Recommended Practices and Benchmark Activity for Hy
in Water Splitting and Fuel Cells

Advanced Materials

31, e1806296

DOI: 10.1002/adma.201806296

#	Article	IF	Citations
1	In-situ generated Mn3O4-reduced graphene oxide nanocomposite for oxygen reduction reaction and isolated reduced graphene oxide for supercapacitor applications. Carbon, 2019, 154, 285-291.	5.4	38
2	Trimetallic Synergy in Intermetallic PtSnBi Nanoplates Boosts Formic Acid Oxidation. Advanced Materials, 2019, 31, e1903683.	11.1	112
3	Electrocatalytic Production of H₂O₂ by Selective Oxygen Reduction Using Earth-Abundant Cobalt Pyrite (CoS₂). ACS Catalysis, 2019, 9, 8433-8442.	5.5	167
4	Ultrafine Defective RuO₂ Electrocatayst Integrated on Carbon Cloth for Robust Water Oxidation in Acidic Media. Advanced Energy Materials, 2019, 9, 1901313.	10.2	182
5	Self-templated construction of 1D NiMo nanowires <i>via</i> a Li electrochemical tuning method for the hydrogen evolution reaction. Nanoscale, 2019, 11, 19429-19436.	2.8	30
6	Facile Synthesis of Well-Dispersed Ni2P on N-Doped Nanomesh Carbon Matrix as a High-Efficiency Electrocatalyst for Alkaline Hydrogen Evolution Reaction. Nanomaterials, 2019, 9, 1022.	1.9	16
7	Interfacial effects in supported catalysts for electrocatalysis. Journal of Materials Chemistry A, 2019, 7, 23432-23450.	5.2	94
8	Ternary Phase Diagram-Facilitated Rapid Screening of Double Perovskites As Electrocatalysts for the Oxygen Evolution Reaction. Chemistry of Materials, 2019, 31, 5919-5926.	3.2	26
9	Hollow bimetallic M-Fe-P (M=Mn, Co, Cu) nanoparticles as efficient electrocatalysts for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2019, 44, 22806-22815.	3.8	19
10	Crystalline Strontium Iridate Particle Catalysts for Enhanced Oxygen Evolution in Acid. ACS Applied Energy Materials, 2019, 2, 5490-5498.	2.5	61
11	Significance of Engineering the Octahedral Units to Promote the Oxygen Evolution Reaction of Spinel Oxides. Advanced Materials, 2019, 31, e1902509.	11.1	201
12	Scalable Synthesis of Bimetallic Phosphide Decorated in Carbon Nanotube Network as Multifunctional Electrocatalyst for Water Splitting. ACS Sustainable Chemistry and Engineering, 2019, 7, 13031-13040.	3.2	42
13	Organicâ€"Inorganic Cobalt-Phosphonate-Derived Hollow Cobalt Phosphate Spherical Hybrids for Highly Efficient Oxygen Evolution. ACS Sustainable Chemistry and Engineering, 2019, 7, 13559-13568.	3.2	58
14	Molybdenum, Cobalt Sulfide-Modified N-, S-Doped Graphene from Low-Temperature Molecular Pyrolysis: Mutual Activation Effect for Hydrogen Evolution. ACS Sustainable Chemistry and Engineering, 2019, 7, 19442-19452.	3.2	9
15	Electrolyte Effects on the Electrocatalytic Performance of Iridiumâ€Based Nanoparticles for Oxygen Evolution in Rotating Disc Electrodes. ChemPhysChem, 2019, 20, 2956-2963.	1.0	44
16	Two-dimensional transition-metal dichalcogenides for electrochemical hydrogen evolution reaction. FlatChem, 2019, 18, 100140.	2.8	39
17	Self-crosslinking carbon dots loaded ruthenium dots as an efficient and super-stable hydrogen production electrocatalyst at all pH values. Nano Energy, 2019, 65, 104023.	8.2	117
18	Rational Design of Rhodiumâ€"Iridium Alloy Nanoparticles as Highly Active Catalysts for Acidic Oxygen Evolution. ACS Nano, 2019, 13, 13225-13234.	7.3	151

#	Article	IF	Citations
19	Highly Stable Nanocrystal Engineered Palladium Decorated Cuprous Oxide Photocathode for Hydrogen Generation. Advanced Materials Interfaces, 2019, 6, 1901099.	1.9	3
20	Inception of molybdate as a â€œpore forming additiveâ€•to enhance the bifunctional electrocatalytic activity of nickel and cobalt based mixed hydroxides for overall water splitting. Nanoscale, 2019, 11, 16896-16906.	2.8	24
21	A Perovskite Electronic Structure Descriptor for Electrochemical CO₂ Reduction and the Competing H₂ Evolution Reaction. Journal of Physical Chemistry C, 2019, 123, 24469-24476.	1.5	26
22	A high-performance oxygen evolution catalyst in neutral-pH for sunlight-driven CO2 reduction. Nature Communications, 2019, 10, 4081.	5.8	57
23	Single Site Cobalt Substitution in 2D Molybdenum Carbide (MXene) Enhances Catalytic Activity in the Hydrogen Evolution Reaction. Journal of the American Chemical Society, 2019, 141, 17809-17816.	6.6	259
24	Switch of the Rate-Determining Step of Water Oxidation by Spin-Selected Electron Transfer in Spinel Oxides. Chemistry of Materials, 2019, 31, 8106-8111.	3.2	87
25	Preparative History vs Driving Force in Water Oxidation Catalysis: Parameter Space Studies of Cobalt Spinels. ACS Omega, 2019, 4, 15444-15456.	1.6	9
26	Mixed valence CoCuMnOx spinel nanoparticles by sacrificial template method with enhanced ORR performance. Applied Surface Science, 2019, 487, 1145-1151.	3.1	75
27	The oxygen evolution reaction enabled by transition metal phosphide and chalcogenide pre-catalysts with dynamic changes. Chemical Communications, 2019, 55, 8744-8763.	2.2	246
28	Homogenous Meets Heterogenous and Electroâ€Catalysis: Ironâ€Nitrogen Molecular Complexes within Carbon Materials for Catalytic Applications. ChemCatChem, 2019, 11, 3602-3625.	1.8	22
29	Recent Progress in Bifunctional Electrocatalysts for Overall Water Splitting under Acidic Conditions. ChemElectroChem, 2019, 6, 3244-3253.	1.7	79
30	Ruthenium Nanoparticles for Catalytic Water Splitting. ChemSusChem, 2019, 12, 2493-2514.	3.6	93
31	Approaches for measuring the surface areas of metal oxide electrocatalysts for determining their intrinsic electrocatalytic activity. Chemical Society Reviews, 2019, 48, 2518-2534.	18.7	483
32	Hierarchically porous Fe/Nâ€"C hollow spheres derived from melamine/Fe-incorporated polydopamine for efficient oxygen reduction reaction electrocatalysis. Sustainable Energy and Fuels, 2019, 3, 3455-3461.	2.5	25
33	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
34	Paradoxical Observance of â€œIntrinsicâ€•and â€œGeometricâ€•Oxygen Evolution Electrocatalysis in Phase-Tuned Cobalt Oxide/Hydroxide Nanoparticles. ACS Applied Nano Materials, 2019, 2, 7957-7968.	2.4	13
35	Amorphization activated ruthenium-tellurium nanorods for efficient waterÂsplitting. Nature Communications, 2019, 10, 5692.	5.8	312
36	Modulated transition metalâ€"oxygen covalency in the octahedral sites of CoFe layered double hydroxides with vanadium doping leading to highly efficient electrocatalysts. Nanoscale, 2019, 11, 23296-23303.	2.8	48

#	Article	IF	Citations
37	Development of RuO2/CeO2 heterostructure as an efficient OER electrocatalyst for alkaline water splitting. International Journal of Hydrogen Energy, 2020, 45, 18635-18644.	3.8	93
38	Multifunctional Transition Metalâ€Based Phosphides in Energyâ€Related Electrocatalysis. Advanced Energy Materials, 2020, 10, 1902104.	10.2	322
39	Highly efficient Ni nanotube arrays and Ni nanotube arrays coupled with NiFe layered-double-hydroxide electrocatalysts for overall water splitting. Journal of Power Sources, 2020, 448, 227434.	4.0	41
40	Interface engineering in transition metal carbides for electrocatalytic hydrogen generation and nitrogen fixation. Materials Horizons, 2020, 7, 32-53.	6.4	61
41	Nitrogen-Doped Graphitic Carbon-Supported Ultrafine Co Nanoparticles as an Efficient Multifunctional Electrocatalyst for HER and Rechargeable Znâ€"Air Batteries. ACS Applied Materials & Interfaces, 2020, 12, 5717-5729.	4.0	72
42	Size-dependence of the electrochemical performance of Feâ€"Nâ€"C catalysts for the oxygen reduction reaction and cathodes of direct methanol fuel cells. Nanoscale, 2020, 12, 3418-3423.	2.8	26
43	Tailoring the composition of a one-step electrodeposited Co,Ni/Co,Ni(OH)₂ composite coating for a highly active hydrogen evolution electrode. Sustainable Energy and Fuels, 2020, 4, 369-379.	2.5	9
44	Atomic cobalt catalysts for the oxygen evolution reaction. Chemical Communications, 2020, 56, 794-797.	2.2	68
45	Pressure-promoted irregular CoMoP₂ nanoparticles activated by surface reconstruction for oxygen evolution reaction electrocatalysts. Journal of Materials Chemistry A, 2020, 8, 2001-2007.	5.2	34
46	State of the art on the photocatalytic applications of graphene based nanostructures: From elimination of hazardous pollutants to disinfection and fuel generation. Journal of Environmental Chemical Engineering, 2020, 8, 103505.	3.3	39
47	Synthesis of Iridium Nanocatalysts for Water Oxidation in Acid: Effect of the Surfactant. ChemCatChem, 2020, 12, 1282-1287.	1.8	31
48	A General Route to Prepare Lowâ€Rutheniumâ€Content Bimetallic Electrocatalysts for pHâ€Universal Hydrogen Evolution Reaction by Using Carbon Quantum Dots. Angewandte Chemie, 2020, 132, 1735-1743.	1.6	40
49	Enhanced Water Oxidation Activity by Introducing Gallium into Cobaltâ€Iron Oxide System. ChemElectroChem, 2020, 7, 118-123.	1.7	6
50	Oxygen Doping Induced by Nitrogen Vacancies in Nb₄N₅ Enables Highly Selective CO₂ Reduction. Small, 2020, 16, e1905825.	5.2	38
51	A General Route to Prepare Lowâ€Rutheniumâ€Content Bimetallic Electrocatalysts for pHâ€Universal Hydrogen Evolution Reaction by Using Carbon Quantum Dots. Angewandte Chemie - International Edition, 2020, 59, 1718-1726.	7.2	452
52	3D Carbon Materials for Efficient Oxygen and Hydrogen Electrocatalysis. Advanced Energy Materials, 2020, 10, 1902494.	10.2	97
53	Composite NiCoO₂/NiCo₂O₄ inverse opals for the oxygen evolution reaction in an alkaline electrolyte. Catalysis Science and Technology, 2020, 10, 7566-7580.	2.1	6
54	Local structure engineering for active sites in fuel cell electrocatalysts. Science China Chemistry, 2020, 63, 1543-1556.	4.2	11

#	Article	IF	Citations
55	Carbon supported noble metal nanoparticles as efficient catalysts for electrochemical water splitting. Nanoscale, 2020, 12, 20165-20170.	2.8	34
56	Synthesis of S-doped AuPbPt alloy nanowire-networks as superior catalysts towards the ORR and HER. Journal of Materials Chemistry A, 2020, 8, 23906-23918.	5.2	32
57	The electropositive environment of Rh in Rh1Sn2/SWNTs for boosting trifunctional electrocatalysis. International Journal of Hydrogen Energy, 2020, 45, 32050-32058.	3.8	5
58	Water electrolysers with closed and open electrochemical systems. Nature Materials, 2020, 19, 1140-1150.	13.3	326
59	Interface Engineering of Binderâ€Free Earthâ€Abundant Electrocatalysts for Efficient Advanced Energy Conversion. ChemSusChem, 2020, 13, 4795-4811.	3.6	28
60	Few-layer N-doped porous carbon nanosheets derived from corn stalks as a bifunctional electrocatalyst for overall water splitting. Fuel, 2020, 280, 118567.	3.4	50
61	Simple descriptor derived from symbolic regression accelerating the discovery of new perovskite catalysts. Nature Communications, 2020, 11, 3513.	5.8	184
62	Integrating PtNi nanoparticles on NiFe layered double hydroxide nanosheets as a bifunctional catalyst for hybrid sodiumâ€“air batteries. Journal of Materials Chemistry A, 2020, 8, 16355-16365.	5.2	21
63	Oxygen Vacancyâ€rich Ni/NiO@NC Nanosheets with Schottky Heterointerface for Efficient Urea Oxidation Reaction. ChemSusChem, 2020, 13, 5004-5014.	3.6	95
64	Selfâ€Supported Mesoporous Iron Phosphide with High Activeâ€Site Density for Electrocatalytic Hydrogen Evolution in Acidic and Alkaline Media. ChemElectroChem, 2020, 7, 4943-4948.	1.7	10
65	Rugged High-Entropy Alloy Nanowires with in Situ Formed Surface Spinel Oxide As Highly Stable Electrocatalyst in Znâ€“Air Batteries. , 2020, 2, 1698-1706.		114
66	Two-dimensional bimetallic CoFe selenite <i>via</i> metal-ion assisted self-assembly for enhanced oxygen evolution reaction. New Journal of Chemistry, 2020, 44, 20148-20154.	1.4	7
67	OMS-2 nanorods filled with Co-ion in the tunnels as efficient electron conduits and regulatory substance for oxygen reduction. Applied Catalysis B: Environmental, 2020, 279, 119373.	10.8	28
68	Emerging Strategies for Developing High-Performance Perovskite-Based Materials for Electrochemical Water Splitting. Energy & Fuels, 2020, 34, 10547-10567.	2.5	52
69	Valence Alignment of Mixed Niâ€“Fe Hydroxide Electrocatalysts through Preferential Templating on Graphene Edges for Enhanced Oxygen Evolution. ACS Nano, 2020, 14, 11327-11340.	7.3	42
70	A Facile Route to Efficient Water Oxidation Electrodes via Electrochemical Activation of Iron in Nickel Sulfate Solution. ACS Sustainable Chemistry and Engineering, 2020, 8, 15550-15559.	3.2	5
71	Autogenous growth of the hierarchical V-doped NiFe layer double metal hydroxide electrodes for an enhanced overall water splitting. Dalton Transactions, 2020, 49, 11217-11225.	1.6	26
72	2D DUT-8(Ni)-derived Ni@C nanosheets for efficient hydrogen evolution. Journal of Solid State Electrochemistry, 2020, 24, 2461-2467.	1.2	8

#	Article	IF	Citations
73	Direct and indirect light energy harvesting with films of ambiently deposited ZnO nanoparticles. Applied Surface Science, 2020, 527, 146927.	3.1	3
74	Ternary IrO2-Pt-Ni deposits prepared by galvanic replacement as bifunctional oxygen catalysts. Journal of Electroanalytical Chemistry, 2020, 877, 114499.	1.9	11
75	Ruâ€Doping Enhanced Electrocatalysis of Metalâ€"Organic Framework Nanosheets toward Overall Water Splitting. Chemistry - A European Journal, 2020, 26, 17091-17096.	1.7	51
76	The oxygen evolution reaction in hematite - Carbon nanotube composites: Insights from density functional theory. Computational Condensed Matter, 2020, 24, e00496.	0.9	2
77	Lattice oxygen activation enabled by high-valence metal sites for enhanced water oxidation. Nature Communications, 2020, 11, 4066.	5.8	337
78	Iridium-based nanomaterials for electrochemical water splitting. Nano Energy, 2020, 78, 105270.	8.2	192
79	In silico discovery of active, stable, CO-tolerant and cost-effective electrocatalysts for hydrogen evolution and oxidation. Physical Chemistry Chemical Physics, 2020, 22, 19454-19458.	1.3	12
80	A Simple Method for Synthesizing Highly Active Amorphous Iridium Oxide for Oxygen Evolution under Acidic Conditions. Chemistry - A European Journal, 2020, 26, 17063-17068.	1.7	12
81	N-Rich hetero-porous defective carbon induced by trace B-doping enables efficient oxygen reduction. Chemical Communications, 2020, 56, 12214-12217.	2.2	7
82	Strong Electronic Interaction Enhanced Electrocatalysis of Metal Sulfide Clusters Embedded Metalâ€"Organic Framework Ultrathin Nanosheets toward Highly Efficient Overall Water Splitting. Advanced Science, 2020, 7, 2001965.	5.6	129
83	Nano/Microscale Integrated Mushroom-Shaped Hydrophilic CoP@Ni-CoP with Optimized Gas Bubble Release for High-Performance Water Splitting Catalysis. ACS Applied Energy Materials, 2020, 3, 9769-9784.	2.5	11
84	Modulating Surface/Interface Structure of Emerging InGaN Nanowires for Efficient Photoelectrochemical Water Splitting. Advanced Functional Materials, 2020, 30, 2005677.	7.8	51
85	Platinum nanoparticle decorated vertically aligned graphene screen-printed electrodes: electrochemical characterisation and exploration towards the hydrogen evolution reaction. Nanoscale, 2020, 12, 18214-18224.	2.8	23
86	Critical Practices in Rigorously Assessing the Inherent Activity of Nanoparticle Electrocatalysts. ACS Catalysis, 2020, 10, 10735-10741.	5.5	24
87	Metal oxide-based materials as an emerging family of hydrogen evolution electrocatalysts. Energy and Environmental Science, 2020, 13, 3361-3392.	15.6	370
88	Spaceâ€Confined Yolkâ€Shell Construction of Fe₃O₄ Nanoparticles Inside Nâ€Doped Hollow Mesoporous Carbon Spheres as Bifunctional Electrocatalysts for Longâ€Term Rechargeable Zincâ€"Air Batteries. Advanced Functional Materials, 2020, 30, 2005834.	7.8	119
89	Illustrating the Role of Quaternary-N of BINOL Covalent Triazine-Based Frameworks in Oxygen Reduction and Hydrogen Evolution Reactions. ACS Applied Materials & Interfaces, 2020, 12, 44689-44699.	4.0	37
90	Advances in the application of manganese dioxide and its composites as electrocatalysts for the oxygen evolution reaction. Journal of Materials Chemistry A, 2020, 8, 18492-18514.	5.2	47

