Jin Young Kim

List of Publications by Year
in descending order

67	2,852	172207	182168
papers	citations	29 h-index	51 g-index

67	67	67	3888
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Role of surface steps in activation of surface oxygen sites on Ir nanocrystals for oxygen evolution reaction in acidic media. Applied Catalysis B: Environmental, 2022, 302, 120834.	10.8	29
2	Mnâ€Dopant Differentiating the Ru and Ir Oxidation States in Catalytic Oxides Toward Durable Oxygen Evolution Reaction in Acidic Electrolyte. Small Methods, 2022, 6, e2101236.	4.6	31
3	Boosting antioxidation efficiency of nonstoichiometric CeOx nanoparticles via surface passivation toward robust polymer electrolyte membrane fuel cells. Chemical Engineering Journal, 2022, 432, 134419.	6.6	10
4	Modulating the Local Coordination Environment of Singleâ€Atom Catalysts for Enhanced Catalytic Performance in Hydrogen/Oxygen Evolution Reaction. Small, 2022, 18, e2105680.	5.2	56
5	Ce(III)â€Based Coordinationâ€Complexâ€Based Efficient Radical Scavenger for Exceptional Durability Enhancement of Polymer Application in Protonâ€Exchange Membrane Fuel Cells and Organic Photovoltaics. Advanced Energy and Sustainability Research, 2022, 3, .	2.8	5
6	Double Hypercrosslinked Porous Organic Polymer-Derived Electrocatalysts for a Water Splitting Device. ACS Applied Energy Materials, 2022, 5, 3269-3274.	2.5	6
7	Tailorâ€Made Charged Catecholâ€Based Polymeric Ligands to Build Robust Fuel Cells Containing Antioxidative Nanoparticles. Advanced Electronic Materials, 2022, 8, .	2.6	6
8	Structure-controlled graphene electrocatalysts for high-performance H₂O₂ production. Energy and Environmental Science, 2022, 15, 2858-2866.	15.6	52
9	Antioxidant technology for durability enhancement in polymer electrolyte membranes for fuel cell applications. Materials Today, 2022, 58, 135-163.	8.3	18
10	Perpendicularly stacked array of PTFE nanofibers as a reinforcement for highly durable composite membrane in proton exchange membrane fuel cells. Nano Energy, 2022, 101, 107581.	8.2	23
11	Multimetallic nanostructures for electrocatalytic oxygen evolution reaction in acidic media. Materials Chemistry Frontiers, 2021, 5, 4445-4473.	3.2	14
12	Understanding synergistic metalâ€“oxide interactions of in situ exsolved metal nanoparticles on a pyrochlore oxide support for enhanced water splitting. Energy and Environmental Science, 2021, 14, 3053-3063.	15.6	39
13	Multifunctional Nafion/CeO₂ Dendritic Structures for Enhanced Durability and Performance of Polymer Electrolyte Membrane Fuel Cells. ACS Applied Materials & Interfaces, 2021, 13, 806-815.	4.0	51
14	Interfacing RuO₂ with Pt to induce efficient charge transfer from Pt to RuO₂ for highly efficient and stable oxygen evolution in acidic media. Journal of Materials Chemistry A, 2021, 9, 14352-14362.	5.2	25
15	Hybrid layered double hydroxides as multifunctional nanomaterials for overall water splitting and supercapacitor applications. Journal of Materials Chemistry A, 2021, 9, 4528-4557.	5.2	98
16	Polystyrene-Based Hydroxide-Ion-Conducting Ionomer: Binder Characteristics and Performance in Anion-Exchange Membrane Fuel Cells. Polymers, 2021, 13, 690.	2.0	14
17	Amphiphilic Ti porous transport layer for highly effective PEM unitized regenerative fuel cells. Science Advances, 2021, 7, .	4.7	16
18	<scp>Ptâ€based</scp> Intermetallic Nanocatalysts for Promoting the Oxygen Reduction Reaction. Bulletin of the Korean Chemical Society, 2021, 42, 724-736.	1.0	17

