

## Abstracts for Poster Presentations

10S	Leonard Gura - Fast Oxygen Diffusion Captured with Spiral Scanning Tunneling Microscopy	Virtual
20S	Yongman Kim - Atomic-Scale Observations of the Manganese Porphyrin/Au Catalyst Interface Under the Electrocatalytic Process Revealed with Electrochemical Scanning Tunneling Microscopy	In-person/ Virtual
30S	Youngjae Kim - Direct Observation of Oxidation Processes on Cu(111) under Dry and Humid Conditions	In-person/ Virtual
40S	Daeho Kim - Operando Investigation of Strong Metal-support Interaction at the Interface of Pt-Co <sub>3</sub> O <sub>4</sub> during CO Oxidation	In-person/ Virtual
50S	Yongchan Jeong - Electrochemical Scanning Tunneling Microscopy Study of CO <sub>2</sub> Reduction in Cu-phthalocyanine on Au(111)	In-person/ Virtual
60S	Beomgyun Jeong - APXPS Study on Carbon Contamination of Anatase TiO <sub>2</sub> (111) Surface under Hydrated Environment	In-person/ Virtual
70S	Moonjung Jung - The Study of Surface Chemical/Electronic Dynamics on Pt-3d Transition Metal Alloys, Pt <sub>3</sub> M (M=V,Ti), during CO Oxidation with AP-XPS	In-person/ Virtual
8MC	Sebastian Kaiser - Forming a Reactive Oxygen Species by Lattice Oxygen Migration onto Small Size-selected Pt Clusters	Virtual
9MC	Seunghwa Hong - Facet-dependent Strong Metal-support Interaction of Pt Nanoparticle on Morphology Controlled Cu <sub>2</sub> O for CO Oxidation	In-person/ Virtual
10MC	Yejin Song - Investigation of Strong Metal-support Interaction at the Pt-CoO Interface in Pt-Co Bimetallic Nanoparticle	In-person/ Virtual
11CT	Beomjoon Jeon - Direct Observation of Electron Coupling Effect with Monitoring Hot Electron Behavior on Au@Pd Core-Shell Nanocatalysts	In-person/ Virtual
12CT	Gyuhoo Han - Effect of Support Oxidation State on Catalytic Activity of Pt/TiO <sub>x</sub> Catalysts	In-person/ Virtual
13CT	Uzma Anjum - Catalytic Activity of Pd-doped ZnZr Oxide Catalyst for CO <sub>2</sub> Hydrogenation	Virtual
14CT	Taek-Seung Kim - Catalytically Active Au-CuO <sub>x</sub> Heterostructure Driven by Oxygen-induced Surface Restructuring	In-person/ Virtual
15CT	Yohan Kim - Alteration of Oxygen Evolution Mechanisms in Layered LiCoO <sub>2</sub> Structures by Intercalation of Alkali Metal Ions	Virtual
16CT	Thanh Duc Le - Dual Single-atoms (Pt, Ni) Decorated Pt-Ni Alloy Nanoparticles Electrocatalysts for Improving ORR in Polymer Electrolyte Membrane Fuel Cells	In-person/ Virtual
17CT	Eunji Kang - Highly Reactive Interface Confined Pt-Single Atoms: Pt/CeO <sub>x</sub> -TiO <sub>2</sub>	In-person/ Virtual
18CT	Jieun Yun - Interspersing CeO <sub>x</sub> Clusters to the Pt-TiO <sub>2</sub> Interfaces for Catalytic Activation of Pt Nanoparticles for CO Oxidation	In-person/ Virtual
19CT	Woonghyeon Park - DFT/ML-Hybrid Design of Single Atom Catalysts for Oxygen Evolution Reaction	Virtual
20CT	Gi Joo Bang - Trends and Discovery of Methane Oxidation Catalysts under Emission Conditions	Virtual
21CT	Kasala Prabhakar Reddy - Tuning the CO <sub>2</sub> Hydrogenation Selectivity via Cu-Ni Core-shell Design: a APXPS Investigation of Reaction-driven Restructuring	In-person/ Virtual

22CT	Heeyoung Kim - Photoelectrochemical Hydrogen Evolution Using Phosphorus-doped g-C <sub>3</sub> N <sub>4</sub> Hollow Nanostructure	In-person/ Virtual
23CS	Nisa Ulumuddin - Investigating Effects of Electric Fields toward CO <sub>2</sub> Activation on YSZ (111)	Virtual
24CS	Hojoon Lim - Nature of Surface Space Charge Layer on Undoped SrTiO <sub>3</sub> (001)	In-person/ Virtual
25CS	Baptiste Chatelain - Charging Single Metal Nanoparticles Grown on Thin Alumina Films by the AFM Tip	Virtual
26WT	Baptiste Chatelain - The Water Forming Reaction on Palladium Nanoparticles Studied by Kelvin Probe Force Microscopy	Virtual
27WT	Nassar Doudin - Transition Metal -Silicates at the 2-D Limit	Virtual
28WT	Zhaozong Sun - Anisotropic Iron-doping Patterns and Hydroxylation of Mixed Co-Fe Oxide Bilayer Nanoislands on Au(111)	Virtual
29WT	Jameel Imran - Structural Determination of the ZnO (1010)/Liquid Water Interface	Virtual
30WT	Tae Won Go - Lubricity of Ice-like Confined Water On Hydrophilic Surfaces Observed by Atomic Force Microscopy at High Humidity Conditions	In-person/ Virtual
31WT	Kyoungjae Song - Plasmonic Hot Hole-Driven Water Splitting on Au Nanoprisms/P-Type GaN	In-person/ Virtual
32WT	Sang Hoon Kim - Inspecting Surface Properties of Ni <sub>3</sub> CO <sub>2</sub> S <sub>4</sub> and Ni <sub>2</sub> Co <sub>2</sub> S <sub>4</sub> Spinel Architectures for Catalyzing *OH Production	In-person/ Virtual
33WT	Ariel Whitten - Deconvoluting XPS Spectra in Lanthanum-Based Perovskites: An Analysis from First Principles	Virtual
34WT	Jaeyoung Kim - A Density Functional Theory Study on the Adhesion of Catechol onto Wet Silica Surface	In-person/ Virtual
35WT	Seyong Choi - Phase, Structure and Dynamics of the Hydration Layer Probed by Atomic Force Microscopy	In-person/ Virtual
36EM	Florian Ellinger - Polaronic Properties of Perovskite Surfaces	Virtual
37EM	Mincheol Kang - Pt/Ag/TiO <sub>2</sub> Plasmonic Nanodiodes for Extraction of Surface Plasmon-driven Chemicurrent	In-person/ Virtual
38EM	Yujin Park - Elongated Lifetime and Enhanced Flux of Photo-induced Hot Electrons on a Perovskite Modified Plasmonic Nanodiode	In-person/ Virtual
39EM	Dooho Lee - Phase-Dependent Friction of Exfoliated MoX <sub>2</sub> (X: S, Te) Atomic Layers	In-person/ Virtual
40EM	Kyungmin Kim - Manipulation of Metal-insulator Transition in VO <sub>2</sub> Thin Films by Using Step- terrace Orientations of TiO <sub>2</sub> (110) Substrates	Virtual
41EM	J. Paier - Hydride Species in Reduced Ceria: Theory Compared with Experiment	Virtual
42EM	Giada Franceschi - The Link between Surface Diffusion and Surface Reconstructions on Oxides	Virtual