Wonyoung Lee

List of Publications by Year in descending order

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54 papers	2,190 citations	279798 23 h-index	214800 47 g-index
54 all docs	54 docs citations	54 times ranked	2813 citing authors

#	Article	IF	Citations
1	Cation Size Mismatch and Charge Interactions Drive Dopant Segregation at the Surfaces of Manganite Perovskites. Journal of the American Chemical Society, 2013, 135, 7909-7925.	13.7	468
2	Anionic defect engineering of transition metal oxides for oxygen reduction and evolution reactions. Journal of Materials Chemistry A, 2019, 7, 5875-5897.	10.3	252
3	Atomic Layer Deposition of Al-doped ZnO Films: Effect of Grain Orientation on Conductivity. Chemistry of Materials, 2010, 22, 4769-4775.	6.7	147
4	Oxygen Surface Exchange at Grain Boundaries of Oxide Ion Conductors. Advanced Functional Materials, 2012, 22, 965-971.	14.9	127
5	Atomic layer deposition of thin-film ceramic electrolytes for high-performance fuel cells. Journal of Materials Chemistry A, 2013, 1, 12695.	10.3	88
6	Enhanced oxygen exchange and incorporation at surface grain boundaries on an oxide ion conductor. Acta Materialia, 2012, 60, 1-7.	7.9	87
7	ZnO decorated flexible and strong graphene fibers for sensing NO2 and H2S at room temperature. Sensors and Actuators B: Chemical, 2020, 308, 127690.	7.8	72
8	Exceptionally high performance of protonic ceramic fuel cells with stoichiometric electrolytes. Energy and Environmental Science, 2021, 14, 6476-6483.	30.8	58
9	Area-Selective Atomic Layer Deposition of Lead Sulfide: Nanoscale Patterning and DFT Simulations. Langmuir, 2010, 26, 6845-6852.	3.5	55
10	Synthesis of silver-loaded ZnO nanorods and their enhanced photocatalytic activity and photoconductivity study. Photochemical and Photobiological Sciences, 2019, 18, 1503-1511.	2.9	48
11	A circular membrane for nano thin film micro solid oxide fuel cells with enhanced mechanical stability. Energy and Environmental Science, 2015, 8, 3374-3380.	30.8	46
12	Nanofiber-based composite cathodes for intermediate temperature solid oxide fuel cells. Journal of Power Sources, 2017, 353, 176-182.	7.8	44
13	Suppression of Cation Segregation in (La,Sr)CoO_{3â^'Î´} by Elastic Energy Minimization. ACS Applied Materials & Interfaces, 2018, 10, 8057-8065.	8.0	44
14	Engineering of Charged Defects at Perovskite Oxide Surfaces for Exceptionally Stable Solid Oxide Fuel Cell Electrodes. ACS Applied Materials & Interfaces, 2020, 12, 21494-21504.	8.0	43
15	Atomic layer deposition of yttria-stabilized zirconia thin films for enhanced reactivity and stability of solid oxide fuel cells. Energy, 2016, 116, 170-176.	8.8	42
16	Suppressing cation segregation on lanthanum-based perovskite oxides to enhance the stability of solid oxide fuel cell cathodes. RSC Advances, 2016, 6, 69782-69789.	3.6	41
17	MEMS-based thin-film solid-oxide fuel cells. MRS Bulletin, 2014, 39, 798-804.	3.5	39
18	Controlling the Diameter of Electrospun Yttriaâ€Stabilized Zirconia Nanofibers. Journal of the American Ceramic Society, 2016, 99, 3146-3150.	3.8	32

