Toward sustainable fuel cells

Science

354, 1378-1379

DOI: 10.1126/science.aal3303

Citation Report

#	Article	IF	Citations
1	Highly crystalline PtCu nanotubes with three dimensional molecular accessible and restructured surface for efficient catalysis. Energy and Environmental Science, 2017, 10, 1751-1756.	15.6	195
2	Iron phosphide nanocrystals decorated in situ on heteroatom-doped mesoporous carbon nanosheets used for an efficient oxygen reduction reaction in both alkaline and acidic media. RSC Advances, 2017, 7, 22263-22269.	1.7	26
3	High Specific and Mass Activity for the Oxygen Reduction Reaction for Thin Film Catalysts of Sputtered Pt₃Y. Advanced Materials Interfaces, 2017, 4, 1700311.	1.9	39
4	Unsupported Ptâ€Ni Aerogels with Enhanced High Current Performance and Durability in Fuel Cell Cathodes. Angewandte Chemie, 2017, 129, 10847-10850.	1.6	15
5	Unsupported Ptâ€Ni Aerogels with Enhanced High Current Performance and Durability in Fuel Cell Cathodes. Angewandte Chemie - International Edition, 2017, 56, 10707-10710.	7.2	65
6	Ultra-fine Pt nanoparticles on graphene aerogel as a porous electrode with high stability for microfluidic methanol fuel cell. Journal of Power Sources, 2017, 349, 75-83.	4.0	70
7	Advances in efficient electrocatalysts based on layered double hydroxides and their derivatives. Journal of Energy Chemistry, 2017, 26, 1094-1106.	7.1	93
8	A general synthesis of abundant metal nanoparticles functionalized mesoporous graphitized carbon. RSC Advances, 2017, 7, 50966-50972.	1.7	6
9	Strain-controlled electrocatalysis on multimetallic nanomaterials. Nature Reviews Materials, 2017, 2, .	23.3	727
10	Radially Phase Segregated PtCu@PtCuNi Dendrite@Frame Nanocatalyst for the Oxygen Reduction Reaction. ACS Nano, 2017, 11, 10844-10851.	7.3	110
11	Nanostructuring Noble Metals as Unsupported Electrocatalysts for Polymer Electrolyte Fuel Cells. Advanced Energy Materials, 2017, 7, 1700548.	10.2	76
12	Synthesis of compositionally tunable, hollow mixed metal sulphide Co_xNi_yS_z octahedral nanocages and their composition-dependent electrocatalytic activities for oxygen evolution reaction. Nanoscale, 2017, 9, 15397-15406.	2.8	52
13	Durability of Unsupported Pt-Ni Aerogels in PEFC Cathodes. Journal of the Electrochemical Society, 2017, 164, F1136-F1141.	1.3	23
14	High-Affinity-Assisted Nanoscale Alloys as Remarkable Bifunctional Catalyst for Alcohol Oxidation and Oxygen Reduction Reactions. ACS Nano, 2017, 11, 7729-7735.	7.3	101
15	Modelling pH and potential in dynamic structures of the water/Pt(111) interface on the atomic scale. Physical Chemistry Chemical Physics, 2017, 19, 23505-23514.	1.3	48
16	Encapsulated iron-based oxygen reduction electrocatalysts by high pressure pyrolysis. International Journal of Hydrogen Energy, 2017, 42, 22887-22896.	3.8	8
17	Engineering of Highly Active Silver Nanoparticles for Oxygen Electroreduction via Simultaneous Control over Their Shape and Size. Advanced Sustainable Systems, 2017, 1, 1700117.	2.7	13
18	Benchmarking Pt and Pt-lanthanide sputtered thin films for oxygen electroreduction: fabrication and rotating disk electrode measurements. Electrochimica Acta, 2017, 247, 708-721.	2.6	39

#	Article	IF	Citations
19	Fuel Cell Measurements with Cathode Catalysts of Sputtered Pt₃Y Thin Films. ChemSusChem, 2018, 11, 1438-1445.	3.6	14
20	Nanoscale kinetics of asymmetrical corrosion in core-shell nanoparticles. Nature Communications, 2018, 9, 1011.	5.8	87
21	On-Chip in Situ Monitoring of Competitive Interfacial Anionic Chemisorption as a Descriptor for Oxygen Reduction Kinetics. ACS Central Science, 2018, 4, 590-599.	5.3	29
22	Three-Dimensional Pd₃Pb Nanosheet Assemblies: High-Performance Non-Pt Electrocatalysts for Bifunctional Fuel Cell Reactions. ACS Catalysis, 2018, 8, 4569-4575.	5.5	106
23	Ferric ion pair mediated biomass redox flow fuel cell and related chemical reaction kinetics study. Chemical Engineering Journal, 2018, 348, 476-484.	6.6	24
24	Tuning active sites on cobalt/nitrogen doped graphene for electrocatalytic hydrogen and oxygen evolution. Electrochimica Acta, 2018, 265, 497-506.	2.6	56
25	Confined organometallic Au1N single-site as an efficient bifunctional oxygen electrocatalyst. Nano Energy, 2018, 46, 110-116.	8.2	77
26	A Membraneless Direct Isopropanol Fuel Cell (DIPAFC) Operated with a Catalyst-Selective Principle. Journal of Physical Chemistry C, 2018, 122, 13558-13563.	1.5	13
27	Scalable Synthesis of Carbon-Supported Platinumâ€“Lanthanide and â^'Rare-Earth Alloys for Oxygen Reduction. ACS Catalysis, 2018, 8, 2071-2080.	5.5	59
28	Vertexâ€Reinforced PtCuCo Ternary Nanoframes as Efficient and Stable Electrocatalysts for the Oxygen Reduction Reaction and the Methanol Oxidation Reaction. Advanced Functional Materials, 2018, 28, 1706440.	7.8	161
29	Fe Stabilization by Intermetallic L1₀-FePt and Pt Catalysis Enhancement in L1₀-FePt/Pt Nanoparticles for Efficient Oxygen Reduction Reaction in Fuel Cells. Journal of the American Chemical Society, 2018, 140, 2926-2932.	6.6	312
30	Selfâ€Humidified Pt Electrocatalyst Fabricated from Hydrophilic Molecules Coating with Enhanced Fuel Cell Performance. Energy Technology, 2018, 6, 1813-1819.	1.8	1
31	Highly Durable and Active Ptâ€Based Nanoscale Design forÂFuelâ€Cell Oxygenâ€Reduction Electrocatalysts. Advanced Materials, 2018, 30, e1704123.	11.1	208
32	Ultra-low loading Pt-sputtered gas diffusion electrodes for oxygen reduction reaction. Journal of Applied Electrochemistry, 2018, 48, 221-232.	1.5	21
33	Stable Highâ€Index Faceted Pt Skin on Zigzagâ€Like PtFe Nanowires Enhances Oxygen Reduction Catalysis. Advanced Materials, 2018, 30, 1705515.	11.1	305
34	Scalable Membraneless Direct Liquid Fuel Cells Based on a Catalystâ€Selective Strategy. Energy and Environmental Materials, 2018, 1, 13-19.	7.3	13
35	Ab Initio Investigation of the Role of Atomic Radius in the Structural Formation of Pt_nTM_{55â€“n} (TM = Y, Zr, Nb, Mo, and Tc) Nanoclusters. Journal of Physical Chemistry C, 2018, 122, 7444-7454.	1.5	21
36	Toward the Decentralized Electrochemical Production of H₂O₂: A Focus on the Catalysis. ACS Catalysis, 2018, 8, 4064-4081.	5.5	663