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19	Dopants in the Design of Noble Metal Nanoparticle Electrocatalysts and their Effect on Surface Energy and Coordination Chemistry at the Nanocrystal Surface. Advanced Energy Materials, 2021, 11, 2100265.	10.2	25
20	Structural Evolution of Atomically Dispersed Fe Species in Feâ€“N/C Catalysts Probed by X-ray Absorption and ⁵⁷Fe MÃ¶ssbauer Spectroscopies. Journal of Physical Chemistry C, 2021, 125, 11928-11938.	1.5	9
21	Activity-stability benefits of Pt/C fuel cell electrocatalysts prepared via remote CeO2 interfacial doping. Journal of Power Sources, 2021, 496, 229798.	4.0	30
22	Hierarchically Assembled Cobalt Oxynitride Nanorods and N-Doped Carbon Nanofibers for Efficient Bifunctional Oxygen Electrocatalysis with Exceptional Regenerative Efficiency. ACS Nano, 2021, 15, 11218-11230.	7.3	45
23	Conformation-modulated three-dimensional electrocatalysts for high-performance fuel cell electrodes. Science Advances, 2021, 7, .	4.7	27
24	Singleâ€Step Fabrication of Polymeric Composite Membrane via Centrifugal Colloidal Casting for Fuel Cell Applications. Small Methods, 2021, 5, e2100285.	4.6	6
25	Facile oneâ€step synthesis of Ru doped NiCoP nanoparticles as highly efficient electrocatalysts for oxygen evolution reaction. Chemistry - an Asian Journal, 2021, 16, 3630-3635.	1.7	5
26	DFT-Machine Learning Approach for Accurate Prediction of pK_a. Journal of Physical Chemistry A, 2021, 125, 8712-8722.	1.1	15
27	Recent advances in non-precious group metal-based catalysts for water electrolysis and beyond. Journal of Materials Chemistry A, 2021, 10, 50-88.	5.2	44
28	Innovative cathode flow-field design for passive air-cooled polymer electrolyte membrane (PEM) fuel cell stacks. International Journal of Hydrogen Energy, 2020, 45, 11704-11713.	3.8	72
29	Cost-effective porous-organic-polymer-based electrolyte membranes with superprotonic conductivity and low activation energy. Journal of Materials Chemistry A, 2020, 8, 1147-1153.	5.2	28
30	Porous Strained Pt Nanostructured Thinâ€Film Electrocatalysts via Dealloying for PEM Fuel Cells. Advanced Materials Interfaces, 2020, 7, 1901326.	1.9	19
31	Highly Stable Ptâ€Based Ternary Systems for Oxygen Reduction Reaction in Acidic Electrolytes. Advanced Energy Materials, 2020, 10, 2002049.	10.2	62
32	Synergetic Structural Transformation of Pt Electrocatalyst into Advanced 3D Architectures for Hydrogen Fuel Cells. Advanced Materials, 2020, 32, e2002210.	11.1	33
33	Pt Dopant: Controlling the Ir Oxidation States toward Efficient and Durable Oxygen Evolution Reaction in Acidic Media. Advanced Functional Materials, 2020, 30, 2003935.	7.8	50
34	IrCo nanocacti on Co_xS_y nanocages as a highly efficient and robust electrocatalyst for the oxygen evolution reaction in acidic media. Nanoscale, 2020, 12, 17074-17082.	2.8	11
35	Dopant-Assisted Control of the Crystallite Domain Size in Hollow Ternary Iridium Alloy Octahedral Nanocages toward the Oxygen Evolution Reaction. Cell Reports Physical Science, 2020, 1, 100260.	2.8	14
36	CeO₂(111) Surface with Oxygen Vacancy for Radical Scavenging: A Density Functional Theory Approach. Journal of Physical Chemistry C, 2020, 124, 20950-20959.	1.5	18