#	Article	IF	Citations
19	Electrospun yttria-stabilized zirconia nanofibers for low-temperature solid oxide fuel cells. International Journal of Hydrogen Energy, 2017, 42, 15903-15907.	7.1	30
20	Effects of surface chemistry and microstructure of electrolyte on oxygen reduction kinetics of solid oxide fuel cells. Journal of Power Sources, 2015, 295, 74-78.	7.8	27
21	Electrostatic spray deposition of chemochromic WO3-Pd sensor for hydrogen leakage detection at room temperature. Sensors and Actuators B: Chemical, 2021, 327, 128930.	7.8	26
22	Nano-film coated cathode functional layers towards high performance solid oxide fuel cells. Journal of Materials Chemistry A, 2018, 6, 11811-11818.	10.3	25
23	One-step fabrication of composite nanofibers for solid oxide fuel cell electrodes. Journal of Power Sources, 2019, 434, 226749.	7.8	24
24	Effects of water atmosphere on chemical degradation of PrBa0.5Sr0.5Co1.5Fe0.5O5+Î´ electrodes. Ceramics International, 2021, 47, 7790-7797.	4.8	24
25	Tailoring defect chemistry at interfaces for promoted oxygen reduction reaction kinetics. Journal of Materials Chemistry A, 2020, 8, 23313-23322.	10.3	20
26	Reduction and oxidation of oxide ion conductors with conductive atomic force microscopy. Nanotechnology, 2009, 20, 445706.	2.6	19
27	Scanning tunneling spectroscopy of lead sulfide quantum wells fabricated by atomic layer deposition. Nanotechnology, 2010, 21, 485402.	2.6	18
28	Enhanced charge transfer with Ag grids at electrolyte/electrode interfaces in solid oxide fuel cells. Journal of Materials Chemistry A, 2016, 4, 4420-4424.	10.3	18
29	Designing Carbon/Oxygen Ratios of Graphene Oxide Membranes for Proton Exchange Membrane Fuel Cells. Journal of Nanomaterials, 2019, 2019, 1-9.	2.7	18
30	Enhanced interface reactivity by a nanowrinkled functional layer for intermediate-temperature solid oxide fuel cells. Journal of Materials Chemistry A, 2019, 7, 21120-21127.	10.3	17
31	Electrospun composite nanofibers for intermediate-temperature solid oxide fuel cell electrodes. Ceramics International, 2020, 46, 6006-6011.	4.8	17
32	Rational Design of a Metallic Functional Layer for High-Performance Solid Oxide Fuel Cells. ACS Applied Energy Materials, 2019, 2, 4059-4068.	5.1	16
33	Pd-WO3 chemiresistive sensor with reinforced self-assembly for hydrogen detection at room temperature. Sensors and Actuators B: Chemical, 2022, 368, 132236.	7.8	15
34	Enhancement of oxygen reduction reaction kinetics using infiltrated yttria-stabilized zirconia interlayers at the electrolyte/electrode interfaces of solid oxide fuel cells. Journal of Power Sources, 2020, 472, 228606.	7.8	14
35	Nanoscale impedance and complex properties in energy-related systems. MRS Bulletin, 2012, 37, 659-667.	3.5	13
36	A hydrogel-assisted GDC chemical diffusion barrier for durable solid oxide fuel cells. Journal of Materials Chemistry A, 2021, 9, 11683-11690.	10.3	13

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37	Modifying defect structures at interfaces for high-performance solid oxide fuel cells. Journal of the European Ceramic Society, 2020, 40, 3089-3097.	5.7	12
38	Effects of Grain Boundaries at the Electrolyte/Cathode Interfaces on Oxygen Reduction Reaction Kinetics of Solid Oxide Fuel Cells. Bulletin of the Korean Chemical Society, 2017, 38, 423-428.	1.9	11
39	Fluid Mechanical Approaches for Rational Design of Infiltrated Electrodes of Solid Oxide Fuel Cells. International Journal of Precision Engineering and Manufacturing - Green Technology, 2019, 6, 53-61.	4.9	10
40	Controlling oxygen defect chemistry at electrolyte surface of intermediate temperature solid oxide fuel cells. Journal of Power Sources, 2021, 509, 230351.	7.8	8
41	First-Principles Study of Enhanced Oxygen Incorporation Near the Grain Boundary on Yttria-Stabilized Zirconia. Science of Advanced Materials, 2016, 8, 196-200.	0.7	8
42	Porous an hollow nanofibers for solid oxide fuel cell electrodes. Korean Journal of Chemical Engineering, 2020, 37, 1371-1378.	2.7	7
43	Enhanced Cr tolerance of perovskite oxide via Gd0.1Ce0.9O2 surface modifications. Korean Journal of Chemical Engineering, 2020, 37, 1346-1351.	2.7	7
44	Encapsulation of Metal Catalysts for Stable Solid Oxide Fuel Cell Cathodes. International Journal of Precision Engineering and Manufacturing - Green Technology, 2021, 8, 1529-1535.	4.9	7
45	Tuning the oxygen vacancy concentration in a heterostructured electrode for high chemical and electrochemical stabilities. Chemical Engineering Journal, 2022, 431, 134345.	12.7	7
46	Resistive-type lanthanum ferrite oxygen sensor based on nanoparticle-assimilated nanofiber architecture. Sensors and Actuators B: Chemical, 2020, 324, 128712.	7.8	6
47	Infiltrated thin film structure with hydrogel-mediated precursor ink for durable SOFCs. Scientific Reports, 2021, 11, 7109.	3.3	6
48	Sol-Gel Combustion-Assisted Electrostatic Spray Deposition for Durable Solid Oxide Fuel Cell Cathodes. Frontiers in Chemistry, 2022, 10, 873758.	3.6	6
49	NANOSCALE ELECTROCHEMISTRY IN ENERGY RELATED SYSTEMS USING ATOMIC FORCE MICROSCOPY. World Scientific Series in Nanoscience and Nanotechnology, 2013, , 317-340.	0.1	3
50	Atomic Layer Deposition of PbS-ZnS quantum wells for high-efficiency solar cells. , 2009, , .		2
51	Evaluation of fine particle removal capability of multi inner stage cyclone. Journal of Mechanical Science and Technology, 2019, 33, 2641-2649.	1.5	1
52	Enhanced Frictional Properties of NiO-Based Nanocomposites with the Addition of GDC. Tribology Letters, 2021, 69, 1.	2.6	1
53	Extended Replacement Cycle of Perfluorinated Compounds (PFCs) Gas Decomposition Catalysts Using Ca(OH)2 Adsorbent in Multi-Bed Reactor. Journal of the Korean Society for Precision Engineering, 2020, 37, 555-561.	0.2	1
54	Scanning tunneling microscopy of quantum confinement effects in lead sulfide thin films. , 2009, , .		0