#	Article	IF	Citations
91	MoO₂ as a Propitious â€œPore-Forming Additiveâ€•for Boosting the Water Oxidation Activity of Cobalt Oxalate Microrods. Journal of Physical Chemistry C, 2020, 124, 20010-20020.	1.5	19
92	Sulfur-Doped Carbon Nanohorn Bifunctional Electrocatalyst for Water Splitting. Nanomaterials, 2020, 10, 2416.	1.9	7
93	Toward Overcoming the Challenges in the Comparison of Different Pd Nanocatalysts: Case Study of the Ethanol Oxidation Reaction. Inorganics, 2020, 8, 59.	1.2	8
94	Hierarchical Nanoflower Arrays of Co₉S₈â€Ni₃S₂ on Nickel Foam: Aâ€‰Highly Efficient Binderâ€Free Electrocatalyst for Overall Water Splitting. Chemistry - A European Journal, 2020, 26, 7900-7911.	1.7	22
95	A non-carbon catalyst support upgrades the intrinsic activity of ruthenium for hydrogen evolution electrocatalysis via strong interfacial electronic effects. Nano Energy, 2020, 75, 104981.	8.2	39
96	Ultrathin 2D nanosheet based 3D hierarchical hollow polyhedral CoM/C (MÂ=ÂNi, Cu, Mn) phosphide nanocages as superior electrocatalysts toward oxygen evolution reaction. Chemical Engineering Journal, 2020, 398, 125467.	6.6	27
97	Core-double shell templated Fe/Co anchored carbon nanospheres for oxygen reduction. Chemical Engineering Journal, 2020, 399, 125647.	6.6	19
98	Graphite defect network constitutes a robust and polishable matrix: Ultralow catalyst loading and excellent electrocatalytic performance. Electrochimica Acta, 2020, 348, 136333.	2.6	5
99	Oxygenâ€Defectâ€Rich Cobalt Ferrite Nanoparticles for Practical Water Electrolysis with High Activity and Durability. ChemSusChem, 2020, 13, 3875-3886.	3.6	52
100	The ï£¿NH x Group Induced Formation of 3D Î±â€Co(OH) 2 Curly Nanosheet Aggregates as Efficient Oxygen Evolution Electrocatalysts. Small, 2020, 16, 2001973.	5.2	22
101	Ir-skinned Ir-Cu Nanoparticles with Enhanced Activity for Oxygen Reduction Reaction. Chemical Research in Chinese Universities, 2020, 36, 467-472.	1.3	5
102	Dual-metal-driven Selective Pathway of Nitrogen Reduction in Orderly Atomic-hybridized Re₂MnS₆ Ultrathin Nanosheets. Nano Letters, 2020, 20, 4960-4967.	4.5	69
103	Mechanism of Oxygen Evolution Catalyzed by Cobalt Oxyhydroxide: Cobalt Superoxide Species as a Key Intermediate and Dioxygen Release as a Rate-Determining Step. Journal of the American Chemical Society, 2020, 142, 11901-11914.	6.6	452
104	Covalency competition dominates the water oxidation structureâ€"activity relationship on spinel oxides. Nature Catalysis, 2020, 3, 554-563.	16.1	284
105	Nickel confined in 2D earth-abundant oxide layers for highly efficient and durable oxygen evolution catalysts. Journal of Materials Chemistry A, 2020, 8, 13340-13350.	5.2	6
106	Interface Catalysts of Ni/Co₂N for Hydrogen Electrochemistry. ACS Applied Materials & Interfaces, 2020, 12, 29357-29364.	4.0	8
107	Confined growth of ultrafine Mo2C nanoparticles embedded in N-doped carbon nanosheet for water splitting. Journal of Alloys and Compounds, 2020, 842, 155939.	2.8	11
108	Adsorption behavior of CO, CO2, H2, H2O, NO, and O2 on pristine and defective 2D monolayer ferromagnetic Fe3GeTe2. Applied Surface Science, 2020, 527, 146894.	3.1	20

#	Article	IF	Citations
109	Oxidation State and Oxygen-Vacancy-Induced Work Function Controls Bifunctional Oxygen Electrocatalytic Activity. ACS Catalysis, 2020, 10, 7734-7746.	5.5	76
110	Microwave-Hydrothermal Tuning of Spinel-Type Co3O4 Water Oxidation Catalysts. Frontiers in Chemistry, 2020, 8, 473.	1.8	8
111	Redox Flow Batteries: How to Determine Electrochemical Kinetic Parameters. ACS Nano, 2020, 14, 2575-2584.	7.3	118
112	Highly dispersed ultrafine shell-like nano-Pt with efficient hydrogen evolution <i>via</i> metal boron organic polymers. Journal of Materials Chemistry A, 2020, 8, 7171-7176.	5.2	38
113	Strategies for Engineering Highâ€Performance PGMâ€Free Catalysts toward Oxygen Reduction and Evolution Reactions. Small Methods, 2020, 4, 2000016.	4.6	70
114	Quantifying intrinsic kinetics of electrochemical reaction controlled by mass transfer of multiple species under rotating disk electrode configuration. Journal of Electroanalytical Chemistry, 2020, 872, 114042.	1.9	20
115	Rational Design of a N,S Coâ€Doped Supermicroporous CoFeâ€"Organic Framework Platform for Water Oxidation. ChemSusChem, 2020, 13, 2564-2570.	3.6	29
116	Gold-Incorporated Cobalt Phosphide Nanoparticles on Nitrogen-Doped Carbon for Enhanced Hydrogen Evolution Electrocatalysis. ACS Applied Materials & Interfaces, 2020, 12, 16548-16556.	4.0	55
117	Tailoring Lattice Oxygen Binding in Ruthenium Pyrochlores to Enhance Oxygen Evolution Activity. Journal of the American Chemical Society, 2020, 142, 7883-7888.	6.6	210
118	RuO2/Co3O4 Nanocubes based on Ru ions impregnation into prussian blue precursor for oxygen evolution. International Journal of Hydrogen Energy, 2020, 45, 9575-9582.	3.8	79
119	Nitride or Oxynitride? Elucidating the Compositionâ€"Activity Relationships in Molybdenum Nitride Electrocatalysts for the Oxygen Reduction Reaction. Chemistry of Materials, 2020, 32, 2946-2960.	3.2	57
120	First Example of Protonation of Ruddlesdenâ€"Popper Sr₂IrO₄: A Route to Enhanced Water Oxidation Catalysts. Chemistry of Materials, 2020, 32, 3499-3509.	3.2	51
121	Hybrid Organicâ€"Inorganic Materials and Composites for Photoelectrochemical Water Splitting. ACS Energy Letters, 2020, 5, 1487-1497.	8.8	104
122	A review on fundamentals for designing oxygen evolution electrocatalysts. Chemical Society Reviews, 2020, 49, 2196-2214.	18.7	1,466
123	Construction and Application of Interfacial Inorganic Nanostructures. Chinese Journal of Chemistry, 2020, 38, 772-786.	2.6	13
124	Electrocatalysis as the Nexus for Sustainable Renewable Energy: The Gordian Knot of Activity, Stability, and Selectivity. Angewandte Chemie - International Edition, 2020, 59, 15298-15312.	7.2	140
125	rGO wrapped trimetallic sulfide nanowires as an efficient bifunctional catalyst for electrocatalytic oxygen evolution and photocatalytic organic degradation. Journal of Materials Chemistry A, 2020, 8, 13558-13571.	5.2	64
126	Single Cu Atoms as Catalysts for Efficient Hydrazine Oxidation Reaction. ChemNanoMat, 2020, 6, 1474-1478.	1.5	7

#	Article	IF	Citations
127	Does power ultrasound (26â€‰kHz) affect the hydrogen evolution reaction (HER) on Pt polycrystalline electrode in a mild acidic electrolyte?. Ultrasonics Sonochemistry, 2020, 69, 105238.	3.8	22
128	Synthesis of nickel hydroxide/reduced graphene oxide composite thin films for water splitting application. International Journal of Energy Research, 2020, 44, 10908-10916.	2.2	18
129	Elektrokatalyse als Nexus fÃ¼r nachhaltige erneuerbare Energien â€“ der gordische Knoten aus AktivitÃ¤t, StabilitÃ¤t und SelektivitÃ¤t. Angewandte Chemie, 2020, 132, 15410-15426.	1.6	14
130	Oxide Electrocatalysts Based on Earth-Abundant Metals for Both Hydrogen- and Oxygen-Evolution Reactions. ACS Sustainable Chemistry and Engineering, 2020, 8, 11549-11557.	3.2	46
131	Stabilizing Oxygen Vacancy in Entropy-Engineered CoFe₂O₄-Type Catalysts for Co-prosperity of Efficiency and Stability in an Oxygen Evolution Reaction. ACS Applied Materials & Interfaces, 2020, 12, 32548-32555.	4.0	105
132	Deep Eutectic Solventâ€Assisted Synthesis of Ternary Heterojunctions for the Oxygen Evolution Reaction and Photocatalysis. ChemSusChem, 2020, 13, 2726-2738.	3.6	17
133	Bismuth Substituted Strontium Cobalt Perovskites for Catalyzing Oxygen Evolution. Journal of Physical Chemistry C, 2020, 124, 6562-6570.	1.5	41
134	Autologous Cobalt Phosphates with Modulated Coordination Sites for Electrocatalytic Water Oxidation. Angewandte Chemie, 2020, 132, 9002-9006.	1.6	34
135	Autologous Cobalt Phosphates with Modulated Coordination Sites for Electrocatalytic Water Oxidation. Angewandte Chemie - International Edition, 2020, 59, 8917-8921.	7.2	89
136	The electrochemical synthesis of CNTs/N-Cu2S composites as efficient electrocatalysts for water oxidation. Journal of Nanoparticle Research, 2020, 22, 1.	0.8	2
137	Hydrogen energy currency: Beyond state-of-the-art transition metal oxides for oxygen electrocatalysis. Current Opinion in Electrochemistry, 2020, 21, 55-61.	2.5	13
138	Periodically ordered mesoporous iron phosphide for highly efficient electrochemical hydrogen evolution. Journal of Colloid and Interface Science, 2020, 569, 68-75.	5.0	11
139	Selfâ€assembly Mesoporous FeP Film with High Porosity for Efficient Hydrogen Evolution Reaction. ChemCatChem, 2020, 12, 2589-2594.	1.8	11
140	Accelerating Atomic Catalyst Discovery by Theoretical Calculationsâ€Machine Learning Strategy. Advanced Energy Materials, 2020, 10, 1903949.	10.2	99
141	Rare-earth-containing perovskite nanomaterials: design, synthesis, properties and applications. Chemical Society Reviews, 2020, 49, 1109-1143.	18.7	211
142	In Situ Growth of Ru Nanoparticles on (Fe,Ni)(OH)₂ to Boost Hydrogen Evolution Activity at High Current Density in Alkaline Media. Small Methods, 2020, 4, 1900796.	4.6	82
143	Structuralâ€Phase Catalytic Redox Reactions in Energy and Environmental Applications. Advanced Materials, 2020, 32, e1905739.	11.1	56
144	Ir/TiON_x/C high-performance oxygen evolution reaction nanocomposite electrocatalysts in acidic media: synthesis, characterization and electrochemical benchmarking protocol. JPhys Energy, 2020, 2, 02LT01.	2.3	11

#	Article	IF	Citations
145	Nanoheterostructures of Partially Oxidized RuNi Alloy as Bifunctional Electrocatalysts for Overall Water Splitting. ChemSusChem, 2020, 13, 2739-2744.	3.6	23
146	Surface Composition Dependent Ligand Effect in Tuning the Activity of Nickelâ€"Copper Bimetallic Electrocatalysts toward Hydrogen Evolution in Alkaline. Journal of the American Chemical Society, 2020, 142, 7765-7775.	6.6	234
147	Adjustable anchoring of Ni/Co cations by oxygen-containing functional groups on functionalized graphite paper and accelerated mass/electron transfer for overall water splitting. Catalysis Science and Technology, 2020, 10, 2627-2643.	2.1	16
148	Constructing Core-Shell Co@N-Rich Carbon Additives Toward Enhanced Hydrogen Storage Performance of Magnesium Hydride. Frontiers in Chemistry, 2020, 8, 223.	1.8	12
149	Tannic Acid-Mediated <i>In Situ</i> Controlled Assembly of NiFe Alloy Nanoparticles on Pristine Graphene as a Superior Oxygen Evolution Catalyst. ACS Applied Energy Materials, 2020, 3, 3966-3977.	2.5	29
150	Amorphous Niâ€"Feâ€"Se hollow nanospheres electrodeposited on nickel foam as a highly active and bifunctional catalyst for alkaline water splitting. Dalton Transactions, 2020, 49, 6764-6775.	1.6	38
151	Recent trends in alkaline hydrogen evolution using nonprecious multi-metallic electrocatalysts. Current Opinion in Green and Sustainable Chemistry, 2020, 25, 100342.	3.2	7
152	The roles of oxygen vacancies in electrocatalytic oxygen evolution reaction. Nano Energy, 2020, 73, 104761.	8.2	465
153	Atomic Level Dispersed Metalâ€"Nitrogenâ€"Carbon Catalyst toward Oxygen Reduction Reaction: Synthesis Strategies and Chemical Environmental Regulation. Energy and Environmental Materials, 2021, 4, 5-18.	7.3	55
154	Facile Access to an Active Î³â€NiOOH Electrocatalyst for Durable Water Oxidation Derived From an Intermetallic Nickel Germanide Precursor. Angewandte Chemie - International Edition, 2021, 60, 4640-4647.	7.2	119
155	A 3D multi-interface structure of coral-like Fe-Mo-S/Ni3S2@NF using for high-efficiency and stable overall water splitting. Chemical Engineering Journal, 2021, 404, 126483.	6.6	82
156	Reactivity with Water and Bulk Ruthenium Redox of Lithium Ruthenate in Basic Solutions. Advanced Functional Materials, 2021, 31, 2002249.	7.8	5
157	Recent progress and prospects of Li-CO2 batteries: Mechanisms, catalysts and electrolytes. Energy Storage Materials, 2021, 34, 148-170.	9.5	88
158	Synergistic Interaction of Double/Simple Perovskite Heterostructure for Efficient Hydrogen Evolution Reaction at High Current Density. Small Methods, 2021, 5, e2000701.	4.6	31
159	Hidden in plain sight: unlocking the full potential of cyclic voltammetry with the thin-film rotating (ring) disk electrode studies for the investigation of oxygen reduction reaction electrocatalysts. Current Opinion in Electrochemistry, 2021, 25, 100626.	2.5	10
160	<i>Operando</i> X-ray spectroscopy visualizing the chameleon-like structural reconstruction on an oxygen evolution electrocatalyst. Energy and Environmental Science, 2021, 14, 906-915.	15.6	93
161	High-Strength agarose gel electrolyte enables long-endurance wearable Al-air batteries with greatly suppressed self-corrosion. Energy Storage Materials, 2021, 34, 427-435.	9.5	45
162	In situ facile fabrication of Ni(OH)2 nanosheet arrays for electrocatalytic co-production of formate and hydrogen from methanol in alkaline solution. Applied Catalysis B: Environmental, 2021, 281, 119510.	10.8	154