#	Article	IF	Citations
37	On the Preparation and Testing of Fuel Cell Catalysts Using the Thin Film Rotating Disk Electrode Method. Journal of Visualized Experiments, 2018, , .	0.2	20
38	Electrochemical probing into the active sites of graphitic-layer encapsulated iron oxygen reduction reaction electrocatalysts. Science Bulletin, 2018, 63, 24-30.	4.3	18
39	Probing the Surface of Platinum during the Hydrogen Evolution Reaction in Alkaline Electrolyte. Journal of Physical Chemistry B, 2018, 122, 864-870.	1.2	50
40	Boosting visible light photocatalytic hydrogen evolution of graphitic carbon nitride via enhancing it interfacial redox activity with cobalt/nitrogen doped tubular graphitic carbon. Applied Catalysis B: Environmental, 2018, 225, 512-518.	10.8	65
41	Ultrathin layered double hydroxide nanosheets with Ni(III) active species obtained by exfoliation for highly efficient ethanol electrooxidation. Electrochimica Acta, 2018, 260, 898-904.	2.6	60
42	Porous octahedral PdCu nanocages as highly efficient electrocatalysts for the methanol oxidation reaction. Journal of Materials Chemistry A, 2018, 6, 3906-3912.	5.2	108
43	RuO_x-decorated multimetallic hetero-nanocages as highly efficient electrocatalysts toward the methanol oxidation reaction. Nanoscale, 2018, 10, 21178-21185.	2.8	21
44	Ultralow-loading platinum-cobalt fuel cell catalysts derived from imidazolate frameworks. Science, 2018, 362, 1276-1281.	6.0	735
45	PEFC Electrocatalysts Supported on Nb-SnO₂for MEAs with High Activity and Durability: Part II. Application of Bimetallic Pt-Alloy Catalysts. Journal of the Electrochemical Society, 2018, 165, F1164-F1175.	1.3	9
46	Updating Pt-Based Electrocatalysts for Practical Fuel Cells. Joule, 2018, 2, 2514-2516.	11.7	31
47	Pt nanowire growth induced by Pt nanoparticles in application of the cathodes for Polymer Electrolyte Membrane Fuel Cells (PEMFCs). International Journal of Hydrogen Energy, 2018, 43, 20041-20049.	3.8	23
48	Enhancement of Catalytic Properties by Adjusting Molecular Diffusion in Nanoporous Catalysts. Advances in Catalysis, 2018, , 1-47.	0.1	3
49	Engineering porosity into trimetallic PtPdNi nanospheres for enhanced electrocatalytic oxygen reduction activity. Green Energy and Environment, 2018, 3, 352-359.	4.7	14
50	Polycrystalline and Singleâ€Crystal Cu Electrodes: Influence of Experimental Conditions on the Electrochemical Properties in Alkaline Media. Chemistry - A European Journal, 2018, 24, 17743-17755.	1.7	46
51	Photochemical Synthesis of Radiate Titanium Oxide Microrods Arrays Supporting Platinum Nanoparticles for Photoassisted Electrooxidation of Methanol. Advanced Materials Interfaces, 2018, 5, 1800748.	1.9	8
52	Insight into Interface Behaviors to Build Phase-Boundary-Matched Na-Ion Direct Liquid Fuel Cells. ACS Sustainable Chemistry and Engineering, 2018, 6, 12827-12834.	3.2	40
53	Preparation and application in assembling high-performance fuel cell catalysts of colloidal PtCu alloy nanoclusters. Journal of Power Sources, 2018, 395, 66-76.	4.0	33
54	Role of Nanomorphology and Interfacial Structure of Platinum Nanoparticles in Catalyzing the Hydrogen Oxidation Reaction. ACS Catalysis, 2018, 8, 6192-6202.	5.5	21

#	Article	IF	Citations
55	Formation of uniform magnetic C@CoNi alloy hollow hybrid composites with excellent performance for catalysis and protein adsorption. Dalton Transactions, 2018, 47, 7839-7847.	1.6	31
56	Operando Time-Resolved X-ray Absorption Fine Structure Study for Pt Oxidation Kinetics on Pt/C and Pt₃Co/C Cathode Catalysts by Polymer Electrolyte Fuel Cell Voltage Operation Synchronized with Rapid O₂ Exposure. Journal of Physical Chemistry C, 2018, 122, 14511-14517.	1.5	22
57	Towards Highâ€Performance Electrocatalysts for Oxygen Reduction: Inducing Atomicâ€Level Reconstruction of Feâ€N_x Site for Atomically Dispersed Fe/Nâ€Doped Hierarchically Porous Carbon. Chemistry - A European Journal, 2018, 24, 8848-8856.	1.7	25
58	Manipulation structure of carbon nitride via trace level iron with improved interfacial redox activity and charge separation for synthetic enhancing photocatalytic hydrogen evolution. Applied Surface Science, 2018, 456, 609-614.	3.1	13
59	High performance layer-by-layer Pt₃Ni(Pt-skin)-modified Pd/C for the oxygen reduction reaction. Chemical Science, 2018, 9, 6134-6142.	3.7	25
60	Activeâ€Phase Formation and Stability of Gd/Pt(111) Electrocatalysts for Oxygen Reduction: An In Situ Grazing Incidence Xâ€Ray Diffraction Study. Chemistry - A European Journal, 2018, 24, 12280-12290.	1.7	17
61	A rejuvenation process to enhance the durability of low Pt loaded polymer electrolyte membrane fuel cells. Journal of Power Sources, 2018, 396, 345-354.	4.0	18
62	Tuning Bifunctional Oxygen Electrocatalysts by Changing the Aâ€Site Rareâ€Earth Element in Perovskite Nickelates. Advanced Functional Materials, 2018, 28, 1803712.	7.8	122
63	Hollow nanoparticles as emerging electrocatalysts for renewable energy conversion reactions. Chemical Society Reviews, 2018, 47, 8173-8202.	18.7	222
64	Progress on design and development of polymer electrolyte membrane fuel cell systems for vehicle applications: A review. Fuel Processing Technology, 2018, 179, 203-228.	3.7	190
65	Oxygen Reduction Reaction: Rapid Prediction of Mass Activity of Nanostructured Platinum Electrocatalysts. Journal of Physical Chemistry Letters, 2018, 9, 4463-4468.	2.1	43
66	Transport biofuels technological paradigm based conversion approaches towards a bio-electric energy framework. Energy Conversion and Management, 2018, 172, 554-566.	4.4	28
67	Enhancement of Electrocatalytic Oxygen Reduction Activity and Durability of Ptâ€“Ni Rhombic Dodecahedral Nanoframes by Anchoring to Nitrogen-Doped Carbon Support. ACS Omega, 2018, 3, 9052-9059.	1.6	16
68	PdCu alloy nanoparticles supported on reduced graphene oxide for electrocatalytic oxidation of methanol. Journal of Materials Science, 2018, 53, 15871-15881.	1.7	29
69	Annealing Behaviour of Pt and PtNi Nanowires for Proton Exchange Membrane Fuel Cells. Materials, 2018, 11, 1473.	1.3	11
70	Prospects of Platinum-Based Nanostructures for the Electrocatalytic Reduction of Oxygen. ACS Catalysis, 2018, 8, 9388-9398.	5.5	52
71	Recent advances in bimetallic electrocatalysts for oxygen reduction: design principles, structure-function relations and active phase elucidation. Current Opinion in Electrochemistry, 2018, 8, 135-146.	2.5	60
72	Ethanol Electrooxidation Catalyzed by Tungsten Core@Palladium Shell Nanoparticles. ACS Applied Materials & Interfaces, 2019, 11, 30968-30976.	4.0	20

#	Article	IF	Citations
73	Monodisperse nanoparticles for catalysis and nanomedicine. Nanoscale, 2019, 11, 18946-18967.	2.8	61
74	Monodispersed Pt3Ni Nanoparticles as a Highly Efficient Electrocatalyst for PEMFCs. Catalysts, 2019, 9, 588.	1.6	13
75	Nitrogenâ€doped Graphene Chainmail Wrapped IrCo Alloy Particles on Nitrogenâ€doped Graphene Nanosheet for Highly Active and Stable Full Water Splitting. ChemCatChem, 2019, 11, 5457-5465.	1.8	20
76	Tuning the Electrocatalytic Oxygen Reduction Reaction Activity of Ptâ€“Co Nanocrystals by Cobalt Concentration with Atomic-Scale Understanding. ACS Applied Materials & Interfaces, 2019, 11, 26789-26797.	4.0	40
77	Ptâ€“Co/C Cathode Catalyst Degradation in a Polymer Electrolyte Fuel Cell Investigated by an Infographic Approach Combining Three-Dimensional Spectroimaging and Unsupervised Learning. Journal of Physical Chemistry C, 2019, 123, 18844-18853.	1.5	32
78	Revealing the nature of active sites in electrocatalysis. Chemical Science, 2019, 10, 8060-8075.	3.7	96
79	Graphene edge-enhanced anchoring of the well-exposed cobalt clusters via strong chemical bonding for accelerating the oxygen reduction reaction. Sustainable Energy and Fuels, 2019, 3, 2859-2866.	2.5	6
80	Insight on Single Cell Proton Exchange Membrane Fuel Cell Performance of Pt-Cu/C Cathode. Catalysts, 2019, 9, 544.	1.6	14
81	Carbon-decorated LiMn2O4 nanorods with enhanced performance for supercapacitors. Journal of Alloys and Compounds, 2019, 805, 624-630.	2.8	12
82	Graphene quantum dots/graphene fiber nanochannels for osmotic power generation. Journal of Materials Chemistry A, 2019, 7, 23727-23732.	5.2	30
83	Activity Origin and Multifunctionality of Pt-Based Intermetallic Nanostructures for Efficient Electrocatalysis. ACS Catalysis, 2019, 9, 11242-11254.	5.5	96
84	Subnano Amorphous Fe-Based Clusters with High Mass Activity for Efficient Electrocatalytic Oxygen Reduction Reaction. ACS Applied Materials & Interfaces, 2019, 11, 41432-41439.	4.0	18
85	Operando Insight into the Oxygen Evolution Kinetics on the Metal-Free Carbon-Based Electrocatalyst in an Acidic Solution. ACS Applied Materials & Interfaces, 2019, 11, 34854-34861.	4.0	37
86	Controlling Near-Surface Ni Composition in Octahedral PtNi(Mo) Nanoparticles by Mo Doping for a Highly Active Oxygen Reduction Reaction Catalyst. Nano Letters, 2019, 19, 6876-6885.	4.5	95
87	Mesoscopic modeling of transport resistances in a polymer-electrolyte fuel-cell catalyst layer: Analysis of hydrogen limiting currents. Applied Energy, 2019, 255, 113895.	5.1	28
88	PdMo bimetallene for oxygen reduction catalysis. Nature, 2019, 574, 81-85.	13.7	935
89	Nanoscale hetero-interfaces between metals and metal compounds for electrocatalytic applications. Journal of Materials Chemistry A, 2019, 7, 5090-5110.	5.2	128
90	Ternary Heterostructural Pt/CNx/Ni as a Supercatalyst for Oxygen Reduction. IScience, 2019, 11, 388-397.	1.9	36

