

Jin Young Kim

List of Publications by Year in descending order

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67
papers

2,852
citations

172207

29
h-index

182168

51
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67
all docs

67
docs citations

67
times ranked

3888
citing authors

#	ARTICLE	IF	CITATIONS
1	Morphologyâ€Controlled Metal Sulfides and Phosphides for Electrochemical Water Splitting. <i>Advanced Materials</i> , 2019, 31, e1806682.	11.1	500
2	Niâ€NiO coreâ€shell inverse opal electrodes for supercapacitors. <i>Chemical Communications</i> , 2011, 47, 5214.	2.2	202
3	Hybrid layered double hydroxides as multifunctional nanomaterials for overall water splitting and supercapacitor applications. <i>Journal of Materials Chemistry A</i> , 2021, 9, 4528-4557.	5.2	98
4	Alkaline anion exchange membrane water electrolysis: Effects of electrolyte feed method and electrode binder content. <i>Journal of Power Sources</i> , 2018, 382, 22-29.	4.0	96
5	Activity Origin and Multifunctionality of Pt-Based Intermetallic Nanostructures for Efficient Electrocatalysis. <i>ACS Catalysis</i> , 2019, 9, 11242-11254.	5.5	96
6	Electrodeposited IrO ₂ /Ti electrodes as durable and cost-effective anodes in high-temperature polymer-membrane-electrolyte water electrolyzers. <i>Applied Catalysis B: Environmental</i> , 2018, 226, 289-294.	10.8	76
7	Costâ€Effective, Highâ€Performance Porousâ€Organicâ€Polymer Conductors Functionalized with Sulfonic Acid Groups by Direct Postsynthetic Substitution. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 16123-16126.	7.2	72
8	Innovative cathode flow-field design for passive air-cooled polymer electrolyte membrane (PEM) fuel cell stacks. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 11704-11713.	3.8	72
9	Toward Efficient Electrocatalytic Oxygen Evolution: Emerging Opportunities with Metallic Pyrochlore Oxides for Electrocatalysts and Conductive Supports. <i>ACS Central Science</i> , 2020, 6, 880-891.	5.3	71
10	Single-step fabrication of quantum funnels via centrifugal colloidal casting of nanoparticle films. <i>Nature Communications</i> , 2015, 6, 7772.	5.8	68
11	Musselâ€Inspired Polydopamineâ€Treated Reinforced Composite Membranes with Selfâ€Supported CeO _x Radical Scavengers for Highly Stable PEM Fuel Cells. <i>Advanced Functional Materials</i> , 2019, 29, 1806929.	7.8	66
12	Highly Stable Ptâ€Based Ternary Systems for Oxygen Reduction Reaction in Acidic Electrolytes. <i>Advanced Energy Materials</i> , 2020, 10, 2002049.	10.2	62
13	Modulating the Local Coordination Environment of Singleâ€Atom Catalysts for Enhanced Catalytic Performance in Hydrogen/Oxygen Evolution Reaction. <i>Small</i> , 2022, 18, e2105680.	5.2	56
14	Factors in electrode fabrication for performance enhancement of anion exchange membrane water electrolysis. <i>Journal of Power Sources</i> , 2017, 347, 283-290.	4.0	54
15	Structure-controlled graphene electrocatalysts for high-performance H ₂ O ₂ production. <i>Energy and Environmental Science</i> , 2022, 15, 2858-2866.	15.6	52
16	Multifunctional Nafion/CeO ₂ Dendritic Structures for Enhanced Durability and Performance of Polymer Electrolyte Membrane Fuel Cells. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 806-815.	4.0	51
17	Pt Dopant: Controlling the Ir Oxidation States toward Efficient and Durable Oxygen Evolution Reaction in Acidic Media. <i>Advanced Functional Materials</i> , 2020, 30, 2003935.	7.8	50
18	Investigation of electrolyte leaching in the performance degradation of phosphoric acid-doped polybenzimidazole membrane-based high temperature fuel cells. <i>Journal of Power Sources</i> , 2017, 363, 365-374.	4.0	49