#	Article	IF	Citations
163	Pt-Sn-Co nanocubes as highly active catalysts for ethanol electro-oxidation. Journal of Catalysis, 2021, 393, 247-258.	3.1	20
164	Formateâ€Bicarbonate Cycle as a Vehicle for Hydrogen and Energy Storage. ChemSusChem, 2021, 14, 1258-1283.	3.6	31
165	Hydrogen Evolution Reaction for Vacancyâ€Ordered iâ€MXenes and the Impact of Proton Absorption into the Vacancies. Advanced Sustainable Systems, 2021, 5, 2000158.	2.7	27
166	Facile Access to an Active Î³â€NiOOH Electrocatalyst for Durable Water Oxidation Derived From an Intermetallic Nickel Germanide Precursor. Angewandte Chemie, 2021, 133, 4690-4697.	1.6	23
167	Engineering defect-rich Fe-doped NiO coupled Ni cluster nanotube arrays with excellent oxygen evolution activity. Applied Catalysis B: Environmental, 2021, 285, 119809.	10.8	103
168	Short communication: Molecular architecture based on palladium-salen complex/graphene for low potential water oxidation. Journal of Electroanalytical Chemistry, 2021, 880, 114928.	1.9	7
169	Dual surfactants applied in synthesis of MoSe2 for high-efficiency hydrogen evolution reaction. Journal of Alloys and Compounds, 2021, 863, 158092.	2.8	13
170	A mild approach to bimetallic ZIF-derived porous carbons as highly efficient oxygen reduction electrocatalysts. International Journal of Hydrogen Energy, 2021, 46, 6188-6196.	3.8	5
171	Beyond traditional water splitting for energy-efficient waste-to-hydrogen conversion with an inorganicâ€“carbon hybrid nanosheet electrocatalyst. Journal of Materials Chemistry A, 2021, 9, 5364-5373.	5.2	5
172	Nanoboxes endow non-noble-metal-based electrocatalysts with high efficiency for overall water splitting. Journal of Materials Chemistry A, 2021, 9, 857-874.	5.2	100
173	SnO2/CeO2 nanoparticle-decorated mesoporous ZSM-5 as bifunctional electrocatalyst for HOR and ORR. Chemical Engineering Journal, 2021, 417, 127913.	6.6	21
174	Understanding the Hydrogen Evolution Reaction Kinetics of Electrodeposited Nickelâ€Molybdenum in Acidic, Nearâ€Neutral, and Alkaline Conditions. ChemElectroChem, 2021, 8, 195-208.	1.7	100
175	In situ demonstration of anodic interface degradation during water electrolysis: Corrosion and passivation. Electrochimica Acta, 2021, 365, 137276.	2.6	9
176	Effect of synthesis conditions on the bifunctional electrocatalytic properties of Co3O4/N-rGO for ORR and OER. Journal of Applied Electrochemistry, 2021, 51, 155-171.	1.5	7
177	Surface and Interface Engineering: Molybdenum Carbideâ€“Based Nanomaterials for Electrochemical Energy Conversion. Small, 2021, 17, e1903380.	5.2	87
178	Supramolecular Nanosheet evolution into BC₃N matrix improves the hydrogen evolution reaction activity in the pH universality of highly dispersed Pt nanoparticles. Journal of Materials Chemistry A, 2021, 9, 16427-16435.	5.2	23
179	Is direct seawater splitting economically meaningful?. Energy and Environmental Science, 2021, 14, 3679-3685.	15.6	158
180	Gasâ€“Liquidâ€“Solid Triphase Interfacial Chemical Reactions Associated with Gas Wettability. Advanced Materials Interfaces, 2021, 8, 2001636.	1.9	17

#	Article	IF	Citations
181	Bottom-up fabrication of triazine-based frameworks as metal-free materials for supercapacitors and oxygen reduction reaction. RSC Advances, 2021, 11, 8384-8393.	1.7	2
182	Controlled growth of porous oxygen-deficient NiCo₂O₄ nanobelts as high-efficiency electrocatalysts for oxygen evolution reaction. Catalysis Science and Technology, 2021, 11, 264-271.	2.1	11
183	Multimetallic nanostructures for electrocatalytic oxygen evolution reaction in acidic media. Materials Chemistry Frontiers, 2021, 5, 4445-4473.	3.2	14
184	Cobalt phosphide nanowires with adjustable iridium, realizing excellent bifunctional activity for acidic water splitting. Dalton Transactions, 2021, 50, 7364-7371.	1.6	12
185	Nanoporous multimetallic Ir alloys as efficient and stable electrocatalysts for acidic oxygen evolution reactions. Journal of Catalysis, 2021, 393, 303-312.	3.1	17
186	Design strategies toward transition metal selenide-based catalysts for electrochemical water splitting. Sustainable Energy and Fuels, 2021, 5, 1347-1365.	2.5	30
187	Carbonate formation lowers the electrocatalytic activity of perovskite oxides for water electrolysis. Journal of Materials Chemistry A, 2021, 9, 19940-19948.	5.2	11
188	Gas diffusion electrodes (GDEs) for electrochemical reduction of carbon dioxide, carbon monoxide, and dinitrogen to value-added products: a review. Energy and Environmental Science, 2021, 14, 1959-2008.	15.6	243
189	A simple method for the preparation of a nickel selenide and cobalt selenide mixed catalyst to enhance bifunctional oxygen activity for Znâ€“air batteries. RSC Advances, 2021, 11, 19406-19416.	1.7	15
190	Dual synergetic catalytic effects boost hydrogen electric oxidation performance of Pd/W18O49. Nano Research, 2021, 14, 2441-2450.	5.8	15
191	Highly Efficient Electrocatalytic Water Splitting. , 2021, , 1335-1367.		1
192	Tuning electrochemically driven surface transformation in atomically flat LaNiO3 thin films for enhanced water electrolysis. Nature Materials, 2021, 20, 674-682.	13.3	105
193	P-doped SnFe nanocubes decorated with PdFe alloy nanoparticles for ethanol fuel cells. Journal of Materials Chemistry A, 2021, 9, 10685-10694.	5.2	10
194	Nickelâ€“cobalt oxalate as an efficient non-precious electrocatalyst for an improved alkaline oxygen evolution reaction. Nanoscale Advances, 2021, 3, 3770-3779.	2.2	19
195	Combination of Highly Efficient Electrocatalytic Water Oxidation with Selective Oxygenation of Organic Substrates using Manganese Borophosphates. Advanced Materials, 2021, 33, e2004098.	11.1	52
196	The Electrochemical Tuning of Transition Metal-Based Materials for Electrocatalysis. Electrochemical Energy Reviews, 2021, 4, 146-168.	13.1	30
197	Designing Highâ€Valence Metal Sites for Electrochemical Water Splitting. Advanced Functional Materials, 2021, 31, 2009779.	7.8	195
198	Delivering the Full Potential of Oxygen Evolving Electrocatalyst by Conditioning Electrolytes at Nearâ€Neutral pH. ChemSusChem, 2021, 14, 1554-1564.	3.6	20

#	Article	IF	Citations
199	Efficient overall water splitting in acid with anisotropic metal nanosheets. Nature Communications, 2021, 12, 1145.	5.8	124
200	Perovskite Oxide Based Electrodes for the Oxygen Reduction and Evolution Reactions: The Underlying Mechanism. ACS Catalysis, 2021, 11, 3094-3114.	5.5	115
201	Controlled Synthesis and Structure Engineering of Transition Metalâ€based Nanomaterials for Oxygen and Hydrogen Electrocatalysis in Zincâ€Air Battery and Waterâ€Splitting Devices. ChemSusChem, 2021, 14, 1659-1673.	3.6	12
202	Active Site Engineering in Transition Metal Based Electrocatalysts for Green Energy Applications. Accounts of Materials Research, 2021, 2, 147-158.	5.9	11
203	<i>Operando</i> unraveling photothermal-promoted dynamic active-sites generation in NiFe ₂ O ₄ for markedly enhanced oxygen evolution. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	107
204	Rational Control of Topological Defects in Porous Carbon for Highâ€Efficiency Carbon Dioxide Conversion. Advanced Materials Interfaces, 2021, 8, 2100051.	1.9	14
205	Activating inverse spinel NiCo2O4 embedded in N-doped carbon nanofibers via Fe substitution for bifunctional oxygen electrocatalysis. Materials Today Physics, 2021, 17, 100353.	2.9	29
206	Carbonâ€Supported Highâ€Entropy Oxide Nanoparticles as Stable Electrocatalysts for Oxygen Reduction Reactions. Advanced Functional Materials, 2021, 31, 2010561.	7.8	86
207	Recent Development of Oxygen Evolution Electrocatalysts in Acidic Environment. Advanced Materials, 2021, 33, e2006328.	11.1	392
208	Rh₂P Nanoparticles Partially Embedded in N/P-Doped Carbon Scaffold at Ultralow Metal Loading for High Current Density Water Electrolysis. ACS Applied Nano Materials, 2021, 4, 3369-3376.	2.4	14
209	Dendrimer-Ni-Based Material: Toward an Efficient Niâ€"Fe Layered Double Hydroxide for Oxygen-Evolution Reaction. Inorganic Chemistry, 2021, 60, 6073-6085.	1.9	23
210	Hierarchical porous S-doped Feâ€"Nâ€"C electrocatalyst for high-power-density zincâ€"air battery. Materials Today Energy, 2021, 19, 100624.	2.5	30
211	Seven steps to reliable cyclic voltammetry measurements for the determination of double layer capacitance. JPhys Energy, 2021, 3, 034013.	2.3	70
212	Modifying the electrochemical process of Liâ€"O2 battery by integrated NiMn-layered double hydroxides substrate. Journal of Alloys and Compounds, 2021, 856, 157457.	2.8	7
213	Facilitating the Deprotonation of OH to O through Fe⁴⁺â€Induced States in Perovskite LaNiO₃ Enables a Fast Oxygen Evolution Reaction. Small, 2021, 17, e2006930.	5.2	40
214	Recent advances in vacancy engineering of metalâ€organic frameworks and their derivatives for electrocatalysis. SusMat, 2021, 1, 66-87.	7.8	230
215	The Pitfalls of Using Potentiodynamic Polarization Curves for Tafel Analysis in Electrocatalytic Water Splitting. ACS Energy Letters, 0, , 1607-1611.	8.8	256
216	Synergy between Nickel Nanoparticles and N-Enriched Carbon Nanotubes Enhances Alkaline Hydrogen Oxidation and Evolution Activity. ACS Applied Nano Materials, 2021, 4, 3586-3596.	2.4	14

#	Article	IF	Citations
217	Nanoparticle exsolution in perovskite oxide and its sustainable electrochemical energy systems. Journal of Power Sources, 2021, 492, 229626.	4.0	17
218	Critical Review of Platinum Group Metal-Free Materials for Water Electrolysis: Transition from the Laboratory to the Market. Johnson Matthey Technology Review, 2021, 65, 207-226.	0.5	17
219	pH- and Cation-Dependent Water Oxidation on Rutile RuO₂(110). Journal of Physical Chemistry C, 2021, 125, 8195-8207.	1.5	45
220	Recent advances in catalyst materials for proton exchange membrane fuel cells. APL Materials, 2021, 9, 040702.	2.2	28
221	Proton-Assisted Reconstruction of Perovskite Oxides: Toward Improved Electrocatalytic Activity. ACS Applied Materials & Interfaces, 2021, 13, 22009-22016.	4.0	28
222	Design Strategies for Electrocatalysts from an Electrochemistâ€™s Perspective. ACS Catalysis, 2021, 11, 5318-5346.	5.5	73
223	Double Perovskite Cobaltites Integrated in a Monolithic and Noble Metal-Free Photoelectrochemical Device for Efficient Water Splitting. ACS Applied Materials & Interfaces, 2021, 13, 20313-20325.	4.0	17
224	Polymer electrolyte electrolysis: A review of the activity and stability of non-precious metal hydrogen evolution reaction and oxygen evolution reaction catalysts. Renewable and Sustainable Energy Reviews, 2021, 139, 110709.	8.2	92
225	Electrocatalysis for the Oxygen Evolution Reaction in Acidic Media: Progress and Challenges. Applied Sciences (Switzerland), 2021, 11, 4320.	1.3	41
226	Transition Metal-Based 2D Layered Double Hydroxide Nanosheets: Design Strategies and Applications in Oxygen Evolution Reaction. Nanomaterials, 2021, 11, 1388.	1.9	24
227	Green electroless plating of cuprous oxide nanoparticles onto carbon nanotubes as efficient electrocatalysts for hydrogen evolution reaction. Applied Surface Science, 2021, 548, 149218.	3.1	11
228	Structural design of cobalt phosphate on nickel foam for electrocatalytic oxygen evolution. Nanotechnology, 2021, 32, 305702.	1.3	3
229	Benchmarking of oxygen evolution catalysts on porous nickel supports. Joule, 2021, 5, 1281-1300.	11.7	74
230	Electrocatalysts for the hydrogen evolution reaction in alkaline and neutral media. A comparative review. Journal of Power Sources, 2021, 493, 229708.	4.0	151
231	Manganese dioxides for oxygen electrocatalysis in energy conversion and storage systems over full pH range. Journal of Power Sources, 2021, 494, 229779.	4.0	37
232	Improving oxygen vacancies by cobalt doping in MoO₂ nanorods for efficient electrocatalytic hydrogen evolution reaction. Nano Select, 2021, 2, 2148-2158.	1.9	9
233	In situ fabrication of cobalt/nickel sulfides nanohybrid based on various sulfur sources as highly efficient bifunctional electrocatalysts for overall water splitting. Nano Select, 0, , .	1.9	6
234	Transition Metal Chalcogenides as a Versatile and Tunable Platform for Catalytic CO₂ and N₂ Electroreduction. ACS Materials Au, 2021, 1, 6-36.	2.6	55

#	Article	IF	Citations
235	A discussion on the possible involvement of singlet oxygen in oxygen electrocatalysis. JPhys Energy, 2021, 3, 031004.	2.3	31
236	Fundamentals, On-Going Advances and Challenges of Electrochemical Carbon Dioxide Reduction. Electrochemical Energy Reviews, 2022, 5, 82-111.	13.1	17
237	Spin Effect on Oxygen Electrocatalysis. Advanced Energy and Sustainability Research, 2021, 2, 2100034.	2.8	32
238	Nickel single atom-decorated carbon nanosheets as multifunctional electrocatalyst supports toward efficient alkaline hydrogen evolution. Nano Energy, 2021, 83, 105850.	8.2	66
239	Coupling of Ru and Oâ€Vacancy on 2D Moâ€Based Electrocatalyst Via a Solidâ€Phase Interface Reaction Strategy for Hydrogen Evolution Reaction. Advanced Energy Materials, 2021, 11, 2100141.	10.2	71
240	Correlation and Improvement of Bimetallic Electronegativity on Metalâ€"Organic Frameworks for Electrocatalytic Water Oxidation. Advanced Energy and Sustainability Research, 2021, 2, 2100055.	2.8	8
241	Emerging Applications of Solid Catalysts with Ionic Liquid Layer Concept in Electrocatalysis. Advanced Functional Materials, 2021, 31, 2010977.	7.8	26
242	Unusual Role of Point Defects in Perovskite Nickelate Electrocatalysts. ACS Applied Materials & Interfaces, 2021, 13, 24887-24895.	4.0	9
243	Evolving Highly Active Oxidic Iron(III) Phase from Corrosion of Intermetallic Iron Silicide to Master Efficient Electrocatalytic Water Oxidation and Selective Oxygenation of 5â€Hydroxymethylfurfural. Advanced Materials, 2021, 33, e2008823.	11.1	91
244	Tailored Brownmillerite Oxide Catalyst with Multiple Electronic Functionalities Enables Ultrafast Water Oxidation. Chemistry of Materials, 2021, 33, 5233-5241.	3.2	32
245	Ni-based 3D hierarchical heterostructures achieved by selective electrodeposition as a bifunctional electrocatalyst for overall water splitting. Electrochimica Acta, 2021, 379, 138042.	2.6	26
246	Engineering Highâ€Spin State Cobalt Cations in Spinel Zinc Cobalt Oxide for Spin Channel Propagation and Active Site Enhancement in Water Oxidation. Angewandte Chemie, 2021, 133, 14657-14665.	1.6	24
247	Engineering Highâ€Spin State Cobalt Cations in Spinel Zinc Cobalt Oxide for Spin Channel Propagation and Active Site Enhancement in Water Oxidation. Angewandte Chemie - International Edition, 2021, 60, 14536-14544.	7.2	149
248	Powder metallurgy synthesis of porous NiMo alloys as efficient electrocatalysts to enhance the hydrogen evolution reaction. Journal of Alloys and Compounds, 2021, 865, 158901.	2.8	22
249	Integration of cryogenic trap to gas chromatography-sulfur chemiluminescent detection for online analysis of hydrogen gas for volatile sulfur compounds. Chinese Chemical Letters, 2021, 32, 3440-3445.	4.8	12
250	Opportunities and Challenges in Precise Synthesis of Transition Metal Singleâ€Atom Supported by 2D Materials as Catalysts toward Oxygen Reduction Reaction. Advanced Functional Materials, 2021, 31, 2103558.	7.8	51
251	Recent Advances on MOF Derivatives for Non-Noble Metal Oxygen Electrocatalysts in Zinc-Air Batteries. Nano-Micro Letters, 2021, 13, 137.	14.4	84
252	Carbon-coated oxygen vacancies-rich Co3O4 nanoarrays grow on nickel foam as efficient bifunctional electrocatalysts for rechargeable zinc-air batteries. Energy, 2021, 224, 120142.	4.5	32

