christian-Doppler Laboratory for Interfaces in Metal-Supported Electrochemical Energy Converters, Austria

10:50 AM
(ICACC-S3-027-2019) Development of Anodes with High Resistance to Coking for Solid Oxide Fuel Cells (Invited)
A. Manthiram*, B. Lai, D. Yoon
1. University of Texas, Austin, Materials Science and Engineering, USA

11:20 AM
(ICACC-S3-029-2019) Nanostructured anode with extremely low Ni content for Redox cycle tolerance of SOFC
J. Park*, J. Lee*, K. Yoon, H. Kim, H. Je, S. Han*, J. Son*
1. Korea Institute of Science and Technology, Republic of Korea
2. Korea Advanced Institute of Science and Engineering (KAIST), Republic of Korea

11:40 AM
(ICACC-S3-030-2019) The study of SOFC Roll with an exsolved nickel anode
K. M. Nowicki*, P. Connor*, J. Yue*, M. D. Gross*
1. University of St Andrews, Chemistry, United Kingdom

*Denotes Presenter