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19	Tailoring ruthenium exposure to enhance the performance of fcc platinum@ruthenium core-shell electrocatalysts in the oxygen evolution reaction. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 16169-16178.	1.3	47
20	Hierarchically Assembled Cobalt Oxynitride Nanorods and N-Doped Carbon Nanofibers for Efficient Bifunctional Oxygen Electrocatalysis with Exceptional Regenerative Efficiency. <i>ACS Nano</i> , 2021, 15, 11218-11230.	7.3	45
21	Recent advances in non-precious group metal-based catalysts for water electrolysis and beyond. <i>Journal of Materials Chemistry A</i> , 2021, 10, 50-88.	5.2	44
22	High-yield electrochemical hydrogen peroxide production from an enhanced two-electron oxygen reduction pathway by mesoporous nitrogen-doped carbon and manganese hybrid electrocatalysts. <i>Nanoscale Horizons</i> , 2020, 5, 832-838.	4.1	40
23	Understanding synergistic metal-oxide interactions of <i>in situ</i> exsolved metal nanoparticles on a pyrochlore oxide support for enhanced water splitting. <i>Energy and Environmental Science</i> , 2021, 14, 3053-3063.	15.6	39
24	A conductive porous organic polymer with superprotonic conductivity of a Nafion-type electrolyte. <i>Journal of Materials Chemistry A</i> , 2017, 5, 17492-17498.	5.2	35
25	Enhanced CO ₂ reduction activity of polyethylene glycol-modified Au nanoparticles prepared via liquid medium sputtering. <i>Applied Catalysis B: Environmental</i> , 2018, 237, 673-680.	10.8	35
26	Development of porous Pt/IrO ₂ /carbon paper electrocatalysts with enhanced mass transport as oxygen electrodes in unitized regenerative fuel cells. <i>Electrochemistry Communications</i> , 2016, 64, 14-17.	2.3	34
27	Synergetic Structural Transformation of Pt Electrocatalyst into Advanced 3D Architectures for Hydrogen Fuel Cells. <i>Advanced Materials</i> , 2020, 32, e2002210.	11.1	33
28	Mn-Dopant Differentiating the Ru and Ir Oxidation States in Catalytic Oxides Toward Durable Oxygen Evolution Reaction in Acidic Electrolyte. <i>Small Methods</i> , 2022, 6, e2101236.	4.6	31
29	Effect of Catalyst Layer Ionomer Content on Performance of Intermediate Temperature Proton Exchange Membrane Fuel Cells (IT-PEMFCs) under Reduced Humidity Conditions. <i>Electrochimica Acta</i> , 2017, 224, 228-234.	2.6	30
30	Activity-stability benefits of Pt/C fuel cell electrocatalysts prepared via remote CeO ₂ interfacial doping. <i>Journal of Power Sources</i> , 2021, 496, 229798.	4.0	30
31	PtFe nanoparticles supported on electroactive Au-PANI core-shell nanoparticles for high performance bifunctional electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2017, 5, 13692-13699.	5.2	29
32	Hierarchical cobalt-nitride and -oxide co-doped porous carbon nanostructures for highly efficient and durable bifunctional oxygen reaction electrocatalysts. <i>Nanoscale</i> , 2017, 9, 15846-15855.	2.8	29
33	Role of surface steps in activation of surface oxygen sites on Ir nanocrystals for oxygen evolution reaction in acidic media. <i>Applied Catalysis B: Environmental</i> , 2022, 302, 120834.	10.8	29
34	Highly efficient and durable TiN nanofiber electrocatalyst supports. <i>Nanoscale</i> , 2015, 7, 18429-18434.	2.8	28
35	Polymeric graphitic carbon nitride nanosheet-coated amorphous carbon supports for enhanced fuel cell electrode performance and stability. <i>Applied Catalysis B: Environmental</i> , 2018, 237, 318-326.	10.8	28
36	Cost-effective porous-organic-polymer-based electrolyte membranes with superprotonic conductivity and low activation energy. <i>Journal of Materials Chemistry A</i> , 2020, 8, 1147-1153.	5.2	28