#	Article	IF	Citations
253	Spin pinning effect to reconstructed oxyhydroxide layer on ferromagnetic oxides for enhanced water oxidation. Nature Communications, 2021, 12, 3634.	5.8	186
254	Recent Advances in Electrocatalysts for Alkaline Hydrogen Oxidation Reaction. Small, 2021, 17, e2100391.	5.2	56
255	Sub-Nanometer Pt Clusters on Defective NiFe LDH Nanosheets as Trifunctional Electrocatalysts for Water Splitting and Rechargeable Hybrid Sodiumâ€“Air Batteries. ACS Applied Materials & Interfaces, 2021, 13, 26891-26903.	4.0	31
256	Recent advances in nanostructured electrocatalysts for hydrogen evolution reaction. Rare Metals, 2021, 40, 3375-3405.	3.6	112
257	Influence of Electrochemical Pretreatment Conditions of PtCu/C Alloy Electrocatalyst on Its Activity. Nanomaterials, 2021, 11, 1499.	1.9	14
258	Progress of Nonpreciousâ€Metalâ€Based Electrocatalysts for Oxygen Evolution in Acidic Media. Advanced Materials, 2021, 33, e2003786.	11.1	166
259	Clean and Affordable Hydrogen Fuel from Alkaline Water Splitting: Past, Recent Progress, and Future Prospects. Advanced Materials, 2021, 33, e2007100.	11.1	781
260	Self-Anchored Platinum-Decorated Antimony-Doped-Tin Oxide as a Durable Oxygen Reduction Electrocatalyst. ACS Catalysis, 2021, 11, 7006-7017.	5.5	17
261	Recent progress in cobalt-based carbon materials as oxygen electrocatalysts for zinc-air battery applications. Materials Today Energy, 2021, 20, 100659.	2.5	31
262	Hydrogen Environmental Benefits Depend on the Way of Production: An Overview of the Main Processes Production and Challenges by 2050. Advanced Energy and Sustainability Research, 2021, 2, 2100093.	2.8	22
263	Boosting electrocatalytic activity of Ni2P nanosheets via incorporation of Ru nanoparticles for efficient hydrogen generation in alkaline media. Applied Surface Science, 2021, 554, 149560.	3.1	10
264	X-ray and electron spectroscopy of (photo)electrocatalysts: Understanding activity through electronic structure and adsorbate coverage. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2021, 39, .	0.9	3
265	Metal carbides as alternative electrocatalysts for energy conversion reactions. Journal of Catalysis, 2021, 404, 911-924.	3.1	20
266	Synergistic effect on the four-electron ORR of the electro-Fenton system to remove micropollutants using an MOF-derived catalyst with carbon black. Applied Surface Science, 2021, 554, 149546.	3.1	19
267	Electronic interaction boosted electrocatalysis of iridium nanoparticles on nitrogen-doped graphene for efficient overall water splitting in acidic and alkaline media. Chemical Engineering Journal, 2021, 415, 129034.	6.6	42
268	Ultrathin Co(OH)₂ Nanosheets@Nitrogenâ€Doped Carbon Nanoflake Arrays as Efficient Air Cathodes for Rechargeable Znâ€“Air Batteries. Small, 2021, 17, e2101720.	5.2	25
269	Effects of catalyst mass loading on electrocatalytic activity: An example of oxygen evolution reaction. Fundamental Research, 2021, 1, 448-452.	1.6	18
271	Activating Both Basal Plane and Edge Sites of Layered Cobalt Oxides for Boosted Water Oxidation. Advanced Functional Materials, 2021, 31, 2103569.	7.8	28

#	Article	IF	Citations
272	Phase- and Surface Composition-Dependent Electrochemical Stability of Ir-Ru Nanoparticles during Oxygen Evolution Reaction. ACS Catalysis, 2021, 11, 9300-9316.	5.5	79
273	Fully ordered L10-PtCoAu electrocatalyst derived from PtAu@CoO precursor with enhanced performance for oxygen reduction reaction. Electrochimica Acta, 2021, 384, 138266.	2.6	12
274	Improving the onset potential and Tafel slope determination of earth-abundant water oxidation electrocatalysts. Electrochimica Acta, 2021, 388, 138613.	2.6	30
275	Switching the Oâ€“O bond-formation mechanism by controlling water activity. CheM, 2021, 7, 1981-1982.	5.8	6
276	Electrocatalytic upcycling of polyethylene terephthalate to commodity chemicals and H2 fuel. Nature Communications, 2021, 12, 4679.	5.8	226
277	Tailoring the Electrocatalytic Activity of Pentlandite Fe_xNi_{9â€X}S₈ Nanoparticles via Variation of the Feâ€‰:â€‰Ni Ratio for Enhanced Water Oxidation. ChemElectroChem, 2021, 8, 3863-3874.	1.7	23
278	Influence of PtCu/C Catalysts Composition on Electrochemical Characteristics of Polymer Electrolyte Fuel Cell and Properties of Proton Exchange Membrane. Catalysts, 2021, 11, 1063.	1.6	8
279	Nonprecious Hybrid Metal Oxide for Bifunctional Oxygen Electrodes: Endorsing the Role of Interfaces in Electrocatalytic Enhancement. Energy & Fuels, 2021, 35, 13370-13381.	2.5	9
280	Benchmarking Catalysts for Formic Acid/Formate Electrooxidation. Molecules, 2021, 26, 4756.	1.7	8
281	Methods for nitrogen activation by reduction and oxidation. Nature Reviews Methods Primers, 2021, 1, .	11.8	107
282	Iron, Nitrogen Coâ€Doped Carbon Spheres as Low Cost, Scalable Electrocatalysts for the Oxygen Reduction Reaction. Advanced Functional Materials, 2021, 31, 2102974.	7.8	35
283	Woodâ€Inspired Binder Enabled Vertical 3D Printing of gâ€C₃N₄/CNT Arrays for Highly Efficient Photoelectrochemical Hydrogen Evolution. Advanced Functional Materials, 2021, 31, 2105045.	7.8	34
284	Expanding the frontiers of hydrogen evolution electrocatalysisâ€“searching for the origins of electrocatalytic activity in the anomalies of the conventional model. Electrochimica Acta, 2021, 388, 138583.	2.6	8
285	Binary-dopant promoted lattice oxygen participation in OER on cobaltate electrocatalyst. Chemical Engineering Journal, 2021, 417, 129324.	6.6	51
286	Facile fabrication of exsolved nanoparticle-decorated hollow ferrite fibers as active electrocatalyst for oxygen evolution reaction. Chemical Engineering Journal, 2021, 418, 129422.	6.6	34
287	Defect Engineering of Sb₂Te₃ through Different Doses of Ion Irradiation to Boost Hydrogen Evolution Reaction Performance. ACS Applied Energy Materials, 2021, 4, 8465-8474.	2.5	7
288	Electrospun One-Dimensional Electrocatalysts for Oxygen Reduction Reaction: Insights into Structureâ€“Activity Relationship. ACS Applied Materials & Interfaces, 2021, 13, 37961-37978.	4.0	43
289	Tertiary-Amine-Assisted Synthesis of Hierarchical Porous Nitrogen-Incorporated Cobaltâ€“Iron (Oxy)hydroxide Nanosheets for Improved Oxygen Evolution Reaction. ACS Applied Energy Materials, 2021, 4, 8866-8874.	2.5	8

#	Article	IF	Citations
290	Ferromagneticâ€"Antiferromagnetic Coupling Coreâ€"Shell Nanoparticles with Spin Conservation for Water Oxidation. Advanced Materials, 2021, 33, e2101091.	11.1	77
291	Active Sites in Heterogeneous Photocatalysis: Brief Notes on the Identification of Their Analogies with the Standard Heterogeneous Catalysis Concept. Chemical Engineering and Technology, 2021, 44, 2164.	0.9	0
292	The Significance of Properly Reporting Turnover Frequency in Electrocatalysis Research. Angewandte Chemie, 2021, 133, 23235.	1.6	1
293	Perovskite oxides as electrocatalyst for glycerol oxidation. Journal of Electroanalytical Chemistry, 2021, 896, 115198.	1.9	9
294	Prudent Practices in <i>exâ€...situ</i> Durability Analysis Using Cyclic Voltammetry for Platinumâ€based Electrocatalysts. Chemistry - an Asian Journal, 2021, 16, 3311-3325.	1.7	6
295	Bioinspired N4-metallomacrocycles for electrocatalytic oxygen reduction reaction. Coordination Chemistry Reviews, 2021, 442, 213996.	9.5	57
296	The pH of Aqueous NaOH/KOH Solutions: A Critical and Non-trivial Parameter for Electrocatalysis. ACS Energy Letters, 2021, 6, 3567-3571.	8.8	52
297	Hollow NH2-MIL-101@TA derived electrocatalyst for enhanced oxygen reduction reaction and oxygen evolution reaction. International Journal of Hydrogen Energy, 2021, 46, 38692-38700.	3.8	12
298	Magnetic Enhancement of Oxygen Evolution in CoNi@C Nanosheets. ACS Sustainable Chemistry and Engineering, 2021, 9, 12376-12384.	3.2	21
299	Tuning Reconstruction Level of Precatalysts to Design Advanced Oxygen Evolution Electrocatalysts. Molecules, 2021, 26, 5476.	1.7	14
300	Surface strain engineered Ni-NiO for boosting hydrogen evolution reaction in alkaline media. Electrochimica Acta, 2021, 391, 138985.	2.6	15
301	Engineering Different Reaction Centers on Hierarchical Ni/NiFe Layered Double Hydroxide Accelerating Overall Water Splitting. ACS Applied Energy Materials, 2021, 4, 9858-9865.	2.5	9
302	The Significance of Properly Reporting Turnover Frequency in Electrocatalysis Research. Angewandte Chemie - International Edition, 2021, 60, 23051-23067.	7.2	180
303	Structural Transformation of Heterogeneous Materials for Electrocatalytic Oxygen Evolution Reaction. Chemical Reviews, 2021, 121, 13174-13212.	23.0	262
304	Enhanced hydrogen evolution reaction activity of FeM (MÂ=ÂPt, Pd, Ru, Rh) nanoparticles with N-doped carbon coatings over a wide-pH environment. Molecular Catalysis, 2021, 514, 111830.	1.0	2
305	Uncovering the Promotion of CeO₂/CoS_{1.97} Heterostructure with Specific Spatial Architectures on Oxygen Evolution Reaction. Advanced Materials, 2021, 33, e2102593.	11.1	118
306	Nano-engineering of Ru-based hierarchical porous nanoreactors for highly efficient pH-universal overall water splitting. Applied Catalysis B: Environmental, 2021, 294, 120230.	10.8	49
307	Lithium-mediated electrochemical nitrogen reduction: Mechanistic insights to enhance performance. IScience, 2021, 24, 103105.	1.9	50

#	Article	IF	Citations
308	A review on poly(amidoamine) dendrimer encapsulated nanoparticles synthesis and usage in energy conversion and storage applications. Coordination Chemistry Reviews, 2021, 444, 214062.	9.5	24
309	Nanostructured transition metal compounds coated 3D porous core-shell carbon fiber as monolith water splitting electrocatalysts: A general strategy. Chemical Engineering Journal, 2021, 423, 130279.	6.6	140
310	ZIF-derived two-dimensional Co@Carbon hybrid: Toward highly efficient trifunctional electrocatalysts. Chemical Engineering Journal, 2021, 423, 130313.	6.6	19
311	Modulating electronic structure of cobalt phosphide porous nanofiber by ruthenium and nickel dual doping for highly-efficiency overall water splitting at high current density. Applied Catalysis B: Environmental, 2021, 298, 120488.	10.8	93
312	Stable and active NiFeW layered double hydroxide for enhanced electrocatalytic oxygen evolution reaction. Chemical Engineering Journal, 2021, 426, 130768.	6.6	42
313	Oxygen reduction reaction of vertically-aligned nanoporous Ag nanowires. Applied Catalysis B: Environmental, 2021, 298, 120586.	10.8	20
314	Correlating the electronic structure of perovskite La1â^'Sr CoO3 with activity for the oxygen evolution reaction: The critical role of Co 3d hole state. Journal of Energy Chemistry, 2022, 65, 637-645.	7.1	39
315	Structural investigation of metallic Ni nanoparticles with N-doped carbon for efficient oxygen evolution reaction. Chemical Engineering Journal, 2022, 429, 132122.	6.6	35
316	Dealloyed RuNiO_x as a robust electrocatalyst for the oxygen evolution reaction in acidic media. Dalton Transactions, 2021, 50, 5124-5127.	1.6	6
317	A CoV2O4 precatalyst for the oxygen evolution reaction: highlighting the importance of postmortem electrocatalyst characterization. Chemical Communications, 2021, 57, 883-886.	2.2	3
318	Ethylene glycol-mediated one-pot synthesis of Fe incorporated Î±-Ni(OH)₂ nanosheets with enhanced intrinsic electrocatalytic activity and long-term stability for alkaline water oxidation. Dalton Transactions, 2021, 50, 7305-7313.	1.6	11
319	Atomically dispersed nonmagnetic electron traps improve oxygen reduction activity of perovskite oxides. Energy and Environmental Science, 2021, 14, 1016-1028.	15.6	130
320	Oxygen evolution catalysts under proton exchange membrane conditions in a conventional three electrode cell <i>vs.</i> electrolyser device: a comparison study and a 3D-printed electrolyser for academic labs. Journal of Materials Chemistry A, 2021, 9, 9113-9123.	5.2	24
321	Vanadium -mediated ultrafine Co/Co₉S₈ nanoparticles anchored on Coâ€"N-doped porous carbon enable efficient hydrogen evolution and oxygen reduction reactions. Nanoscale, 2021, 13, 16277-16287.	2.8	11
322	Stabilized hydroxide-mediated nickel-based electrocatalysts for high-current-density hydrogen evolution in alkaline media. Energy and Environmental Science, 2021, 14, 4610-4619.	15.6	118
323	A Co-MOF-derived Co₉S₈@NS-C electrocatalyst for efficient hydrogen evolution reaction. RSC Advances, 2021, 11, 5947-5957.	1.7	13
324	Simultaneous phase transformation and doping <i>via</i> a unique photochemicalâ€"electrochemical strategy to achieve a highly active Fe-doped Ni oxyhydroxide oxygen evolution catalyst. Journal of Materials Chemistry A, 2021, 9, 4213-4220.	5.2	26
325	Boosting the hydrogen evolution reaction activity of Ru in alkaline and neutral media by accelerating water dissociation. RSC Advances, 2021, 11, 6107-6113.	1.7	13