#	Article	IF	Citations
91	Ptâ€“Cu based nanocrystals as promising catalysts for various electrocatalytic reactions. Journal of Materials Chemistry A, 2019, 7, 17183-17203.	5.2	48
92	An efficient ultrathin PtFeNi Nanowire/Ionic liquid conjugate electrocatalyst. Applied Catalysis B: Environmental, 2019, 256, 117828.	10.8	40
93	Fast identification of optimal pure platinum nanoparticle shapes and sizes for efficient oxygen electroreduction. Nanoscale Advances, 2019, 1, 2901-2909.	2.2	12
94	Fe3C/C nanoparticles encapsulated in N-doped graphene aerogel: an advanced oxygen reduction reaction catalyst for fiber-shaped fuel cells. International Journal of Hydrogen Energy, 2019, 44, 18393-18402.	3.8	15
95	Current status of automotive fuel cells for sustainable transport. Current Opinion in Electrochemistry, 2019, 16, 90-95.	2.5	269
96	Mesoporous iron sulfide nanoparticles anchored graphene sheet as an efficient and durable catalyst for oxygen reduction reaction. Journal of Power Sources, 2019, 427, 91-100.	4.0	45
97	Comparison of Ptâ€“Cu/C with Benchmark Ptâ€“Co/C: Metal Dissolution and Their Surface Interactions. ACS Applied Energy Materials, 2019, 2, 3131-3141.	2.5	54
98	Sputtered Platinum Thin-films for Oxygen Reduction in Gas Diffusion Electrodes: A Model System for Studies under Realistic Reaction Conditions. Surfaces, 2019, 2, 336-348.	1.0	27
99	Effective surface termination with Au on PtCo@Pt core-shell nanoparticle: Microstructural investigations and oxygen reduction reaction properties. Journal of Electroanalytical Chemistry, 2019, 842, 1-7.	1.9	14
100	Challenges and opportunities in IR nanospectroscopy measurements of energy materials. Nano Research, 2019, 12, 2200-2210.	5.8	23
101	Importance of Electrocatalyst Morphology for the Oxygen Reduction Reaction. ChemElectroChem, 2019, 6, 2600-2614.	1.7	45
102	Deviations from Vegard's law and evolution of the electrocatalytic activity and stability of Pt-based nanoalloys inside fuel cells byin operandoX-ray spectroscopy and total scattering. Nanoscale, 2019, 11, 5512-5525.	2.8	33
103	Recommended Practices and Benchmark Activity for Hydrogen and Oxygen Electrocatalysis in Water Splitting and Fuel Cells. Advanced Materials, 2019, 31, e1806296.	11.1	841
104	Trimetallic PtPdCo mesoporous nanopolyhedra with hollow cavities. Nanoscale, 2019, 11, 4781-4787.	2.8	31
105	Evaluating Electrocatalysts at Relevant Currents in a Half-Cell: The Impact of Pt Loading on Oxygen Reduction Reaction. Journal of the Electrochemical Society, 2019, 166, F1259-F1268.	1.3	72
106	Effect of particle size of carbon catalyst on oxygen reduction activity for fuel cell applications. IOP Conference Series: Materials Science and Engineering, 2019, 504, 012025.	0.3	0
107	Detrimental Effects and Prevention of Acidic Electrolytes on Oxygen Reduction Reaction Catalytic Performance of Heteroatom-Doped Graphene Catalysts. Frontiers in Materials, 2019, 6, .	1.2	6
108	From Halfâ€Cells to Membraneâ€Electrode Assemblies: a Comparison of Oxygen Reduction Reaction Catalyst Performance Characteristics. Fuel Cells, 2019, 19, 695-707.	1.5	8

#	Article	IF	Citations
109	Component-Dependent Electrocatalytic Activity of Ultrathin PdRh Alloy Nanocrystals for the Formate Oxidation Reaction. ACS Sustainable Chemistry and Engineering, 2019, 7, 2830-2836.	3.2	47
110	Top-Down Synthesis of Nanostructured Platinumâ€“Lanthanide Alloy Oxygen Reduction Reaction Catalysts: Pt_xPr/C as an Example. ACS Applied Materials & Interfaces, 2019, 11, 5129-5135.	4.0	60
111	Hard-Magnet L10-CoPt Nanoparticles Advance Fuel Cell Catalysis. Joule, 2019, 3, 124-135.	11.7	326
112	Tungsten carbide/carbon composites coated with little platinum nano particles derived from the redox reaction between in-situ synthesized WC1â^'x and chloroplatinic acid as the electrocatalyst for hydrogen evolution reaction. Applied Surface Science, 2019, 463, 1154-1160.	3.1	16
113	The role of hydrogen and fuel cells in the global energy system. Energy and Environmental Science, 2019, 12, 463-491.	15.6	2,253
114	Platinum in-situ catalytic oleylamine combustion removal process for carbon supported platinum nanoparticles. Journal of Energy Chemistry, 2020, 41, 120-125.	7.1	13
115	Interface modulation of twinned PtFe nanoplates branched 3D architecture for oxygen reduction catalysis. Science Bulletin, 2020, 65, 97-104.	4.3	42
116	Thin film electrodes from Pt nanorods supported on aligned N-CNTs for proton exchange membrane fuel cells. Applied Catalysis B: Environmental, 2020, 260, 118031.	10.8	73
117	Precious metal nanocrystals for renewable energy electrocatalysis: structural design and controlled synthesis. Dalton Transactions, 2020, 49, 267-273.	1.6	9
118	Pt²⁺-Exchanged ZIF-8 nanocube as a solid-state precursor for L1₀-PtZn intermetallic nanoparticles embedded in a hollow carbon nanocage. Nanoscale, 2020, 12, 1118-1127.	2.8	10
119	Understanding the Ion-Sorption Dynamics in Functionalized Porous Carbons for Enhanced Capacitive Energy Storage. ACS Applied Materials & Interfaces, 2020, 12, 2773-2782.	4.0	17
120	Unraveling the Surface Chemistry and Structure in Highly Active Sputtered Pt₃Y Catalyst Films for the Oxygen Reduction Reaction. ACS Applied Materials & Interfaces, 2020, 12, 4454-4462.	4.0	16
121	A theoretical indicator of transition-metal nanoclusters applied in the carbon nanotube nucleation process: a DFT study. Dalton Transactions, 2020, 49, 492-503.	1.6	10
122	On the facile and accurate determination of the Pt content in standard carbon supported Pt fuel cell catalysts. Analytica Chimica Acta, 2020, 1101, 41-49.	2.6	3
123	Visualization Analysis of Pt and Co Species in Degraded Pt₃Co/C Electrocatalyst Layers of a Polymer Electrolyte Fuel Cell Using a Same-View Nano-XAFS/STEM-EDS Combination Technique. ACS Applied Materials & Interfaces, 2020, 12, 2299-2312.	4.0	8
124	Hollow PtFe Alloy Nanoparticles Derived from Ptâ€Fe₃O₄ Dimers through a Silicaâ€Protection Reduction Strategy as Efficient Oxygen Reduction Electrocatalysts. Chemistry - A European Journal, 2020, 26, 4090-4096.	1.7	49
125	Highly Stable Ptâ€Based Ternary Systems for Oxygen Reduction Reaction in Acidic Electrolytes. Advanced Energy Materials, 2020, 10, 2002049.	10.2	62
126	Synergetic Structural Transformation of Pt Electrocatalyst into Advanced 3D Architectures for Hydrogen Fuel Cells. Advanced Materials, 2020, 32, e2002210.	11.1	33