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37	Conformation-modulated three-dimensional electrocatalysts for high-performance fuel cell electrodes. <i>Science Advances</i> , 2021, 7, .	4.7	27
38	Interfacing RuO ₂ with Pt to induce efficient charge transfer from Pt to RuO ₂ for highly efficient and stable oxygen evolution in acidic media. <i>Journal of Materials Chemistry A</i> , 2021, 9, 14352-14362.	5.2	25
39	Dopants in the Design of Noble Metal Nanoparticle Electrocatalysts and their Effect on Surface Energy and Coordination Chemistry at the Nanocrystal Surface. <i>Advanced Energy Materials</i> , 2021, 11, 2100265.	10.2	25
40	Electrochemical impedance analysis with transmission line model for accelerated carbon corrosion in polymer electrolyte membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 15457-15465.	3.8	23
41	Perpendicularly stacked array of PTFE nanofibers as a reinforcement for highly durable composite membrane in proton exchange membrane fuel cells. <i>Nano Energy</i> , 2022, 101, 107581.	8.2	23
42	Post-assembly modification of polymeric composite membranes using spin drying for fuel cell applications. <i>Journal of Materials Chemistry A</i> , 2019, 7, 7380-7388.	5.2	19
43	Porous Strained Pt Nanostructured Thin-Film Electrocatalysts via Dealloying for PEM Fuel Cells. <i>Advanced Materials Interfaces</i> , 2020, 7, 1901326.	1.9	19
44	CeO ₂ (111) Surface with Oxygen Vacancy for Radical Scavenging: A Density Functional Theory Approach. <i>Journal of Physical Chemistry C</i> , 2020, 124, 20950-20959.	1.5	18
45	Effect of the Side-Chain Length in Perfluorinated Sulfonic and Phosphoric Acid-Based Membranes on Nanophase Segregation and Transport: A Molecular Dynamics Simulation Approach. <i>Journal of Physical Chemistry B</i> , 2020, 124, 1571-1580.	1.2	18
46	Hydrocarbon-based electrode ionomer for proton exchange membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 32856-32864.	3.8	18
47	Antioxidant technology for durability enhancement in polymer electrolyte membranes for fuel cell applications. <i>Materials Today</i> , 2022, 58, 135-163.	8.3	18
48	Transition metal alloying effect on the phosphoric acid adsorption strength of Pt nanoparticles: an experimental and density functional theory study. <i>Scientific Reports</i> , 2017, 7, 7186.	1.6	17
49	Pt-based Intermetallic Nanocatalysts for Promoting the Oxygen Reduction Reaction. <i>Bulletin of the Korean Chemical Society</i> , 2021, 42, 724-736.	1.0	17
50	Amphiphilic Ti porous transport layer for highly effective PEM unitized regenerative fuel cells. <i>Science Advances</i> , 2021, 7, .	4.7	16
51	Enhanced Stability and Electrochemical Performance of Carbon-Coated Ti ³⁺ Self-Doped TiO ₂ -Reduced Graphene Oxide Hollow Nanostructure-Supported Pt-Catalyzed Fuel Cell Electrodes. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700564.	1.9	15
52	High purity hydrogen production via aqueous phase reforming of xylose over small Pt nanoparticles on a γ -Al ₂ O ₃ support. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 13848-13861.	3.8	15
53	DFT-Machine Learning Approach for Accurate Prediction of p_{K_a} . <i>Journal of Physical Chemistry A</i> , 2021, 125, 8712-8722.	1.1	15
54	Dopant-Assisted Control of the Crystallite Domain Size in Hollow Ternary Iridium Alloy Octahedral Nanocages toward the Oxygen Evolution Reaction. <i>Cell Reports Physical Science</i> , 2020, 1, 100260.	2.8	14

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55	Multimetallic nanostructures for electrocatalytic oxygen evolution reaction in acidic media. <i>Materials Chemistry Frontiers</i> , 2021, 5, 4445-4473.	3.2	14
56	Polystyrene-Based Hydroxide-Ion-Conducting Ionomer: Binder Characteristics and Performance in Anion-Exchange Membrane Fuel Cells. <i>Polymers</i> , 2021, 13, 690.	2.0	14
57	Polyethylenimine-assisted Synthesis of Au Nanoparticles for Efficient Syngas Production. <i>Electroanalysis</i> , 2019, 31, 1401-1408.	1.5	12
58	IrCo nanocatalyst on Co _x S _y nanocages as a highly efficient and robust electrocatalyst for the oxygen evolution reaction in acidic media. <i>Nanoscale</i> , 2020, 12, 17074-17082.	2.8	11
59	Boosting antioxidation efficiency of nonstoichiometric CeO _x nanoparticles via surface passivation toward robust polymer electrolyte membrane fuel cells. <i>Chemical Engineering Journal</i> , 2022, 432, 134419.	6.6	10
60	Structural Evolution of Atomically Dispersed Fe Species in Fe ⁰ /N/C Catalysts Probed by X-ray Absorption and ⁵⁷ Fe Mössbauer Spectroscopies. <i>Journal of Physical Chemistry C</i> , 2021, 125, 11928-11938.	1.5	9
61	Single-step Fabrication of Polymeric Composite Membrane via Centrifugal Colloidal Casting for Fuel Cell Applications. <i>Small Methods</i> , 2021, 5, e2100285.	4.6	6
62	Double Hypercrosslinked Porous Organic Polymer-Derived Electrocatalysts for a Water Splitting Device. <i>ACS Applied Energy Materials</i> , 2022, 5, 3269-3274.	2.5	6
63	Tailor-Made Charged Catechol-Based Polymeric Ligands to Build Robust Fuel Cells Containing Antioxidative Nanoparticles. <i>Advanced Electronic Materials</i> , 2022, 8, .	2.6	6
64	Thiometallate precursors for the synthesis of supported Pt and PtNi nanoparticle electrocatalysts: Size-focusing by S capping. <i>Nanoscale</i> , 2020, 12, 10498-10504.	2.8	5
65	Facile one-step synthesis of Ru doped NiCoP nanoparticles as highly efficient electrocatalysts for oxygen evolution reaction. <i>Chemistry - an Asian Journal</i> , 2021, 16, 3630-3635.	1.7	5
66	Ce(III)-Based Coordination-Complex-Based Efficient Radical Scavenger for Exceptional Durability Enhancement of Polymer Application in Proton-Exchange Membrane Fuel Cells and Organic Photovoltaics. <i>Advanced Energy and Sustainability Research</i> , 2022, 3, .	2.8	5
67	Effect of the fabrication condition of membrane electrode assemblies with carbon-supported ordered PtCo electrocatalyst on the durability of polymer electrolyte membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 32834-32843.	3.8	2