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Education:

PhD (2008) Graduate School of Science, Kyushu University, Japan

Experience:

2022- Associate Professor, Research Center for Negative Emissions Technologies, Kyushu University

2020. Researcher, Technology Development Department, Oita Complex, SHOWA DENKO K.K.

2015. PRESTO Researcher, Japan Science and Technology

2012. Specific Associate Professor, Division of Chemistry, Graduate School of Science, Kyoto University

2009. Specific Assistant Professor, Institute for Integrated Cell-Material Sciences, Kyoto University

2009. Post Doctoral Fellow, Department of Biomedical Engineering, Washington University in St. Louis

Selective Honors & Awards:

1. The Young Scientists' Prize, The Commendation for Science and Technology by the Minister of Education, Culture, Sports, Science and Technology, Japan (2016)
2. International Association of Advanced Materials Scientist Medal for the year 2016 (2016)
3. The Chemical Society of Japan Award for Young Chemists (2015)

Research Areas:

Nanomaterials, Metal-organic Frameworks (MOFs), Catalysis

Selective Publications:

1. "Fabrication of Integrated Copper-Based Nanoparticles/Amorphous Metal–Organic Framework by a Facile Spray-Drying Method: Highly Enhanced CO₂ Hydrogenation Activity for Methanol Synthesis", *Angew. Chem. Int. Ed.*, 60, 22283–22288 (2021).
2. "Significant Enhancement of Hydrogen Evolution Reaction Activity by Negatively Charged Pt through Light Doping of W", *J. Am. Chem. Soc.*, 142, 17250–17254 (2020).
3. "Copper Substitution Induced CO Adsorption Site Change of a Ruthenium Catalyst for Highly Enhanced CO Oxidation Activity", *Angew. Chem. Int. Ed.*, 58, 2230–2235 (2019)
4. "Creation of Novel Solid-solution Alloy Nanoparticles on the Basis of Density-of-states Engineering by Interelement Fusion", *Acc. Chem. Res.*, 48, 1551–1559 (2015)
5. "Hydrogen Storage in Pd Nanocrystals Covered with a Metal–organic Framework", *Nat. Mater.*, 13, 802–806 (2014).