#	Article	IF	Citations
127	Electrocatalyst Performance at the Gas/Electrolyte Interface under High-Mass-Transport Conditions: Optimization of the â€œFloating Electrodeâ€•Method. ACS Applied Materials & Interfaces, 2020, 12, 47467-47481.	4.0	25
128	Eliminating dissolution of platinum-based electrocatalysts at the atomic scale. Nature Materials, 2020, 19, 1207-1214.	13.3	127
129	Dynamic Coreâ€“Shell and Alloy Structures of Multimetallic Nanomaterials and Their Catalytic Synergies. Accounts of Chemical Research, 2020, 53, 2913-2924.	7.6	79
130	Activityâ€“Stability Relationship in Au@Pt Nanoparticles for Electrocatalysis. ACS Energy Letters, 2020, 5, 2827-2834.	8.8	49
131	Self-Sacrificing Template-Derived Hollow-Structured NiCo₂S₄ Spheres with Highly Efficient Supercapacitance Performance. Energy & Fuels, 2020, 34, 10203-10210.	2.5	21
132	Exploring the Structureâ€“Activity Relationship on Platinum Nanoparticles. Topics in Catalysis, 2020, 63, 1647-1657.	1.3	6
133	Reconsidering the Benchmarking Evaluation of Catalytic Activity in Oxygen Reduction Reaction. IScience, 2020, 23, 101532.	1.9	42
134	Nanoporous materials for proton exchange membrane fuel cell applications. , 2020, , 441-476.		1
135	Surface Composition of a Highly Active Pt₃Y Alloy Catalyst for Application in Low Temperature Fuel Cells. Fuel Cells, 2020, 20, 413-419.	1.5	6
136	Comparative Study of PtNi Nanowire Array Electrodes toward Oxygen Reduction Reaction by Half-Cell Measurement and PEMFC Test. ACS Applied Materials & Interfaces, 2020, 12, 42832-42841.	4.0	35
137	Multinary PtPdNiP truncated octahedral mesoporous nanocages for enhanced methanol oxidation electrocatalysis. New Journal of Chemistry, 2020, 44, 15492-15497.	1.4	6
138	One-step phosphating synthesis of CoP nanosheet arrays combined with Ni₂P as a high-performance electrode for supercapacitors. Nanoscale, 2020, 12, 20710-20718.	2.8	52
139	Random alloy and intermetallic nanocatalysts in fuel cell reactions. Nanoscale, 2020, 12, 19557-19581.	2.8	27
140	Biomassâ€derived nonprecious metal catalysts for oxygen reduction reaction: The demandâ€oriented engineering of active sites and structures. , 2020, 2, 561-581.		83
141	Nanomanufacturing of Non-Noble Amorphous Alloys for Electrocatalysis. ACS Applied Energy Materials, 2020, 3, 12099-12107.	2.5	14
142	South Koreaâ€™s big move to hydrogen society. Cogent Environmental Science, 2020, 6, .	1.6	3
143	Carbon-free nanoporous gold based membrane electrocatalysts for fuel cells. Progress in Natural Science: Materials International, 2020, 30, 775-786.	1.8	16
144	Performance enhancement and degradation mechanism identification of a single-atom Coâ€“Nâ€“C catalyst for proton exchange membrane fuel cells. Nature Catalysis, 2020, 3, 1044-1054.	16.1	443

#	Article	IF	Citations
145	Strengthening the Carbon-Ionomer Interaction Feeds Catalytic Sites Better. Matter, 2020, 3, 1395-1397.	5.0	0
146	Particle Size Effect on Platinum Dissolution: Considerations for Accelerated Stability Testing of Fuel Cell Catalysts. ACS Catalysis, 2020, 10, 6281-6290.	5.5	65
147	Visualization and understanding of the degradation behaviors of a PEFC Pt/C cathode electrocatalyst using a multi-analysis system combining time-resolved quick XAFS, three-dimensional XAFS-CT, and same-view nano-XAFS/STEM-EDS techniques. Physical Chemistry Chemical Physics, 2020, 22, 18919-18931.	1.3	16
148	Corrosion-Induced Microstructural Variability Affects Transport-Kinetics Interaction in PEM Fuel Cell Catalyst Layers. Journal of the Electrochemical Society, 2020, 167, 084519.	1.3	18
149	Ultrathin Octahedral CuPt Nanocages Obtained by Facet Transformation from Rhombic Dodecahedral Coreâ€“Shell Nanocrystals. ACS Sustainable Chemistry and Engineering, 2020, 8, 10544-10553.	3.2	10
150	Electronic Effects of Nitrogen Atoms of Supports on Ptâ€“Ni Rhombic Dodecahedral Nanoframes for Oxygen Reduction. ACS Applied Energy Materials, 2020, 3, 6768-6774.	2.5	19
151	Dealloying Co-Rich PtPdCo Nanoparticles on Nitrogen Modified Carbon as Advanced Electrocatalyst for Ethylene Glycol Oxidation. Journal of the Electrochemical Society, 2020, 167, 044518.	1.3	8
152	Strategies for Engineering Highâ€Performance PGMâ€Free Catalysts toward Oxygen Reduction and Evolution Reactions. Small Methods, 2020, 4, 2000016.	4.6	70
153	Theoretical study of the strain effect on the oxygen reduction reaction activity and stability of FeNC catalyst. New Journal of Chemistry, 2020, 44, 6818-6824.	1.4	12
154	Active and Stable Ptâ€“Ni Alloy Octahedra Catalyst for Oxygen Reduction via Near-Surface Atomical Engineering. ACS Catalysis, 2020, 10, 4205-4214.	5.5	98
155	Ptâ€Irâ€Pd Trimetallic Nanocages as a Dual Catalyst for Efficient Oxygen Reduction and Evolution Reactions in Acidic Media. Advanced Energy Materials, 2020, 10, 1904114.	10.2	100
156	Designed Formation of Doubleâ€Shelled Niâ€“Fe Layeredâ€Doubleâ€Hydroxide Nanocages for Efficient Oxygen Evolution Reaction. Advanced Materials, 2020, 32, e1906432.	11.1	305
157	Rational design of hollow core-double shells hybrid nanoboxes and nanopipes composed of hierarchical Cu-Ni-Co selenides anchored on nitrogenâ€doped carbon skeletons as efficient and stable bifunctional electrocatalysts for overall water splitting. Chemical Engineering Journal, 2020, 402, 126174.	6.6	69
158	Catalytic Nanoframes and Beyond. Advanced Materials, 2020, 32, e2001345.	11.1	57
159	Oxygen Reduction Activities of Strained Platinum Coreâ€“Shell Electrocatalysts Predicted by Machine Learning. Journal of Physical Chemistry Letters, 2020, 11, 1773-1780.	2.1	31
160	Electrochemical Measurement of Intrinsic Oxygen Reduction Reaction Activity at High Current Densities as a Function of Particle Size for Pt_{4â€“x}Co_x/C (x) Tj ETQq1 1 0.784314 rgB	5.1	31
161	Segmentation and Re-encapsulation of Porous PtCu Nanoparticles by Generated Carbon Shell for Enhanced Ethylene Glycol Oxidation and Oxygen-Reduction Reaction. ACS Applied Materials & Interfaces, 2020, 12, 6298-6308.	4.0	25
162	Template-free synthesis of platinum hollow-opened structures in deep-eutectic solvents and their enhanced performance for methanol electrooxidation. Electrochimica Acta, 2020, 337, 135742.	2.6	21