#	Article	IF	Citations
326	Supporting nickel on vanadium nitride for comparable hydrogen evolution performance to platinum in alkaline solution. Journal of Materials Chemistry A, 2021, 9, 19669-19674.	5.2	19
327	New atomically precise M1Ag21 (M = Au/Ag) nanoclusters as excellent oxygen reduction reaction catalysts. Chemical Science, 2021, 12, 3660-3667.	3.7	22
328	Pyrolyzed Mâ€“N_x catalysts for oxygen reduction reaction: progress and prospects. Energy and Environmental Science, 2021, 14, 2158-2185.	15.6	170
329	Antiferromagnetic Inverse Spinel Oxide LiCoVO₄ with Spinâ€Polarized Channels for Water Oxidation. Advanced Materials, 2020, 32, e1907976.	11.1	106
330	Electronic Modulation of Hierarchical Spongy Nanosheets toward Efficient and Stable Water Electrolysis. Small, 2021, 17, e2006881.	5.2	35
331	Rh₂S₃/Nâ€Doped Carbon Hybrids as pHâ€Universal Bifunctional Electrocatalysts for Energyâ€Saving Hydrogen Evolution. Small Methods, 2020, 4, 2000208.	4.6	45
332	Common Pitfalls of Reporting Electrocatalysts for Water Splitting. Chemical Research in Chinese Universities, 2020, 36, 360-365.	1.3	12
333	Morphology and defect modification on in-situ derived Co9S8-porous nitrogen-doped carbon as a bifunctional electrocatalyst for oxygen evolution and reduction. Journal of Solid State Chemistry, 2020, 285, 121185.	1.4	12
334	Photochemically deposited Ir-doped NiCo oxyhydroxide nanosheets provide highly efficient and stable electrocatalysts for the oxygen evolution reaction. Nano Energy, 2020, 75, 104885.	8.2	30
335	Ultrathin RuRh@(RuRh)O₂core@shell nanosheets as stable oxygen evolution electrocatalysts. Journal of Materials Chemistry A, 2020, 8, 15746-15751.	5.2	24
336	Reversible and irreversible processes during cyclic voltammetry of an electrodeposited manganese oxide as catalyst for the oxygen evolution reaction. JPhys Energy, 2020, 2, 034009.	2.3	11
337	Open-ended W₁₈O₄₉-filled tungsten dichalcogenide nanotubes grown on a W substrate to efficiently catalyze hydrogen evolution. Nanoscale Advances, 2021, 3, 6587-6595.	2.2	2
338	Advanced Cathode Electrocatalysts for Fuel Cells: Understanding, Construction, and Application of Carbon-Based and Platinum-Based Nanomaterials. , 2021, 3, 1610-1634.		26
339	Essentials of High Performance Water Electrolyzers â€“ From Catalyst Layer Materials to Electrode Engineering. Advanced Energy Materials, 2021, 11, 2101998.	10.2	92
340	Contribution of the Subâ€Surface to Electrocatalytic Activity in Atomically Precise La_{0.7}Sr_{0.3}MnO₃ Heterostructures. Small, 2021, 17, e2103632.	5.2	4
341	Characterizing the Onset Potential Distribution of Pt/C Catalyst Deposition by a Total Internal Reflection Imaging Method. Small, 2021, 17, e2102407.	5.2	6
342	N-Doping of Graphene Aerogel as a Multifunctional Air Cathode for Microbial Fuel Cells. ACS Applied Materials & Interfaces, 2021, 13, 51312-51320.	4.0	9
343	Electrocatalytic activity and structural transformation of Ca2Sr2Mn2MO10-Î´ (Mâ€‰=â€‰Fe, Co). Ionics, 2022, 28, 397-406.	1.2	3

#	Article	IF	Citations
344	Simulating Current Distribution of Oxygen Evolution Reaction in Microcells Using Finite Element Method. Journal of the Electrochemical Society, 2021, 168, 106508.	1.3	5
345	Design and synthesis of noble metalâ€“based electrocatalysts using metalâ€“organic frameworks and derivatives. Materials Today Nano, 2022, 17, 100144.	2.3	17
346	Concurrent H₂ Generation and Formate Production Assisted by CO₂ Absorption in One Electrolyzer. Small Methods, 2021, 5, e2100871.	4.6	9
348	Surface Reconstruction of Perovskites for Water Oxidation: The Role of Initial Oxidesâ€™ Bulk Chemistry. Small Science, 2022, 2, 2100048.	5.8	21
349	Engineering the Electrochemical Interface of Oxygen Reduction Electrocatalysts with Ionic Liquids: A Review. Advanced Energy and Sustainability Research, 2021, 2, 2000062.	2.8	13
350	Hierarchical Feâ€“Mn binary metal oxide coreâ€“shell nano-polyhedron as a bifunctional electrocatalyst for efficient water splitting. Dalton Transactions, 2021, 50, 17265-17274.	1.6	7
351	Sacrificial templating synthesis of metal-organic framework hybrid nanosheets as efficient pre-electrocatalyst for oxygen evolution reaction in alkaline. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 632, 127745.	2.3	7
352	Self-reconstruction of a MOF-derived chromium-doped nickel disulfide in electrocatalytic water oxidation. Chemical Engineering Journal, 2022, 430, 133046.	6.6	22
353	Highly Efficient Electrocatalytic Water Splitting. , 2020, , 1-33.		0
354	Nickel in nitrogen-doped graphene nanotube as efficient electrocatalyst for water splitting. AIP Conference Proceedings, 2020, , .	0.3	0
355	Dynamic Surface Reconstruction Unifies the Electrocatalytic Oxygen Evolution Performance of Nonstoichiometric Mixed Metal Oxides. Jacs Au, 2021, 1, 2224-2241.	3.6	23
356	Highâ€Entropy Alloys for Electrocatalysis: Design, Characterization, and Applications. Small, 2022, 18, e2104339.	5.2	82
357	Recent developments of Co₃O₄-based materials as catalysts for the oxygen evolution reaction. Catalysis Science and Technology, 2022, 12, 436-461.	2.1	39
358	Epitaxial oxide thin films for oxygen electrocatalysis: A tutorial review. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2022, 40, 010801.	0.9	12
359	Functional role of single-atom catalysts in electrocatalytic hydrogen evolution: Current developments and future challenges. Coordination Chemistry Reviews, 2022, 452, 214289.	9.5	54
360	One-pot synthesis of Ru/Nb2O5@Nb2C ternary photocatalysts for water splitting by harnessing hydrothermal redox reactions. Applied Catalysis B: Environmental, 2022, 303, 120910.	10.8	28
361	Modulatorâ€Assisted Photosynthesis: Green and Powerful Approach towards Superstructured Ï€â€Conjugated Covalent Organic Frameworks with Enhanced Electrochemical Performances. ChemPhotoChem, 2022, 6, .	1.5	7
362	Evaluation of Electrocatalytic Activity of Noble Metal Catalysts Toward Nitrogen Reduction Reaction in Aqueous Solutions under Ambient Conditions. ChemSusChem, 2022, 15, .	3.6	12

#	Article	IF	Citations
363	Structural Insights into Multiâ€Metal Spinel Oxide Nanoparticles for Boosting Oxygen Reduction Electrocatalysis. Advanced Materials, 2022, 34, e2107868.	11.1	30
364	Hierarchical Structure of CuO Nanowires Decorated with Ni(OH)₂ Supported on Cu Foam for Hydrogen Production via Urea Electrocatalysis. Small Methods, 2022, 6, e2101017.	4.6	43
365	Boosting Oxygen Reduction Activity of Manganese Oxide Through Strain Effect Caused By Ion Insertion. Small, 2022, 18, e2105201.	5.2	8
366	Facile room-temperature fabrication of a silverâ€“platinum nanocoral catalyst towards hydrogen evolution and methanol electro-oxidation. Materials Advances, 2022, 3, 1609-1616.	2.6	16
367	Structural, electronic, and electrocatalytic evaluation of spinel transition metal sulfide supported reduced graphene oxide. Journal of Materials Chemistry A, 2022, 10, 1999-2011.	5.2	51
368	First principles study on electronic properties and oxygen evolution mechanism of 2D bimetallic N-doped graphene. Journal of Molecular Graphics and Modelling, 2022, 111, 108101.	1.3	5
369	Heterostructure Ni(OH)2/ZrO2 catalyst can achieve efficient oxygen reduction reaction. Chemical Engineering Science, 2022, 250, 117398.	1.9	4
370	Tuning the microphase behavior of carbon-precursor polymer blends with surfactant-like nanotubes: Toward catalyst support for water splitting. Chemical Engineering Journal, 2022, 431, 134027.	6.6	4
371	Metal-organic frameworks derived RuP2 with yolk-shell structure and efficient performance for hydrogen evolution reaction in both acidic and alkaline media. Applied Catalysis B: Environmental, 2022, 305, 121043.	10.8	37
372	In situ unraveling surface reconstruction of Ni5P4@FeP nanosheet array for superior alkaline oxygen evolution reaction. Applied Catalysis B: Environmental, 2022, 305, 121033.	10.8	104
373	Effect of heat treatment temperature on the Pt3Co binary metal catalysts for oxygen reduced reaction and DFT calculations. Journal of Fuel Chemistry and Technology, 2022, 50, 114-121.	0.9	3
374	Catalyst development for viability of electrochemical hydrogen purifier and compressor (EHPC) technology. International Journal of Hydrogen Energy, 2022, 47, 19619-19632.	3.8	4
375	Random Occupation of Multimetal Sites in Transition Metalâ€Organic Frameworks for Boosting the Oxygen Evolution Reaction. Chemistry - A European Journal, 2022, , .	1.7	7
376	Metal-containing heteroatom doped carbon nanomaterials for ORR, OER, and HER. , 2022, , 169-211.		0
377	Au Nanoparticle Modification Induces Charge-Transfer Channels to Enhance the Electrocatalytic Hydrogen Evolution Reaction of InSe Nanosheets. ACS Applied Materials & Interfaces, 2022, 14, 2908-2917.	4.0	14
378	Progress and Perspective of Metallic Glasses for Energy Conversion and Storage. Advanced Energy Materials, 2022, 12, .	10.2	19
379	Phase reconfiguration of multivalent nickel sulfides in hydrogen evolution. Energy and Environmental Science, 2022, 15, 633-644.	15.6	68
380	Mn-doped NiP: Facile synthesis and enhanced electrocatalytic activity for hydrogen evolution. Journal of Materials Research, 2022, 37, 807-817.	1.2	8

#	Article	IF	Citations
381	A novel 3D hybrid carbon-based conductive network constructed by bimetallic MOF-derived CNTs embedded nitrogen-doped carbon framework for oxygen reduction reaction. International Journal of Hydrogen Energy, 2022, 47, 5474-5485.	3.8	14
382	Strategies for Electrochemically Sustainable H₂ Production in Acid. Advanced Science, 2022, 9, e2104916.	5.6	15
383	A Facile Design of Solution-Phase Based VS2 Multifunctional Electrode for Green Energy Harvesting and Storage. Nanomaterials, 2022, 12, 339.	1.9	21
384	Morphology effects on electrocatalysis of anodic water splitting on nickel (II) oxide. Microporous and Mesoporous Materials, 2022, 333, 111734.	2.2	17
385	Amorphous-crystalline cobalt-molybdenum bimetallic phosphide heterostructured nanosheets as Janus electrocatalyst for efficient water splitting. International Journal of Hydrogen Energy, 2022, 47, 7783-7792.	3.8	21
386	Porous metal oxide electrocatalytic nanomaterials for energy conversion: Oxygen defects and selection techniques. Coordination Chemistry Reviews, 2022, 457, 214389.	9.5	46
387	Dynamic active site evolution and stabilization of core-shell structure electrode for oxygen evolution reaction. Chemical Engineering Journal, 2022, 435, 134672.	6.6	8
388	Single palladium site in ordered porous heteroatom-doped carbon for high-performance alkaline hydrogen oxidation. Applied Catalysis B: Environmental, 2022, 306, 121029.	10.8	67
389	Crystalline-amorphous interface of mesoporous Ni2PÂ@ÂFePOxHy for oxygen evolution at high current density in alkaline-anion-exchange-membrane water-electrolyzer. Applied Catalysis B: Environmental, 2022, 306, 121127.	10.8	90
390	FeV₃O₈/MoS₂ nanostructure heterojunctions as a highly effective electrocatalyst for hydrogen evolution. Journal of Materials Chemistry C, 2022, 10, 3489-3499.	2.7	13
391	Metal coordination in C₂N-like materials towards dual atom catalysts for oxygen reduction. Journal of Materials Chemistry A, 2022, 10, 6023-6030.	5.2	21
392	Nickel/Nickel Oxide-Nitrogen Self-Doped Carbon Nanosheets for Electrocatalytic Oxygen and Hydrogen Evolution Reactions. ACS Applied Nano Materials, 2022, 5, 2953-2961.	2.4	20
393	La-Based Perovskite Oxide Catalysts for Alkaline Oxygen Reduction: The Importance of Electrochemical Stability. Journal of Physical Chemistry C, 2022, 126, 3098-3108.	1.5	7
394	Spherical vs. planar: Steering the electronic communication between Ru nanoparticle and single atom to boost the electrocatalytic hydrogen evolution activity both in acid and alkaline. Applied Catalysis B: Environmental, 2022, 307, 121193.	10.8	36
395	Surface Dielsâ€"Alder adducts on multilayer graphene for the generation of edge-enriched single-atom FeN₄ sites for ORR and OER electrocatalysis. Sustainable Energy and Fuels, 2022, 6, 1603-1615.	2.5	3
396	The low overpotential regime of acidic water oxidation part I: the importance of O₂ detection. Energy and Environmental Science, 2022, 15, 1977-1987.	15.6	23
397	Acid anion electrolyte effects on platinum for oxygen and hydrogen electrocatalysis. Communications Chemistry, 2022, 5, .	2.0	48
398	Tunable metal hydroxideâ€"organic frameworks for catalysing oxygen evolution. Nature Materials, 2022, 21, 673-680.	13.3	123

#	Article	IF	Citations
399	Oxygen evolving reactions catalyzed by different manganese oxides: the role of oxidation state and specific surface area. Zeitschrift Fur Naturforschung - Section B Journal of Chemical Sciences, 2022, 77, 273-285.	0.3	1
400	Advances in Oxygen Evolution Electrocatalysts for Proton Exchange Membrane Water Electrolyzers. Advanced Energy Materials, 2022, 12, .	10.2	105
401	Nickel-Based Metal-Organic Frameworks as Electrocatalysts for the Oxygen Evolution Reaction (OER). Molecules, 2022, 27, 1241.	1.7	28
402	Bifunctional Ptâ€"Ni Electrocatalyst Synthesis with Ultralow Platinum Seeds for Oxygen Evolution and Reduction in Alkaline Medium. ACS Applied Energy Materials, 2022, 5, 4212-4220.	2.5	7
403	Identifying the Role of Hydroxyl Binding Energy in a Nonâ€Monotonous Behavior of Pdâ€Pd₄S for Hydrogen Oxidation Reaction. Advanced Functional Materials, 2022, 32, .	7.8	28
404	Electrocatalysis Goes Nuts. ACS Catalysis, 2022, 12, 4296-4301.	5.5	56
405	Separating the Effects of Band Bending and Covalency in Hybrid Perovskite Oxide Electrocatalyst Bilayers for Water Electrolysis. ACS Applied Materials & Interfaces, 2022, 14, 14129-14136.	4.0	23
406	Ligand-Tuned Energetics for the Selective Synthesis of Ni₂P and Ni₁₂P₅ Possessing Bifunctional Electrocatalytic Activity toward Hydrogen Evolution and Hydrazine Oxidation Reactions. Inorganic Chemistry, 2022, 61, 4394-4403.	1.9	3
407	Understanding the Effects of Ultrasound (408 kHz) on the Hydrogen Evolution Reaction (HER) and the Oxygen Evolution Reaction (OER) on Raney-Ni in Alkaline Media. Ultrasonics Sonochemistry, 2022, 84, 105979.	3.8	15
408	Exceptionally active and stable RuO2 with interstitial carbon for water oxidation in acid. CheM, 2022, 8, 1673-1687.	5.8	52
409	Highly Selective Oxygen Reduction to Hydrogen Peroxide on a Carbon-Supported Single-Atom Pd Electrocatalyst. ACS Catalysis, 2022, 12, 4156-4164.	5.5	44
410	Interfacial engineering induced highly efficient CoNiP@NiFe layered double hydroxides bifunctional electrocatalyst for water splitting. Materials Today Energy, 2022, 25, 100975.	2.5	8
411	Oxygen Vacancyâ€Enhanced Ternary Nickelâ€Tungstenâ€Cerium Metal Alloyâ€Oxides for Efficient Alkaline Electrochemical Full Cell Water Splitting Using Anion Exchange Membrane. ChemElectroChem, 2022, 9, .	1.7	6
412	Nanoheterostructures based on nanosized Prussian blue and its Analogues: Design, properties and applications. Coordination Chemistry Reviews, 2022, 461, 214497.	9.5	21
413	Interfacial electronic engineering of Ru/FeRu nanoparticles as efficient trifunctional electrocatalyst for overall water splitting and Zn-air battery. Chemical Engineering Journal, 2022, 437, 135456.	6.6	26
414	Atomic ruthenium coordinated with chlorine and nitrogen as efficient and multifunctional electrocatalyst for overall water splitting and rechargeable zinc-air battery. Chemical Engineering Journal, 2022, 441, 136078.	6.6	30
415	A Protocol for Electrocatalyst Stability Evaluation: H₂O₂ Electrosynthesis for Industrial Wastewater Treatment. Environmental Science & Technology, 2022, 56, 1365-1375.	4.6	12
416	Atomically dispersed metal sites in COF-based nanomaterials for electrochemical energy conversion. Green Energy and Environment, 2023, 8, 360-382.	4.7	15