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37	Thiometallate precursors for the synthesis of supported Pt and PtNi nanoparticle electrocatalysts: Size-focusing by S capping. Nanoscale, 2020, 12, 10498-10504.	2.8	5
38	Toward Efficient Electrocatalytic Oxygen Evolution: Emerging Opportunities with Metallic Pyrochlore Oxides for Electrocatalysts and Conductive Supports. ACS Central Science, 2020, 6, 880-891.	5.3	71
39	Effect of the fabrication condition of membrane electrode assemblies with carbon-supported ordered PtCo electrocatalyst on the durability of polymer electrolyte membrane fuel cells. International Journal of Hydrogen Energy, 2020, 45, 32834-32843.	3.8	2
40	Effect of the Side-Chain Length in Perfluorinated Sulfonic and Phosphoric Acid-Based Membranes on Nanophase Segregation and Transport: A Molecular Dynamics Simulation Approach. Journal of Physical Chemistry B, 2020, 124, 1571-1580.	1.2	18
41	High-yield electrochemical hydrogen peroxide production from an enhanced two-electron oxygen reduction pathway by mesoporous nitrogen-doped carbon and manganese hybrid electrocatalysts. Nanoscale Horizons, 2020, 5, 832-838.	4.1	40
42	High purity hydrogen production via aqueous phase reforming of xylose over small Pt nanoparticles on a Î³-Al2O3 support. International Journal of Hydrogen Energy, 2020, 45, 13848-13861.	3.8	15
43	Hydrocarbon-based electrode ionomer for proton exchange membrane fuel cells. International Journal of Hydrogen Energy, 2020, 45, 32856-32864.	3.8	18
44	Activity Origin and Multifunctionality of Pt-Based Intermetallic Nanostructures for Efficient Electrocatalysis. ACS Catalysis, 2019, 9, 11242-11254.	5.5	96
45	Post-assembly modification of polymeric composite membranes using spin drying for fuel cell applications. Journal of Materials Chemistry A, 2019, 7, 7380-7388.	5.2	19
46	Polyethylenimineâ€assisted Synthesis of Au Nanoparticles for Efficient Syngas Production. Electroanalysis, 2019, 31, 1401-1408.	1.5	12
47	Musselâ€Inspired Polydopamineâ€Treated Reinforced Composite Membranes with Selfâ€Supported CeO_x Radical Scavengers for Highly Stable PEM Fuel Cells. Advanced Functional Materials, 2019, 29, 1806929.	7.8	66
48	Morphologyâ€Controlled Metal Sulfides and Phosphides for Electrochemical Water Splitting. Advanced Materials, 2019, 31, e1806682.	11.1	500
49	Alkaline anion exchange membrane water electrolysis: Effects of electrolyte feed method and electrode binder content. Journal of Power Sources, 2018, 382, 22-29.	4.0	96
50	Electrodeposited IrO2/Ti electrodes as durable and cost-effective anodes in high-temperature polymer-membrane-electrolyte water electrolyzers. Applied Catalysis B: Environmental, 2018, 226, 289-294.	10.8	76
51	Electrochemical impedance analysis with transmission line model for accelerated carbon corrosion in polymer electrolyte membrane fuel cells. International Journal of Hydrogen Energy, 2018, 43, 15457-15465.	3.8	23
52	Polymeric graphitic carbon nitride nanosheet-coated amorphous carbon supports for enhanced fuel cell electrode performance and stability. Applied Catalysis B: Environmental, 2018, 237, 318-326.	10.8	28
53	Enhanced CO2 reduction activity of polyethylene glycol-modified Au nanoparticles prepared via liquid medium sputtering. Applied Catalysis B: Environmental, 2018, 237, 673-680.	10.8	35
54	Factors in electrode fabrication for performance enhancement of anion exchange membrane water electrolysis. Journal of Power Sources, 2017, 347, 283-290.	4.0	54

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55	PtFe nanoparticles supported on electroactive Auâ€“PANI core@shell nanoparticles for high performance bifunctional electrocatalysis. Journal of Materials Chemistry A, 2017, 5, 13692-13699.	5.2	29
56	Effect of Catalyst Layer Ionomer Content on Performance of Intermediate Temperature Proton Exchange Membrane Fuel Cells (IT-PEMFCs) under Reduced Humidity Conditions. Electrochimica Acta, 2017, 224, 228-234.	2.6	30
57	Enhanced Stability and Electrochemical Performance of Carbonâ€Coated Ti³⁺ Selfâ€Doped TiO₂â€Reduced Graphene Oxide Hollow Nanostructureâ€Supported Ptâ€Catalyzed Fuel Cell Electrodes. Advanced Materials Interfaces, 2017, 4, 1700564.	1.9	15
58	Hierarchical cobaltâ€“nitride and â€“oxide co-doped porous carbon nanostructures for highly efficient and durable bifunctional oxygen reaction electrocatalysts. Nanoscale, 2017, 9, 15846-15855.	2.8	29
59	Transition metal alloying effect on the phosphoric acid adsorption strength of Pt nanoparticles: an experimental and density functional theory study. Scientific Reports, 2017, 7, 7186.	1.6	17
60	A conductive porous organic polymer with superprotonic conductivity of a Nafion-type electrolyte. Journal of Materials Chemistry A, 2017, 5, 17492-17498.	5.2	35
61	Investigation of electrolyte leaching in the performance degradation of phosphoric acid-doped polybenzimidazole membrane-based high temperature fuel cells. Journal of Power Sources, 2017, 363, 365-374.	4.0	49
62	Tailoring ruthenium exposure to enhance the performance of fcc platinum@ruthenium coreâ€“shell electrocatalysts in the oxygen evolution reaction. Physical Chemistry Chemical Physics, 2016, 18, 16169-16178.	1.3	47
63	Costâ€Effective, Highâ€Performance Porousâ€Organicâ€Polymer Conductors Functionalized with Sulfonic Acid Groups by Direct Postsynthetic Substitution. Angewandte Chemie - International Edition, 2016, 55, 16123-16126.	7.2	72
64	Development of porous Pt/IrO2/carbon paper electrocatalysts with enhanced mass transport as oxygen electrodes in unitized regenerative fuel cells. Electrochemistry Communications, 2016, 64, 14-17.	2.3	34
65	Single-step fabrication of quantum funnels via centrifugal colloidal casting of nanoparticle films. Nature Communications, 2015, 6, 7772.	5.8	68
66	Highly efficient and durable TiN nanofiber electrocatalyst supports. Nanoscale, 2015, 7, 18429-18434.	2.8	28
67	Niâ€“NiO coreâ€“shell inverse opal electrodes for supercapacitors. Chemical Communications, 2011, 47, 5214.	2.2	202