#	Article	IF	Citations
163	An ultrasonic atomization spray strategy for constructing hydrophobic and hydrophilic synergistic surfaces as gas diffusion layers for proton exchange membrane fuel cells. Journal of Power Sources, 2020, 451, 227784.	4.0	12
164	Enhancement of service life of polymer electrolyte fuel cells through application of nanodispersed ionomer. Science Advances, 2020, 6, eaaw0870.	4.7	51
165	Morphing Mncore@Ptshell nanoparticles: Effects of core structure on the ORR performance of Pt shell. Applied Catalysis B: Environmental, 2020, 267, 118727.	10.8	58
166	Mesoscopic analyses of the impact of morphology and operating conditions on the transport resistances in a proton-exchange-membrane fuel-cell catalyst layer. Sustainable Energy and Fuels, 2020, 4, 3623-3639.	2.5	12
167	Enhancing Oxygen Reduction Activity of Ptâ€based Electrocatalysts: From Theoretical Mechanisms to Practical Methods. Angewandte Chemie, 2020, 132, 18490-18504.	1.6	24
168	Enhancing Oxygen Reduction Activity of Ptâ€based Electrocatalysts: From Theoretical Mechanisms to Practical Methods. Angewandte Chemie - International Edition, 2020, 59, 18334-18348.	7.2	174
169	Feed gas exchange (startup/shutdown) effects on Pt/C cathode electrocatalysis and surface Pt-oxide behavior in polymer electrolyte fuel cells as revealed using in situ real-time XAFS and high-resolution STEM measurements. Physical Chemistry Chemical Physics, 2020, 22, 9424-9437.	1.3	2
170	Recent advances in nanostructured intermetallic electrocatalysts for renewable energy conversion reactions. Journal of Materials Chemistry A, 2020, 8, 8195-8217.	5.2	64
171	New PtMg Alloy with Durable Electrocatalytic Performance for Oxygen Reduction Reaction in Proton Exchange Membrane Fuel Cell. ACS Energy Letters, 2020, 5, 1601-1609.	8.8	37
172	Lowâ€PGM and PGMâ€Free Catalysts for Proton Exchange Membrane Fuel Cells: Stability Challenges and Material Solutions. Advanced Materials, 2021, 33, e1908232.	11.1	201
173	Interface engineering in transition metal-based heterostructures for oxygen electrocatalysis. Materials Chemistry Frontiers, 2021, 5, 1033-1059.	3.2	64
174	Highly dispersed Fe-Nx active sites on Graphitic-N dominated porous carbon for synergetic catalysis of oxygen reduction reaction. Carbon, 2021, 171, 1-9.	5.4	46
175	An ultralight-weight polymer electrolyte fuel cell based on woven carbon fiber-resin reinforced bipolar plate. Journal of Power Sources, 2021, 484, 229291.	4.0	22
176	Selfâ€Standing Nanofiber Electrodes with Ptâ€“Co Derived from Electrospun Zeolitic Imidazolate Framework for High Temperature PEM Fuel Cells. Advanced Functional Materials, 2021, 31, 2006771.	7.8	27
177	The Analysis of Micro-Scale Deformation and Fracture of Carbonized Elastomer-Based Composites by In Situ SEM. Molecules, 2021, 26, 587.	1.7	6
178	Mesoporous Rh nanotubes for efficient electro-oxidation of methanol. Journal of Materials Chemistry A, 2021, 9, 4744-4750.	5.2	19
179	Recent Advances in Electrode Design Based on One-Dimensional Nanostructure Arrays for Proton Exchange Membrane Fuel Cell Applications. Engineering, 2021, 7, 33-49.	3.2	37
180	Sulfur poisoning of Pt and PtCo anode and cathode catalysts in polymer electrolyte fuel cells studied by operando near ambient pressure hard X-ray photoelectron spectroscopy. Physical Chemistry Chemical Physics, 2021, 23, 3866-3873.	1.3	15

#	Article	IF	Citations
181	Understanding the enhanced catalytic activity of high entropy alloys: from theory to experiment. Journal of Materials Chemistry A, 2021, 9, 19410-19438.	5.2	43
182	Bridging Structural Inhomogeneity to Functionality: Pair Distribution Function Methods for Functional Materials Development. Advanced Science, 2021, 8, 2003534.	5.6	44
183	Three-dimensional mesoporous PtM (M = Co, Cu, Ni) nanowire catalysts with high-performance towards methanol electro-oxidation reaction and oxygen reduction reaction. RSC Advances, 2021, 11, 14970-14979.	1.7	9
184	Engineering electrocatalyst nanosurfaces to enrich the activity by inducing lattice strain. Energy and Environmental Science, 2021, 14, 3717-3756.	15.6	98
185	Advanced Platinum-Based Oxygen Reduction Electrocatalysts for Fuel Cells. Accounts of Chemical Research, 2021, 54, 311-322.	7.6	237
186	Technological Approaches to Sustainability. , 2021, , 355-380.		3
187	Oxygen Reduction Electrocatalysts toward Practical Fuel Cells: Progress and Perspectives. Angewandte Chemie - International Edition, 2021, 60, 17832-17852.	7.2	265
188	Oxygen Reduction Electrocatalysts toward Practical Fuel Cells: Progress and Perspectives. Angewandte Chemie, 2021, 133, 17976-17996.	1.6	60
189	Alloyingâ€“realloying enabled high durability for Ptâ€“Pd-3d-transition metal nanoparticle fuel cell catalysts. Nature Communications, 2021, 12, 859.	5.8	137
190	A fundamental comprehension and recent progress in advanced Ptâ€based ORR nanocatalysts. SmartMat, 2021, 2, 56-75.	6.4	141
191	Significantly enhanced electrocatalytic activity of copper for hydrogen evolution reaction through femtosecond laser blackening. International Journal of Hydrogen Energy, 2021, 46, 10783-10788.	3.8	15
192	Janus Nanocages of Platinumâ€Group Metals and Their Use as Effective Dualâ€Electrocatalysts. Angewandte Chemie, 2021, 133, 10472-10480.	1.6	4
193	Recent Advances in Electrocatalysts for Proton Exchange Membrane Fuel Cells and Alkaline Membrane Fuel Cells. Advanced Materials, 2021, 33, e2006292.	11.1	300
194	Janus Nanocages of Platinumâ€Group Metals and Their Use as Effective Dualâ€Electrocatalysts. Angewandte Chemie - International Edition, 2021, 60, 10384-10392.	7.2	33
195	Engineering sub-nano structures with highly jagged edges on the Pt surface of Pt/C electrocatalysts to promote oxygen reduction reactions. Electrochimica Acta, 2021, 372, 137868.	2.6	3
196	<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
198	The NederDrone: A hybrid lift, hybrid energy hydrogen UAV. International Journal of Hydrogen Energy, 2021, 46, 16003-16018.	3.8	21
199	Design and Structural Parameters Analysis of the Turbine Rotor in Fuel Cell Vehicle. , 0, , .		1

#	Article	IF	Citations
200	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
201	Recent Advances in Rechargeable Liâ€“CO₂ Batteries. Energy & Fuels, 2021, 35, 9165-9186.	2.5	44
202	Conventional and advanced exergy analyses of a vehicular proton exchange membrane fuel cell power system. Energy, 2021, 222, 119939.	4.5	25
203	Towards comprehensive understanding of proton-exchange membrane fuel cells using high energy x-rays. JPhys Energy, 2021, 3, 031003.	2.3	2
204	Impact of ionomer structuration on the performance of bio-inspired noble-metal-free fuel cell anodes. Chem Catalysis, 2021, 1, 88-105.	2.9	14
205	The Oxygen Reduction Reaction on Pt: Why Particle Size and Interparticle Distance Matter. ACS Catalysis, 2021, 11, 7144-7153.	5.5	49
206	Future directions of catalytic chemistry. Pure and Applied Chemistry, 2021, 93, 1411-1421.	0.9	4
207	Highly dispersed Cu nanoparticles decorated on MOF-5: development of highly efficient noble metal-free electrocatalyst. Nano Futures, 2021, 5, 025006.	1.0	4
208	Direct Integration of Strainedâ€Pt Catalysts into Protonâ€Exchangeâ€Membrane Fuel Cells with Atomic Layer Deposition. Advanced Materials, 2021, 33, e2007885.	11.1	10
209	Ballâ€Milling Effect on Biomassâ€Derived Nanocarbon Catalysts for the Oxygen Reduction Reaction. ChemistrySelect, 2021, 6, 6019-6028.	0.7	10
210	Multifunctional Pt-Cu/TiO2 nanostructures and their performance in oxidation of soot, formaldehyde, and carbon monoxide reactions. Catalysis Today, 2022, 392-393, 23-30.	2.2	7
211	High-surface-area organic matrix tris(aza)pentacene supported platinum nanostructures as selective electrocatalyst for hydrogen oxidation/evolution reaction and suppressive for oxygen reduction reaction. International Journal of Hydrogen Energy, 2021, 46, 25039-25049.	3.8	4
212	Conformation-modulated three-dimensional electrocatalysts for high-performance fuel cell electrodes. Science Advances, 2021, 7, .	4.7	27
213	Advanced Oxygen Electrocatalyst for Air-Breathing Electrode in Zn-Air Batteries. ACS Applied Materials & Interfaces, 2021, 13, 40172-40199.	4.0	92
214	Recent Advances in Electrode Design for Rechargeable Zincâ€“Air Batteries. Small Science, 2021, 1, 2100044.	5.8	47
215	Microalgae biomass-derived nitrogen-enriching carbon materials as an efficient pH-universal oxygen reduction electrocatalyst for Zn-air battery. Science of the Total Environment, 2021, 782, 146844.	3.9	14
216	An Examination of the Catalyst Layer Contribution to the Disparity between the Nernst Potential and Open Circuit Potential in Proton Exchange Membrane Fuel Cells. Catalysts, 2021, 11, 965.	1.6	3
217	Engineering Catalyst Layers for Nextâ€Generation Polymer Electrolyte Fuel Cells: A Review of Design, Materials, and Methods. Advanced Energy Materials, 2021, 11, 2101025.	10.2	85