#	Article	IF	Citations
417	Surface Atomic Decoration of a Manganite to a Modulable Oxygen Evolution Reaction. ACS Applied Materials & Interfaces, 2021, 13, 61267-61274.	4.0	4
418	Sodium Cobalticarborane: A Promising Precatalyst for Oxygen Evolution Reaction. Inorganic Chemistry, 2022, 61, 464-473.	1.9	3
419	Navigating multimetallic catalyst space with Bayesian optimization. Joule, 2021, 5, 3069-3071.	11.7	7
420	Lattice siteâ€“dependent metal leaching in perovskites toward a honeycomb-like water oxidation catalyst. Science Advances, 2021, 7, eabk1788.	4.7	41
421	ZIFs@chitosan Derived Efficient Bimetallic Carbon-Based Catalyst for Oxygen Reduction. Industrial & Engineering Chemistry Research, 2022, 61, 6156-6162.	1.8	9
422	Ternary Nanohybrids Comprising N-Doped Graphene and WSe₂â€“WO₃ Nanosheets Enable High-Mass-Loading Electrodes with Long-Term Stability for Hydrogen Evolution. ACS Applied Nano Materials, 2021, 4, 14094-14104.	2.4	13
423	Dualâ€Metal Atom Electrocatalysts: Theory, Synthesis, Characterization, and Applications. Advanced Energy Materials, 2022, 12, .	10.2	78
424	Hexagonal perovskite Sr₆(Co_{0.8}Fe_{0.2})₅O₁₅ as an efficient electrocatalyst towards the oxygen evolution reaction. Dalton Transactions, 2022, 51, 7100-7108.	1.6	8
425	Eutectic dual-phase microstructure modulated porous high-entropy alloys as high-performance bifunctional electrocatalysts for water splitting. Journal of Materials Chemistry A, 2022, 10, 11110-11120.	5.2	18
426	Highâ€entropy alloy stabilized and activated Pt clusters for highly efficient electrocatalysis. SusMat, 2022, 2, 186-196.	7.8	41
427	Rational Design of Better Hydrogen Evolution Electrocatalysts for Water Splitting: A Review. Advanced Science, 2022, 9, e2200307.	5.6	121
428	Metal-organic aerogel derived hierarchical porous metal-carbon nanocomposites as efficient bifunctional electrocatalysts for overall water splitting. Journal of Colloid and Interface Science, 2022, 621, 398-405.	5.0	6
429	Indirect electrodeposition of a NiMo@Ni(OH)2MoO composite catalyst for superior hydrogen production in acidic and alkaline electrolytes. Renewable Energy, 2022, 191, 370-379.	4.3	4
430	Unexpected Intrinsic Catalytic Function of Porous Boron Nitride Nanorods for Highly Efficient Peroxymonosulfate Activation in Water Treatment. ACS Applied Materials & Interfaces, 2022, 14, 18409-18419.	4.0	14
431	Several Key Factors for Efficient Electrocatalytic Water Splitting: Active Site Coordination Environment, Morphology Changes and Intermediates Identification. Chemistry - A European Journal, 2022, 28, .	1.7	5
432	Copper foam-derived electrodes as efficient electrocatalysts for conventional and hybrid water electrolysis. Materials Reports Energy, 2022, 2, 100092.	1.7	9
433	Spectroelectrochemical Analysis of the Water Oxidation Mechanism on Doped Nickel Oxides. Journal of the American Chemical Society, 2022, 144, 7622-7633.	6.6	66
434	Hard template derived N, S dual heteroatom doped ordered mesoporous carbon as an efficient electrocatalyst for oxygen reduction reaction. International Journal of Hydrogen Energy, 2022, 47, 40327-40339.	3.8	16

#	Article	IF	Citations
435	Why do platinum catalysts show diverse electrocatalytic performance?. Fundamental Research, 2023, 3, 804-808.	1.6	2
436	Sr3Mn2O6 and Sr3FeMnO6 for oxygen and hydrogen evolution electrocatalysis. Journal of Solid State Electrochemistry, 2022, 26, 1303.	1.2	2
437	Conducting polymers-derived fascinating electrocatalysts for advanced hydrogen and oxygen electrocatalysis. Coordination Chemistry Reviews, 2022, 464, 214555.	9.5	32
439	Electrochemistry in Magnetic Fields. Angewandte Chemie - International Edition, 2022, 61, .	7.2	64
440	Electrocatalytic oxygen reduction reaction with metalloporphyrins. Scientia Sinica Chimica, 2022, 52, 1306-1320.	0.2	3
441	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
442	Electrochemistry in Magnetic Fields. Angewandte Chemie, 2022, 134, .	1.6	6
443	Oxygen reduction reaction and proton exchange membrane fuel cell performance of pulse electrodeposited Ptâ€“Ni and Ptâ€“Niâ€“Mo(O) nanoparticles. Materials Today Energy, 2022, 27, 101023.	2.5	3
444	Highly Durable Pt-Based Coreâ€“Shell Catalysts with Metallic and Oxidized Co Species for Boosting the Oxygen Reduction Reaction. ACS Catalysis, 2022, 12, 6394-6408.	5.5	30
445	CoFe2O4 surface modification with conducting polypyrrole: employed as a highly active electrocatalyst for oxygen evolution reaction. Journal of Materials Science: Materials in Electronics, 2022, 33, 13244-13254.	1.1	6
446	Efficient Selfâ€Supported Bifunctional NiMo Alloy Electrocatalysts for Water Splitting in Alkaline Environment. ChemistrySelect, 2022, 7, .	0.7	3
447	Spectroelectrochemistry of Water Oxidation Kinetics in Molecular versus Heterogeneous Oxide Iridium Electrocatalysts. Journal of the American Chemical Society, 2022, 144, 8454-8459.	6.6	25
448	Electrocatalytic hydrogen evolution of a cobalt A2B triaryl corrole complex containing â€“N=PPh3 group. International Journal of Hydrogen Energy, 2022, , .	3.8	3
449	Manganese sulfide enables the formation of a highly active Î²-MnOOH electrocatalyst for effective alkaline water oxidation. Materials Today Chemistry, 2022, 24, 100905.	1.7	5
450	PdNi thin films for hydrogen oxidation reaction and oxygen reduction reaction in alkaline media. Electrochimica Acta, 2022, 420, 140425.	2.6	13
451	Environmentally benign general synthesis of nonconsecutive carbon-coated RuP₂porous microsheets as efficient bifunctional electrocatalysts under neutral conditions for energy-saving H₂production in hybrid water electrolysis. Catalysis Science and Technology, 2022, 12, 4339-4349.	2.1	2
452	The 2022 solar fuels roadmap. Journal Physics D: Applied Physics, 2022, 55, 323003.	1.3	58
453	Tailoring Oxygen Reduction Reaction Pathway on Spinel Oxides via Surficial Geometricalâ€Site Occupation Modification Driven by the Oxygen Evolution Reaction. Advanced Materials, 2022, 34, e2202874.	11.1	52

#	Article	IF	Citations
454	Water electrolysis: from textbook knowledge to the latest scientific strategies and industrial developments. Chemical Society Reviews, 2022, 51, 4583-4762.	18.7	453
455	Low-temperature water electrolysis: fundamentals, progress, and new strategies. Materials Advances, 2022, 3, 5598-5644.	2.6	50
456	In Situ Formed Edge-Rich Ni₃S₂-NiOOH Heterojunctions for Oxygen Evolution Reaction. Journal of the Electrochemical Society, 2022, 169, 054532.	1.3	15
457	Innovative strategies in design of transition metal-based catalysts for large-current-density alkaline water/seawater electrolysis. Materials Today Physics, 2022, 26, 100727.	2.9	41
458	Cobalt Formate, a Functional MOF: Electrocatalytic Water Oxidation. Journal of Molecular and Engineering Materials, 0, , .	0.9	0
459	Nickel Site Modification by High-Valence Doping: Effect of Tantalum Impurities on the Alkaline Water Electro-Oxidation by NiO Probed by Operando Raman Spectroscopy. ACS Catalysis, 2022, 12, 6506-6516.	5.5	25
460	Electrochemical Water Splitting: Bridging the Gaps Between Fundamental Research and Industrial Applications. Energy and Environmental Materials, 2023, 6, .	7.3	89
461	Hydrogen production byÂelectrocatalysis using the reaction ofÂacidic oxygen evolution: a review. Environmental Chemistry Letters, 2022, 20, 3429-3452.	8.3	18
462	Metalâ€"Organic Frameworks with Assembled Bifunctional Microreactor for Charge Modulation and Strain Generation toward Enhanced Oxygen Electrocatalysis. ACS Nano, 2022, 16, 9523-9534.	7.3	38
463	Efficient Electrochemical Reconstruction of a Cobalt- and Silver-Based Precatalytic Oxalate Framework for Boosting the Alkaline Water Oxidation Performance. ACS Sustainable Chemistry and Engineering, 2022, 10, 7265-7276.	3.2	10
464	Recent Advances in Porphyrin-Based Systems for Electrochemical Oxygen Evolution Reaction. International Journal of Molecular Sciences, 2022, 23, 6036.	1.8	19
465	Role of V doping in coreâ€"shell heterostructured Bi2Te3/Sb2Te3 for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2022, 47, 21361-21368.	3.8	3
466	New microporous nickel phosphonate derivatives N, P-codoped nickel oxides and N, O-codoped nickel phosphides: Potential electrocatalysts for water oxidation. Catalysis Today, 2023, 424, 113771.	2.2	4
467	Tuning the Catalytic Activity of Fe-Phthalocyanine-Based Catalysts for the Oxygen Reduction Reaction by Ligand Functionalization. ACS Catalysis, 2022, 12, 7278-7287.	5.5	30
468	Stabilization of a Mnâˆ'Co Oxide During Oxygen Evolution in Alkaline Media. ChemElectroChem, 2022, 9, .	1.7	6
469	Recent Advances in Carbonâ€Supported Nobleâ€Metal Electrocatalysts for Hydrogen Evolution Reaction: Syntheses, Structures, and Properties. Advanced Energy Materials, 2022, 12, .	10.2	64
470	Simultaneous electrocatalytic hydrogen production and hydrazine removal from acidic waste water. Chemical Engineering Science, 2022, 258, 117769.	1.9	9
471	The oxygen electrode bifunctionality studies: La2FeNiO6 double perovskite nanoparticles. Journal of Alloys and Compounds, 2022, 918, 165492.	2.8	3

#	Article	IF	Citations
472	Recent status and challenges in multifunctional electrocatalysis based on 2D MXenes. Catalysis Science and Technology, 2022, 12, 4413-4441.	2.1	16
473	Dos and donâ€™ts in screening water splitting electrocatalysts. Energy Advances, 2022, 1, 511-523.	1.4	23
474	Oxygen reduction reaction in hydrogen fuel cells. , 2022, , 277-303.		0
475	Feather-like Few-layer WSe2 Nanosheets Grown on W Substrateï¼šExcellent Electrocatalyst for Hydrogen Evolution Reaction. Nanoscale Advances, 0, , .	2.2	0
476	Empirical analysis and recent advances in metal-organic framework-derived electrocatalysts for oxygen reduction, hydrogen and oxygen evolution reactions. Materials Chemistry and Physics, 2022, 289, 126438.	2.0	7
477	Free-standing and binder-free porous monolithic electrodes prepared via solâ€“gel processes. Journal of Sol-Gel Science and Technology, 2022, 103, 637-679.	1.1	5
478	Size Effects of Electrocatalysts: More Than a Variation of Surface Area. ACS Nano, 2022, 16, 8531-8539.	7.3	42
479	Strategies and challenges on selective electrochemical hydrogen peroxide production: Catalyst and reaction medium design. Chem Catalysis, 2022, 2, 1919-1960.	2.9	41
480	Activity-Stability Relationships in Oxide Electrocatalysts for Water Electrolysis. Frontiers in Chemistry, 0, 10, .	1.8	9
481	Molybdenum disulfide (MoS2)-based electrocatalysts for hydrogen evolution reaction: From mechanism to manipulation. Journal of Energy Chemistry, 2022, 74, 45-71.	7.1	35
482	Transition Metal Nonâ€Oxides as Electrocatalysts: Advantages and Challenges. Small, 2022, 18, .	5.2	47
483	Methodsâ€”A Practical Approach to the Reversible Hydrogen Electrode Scale. Journal of the Electrochemical Society, 2022, 169, 066505.	1.3	11
484	Edge and defect sites in porous activated coke enable highly efficient carbon-assisted water electrolysis for energy-saving hydrogen production. Renewable Energy, 2022, 195, 283-292.	4.3	6
485	Janus bimetallic materials as efficient electrocatalysts for hydrogen oxidation and evolution reactions. Journal of Colloid and Interface Science, 2022, 625, 128-135.	5.0	10
487	Adjustable antiperovskite cobalt-based nitrides as efficient electrocatalysts for overall water splitting. Journal of Materials Chemistry A, 2022, 10, 15520-15527.	5.2	28
488	Strain engineering in single-atom catalysts: GaPS₄ for bifunctional oxygen reduction and evolution. Inorganic Chemistry Frontiers, 2022, 9, 4272-4280.	3.0	15
489	Tuning the electronic communication of the Ruâ€“O bond in ultrafine Ru nanoparticles to boost the alkaline electrocatalytic hydrogen production activity at large current density. Inorganic Chemistry Frontiers, 2022, 9, 4151-4159.	3.0	9
490	New challenges in oxygen reduction catalysis: a consortium retrospective to inform future research. Energy and Environmental Science, 2022, 15, 3775-3794.	15.6	19

#	Article	IF	Citations
491	Molecular Regulation Based on Functional Trimetallic Metalâ€"Organic Frameworks for Efficient Oxygen Evolution Reaction. Inorganic Chemistry, 2022, 61, 10934-10941.	1.9	5
492	Powering the World with Solar Fuels from Photoelectrochemical CO₂ Reduction: Basic Principles and Recent Advances. Advanced Energy Materials, 2022, 12, .	10.2	44
493	Pt Single Atom Electrocatalysts at Graphene Edges for Efficient Alkaline Hydrogen Evolution. Advanced Functional Materials, 2022, 32, .	7.8	38
494	Phosphorus modified hollow, porous Nickel-Cobalt oxides nanocubes with heterostructure for oxygen evolution reaction in alkaline. Journal of Alloys and Compounds, 2022, 925, 166338.	2.8	7
495	Controlled Synthesis of Transition Metal Phosphide Nanoparticles to Establish Composition-Dependent Trends in Electrocatalytic Activity. Chemistry of Materials, 2022, 34, 6255-6267.	3.2	17
496	Microenvironment Alters the Oxygen Reduction Activity of Metal/N/C Catalysts at the Triple-Phase Boundary. ACS Catalysis, 2022, 12, 9003-9010.	5.5	10
497	Rational design and synthesis of two-dimensional conjugated metal-organic polymers for electrocatalysis applications. CheM, 2022, 8, 1822-1854.	5.8	32
498	Ultra-dense carbon defects as highly active sites for oxygen reduction catalysis. CheM, 2022, 8, 2715-2733.	5.8	66
499	In-situ transformed trimetallic metal-organic frameworks as an efficient pre-catalyst for electrocatalytic oxygen evolution. Nano Research, 2023, 16, 3672-3679.	5.8	11
500	Promoting surface reconstruction of NiFe layered double hydroxides via intercalating [Cr(C2O4)3]3âˆ’ for enhanced oxygen evolution. Journal of Energy Chemistry, 2022, 74, 140-148.	7.1	20
501	Bridging the Gap between Single Nanoparticle Imaging and Global Electrochemical Response by Correlative Microscopy Assisted By Machine Vision. Small Methods, 2022, 6, .	4.6	13
502	Activating lattice oxygen of two-dimensional MnXnâˆ’1O2 MXenes via zero-dimensional graphene quantum dots for water oxidation. Science China Materials, 2022, 65, 3053-3061.	3.5	12
503	Enhanced bifunctional catalytic activity of surface-modified vanadyl ethylene glycolate for oxygen reduction and evolution reactions. Materials Chemistry and Physics, 2022, 289, 126506.	2.0	0
504	Enhancing the electronic metal-support interaction of CoRu alloy and pyridinic N for electrocatalytic pH-universal hydrogen evolution reaction. Chemical Engineering Journal, 2022, 450, 138026.	6.6	20
505	Noble Metal-Based Catalysts with Core-Shell Structure for Oxygen Reduction Reaction: Progress and Prospective. Nanomaterials, 2022, 12, 2480.	1.9	24
506	Macro/Microâ€Environment RegulatingÂCarbonâ€Supported Singleâ€Atom Catalysts for Hydrogen/Oxygen Conversion Reactions. Small, 2022, 18, .	5.2	37
507	Sustainable oxygen evolution electrocatalysis in aqueous 1â€‰M H2SO4 with earth abundant nanostructured Co3O4. Nature Communications, 2022, 13, .	5.8	55
508	Photosynthesis of Hydrogen and Its Synchronous Application in a Hydrogen Fuel Cell: A Comprehensive Experiment in the Undergraduate Teaching Laboratory. Journal of Chemical Education, 2022, 99, 3283-3288.	1.1	2

