Room I #204 **10:30-12:30**

[Tu-I1] Hybrid Materials and Processing Technologies III
Session Chairs:
Junghoon Lee (Pukyong Nat'l Univ., Korea),
Jong Min Yuk (KAIST, Korea)

Tu-I1-1 [Invited] 10:30-11:00

Omniphobicity and Corrosion-Resistance of Oil-Impregnated Nanoporous Anodic Oxide Layer of Aluminum

Junghoon Lee[1] and Chang-Hwan Choi[2]
[1]Pukyong Nat'l Univ., Korea, [2]Stevens Inst. of Tech., USA

Tu-I1-2 11:00-11:15

Using Magnetic Fields to Design and Build Transparent, Conducting and Flexible Graphene-based Composites

Hortense Le Ferrand
Nanyang Technological Univ., Singapore

Tu-I1-3 11:15-11:30

Plasma-Assisted Multi-Metallic Oxyhydroxides for Efficient Electrocatalytic Oxygen Evolution Reaction

Byeong Cheul Moon and Jeung Ku Kang
KAIST, Korea

Tu-I1-4 [Invited] 11:30-12:00

In-Situ Electron Microscopy of Energy Materials

Jong Min Yuk
KAIST, Korea

Tu-I1-5 12:00-12:15

3-Dimensional Nanorod & Nano Array Structure using Nano-mold Process

Je Won Kim
Namseoul Univ., Korea

Tu-I1-6 12:15-12:30

Pressure-Light Bimodal Sensor based on Long-Term Stable $MAPbI_3$ Thin Films by CVD

Ji-Ho Eom[1], Hye-Jin Kim[2], and Soon-Gil Yoon[1]
[1]Chungnam Nat'l Univ., Korea, [2]ETRI, Korea

Room J #205 **10:30-12:30**

[Tu-J1] Fuel Cell & Electrolyzer Materials I
Session Chairs:
Rak-Hyun Song (KIER, Korea),
Hyungjun Kim (KAIST, Korea)

Tu-J1-1 10:30-10:45

Experimental Analysis on Operation Conditions of Open Cathode Polymer Electrolyte Fuel Cells

Beom Jun Kim[1], Jun-Young Kang[2], Jeong-Wook Yang[2], and Young Gi Yoon[1]
[1]KIER, Korea, [2]Chonbuk Nat'l Univ., Korea

Tu-J1-2 [Invited] 10:45-11:15

First-Principles Computational and Machine Learning Approach to Design Highly Functional Catalysts Materials for Fuel Cells

Byungchan Han, Seunghyo Noh, and Jeemin Hwang
Yonsei Univ., Korea

Tu-J1-3 11:15-11:30

Theoretical Insights on the Electrode-Electrolyte Microstructure in the Proton Exchange Membrane Fuel Cells

Chi-Young Jung, Hyunguk Choi, Suwon Choi, Younggi Yoon, and Tae-Young Kim
KIER, Korea

Tu-J1-4 11:30-11:45

Design of Promotion Effects of CeO_x on Pt Electrodes in PEFCs

Toshiyuki Mori[1], Shipra Chauhan[1], Akira Suzuki[1], Shunya Yamamoto[2], Tomohiro Kobayashi[3], and Noriko Isaka[1]
[1]NIMS, Japan, [2]Nat'l Inst. for Quantum and Radiological Sci. and Tech., Japan, [3]RIKEN, Japan

Tu-J1-5 [Invited] 11:45-12:15

Phase Transformation of Metal Phosphide Nanoparticles for Hydrogen Evolution Reaction Catalysis

Don-Hyung Ha
Chung-Ang Univ., Korea

Tu-J1-6 12:15-12:30

A Technological and Economic Points of Power to Gas Project

Wonchul Cho, Hyun-Seok Cho, Sang-Kyung Kim, and Chang Hee Kim
KIER, Korea

Tu-J1-7 12:30-12:45

Efficient Photoelectrochemical Hydrogen Generation using Molybdenum Disulfide Film on Black Si Photocathode via Wafer-Scale Atomic Layer Deposition

Dae Woong Kim, Dae Hyun Kim, and Tae Joo Park
Hanyang Univ., Korea