#	Article	IF	Citations
218	Atomic level engineering of noble metal nanocrystals for energy conversion catalysis. Journal of Energy Chemistry, 2021, 63, 604-624.	7.1	12
219	Observing, tracking and analysing electrochemically induced atomic-scale structural changes of an individual Pt-Co nanoparticle as a fuel cell electrocatalyst by combining modified floating electrode and identical location electron microscopy. Electrochimica Acta, 2021, 388, 138513.	2.6	22
220	Subnano-FeO_x Clusters Anchored in an Ultrathin Amorphous Al₂O₃ Nanosheet for Styrene Epoxidation. ACS Catalysis, 2021, 11, 11542-11550.	5.5	21
221	Signal-based diagnostic approach to enhance fuel cell durability. Journal of Power Sources, 2021, 506, 230223.	4.0	13
222	1D PtCo nanowires as catalysts for PEMFCs with low Pt loading. Science China Materials, 2022, 65, 704-711.	3.5	16
223	A novel 2D Co3(HADQ)2 metal-organic framework as a highly active and stable electrocatalyst for acidic oxygen reduction. Chemical Engineering Journal, 2022, 430, 132642.	6.6	43
224	Highly stable Co3O4 nanoparticles/carbon nanosheets array derived from flake-like ZIF-67 as an advanced electrode for supercapacacitor. Chemical Engineering Journal, 2021, 419, 129631.	6.6	52
225	Non-Fourier Heat Conduction and Thermal-Stress Analysis of a Spherical Ice Particle Subjected to Thermal Shock in PEM Fuel Cell at Quick Cold Start-Up. Journal of Energy Engineering - ASCE, 2021, 147, 04021028.	1.0	5
226	Energy storage onboard zero-emission two-wheelers: Challenges and technical solutions. Sustainable Energy Technologies and Assessments, 2021, 47, 101435.	1.7	14
227	Engineering ionomer homogeneously distributed onto the fuel cell electrode with superbly retrieved activity towards oxygen reduction reaction. Applied Catalysis B: Environmental, 2021, 298, 120609.	10.8	9
228	Enhanced oxygen reduction and methanol oxidation reaction over self-assembled Pt-M (MÂ=ÂCo, Ni) nanoflowers. Journal of Colloid and Interface Science, 2022, 607, 1411-1423.	5.0	26
229	Recent advances in non-precious metal electrocatalysts for oxygen reduction in acidic media and PEMFCs: an activity, stability and mechanism study. Green Chemistry, 2021, 23, 6898-6925.	4.6	32
230	Highly dispersed L10-PtZn intermetallic catalyst for efficient oxygen reduction. Science China Materials, 2021, 64, 1671-1678.	3.5	18
231	Boosting Both Electrocatalytic Activity and Durability of Metal Aerogels via Intrinsic Hierarchical Porosity and Continuous Conductive Network Backbone Preservation. Advanced Energy Materials, 2021, 11, 2002276.	10.2	24
232	Technological Approaches to Sustainability. , 2020, , 1-26.		1
233	High Performance FeNC and Mn-oxide/FeNC Layers for AEMFC Cathodes. Journal of the Electrochemical Society, 2020, 167, 134505.	1.3	49
234	Modified Floating Electrode Apparatus for Advanced Characterization of Oxygen Reduction Reaction Electrocatalysts. Journal of the Electrochemical Society, 2020, 167, 166501.	1.3	25
235	Possibilities and Challenges for the Inclusion of the Electric Vehicle (EV) to Reduce the Carbon Footprint in the Transport Sector: A Review. Energies, 2020, 13, 2602.	1.6	162

#	Article	IF	Citations
236	Ordered Mesoporous Carbon Confined Highly Dispersed PtCo Alloy for the Oxygen Reduction Reaction: The Effect of Structure and Composition on Performance. Industrial & Engineering Chemistry Research, 2021, 60, 14728-14736.	1.8	18
237	Engineering the Electrochemical Interface of Oxygen Reduction Electrocatalysts with Ionic Liquids: A Review. Advanced Energy and Sustainability Research, 2021, 2, 2000062.	2.8	13
238	Introduction to Materials for PEMFC Electrodes. , 2022, , 242-255.		3
239	Hydrogen and Fuel Cells in Transport Road, Rail, Air, and Sea. , 2020, , .		2
240	Silica-facilitated proton transfer for high-temperature proton-exchange membrane fuel cells. Science China Chemistry, 2021, 64, 2203-2211.	4.2	16
241	Differences in the Electrochemical Performance of Pt-Based Catalysts Used for Polymer Electrolyte Membrane Fuel Cells in Liquid Half- and Full-Cells. Chemical Reviews, 2021, 121, 15075-15140.	23.0	104
242	Electrophoretic deposition of carbon-supported octahedral Ptâ€“Ni alloy nanoparticle catalysts for cathode in polymer electrolyte membrane fuel cells. International Journal of Hydrogen Energy, 2022, 47, 1833-1844.	3.8	8
244	Structural evolution of Pt-based oxygen reduction reaction electrocatalysts. Chinese Journal of Catalysis, 2022, 43, 47-58.	6.9	20
245	Highly graphitized N-doped carbon nanosheets from 2-dimensional coordination polymers for efficient metal-air batteries. Carbon, 2022, 188, 135-145.	5.4	25
246	Rationalization of Nonlinear Adsorption Energyâ€“Strain Relations and BrÃ¸nstedâ€“Evansâ€“Polanyi and Transition State Scaling Relationships under Strain. Journal of Physical Chemistry Letters, 2021, 12, 11578-11584.	2.1	4
247	Ni nanodendrites prepared by a low-temperature process as electrocatalysts for hydrogen evolution reaction in alkaline solution. Molecular Catalysis, 2021, 516, 112006.	1.0	6
248	Hybrid electrocatalyst of CoFe2O4 decorating carbon spheres for alkaline oxygen evolution reaction. Ceramics International, 2022, 48, 5442-5449.	2.3	17
249	Platinum nanocluster catalysts supported on Marimo carbon via scalable dry deposition synthesis. RSC Advances, 2021, 11, 39216-39222.	1.7	6
250	Modelling the reactive transport processes in different reconstructed agglomerates of a PEFC catalyst layer. Electrochimica Acta, 2022, 404, 139721.	2.6	8
251	Saving global platinum demand while achieving carbon neutrality in the passenger transport sector: linking material flow analysis with integrated assessment model. Resources, Conservation and Recycling, 2022, 179, 106110.	5.3	16
252	Atomically dispersed catalysts for small molecule electrooxidation in direct liquid fuel cells. Journal of Energy Chemistry, 2022, 68, 439-453.	7.1	18
253	High-loaded sub-6 nm Pt1Co1 intermetallic compounds with highly efficient performance expression in PEMFCs. Energy and Environmental Science, 2022, 15, 278-286.	15.6	81
254	Benchmarking Fuel Cell Electrocatalysts Using Gas Diffusion Electrodes: Inter-lab Comparison and Best Practices. ACS Energy Letters, 2022, 7, 816-826.	8.8	58