#	Article	IF	Citations
509	Activation of iridium site by anchoring ruthenium atoms on defects for efficient anodic catalyst in polymer electrolyte membrane water electrolyzers. Journal of Energy Chemistry, 2022, 75, 260-266.	7.1	7
510	Tuning the Catalytic Activity of Bifunctional Cobalt Boride Nanoflakes for Overall Water Splitting over a Wide pH Range. Journal of the Electrochemical Society, 2022, 169, 096507.	1.3	4
511	Stability Design Principles of Manganese-Based Oxides in Acid. Chemistry of Materials, 2022, 34, 7774-7787.	3.2	17
512	Room-Temperature Synthesis of Sub-2 nm Ultrasmall Platinumâ€"Rare-Earth Metal Nanoalloys for Hydrogen Evolution Reaction. Inorganic Chemistry, 2022, 61, 13379-13385.	1.9	6
513	Defect and Interface Engineering of Three-Dimensional Open Nanonetcage Electrocatalysts for Advanced Electrocatalytic Oxygen Evolution Reaction. ACS Applied Materials & Interfaces, 2022, 14, 38669-38676.	4.0	34
514	Human- and machine-centred designs of molecules and materials for sustainability and decarbonization. Nature Reviews Materials, 2022, 7, 991-1009.	23.3	30
515	Piezo-photoelectric all-in-one coaxial hierarchical TiO2-BaTiO3-CuInS2 heterostructure for synergistic water splitting. Materials Today Chemistry, 2022, 26, 101076.	1.7	2
516	Metal-supported cathodically activated graphite via self-reduction as electrocatalysts for efficient hydrogen evolution reaction. Materials Today Chemistry, 2022, 26, 101099.	1.7	0
517	High-entropy oxides for catalysis: A diamond in the rough. Chemical Engineering Journal, 2023, 451, 138659.	6.6	41
518	Key criteria for next-generation dimensionally stable electrodes towards large-scale green hydrogen production by water electrolysis. Current Opinion in Electrochemistry, 2022, 36, 101136.	2.5	10
519	FeSe2/CoSe nanosheets for efficient overall water splitting under low cell voltages. Materials Today Chemistry, 2022, 26, 101110.	1.7	4
520	Manipulating Ru oxidation within electrospun carbon nanofibers to boost hydrogen and oxygen evolution for electrochemical overall water splitting. Inorganic Chemistry Frontiers, 2022, 9, 4881-4891.	3.0	14
521	Development of New Mixed-Metal Ruthenium and Iridium Oxides as Electrocatalysts for Oxygen Evolution: Part II. Johnson Matthey Technology Review, 2022, 66, 406-417.	0.5	3
522	Benchmarking in electrocatalysis. , 2023, , 492-550.		2
523	Enhanced Performance of Sn@Pt Core-Shell Nanocatalysts Supported on Two Different Carbon Structures for the Hydrogen Oxidation Reaction in Acid Media. Journal of Chemistry, 2022, 2022, 1-12.	0.9	1
524	Understanding the Phase Equilibrium and Kinetics of Electrochemically Driven Phase Transition in CoO_{<i>x</i>}H_{<i>y</i>} during Electrocatalytic Reactions. Journal of Physical Chemistry C, 2022, 126, 18198-18207.	1.5	2
525	Was uns die RÃ¶ntgenabsorptionsspektroskopie Ã¼ber den aktiven Zustand von Elektrokatalysatoren fÃ¼r die Sauerstoffentwicklungsreaktion lehrt**. Angewandte Chemie, 2022, 134, .	1.6	2
526	Review of High Entropy Alloys Electrocatalysts for Hydrogen Evolution, Oxygen Evolution, and Oxygen Reduction Reaction. Chemical Record, 2022, 22, .	2.9	16

#	Article	IF	Citations
527	What Xâ€Ray Absorption Spectroscopy Can Tell Us About the Active State of Earthâ€Abundant Electrocatalysts for the Oxygen Evolution Reaction**. Angewandte Chemie - International Edition, 2022, 61, .	7.2	17
528	Optimized NiFe-Based Coordination Polymer Catalysts: Sulfur-Tuning and Operando Monitoring of Water Oxidation. ACS Nano, 2022, 16, 15318-15327.	7.3	12
529	Unraveling the Role of Defects in Electrocatalysts for Water Splitting: Recent Advances and Perspectives. Energy & Fuels, 2022, 36, 11660-11690.	2.5	15
530	Effect of rotating disk electrode conditions on oxygen evolution reaction activity of Ir nanoparticle catalysts and comparison with membrane and electrode assemblies. International Journal of Hydrogen Energy, 2022, 47, 38506-38516.	3.8	3
531	A hierarchical nickel-iron hydroxide nanosheetÂfrom the high voltage cathodic polarization for alkaline water splitting. International Journal of Hydrogen Energy, 2022, 47, 34421-34429.	3.8	10
532	Catalysis of Alloys: Classification, Principles, and Design for a Variety of Materials and Reactions. Chemical Reviews, 2023, 123, 5859-5947.	23.0	63
533	High valence metals engineering strategies of Fe/Co/Ni-based catalysts for boosted OER electrocatalysis. Journal of Energy Chemistry, 2023, 76, 195-213.	7.1	114
535	Platinum-free electrocatalysts for hydrogen oxidation reaction in alkaline media. Nano Energy, 2022, 104, 107877.	8.2	20
536	One-pot construction of CoSe nanoparticles anchored on single-atomic-Co doped carbon for pH-universal hydrogen evolution. Materials Chemistry Frontiers, 2022, 6, 3577-3588.	3.2	6
537	A dual-strategy of interface and reconstruction engineering to boost efficient alkaline water and seawater oxidation. Sustainable Energy and Fuels, 2022, 6, 5521-5530.	2.5	2
538	Essential data for industrially relevant development of bifunctional cathodes and biopolymer electrolytes in solid-state zincâ€“air secondary batteries. Energy and Environmental Science, 2022, 15, 5039-5058.	15.6	12
539	Pivotal role of reversible NiO6 geometric conversion in oxygen evolution. Nature, 2022, 611, 702-708.	13.7	119
540	Modulation of IrO₆ Chemical Environment for Highly Efficient Oxygen Evolution in Acid. Small, 2022, 18, .	5.2	14
541	A general approach to high-entropy metallic nanowire electrocatalysts. Matter, 2023, 6, 193-205.	5.0	28
542	Tuning oxygen reduction reaction activity via structure orientation and surface arrangement: A study on ordered PtCo/C catalysts. International Journal of Hydrogen Energy, 2022, 47, 40952-40960.	3.8	5
543	Recommended practices and benchmarking of foam electrodes in water splitting. Trends in Chemistry, 2022, 4, 1065-1077.	4.4	10
544	Overall water splitting realized by overall sputtering thin-film technology for a bifunctional MoNiFe electrode: A green technology for green hydrogen. Applied Catalysis B: Environmental, 2023, 322, 122103.	10.8	26
545	Lattice Strain and Schottky Junction Dual Regulation Boosts Ultrafine Ruthenium Nanoparticles Anchored on a N-Modified Carbon Catalyst for H₂ Production. Journal of the American Chemical Society, 2022, 144, 19619-19626.	6.6	99

#	Article	IF	Citations
546	High-current density alkaline electrolyzers: The role of Nafion binder content in the catalyst coatings and techno-economic analysis. Frontiers in Chemistry, 0, 10, .	1.8	8
547	<scp>Surfaceâ€Enhanced</scp>Raman Spectroscopy: Principles, Methods, and Applications in Energy Systems^{â€}. Chinese Journal of Chemistry, 2023, 41, 355-369.	2.6	10
548	Water electrolysis. Nature Reviews Methods Primers, 2022, 2, .	11.8	70
549	Advances in the Electrocatalytic Hydrogen Evolution Reaction by Metal Nanoclustersâ€based Materials. Small, 2022, 18, .	5.2	85
550	Superstructures of Zeolitic Imidazolate Frameworks to Singleâ€•and Multiatom Sites for Electrochemical Energy Conversion. Small, 2022, 18, .	5.2	13
551	Oxygen Evolution Reaction Electrocatalysis on Cobalt(oxy)hydroxide: Role of Fe Impurities. Journal of Physical Chemistry C, 0, , .	1.5	8
552	In situ Selfâ€Catalyzed Growth of Manganeseâ€Embedded 3D Flakesâ€Coated Carbon Rod as an Efficient Oxygenâ€Reduction Reaction Catalyst of Zincâ€Air Batteries. Chemistry - A European Journal, 2023, 29, .	1.7	0
553	Freestanding Î¼m-thin nanomesh electrodes exceeding 100x current density enhancement for high-throughput electrochemical applications. Materials Today Energy, 2022, 30, 101172.	2.5	4
554	MFC based in situ electrocatalytic persulfate activation for degradation of 2,4-dichlorophenol: Process and mechanism. Journal of Environmental Chemical Engineering, 2022, 10, 108803.	3.3	10
555	Electrocatalytic activity of layered oxides SrLaAl1/2M1/2O4 (M = Mn, Fe, Co) for hydrogen- and oxygen-evolution reactions. Materials Chemistry and Physics, 2023, 293, 126942.	2.0	6
556	Versatile Mo modulation effects enable efficient electrocatalytic aqueous methanol electro-reforming over surface-engineered NiCoMo alloy. Chemical Engineering Journal, 2023, 454, 140056.	6.6	9
557	Identifying diffusion limiting current to unravel the intrinsic kinetics of electrode reactions affected by mass transfer at rotating disk electrode. Chinese Journal of Chemical Physics, 2022, 35, 797-804.	0.6	5
558	A platinum modulated tungsten oxide on Ag nanowires network as an indicator for in-situ visualized evaluation of the hydrogen evolution performance. International Journal of Hydrogen Energy, 2023, 48, 3364-3372.	3.8	2
559	Toward Escherichia coli bacteria-machine for water-oxidation reaction at neutral conditions: Using Ruthenium Red. International Journal of Hydrogen Energy, 2023, 48, 3478-3485.	3.8	8
560	Bioinspired and Bioderived Aqueous Electrocatalysis. Chemical Reviews, 2023, 123, 2311-2348.	23.0	22
561	Tailoring Interfacial Charge Transfer of Epitaxially Grown Ir Clusters for Boosting Hydrogen Oxidation Reaction. Advanced Energy Materials, 2023, 13, .	10.2	11
562	Unveiling the Metal Incorporation Effect of Steadyâ€Active FeP Hydrogen Evolution Nanocatalysts for Water Electrolyzer. Chemistry - A European Journal, 0, , .	1.7	1
563	In Situ Quantification of the Active Sites, Turnover Frequency, and Stability of Niâ€"Fe (Oxy)hydroxides for the Oxygen Evolution Reaction. ACS Catalysis, 2022, 12, 14280-14289.	5.5	16

#	Article	IF	Citations
564	Error, reproducibility and uncertainty in experiments for electrochemical energy technologies. Nature Communications, 2022, 13, .	5.8	6
565	Gas-Phase Synthesis of PtMo Alloy Electrocatalysts with Enhanced Activity and Durability for Oxygen Reduction Reaction. ACS Sustainable Chemistry and Engineering, 2022, 10, 15319-15327.	3.2	7
566	Progress of Heterogeneous Iridium-Based Water Oxidation Catalysts. ACS Nano, 2022, 16, 17761-17777.	7.3	29
567	Recent advances in understanding and design of efficient hydrogen evolution electrocatalysts for water splitting: A comprehensive review. Advances in Colloid and Interface Science, 2023, 311, 102811.	7.0	17
568	A molecular strategy to Ni45Pt55@NC nanoparticles as efficient and robust Electrocatalyst for hydrogen evolution reaction. Journal of Organometallic Chemistry, 2023, 983, 122558.	0.8	0
569	Interfacial engineering of metalâ€"organic framework derived hierarchical CoPâ€"Ni₅P₄ nanosheet arrays for overall water splitting. Journal of Materials Chemistry A, 2023, 11, 1801-1809.	5.2	5
570	Recent progress on design and applications of transition metal chalcogenide-associated electrocatalysts for the overall water splitting. Chinese Journal of Catalysis, 2023, 44, 7-49.	6.9	47
571	Interfacial electron transfer in heterojunction nanofibers for highly efficient oxygen evolution reaction. Nanoscale, 0, , .	2.8	3
572	Recent trends in electrochemical catalyst design for hydrogen evolution, oxygen evolution, and overall water splitting. Electrochimica Acta, 2023, 439, 141715.	2.6	14
573	Topologic transition-induced abundant undercoordinated Fe active sites in NiFeOOH for superior oxygen evolution. Nano Energy, 2023, 106, 108044.	8.2	10
574	Increased Sensitivity and Selectivity for As(III) Detection at the Au(111) Surface: Single Crystals and Ultraflat Thin Films Comparison. Journal of Physical Chemistry C, 2022, 126, 20343-20353.	1.5	0
575	Interfacial Electronic Engineering of NiSeâ€"Anchored Niâ€"Nâ€"C Composite Electrocatalyst for Efficient Hydrogen Evolution. Catalysts, 2022, 12, 1525.	1.6	3
576	Review on Magnetism in Catalysis: From Theory to PEMFC Applications of 3d Metal Pt-Based Alloys. International Journal of Molecular Sciences, 2022, 23, 14768.	1.8	11
577	Role of oxide support in electrocatalytic nitrate reduction on Cu. Electrochemical Science Advances, 2024, 4, .	1.2	0
578	Multifunctional Salt-Assisted Construction of Lignin-Derived Ruâ€"Co Bimetal/Carbon Composites with Rich Nanointerface for Electrocatalytic Water Splitting. ACS Sustainable Chemistry and Engineering, 2022, 10, 16214-16224.	3.2	5
579	Combining impedance and hydrodynamic methods in electrocatalysis. Characterization of Pt(pc), Pt₅Gd, and nanostructured Pd for the hydrogen evolution reaction. JPhys Energy, 2023, 5, 014016.	2.3	1
580	Y and Fe co-doped LaNiO3 perovskite as a novel bifunctional electrocatalyst for rechargeable zinc-air batteries. International Journal of Hydrogen Energy, 2023, 48, 8082-8092.	3.8	11
581	High-Performance Oxygen Evolution Reaction Electrocatalysts Discovered via High-Throughput Aerogel Synthesis. ACS Catalysis, 2023, 13, 601-611.	5.5	5

#	Article	IF	Citations
582	Bilayer MXeneâ€Derived Carbonâ€Encapsulated Palladium Nanocatalysts: Engineering Robust Electronic and Chemical Interfaces for Oxygen Reduction and Zincâ€"Air Batteries. Advanced Energy Materials, 2023, 13, .	10.2	6
583	Symbolic regression assisted design of perovskite-type OER electrocatalysts for oxygen evolution reaction (OER) in alkaline electrolyte. Journal of Physics: Conference Series, 2022, 2393, 012019.	0.3	0
584	The Role of Hydrogen Adsorption Site Diversity in Catalysis on Transition-Metal Phosphide Surfaces. ACS Catalysis, 2023, 13, 287-295.	5.5	11
585	Structural characteristics of metal (Ni, Cu) doped cobalt phosphide catalysts and mechanism of catalytic hydrogen evolution of <scp>NH₃BH₃</scp>. International Journal of Quantum Chemistry, 2023, 123, .	1.0	1
586	Electrochemical Oxidation of Primary Alcohols Using a Co₂NiO₄ Catalyst: Effects of Alcohol Identity and Electrochemical Bias on Product Distribution. ACS Catalysis, 2023, 13, 515-529.	5.5	9
587	CoO_{<i>x</i>} Supported on Î±â€MoC for Efficient Electrocatalytic Oxygen Evolution Reaction. ChemElectroChem, 2022, 9, .	1.7	2
588	Altering oxygen binding by redoxâ€inactive metal substitution to control catalytic activity: oxygen reduction on manganese oxide nanoparticles as a model system. Angewandte Chemie, 0, , .	1.6	0
589	Altering Oxygen Binding by Redoxâ€Inactive Metal Substitution to Control Catalytic Activity: Oxygen Reduction on Manganese Oxide Nanoparticles as a Model System**. Angewandte Chemie - International Edition, 2023, 62, .	7.2	4
590	Photoassisted Electrochemical Hydrogen Evolution Reaction of MFe₂O₄@Ultrathin Black Phosphorus Amorphousâ€"Crystalline Interface. ACS Applied Materials & Interfaces, 2022, 14, 54748-54757.	4.0	4
591	Understanding Cation Effects on the Hydrogen Evolution Reaction. ACS Energy Letters, 2023, 8, 657-665.	8.8	31
592	A novel exsolution techniqueâ€"twice lasers: rapidly aroused explosive exsolution of nanoparticles to boost electrochemical performance. Nanotechnology, 2023, 34, 105709.	1.3	0
593	Controlled synthesis of NiCoM (M=P, S, Se, O)â€"Ni3S2â€"MoS2 hybrid material as environmentally friendly water splitting catalyst. International Journal of Hydrogen Energy, 2023, 48, 9260-9272.	3.8	5
594	Can the CO₂ Reduction Reaction Be Improved on Cu: Selectivity and Intrinsic Activity of Functionalized Cu Surfaces. ACS Catalysis, 2022, 12, 15737-15749.	5.5	17
595	Active Surface Area and Intrinsic Catalytic Oxygen Evolution Reactivity of NiFe LDH at Reactive Electrode Potentials Using Capacitances. ACS Catalysis, 2023, 13, 1186-1196.	5.5	36
596	Review on Metals and Metal Oxides in Sustainable Energy Production: Progress and Perspectives. Energy & Fuels, 2023, 37, 1577-1632.	2.5	23
597	The Influence of Loadings and Substrates on the Performance of Nickelâ€Based Catalysts for the Oxygen Evolution Reaction. ChemElectroChem, 2023, 10, .	1.7	3
598	iRs-corrections induce potentially misjudging toward electrocatalytic water oxidation. Materials Today Energy, 2023, 32, 101246.	2.5	4
599	Recommended practices and benchmarking of foam electrodes in water splitting. Trends in Chemistry, 2023, , .	4.4	0

