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Degree	<ul style="list-style-type: none"> • 2009 Yonsei University, Department of Ceramic Engineering (B.S) • 2013 Yonsei University, Department of Advanced Materials Science and Engineering (Ph.D)
Experience	<ul style="list-style-type: none"> • 2018~Present Incheon National University, Assistant Professor • 2016~2018 Korea Institute of Energy Research, Senior Researcher • 2013~2016 University of St. Andrews, Research Fellow
Major	<ul style="list-style-type: none"> • Fuel Cell, Ceramic Materials, Electrochemistry, Energy Materials
Teaching	<ul style="list-style-type: none"> • Phase Transformation, Semiconductor Materials
Representative Research	<ul style="list-style-type: none"> • “Switching on Electrocatalytic Activity in Solid Oxide Cells”, Nature, 537, 528–531 (2016) • “Nano-composite structural Ni-Sn alloy anode for high performance and durability of direct methane-fueled SOFCs”, Journal of Materials Chemistry A, 3, 13801–13806 (2015)
Researches	<ul style="list-style-type: none"> • “Direct methane fueled solid oxide fuel cells via catalytic partial oxidation enabling complete coking tolerance of Ni based anodes”, Journal of Power Sources, 345, 30–40 (2017) • “Corn-cob like Nanofibres as Cathode Catalysts for an Effective Microstructure Design in Solid Oxide Fuel Cells”, Journal of Materials Chemistry A, 5, 3966–3973 (2017) • “Switching on Electrocatalytic Activity in Solid Oxide Cells”, Nature, 537, 528–531 (2016) • “Enhancement of Redox Stability and Electrical Conductivity by Doping Various Metals on Ceria, Ce_{1-x}M_xO_{2-δ} (M=Fe, Ni, Cu, Co, Mn, Ti, Zr)”, International Journal of Hydrogen Energy, 40 (35), 12003–12008 (2015) • “Nano-composite structural Ni-Sn alloy anode for high performance and durability of direct methane-fueled SOFCs”, Journal of Materials Chemistry A, 3, 13801–13806 (2015) • “Synthesis and Characterization of NiO/GDC-GDC Dual Nano-composite Powders for High-performance Methane Fuel Solid Oxide Fuel Cells”, International Journal of Hydrogen Energy, 37 (15), 11351–11359 (2012)
Current Research	<ul style="list-style-type: none"> • Solid oxide fuel/electrolysis cell (SOFC/EC), metal-air battery, reforming catalyst