#	Article	IF	Citations
255	Thermodynamic Modeling and Performance Analysis of Vehicular High-Temperature Proton Exchange Membrane Fuel Cell System. Membranes, 2022, 12, 72.	1.4	12
256	Core-Shell ZIF-67@ZIF-8-derived multi-dimensional cobalt-nitrogen doped hierarchical carbon nanomaterial for efficient oxygen reduction reaction. Journal of Alloys and Compounds, 2022, 903, 163701.	2.8	36
257	Edge Effect Promotes Graphene-Confining Single-Atom Coâ€“N₄ and Rhâ€“N₄ for Bifunctional Oxygen Electrocatalysis. Journal of Physical Chemistry C, 2022, 126, 30-39.	1.5	17
258	Single atom alloys vs. phase separated alloys in Cu, Ag, and Au atoms with Ni(111) and Ni, Pd, and Pt atoms with Cu(111): a theoretical exploration. Physical Chemistry Chemical Physics, 2022, 24, 10420-10438.	1.3	4
259	Atomically ordered Pt₃Mn intermetallic electrocatalysts for the oxygen reduction reaction in fuel cells. Journal of Materials Chemistry A, 2022, 10, 7399-7408.	5.2	26
260	Degradation of platinum electrocatalysts for methanol oxidation by lead contamination. Chinese Chemical Letters, 2023, 34, 107230.	4.8	4
261	Catalyst Electrodes with PtCu Nanowire Arrays In Situ Grown on Gas Diffusion Layers for Direct Formic Acid Fuel Cells. ACS Applied Materials & Interfaces, 2022, 14, 11457-11464.	4.0	18
262	Engineering nanoporous and solid core-shell architectures of low-platinum alloy catalysts for high power density PEM fuel cells. Nano Research, 2022, 15, 6148-6155.	5.8	20
263	Hydrophobization Engineering of the Airâ€“Cathode Catalyst for Improved Oxygen Diffusion towards Efficient Zincâ€“Air Batteries. Angewandte Chemie - International Edition, 2022, 61, .	7.2	72
264	Variation of Local Structure and Reactivity of Pt/C Catalyst for Accelerated Degradation Test of Polymer Electrolyte Fuel Cell Visualized by Operando 3D CTâ€XAFS Imaging. ChemNanoMat, 2022, 8, .	1.5	4
265	Hydrophobization Engineering of the Airâ€“Cathode Catalyst for Improved Oxygen Diffusion towards Efficient Zincâ€“Air Batteries. Angewandte Chemie, 2022, 134, .	1.6	12
266	Synthesis of PtCu Rhombic Dodecahedral Nanoframes Decorated with Six Nanobranches for Efficient Methanol Electrooxidation. Energy & Fuels, 2022, 36, 3947-3953.	2.5	9
267	Modeling Temperature-, Humidity-, and Material-Dependent Kinetics of the Oxygen Reduction Reaction. Journal of the Electrochemical Society, 2022, 169, 044507.	1.3	4
268	Surface reconstruction of oxidized platinum nanoparticles using classical molecular dynamics simulations. Computational Materials Science, 2022, 209, 111364.	1.4	2
269	Ordered PtFeIr Intermetallic Nanowires Prepared through a Silicaâ€Protection Strategy for the Oxygen Reduction Reaction. Angewandte Chemie - International Edition, 2022, 61, .	7.2	61
270	Materials Engineering toward Durable Electrocatalysts for Proton Exchange Membrane Fuel Cells. Advanced Energy Materials, 2022, 12, .	10.2	61
271	Ordered PtFeIr Intermetallic Nanowires Prepared through a Silicaâ€Protection Strategy for the Oxygen Reduction Reaction. Angewandte Chemie, 2022, 134, .	1.6	8
272	Dualâ€Metal Atom Electrocatalysts: Theory, Synthesis, Characterization, and Applications. Advanced Energy Materials, 2022, 12, .	10.2	78

#	Article	IF	Citations
273	Hollow Porous Carbon-Confined Atomically Ordered PtCo₃ Intermetallics for an Efficient Oxygen Reduction Reaction. ACS Catalysis, 2022, 12, 5380-5387.	5.5	57
274	Advanced Pt-based intermetallic nanocrystals for the oxygen reduction reaction. Chinese Journal of Catalysis, 2022, 43, 1444-1458.	6.9	22
275	Defect-rich PtPdCu flower-like nanoframes with enhanced electrocatalytic activity for methanol oxidation. Applied Surface Science, 2022, 593, 153404.	3.1	10
277	Highly accessible and dense surface single metal FeN₄ active sites for promoting the oxygen reduction reaction. Energy and Environmental Science, 2022, 15, 2619-2628.	15.6	82
278	Overcoming Nitrogen Reduction to Ammonia Detection Challenges: The Case for Leapfrogging to Gas Diffusion Electrode Platforms. ACS Catalysis, 2022, 12, 5726-5735.	5.5	24
279	The 2022 solar fuels roadmap. Journal Physics D: Applied Physics, 2022, 55, 323003.	1.3	58
280	Vertically aligned carbon nanotubes grown from Langmuirâ€“Blodgett films with nano alloy particles. Japanese Journal of Applied Physics, 2022, 61, SD1026.	0.8	1
281	Oxygen reduction reaction measurements on platinum electrocatalysts in gas diffusion electrode half-cells: Influence of electrode preparation, measurement protocols and common pitfalls. Journal of Power Sources, 2022, 539, 231530.	4.0	5
282	PdAg/Ag(111) Surface Alloys: A Highly Efficient Catalyst of Oxygen Reduction Reaction. Nanomaterials, 2022, 12, 1802.	1.9	3
283	Piezocatalytic Degradation of Pollutants and Simultaneous Recovery of Power: A New Strategy of Pollutant-to-Energy Conversion. SSRN Electronic Journal, 0, , .	0.4	0
284	Oxygen reduction reaction in hydrogen fuel cells. , 2022, , 277-303.		0
285	Nextâ€Generation Energy Harvesting and Storage Technologies for Robots Across All Scales. Advanced Intelligent Systems, 2023, 5, .	3.3	10
286	Ultrathin and Porous 2D PtPdCu Nanoalloys as High-Performance Multifunctional Electrocatalysts for Various Alcohol Oxidation Reactions. Inorganic Chemistry, 2022, 61, 9352-9363.	1.9	9
287	Electrochemical surface activation of commercial tungsten carbide for enhanced electrocatalytic hydrogen evolution and methanol oxidation reactions. Journal of Electroanalytical Chemistry, 2022, 919, 116525.	1.9	1
288	Lowâ€Pt NiNCâ€Supported PtNi Nanoalloy Oxygen Reduction Reaction Electrocatalystsâ€”In Situ Tracking of the Atomic Alloying Process. Angewandte Chemie - International Edition, 2022, 61, .	7.2	24
289	Lowâ€Pt NiNCâ€Supported PtNi Nanoalloy Oxygen Reduction Reaction Electrocatalystsâ€”In Situ Tracking of the Atomic Alloying Process. Angewandte Chemie, 2022, 134, .	1.6	1
290	A kinetic descriptor for the electrolyte effect on the oxygen reduction kinetics on Pt(111). Nature Catalysis, 2022, 5, 615-623.	16.1	62
291	Molecular Scissor Tailoring Hierarchical Architecture of Zif-Derived Fe/N/C Catalysts for Acidic Oxygen Reduction Reaction. SSRN Electronic Journal, 0, , .	0.4	0