#	Article	IF	Citations
600	Strong precious metalâ€“metal oxide interaction for oxygen reduction reaction: A strategy for efficient catalyst design. SusMat, 2023, 3, 2-20.	7.8	17
601	Controlled synthesis of Wâ€“Co3S4@Co3O4 as an environmentally friendly and low cost electrocatalyst for overall water splitting. International Journal of Hydrogen Energy, 2023, 48, 12739-12752.	3.8	10
602	Growth of Ultrathin Well-Defined and Crystalline Films of Co₃O₄ and CoOOH by Electrodeposition. Journal of the Electrochemical Society, 2023, 170, 012501.	1.3	2
603	Low temperature route to Co, N, O tri-decorated carbon nanotubes: Moderate defects toward boosted bifunctional oxygen electrocatalysis and Zn-air batteries. Applied Surface Science, 2023, 616, 156450.	3.1	3
604	Electrochemical Performance Evaluation of Bimetallic Sulfide Nanocomposite with Fullerene (CeNdS/C₆₀) for Efficient Oxygen Evolution Reaction (OER). Energy & Fuels, 2023, 37, 1370-1386.	2.5	9
605	Recent Advances in Defect-Engineered Transition Metal Dichalcogenides for Enhanced Electrocatalytic Hydrogen Evolution: Perfecting Imperfections. ACS Omega, 2023, 8, 1851-1863.	1.6	6
606	Influence of Support Physicochemical Properties on the Oxygen Evolution Reaction Performance of ITO-Supported IrO_{<i>x</i>} Nanoparticles. Journal of Physical Chemistry C, 2023, 127, 894-906.	1.5	5
607	Exploring the Magnetic and Electrocatalytic Properties of Amorphous MnB Nanoflakes. Nanomaterials, 2023, 13, 300.	1.9	1
608	Iron-induced lattice distortion generally boots the graphene-supported nickel phosphide nanoparticles catalysis for efficient overall water splitting. Electrochimica Acta, 2023, 441, 141807.	2.6	4
609	Dynamically-evolved surface heterojunction in iridium nanocrystals boosting acidic oxygen evolution and overall water splitting. Journal of Energy Chemistry, 2023, 78, 374-380.	7.1	19
610	A practical FeP nanoarrays electrocatalyst for efficient catalytic reduction of nitrite ions in wastewater to ammonia. Applied Catalysis B: Environmental, 2023, 325, 122353.	10.8	31
611	Triple Interface Optimization of Ruâ€based Electrocatalyst with Enhanced Activity and Stability for Hydrogen Evolution Reaction. Advanced Functional Materials, 2023, 33, .	7.8	22
612	Hydrogel Polymerâ€“PBA Nanocomposite Thin Film-Based Bifunctional Catalytic Electrode for Water Splitting: The Unique Role of the Polymer Matrix in Enhancing the Electrocatalytic Efficiency. ACS Applied Materials & Interfaces, 2023, 15, 6687-6696.	4.0	2
613	Elucidating the chirality transfer mechanisms during enantioselective synthesis for the spin-controlled oxygen evolution reaction. Energy and Environmental Science, 2023, 16, 1187-1199.	15.6	6
614	Construction of a NiFe-LDH catalyst with a three-dimensional unified gas diffusion layer structure <i>via</i> a facile acid etching route for the oxygen evolution reaction. Materials Chemistry Frontiers, 2023, 7, 1335-1344.	3.2	3
615	Synthesis of Nitrogen and Phosphorus/Sulfur Co-Doped Carbon Xerogels for the Efficient Electrocatalytic Reduction of p-Nitrophenol. International Journal of Molecular Sciences, 2023, 24, 2432.	1.8	3
616	Improved activity for the oxygen evolution reaction using a tiara-like thiolate-protected nickel nanocluster. Nanoscale, 2023, 15, 5201-5208.	2.8	9
617	Thoughts about Choosing a Proper Counter Electrode. ACS Catalysis, 2023, 13, 2534-2541.	5.5	6

#	Article	IF	Citations
618	Blockchain Technology: Energy Community and Beyond. , 2022, , .		2
619	Efficient OER electrocatalyst based on Co0.85Se/rGO nanocomposite. Ionics, 2023, 29, 1515-1521.	1.2	2
620	FeNC Oxygen Reduction Electrocatalyst with High Utilization Pentaâ€Coordinated Sites. Advanced Materials, 2023, 35, .	11.1	22
621	Singleâ€Atom and Hierarchicalâ€Pore Aerogel Confinement Strategy for Lowâ€Platinum Fuel Cells. Advanced Materials, 2023, 35, .	11.1	7
622	Growth of Fe-Substituted Sr₆Co₅O₁₅ Hexagonal Perovskite Single Crystals by a Flux Method. Crystal Growth and Design, 2023, 23, 3747-3753.	1.4	2
623	Recent advances in InGaN nanowires for hydrogen production using photoelectrochemical water splitting. Materials Today Energy, 2023, 33, 101275.	2.5	5
624	Highly active and stable IrO2 and IrO2â€"Ta2O5 catalysts for oxygen evolution reaction. International Journal of Hydrogen Energy, 2023, 48, 26021-26031.	3.8	4
625	Co Nanoparticles Embedded in Mesoporous Walls of Carbon Nanoboxes for Rechargeable Zincâ€air Batteries. Chemistry - an Asian Journal, 0, , .	1.7	0
626	Self-supported N-doped hierarchical Co3O4 electrocatalyst with abundant oxygen vacancies for acidic water oxidation. Chemical Engineering Journal, 2023, 465, 142745.	6.6	22
627	Gas diffusion electrode activity measurements of iridium-based self-supported catalysts produced by alternated physical vapour deposition. Journal of Power Sources, 2023, 569, 232990.	4.0	5
628	Critical aspects in the reliable assessment of the activity data for electrocatalytic materials. Current Opinion in Electrochemistry, 2023, 39, 101266.	2.5	3
629	NiO/Bi2MoxW1â^'xO6 (0Ââ‰ xÂâ‰Â1) nanofibers as a bifunctional platform boosting photocatalytic tetracycline conversion and electrocatalytic oxygen reduction. Journal of Alloys and Compounds, 2023, 947, 169607.	2.8	4
630	Pt nanoparticles in polyelectrolyte multilayers: Polymer effects on the electrocatalytic activity for methanol oxidation. Journal of Electroanalytical Chemistry, 2023, 938, 117430.	1.9	0
631	Crystalline-amorphous Ru@RuP core-shell nanoparticles anchored on carbon nanotube for enhanced hydrogen evolution electrocatalysis. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2023, 668, 131452.	2.3	4
632	Co3C-stabilized-CoFe heterostructure wrapped by bamboo-like N-doped carbon nanotubes for highly-efficient oxygen electrocatalysis. Chemical Engineering Journal, 2023, 459, 141591.	6.6	5
633	ä½Žç”µèŸæ€§é˜´ç¦»åæž²æ,è°ƒæŽ§é'´é…¸é"Œçš„ç"µåç»"æž„ä»¥æé«˜æžæ°§åå²º"æ´»æ€§. Science China Materials, 2023, 66, 1793-180	3.5	4
634	Enhancing Water Oxidation of Ru Single Atoms <i>via</i> Oxygen-Coordination Bonding with NiFe Layered Double Hydroxide. ACS Catalysis, 2023, 13, 2771-2779.	5.5	29
635	Noble Metal-Based Heterogeneous Catalysts for Electrochemical Hydrogen Evolution Reaction. Applied Sciences (Switzerland), 2023, 13, 2177.	1.3	3

#	Article	IF	Citations
636	Scalable Synthesis of 2D Mo₂C and Thicknessâ€Dependent Hydrogen Evolution on Its Basal Plane and Edges. Advanced Materials, 2023, 35, .	11.1	24
637	åŒ—äº¬å§å¦æŠ€æœ¯ç‰©ç†ç³»ç¦»åæŸææ–™æ”¹æ€§ç”©ç¶æœ€æ–°è¿å±•. Scientia Sinica: Physica, Mechanica Et Astronomica, 20	0.2	0
638	Efficient oxygen reduction using a polymorphic tungsten catalyst. Cell Reports Physical Science, 2023, 4, 101288.	2.8	3
639	Electrochemical Methods and Materials for Transition Metal-Based Electrocatalysts in Alkaline and Acidic Media. ACS Symposium Series, 0, , 219-248.	0.5	0
640	Composition-Tunable Co_{3â€"<i>x</i>}Fe_{<i>x</i>}Mo₃N Electrocatalysts for the Oxygen Evolution Reaction. ACS Energy Letters, 2023, 8, 1455-1462.	8.8	18
641	Upgrading the detection of electrocatalyst degradation during the oxygen evolution reaction. Current Opinion in Electrochemistry, 2023, 38, 101247.	2.5	8
642	æ°¢ç‡ƒæ–™ç”µæ±é˜³æžæŠ—ä¸€æ°§åŒ–ç¢³æ¯’åŒ–å‚¬åŒ–å‰‚çš„ç ”ç©¶è¿å±•ä¸Žå±•æœ›. Zhongguo Kexue Jishu Kexue/Scientia Sini	0.1	0
643	Rhenium-Based Electrocatalysts for Water Splitting. ACS Materials Au, 2023, 3, 177-200.	2.6	11
644	Cobaltâ€"platinum intermetallic composite loaded on pyridinic N-enriched carbon for acidic hydrogen evolution catalysis with ultralow overpotential. Materials Chemistry Frontiers, 2023, 7, 1607-1616.	3.2	3
645	Dual-phased Mo₂C/Mo₃N₂/C nanosheets for efficient electrocatalytic hydrogen evolution. Journal of Materials Chemistry A, 2023, 11, 6581-6590.	5.2	9
646	Microenvironment Engineering of Single/Dualâ€Atom Catalysts for Electrocatalytic Application. Advanced Materials, 2023, 35, .	11.1	56
647	Atomicâ€Level Regulated 2D ReSe₂: A Universal Platform Boostin Photocatalysis. Advanced Materials, 2023, 35, .	11.1	25
648	Approach to Evaluation of Electrocatalytic Water Splitting Parameters, Reflecting Intrinsic Activity: Toward the Right Pathway. ChemSusChem, 2023, 16, .	3.6	2
650	Ensemble Effect of Ruthenium Single-Atom and Nanoparticle Catalysts for Efficient Hydrogen Evolution in Neutral Media. ACS Applied Materials & Interfaces, 0, , .	4.0	0
651	A High-Entropy Oxide as High-Activity Electrocatalyst for Water Oxidation. ACS Nano, 2023, 17, 5329-5339.	7.3	24
652	Coordination Chemistry of Largeâ€Sized Yttrium Singleâ€Atom Catalysts for Oxygen Reduction Reaction. Advanced Materials, 2023, 35, .	11.1	31
653	Modification of micro/nanoscaled manganese dioxide-based materials and their electrocatalytic applications toward oxygen evolution reaction. Journal of Materials Chemistry A, 2023, 11, 6688-6746.	5.2	13
654	Hierarchical ironâ€"nickel oxyhydroxide nanosheets directly grown on porous TiFe₂-based intermetallics for robust oxygen evolution. Chemical Communications, 2023, 59, 4519-4522.	2.2	1

#	Article	IF	Citations
655	Oxygen Evolution/Reduction Reaction Catalysts: From <i>In Situ</i> Monitoring and Reaction Mechanisms to Rational Design. Chemical Reviews, 2023, 123, 6257-6358.	23.0	81
656	Diversity of platinum-sites at platinum/fullerene interface accelerates alkaline hydrogen evolution. Nature Communications, 2023, 14, .	5.8	30
657	EDTA-Assisted Synthesis of Nitrogen-Doped Carbon Nanospheres with Uniform Sizes for Photonic and Electrocatalytic Applications. Chemistry of Materials, 2023, 35, 3024-3032.	3.2	4
658	Application of a Nickel Complex for Water Oxidation under Neutral and Acidic Conditions. ACS Applied Energy Materials, 2023, 6, 3881-3893.	2.5	9
659	Deciphering the Poisoning Effect of Sulfate on a Perovskite-Derived IrO_xH_y Catalyst for Water Oxidation in Acid. Journal of the Electrochemical Society, 2023, 170, 044507.	1.3	3
660	Recent progress and perspective on molybdenum-based electrocatalysts for water electrolysis. International Journal of Hydrogen Energy, 2023, 48, 26084-26106.	3.8	13
661	Considerations of Liquid-Phase Transmission Electron Microscopy Applied to Heterogeneous Electrocatalysis. Journal of the Electrochemical Society, 2023, 170, 056502.	1.3	2
662	In Situ Sonoactivation of Polycrystalline Ni for the Hydrogen Evolution Reaction in Alkaline Media. ACS Applied Energy Materials, 2023, 6, 4520-4529.	2.5	1
663	Co-designing Electrocatalytic Systems with Separations To Improve the Sustainability of Reactive Nitrogen Management. ACS Catalysis, 2023, 13, 6268-6279.	5.5	4
664	Two-Dimensional Covalent Framework Derived Nonprecious Transition Metal Single-Atomic-Site Electrocatalyst toward High-Efficiency Oxygen Reduction. Nano Letters, 2023, 23, 3803-3809.	4.5	4
672	Catalysts: Platinum-free. , 2023, , .		0
675	Performance degradation and mitigation of high temperature polybenzimidazole-based polymer electrolyte membrane fuel cells. Chemical Society Reviews, 2023, 52, 4046-4070.	18.7	7
681	Perovskites for fuel cell applications. , 2023, , 395-418.		0
704	Synthesis of porous LaNiO₃ thin films by chemical solution deposition for enhanced oxygen evolution reaction. Dalton Transactions, 2023, 52, 9903-9907.	1.6	1
716	Design and Modeling of a Hybrid Fuel Cell-Photovoltaic Power System for a Fixed-Wing Unmanned Aircraft. , 2023, , .		0
729	Heterostructured 2D material-based electro-/photo-catalysts for water splitting. Materials Chemistry Frontiers, 2023, 7, 6154-6187.	3.2	3
740	Constructing the coordination environment of Seâ€“O in Cu_{2âˆ’<i>x</i>}Se for electrochemical hydrogen evolution. Chemical Communications, 2023, 59, 12589-12592.	2.2	0
762	Reporting activities for the oxygen evolution reaction. Communications Chemistry, 2023, 6, .	2.0	1

#	Article	IF	Citations
775	Metal nitrides for seawater electrolysis. Chemical Society Reviews, 0, , .	18.7	1
781	Recent advances in Feâ€“Nâ€“C- and Coâ€“Nâ€“C-based materials as bifunctional electrocatalysts for oxygen reduction and oxygen evolution. Science China Chemistry, 0, , .	4.2	0
794	A comprehensive review on the application of semiconducting materials in the degradation of effluents and water splitting. Environmental Science and Pollution Research, 0, , .	2.7	0
818	Rational design and application of electrocatalysts based on transition metal selenides for water splitting. Materials Chemistry Frontiers, 2024, 8, 1888-1926.	3.2	0
819	Low-loaded Ru on hollow SnO₂ for enhanced electrocatalytic hydrogen evolution. Chemical Communications, 2024, 60, 2768-2771.	2.2	0
827	Best Practices for Accurately Reporting Electrocatalytic Performance of Nanomaterials. Materials Horizons, 2024, , 95-117.	0.3	0
828	Bottlenecks in Water Electrolysis: A Comprehensive Exploration for Hydrogen Production. Materials Horizons, 2024, , 119-151.	0.3	0
829	Electrode Setups and Water Electrolysis Technologies. Materials Horizons, 2024, , 21-44.	0.3	0
830	Electrochemical Methods for Measuring Water Splitting Efficiency. Materials Horizons, 2024, , 71-93.	0.3	0