#	Article	IF	Citations
292	Novel Ptni Nanoflowers Regulated by a Third Element (Rh, Ru, Pd) as Efficient Multifunctional Electrocatalysts for Orr, Mor and Her. SSRN Electronic Journal, 0, , .	0.4	0
293	Three-dimensional porous platinumâ€“telluriumâ€“rhodium surface/interface achieve remarkable practical fuel cell catalysis. Energy and Environmental Science, 2022, 15, 3877-3890.	15.6	32
294	Recent Advances in the Development of Nanocatalysts for Direct Methanol Fuel Cells. Energies, 2022, 15, 6335.	1.6	9
295	The promoting effect of interstitial hydrogen on the oxygen reduction performance of PtPd alloy nanotubes for fuel cells. Nano Research, 2023, 16, 2366-2372.	5.8	3
296	How to maximize geometric current density in testing of fuel cell catalysts by using gas diffusion electrode half-cell setups. Electrochemistry Communications, 2022, 141, 107362.	2.3	1
297	Porous Plasmonic Auâ€“Ag@Au Nanostructures for Photoelectrochemical Methanol Oxidation. ACS Applied Nano Materials, 2022, 5, 13286-13294.	2.4	2
298	Electrocatalytic oxygen reduction activity of AgCoCu oxides on reduced graphene oxide in alkaline media. Beilstein Journal of Nanotechnology, 0, 13, 1020-1029.	1.5	2
299	Recent progress in palladium-nonmetal nanostructure development for fuel cell applications. NPG Asia Materials, 2022, 14, .	3.8	3
300	Enhanced Activity of Oxygen Reduction Reaction on Pr₆O₁₁-Assisted PtPr Alloy Electrocatalysts. ACS Applied Materials & Interfaces, 2022, 14, 41861-41869.	4.0	6
301	Directly Sulfonated Carbon Nanofibers to Improve Single-Cell Performance of Pt/CNFsâ€“SO₃H Catalyst. Journal of Nanoelectronics and Optoelectronics, 2022, 17, 604-615.	0.1	0
302	Recent Developments of Atomically Dispersed Metal Electrocatalysts for Oxygen Reduction Reaction^{â€}. Chinese Journal of Chemistry, 2023, 41, 581-598.	2.6	6
303	Designing fuel cell catalyst support for superior catalytic activity and low mass-transport resistance. Nature Communications, 2022, 13, .	5.8	34
304	Pt Single Atoms on CrN Nanoparticles Deliver Outstanding Activity and CO Tolerance in the Hydrogen Oxidation Reaction. Advanced Materials, 2023, 35, .	11.1	33
305	Durable Highâ€temperature Proton Exchange Membrane Fuel Cells Enabled by the Workingâ€temperatureâ€matching Palladiumâ€Hydrogen Buffer Layer. Angewandte Chemie, 0, , .	1.6	0
306	Heterostructure Engineering of 2D Superlattice Materials for Electrocatalysis. Advanced Science, 2022, 9, .	5.6	29
307	Durable Highâ€Temperature Proton Exchange Membrane Fuel Cells Enabled by the Workingâ€Temperatureâ€Matching Palladiumâ€Hydrogen Buffer Layer. Angewandte Chemie - International Edition, 2023, 62, .	7.2	6
308	Novel PtNi nanoflowers regulated by a third element (Rh, Ru, Pd) as efficient multifunctional electrocatalysts for ORR, MOR and HER. Chemical Engineering Journal, 2023, 454, 140131.	6.6	14
309	Surface and lattice engineered ruthenium superstructures towards high-performance bifunctional hydrogen catalysis. Energy and Environmental Science, 2023, 16, 157-166.	15.6	41

#	Article	IF	Citations
310	An integrated platinum-nanocarbon electrocatalyst for efficient oxygen reduction. Nature Communications, 2022, 13, .	5.8	62
311	State-of-the-art in bioresources for sustainable transportation. International Journal of Hydrogen Energy, 2023, 48, 3768-3790.	3.8	7
312	Tafel Slope Analysis from Inherent Rate Constants for Oxygen Reduction Reaction Over N-doped Carbon and Feâ€“N-doped Carbon Electrocatalysts. Catalysis Surveys From Asia, 2023, 27, 84-94.	1.0	3
313	Numerical analyses on oxygen transport resistances in polymer electrolyte membrane fuel cells using a novel agglomerate model. International Journal of Hydrogen Energy, 2023, 48, 3232-3251.	3.8	12
314	Advances in platinum-based and platinum-free oxygen reduction reaction catalysts for cathodes in direct methanol fuel cells. Frontiers in Chemistry, 0, 10, .	1.8	8
315	Stability challenges of carbon-supported Pt-nanoalloys as fuel cell oxygen reduction reaction electrocatalysts. Chemical Communications, 2022, 58, 13832-13854.	2.2	12
316	Molecular scissor tailoring hierarchical architecture of ZIF-derived Fe/N/C catalysts for acidic oxygen reduction reaction. Applied Catalysis B: Environmental, 2023, 324, 122209.	10.8	24
317	Break-In Bad: On the Conditioning of Fuel Cell Nanoalloy Catalysts. ACS Catalysis, 2022, 12, 15675-15685.	5.5	12
318	Skeletal Nanostructures Promoting Electrocatalytic Reactions with Three-Dimensional Frameworks. ACS Catalysis, 2023, 13, 355-374.	5.5	10
319	Interfacial Engineering of Ni/V₂O₃ Heterostructure Catalyst for Boosting Hydrogen Oxidation Reaction in Alkaline Electrolytes. Angewandte Chemie, 2023, 135, .	1.6	2
320	Interfacial Engineering of Ni/V₂O₃ Heterostructure Catalyst for Boosting Hydrogen Oxidation Reaction in Alkaline Electrolytes. Angewandte Chemie - International Edition, 2023, 62, .	7.2	32
321	Synthesis of PdSn Nanoparticles with a Faceâ€Centered Cubic Structure for Electrocatalytic Ethanol Oxidation. ChemCatChem, 2023, 15, .	1.8	1
322	Size and near-surface engineering in weak-oxidative confined space to fabricate 4 nm L10-PtCo@Pt nanoparticles for oxygen reduction reaction. Nano Research, 2023, 16, 6622-6631.	5.8	7
323	Platinum-Cobalt Nanowires for Efficient Alcohol Oxidation Electrocatalysis. Materials, 2023, 16, 840.	1.3	2
324	Model Metallic Glasses for Superior Electrocatalytic Performance in a Hydrogen Oxidation Reaction. ACS Applied Materials & Interfaces, 2023, 15, 6697-6707.	4.0	0
325	Oxygen reduction performance measurements: Discrepancies against benchmarks. , 2023, 2, .		14
326	Research progress on the construction of synergistic electrocatalytic ORR/OER self-supporting cathodes for zincâ€“air batteries. Journal of Materials Chemistry A, 2023, 11, 4400-4427.	5.2	33
327	Palladium nanoparticles combined with reduced graphene oxide and multiwall carbon nanotubes for alkaline ascorbic acid oxidation. Japanese Journal of Applied Physics, 0, , .	0.8	1

#	Article	IF	Citations
328	Composition-tunable PtNiCu nanoparticles for boosting methanol oxidation reaction. Journal of Alloys and Compounds, 2023, 946, 169354.	2.8	3
329	In-situ growth of PPy/MnOx radical quenching layer for durability enhancement of proton exchange membrane in PEMFCs. Journal of Membrane Science, 2023, 675, 121556.	4.1	10
330	Gram-scale synthesis and unraveling the activity origin of atomically dispersed Co-N4O sites toward superior electrocatalytic oxygen reduction. Applied Catalysis B: Environmental, 2023, 328, 122489.	10.8	9
331	Strategies to Improve the Oxygen Reduction Reaction Activity on Ptâ€“Bi Bimetallic Catalysts: A Density Functional Theory Study. Journal of Physical Chemistry Letters, 2023, 14, 1990-1998.	2.1	4
332	The synthesis of iron-nitrogen sites embedded in electrospun carbon nanofibers with an excellent oxygen reduction reaction activity in alkaline/acidic media. New Carbon Materials, 2023, 38, 154-160.	2.9	2
333	Atomic-scale modeling of the dissolution of oxidized platinum nanoparticles in an explicit water environment. Journal of Materials Chemistry A, 2023, 11, 7043-7052.	5.2	1
334	Ptâ€Based Rare Earth Alloy as Efficient and Robust Electrocatalyst for Highâ€Temperature Proton Exchange Membrane Fuel Cells. Chemistry - an Asian Journal, 0, , .	1.7	1
335	Dissolvable templates to prepare Pt-based porous metallic glass for the oxygen reduction reaction. Nanoscale, 2023, 15, 6802-6811.	2.8	2
336	Mechanistic Investigations into the Selective Reduction of Oxygen by a Multicopper Oxidase T3 Site-Inspired Dicopper Complex. ACS Catalysis, 2023, 13, 5712-5722.	5.5	3
340	Into the groove. Nature Energy, 0, , .	19.8	0
344	Polymer blend nanocomposites for polymer electrolyte membrane fuel cell (PEMFC) applications. , 2023, , 479-493.		0
347	Hydrogen utilization in transportation systems. , 2023, , 283-329.		0
350	Atomic metal coordinated to nitrogen-doped carbon electrocatalysts for proton exchange membrane fuel cells: a perspective on progress, pitfalls and prospectives. Journal of Materials Chemistry A, 2023, 11, 23211-23222.	5.2	2
364	Low-cost Transition Metal-Nitrogen-Carbon Electrocatalysts for Oxygen Reduction Reaction: Operating Conditions from Aqueous Electrolytes to Fuel Cells. Sustainable Energy and Fuels, 0, , .	2.5	0
365	The role of high-resolution transmission electron microscopy and aberration corrected scanning transmission electron microscopy in unraveling the structureâ€“property relationships of Pt-based fuel cells electrocatalysts. Inorganic Chemistry Frontiers, 0, , .	3.0	1
380	Naturally Inspired Heme-Like Chemistries for the Oxygen Reduction Reaction: Going Beyond Platinum Group Metals in Proton Exchange Membrane Fuel Cell Catalysis. , 2024, , 325-351.		0