

Recent Progress in Cobalt-Based Heterogeneous Catalytic Splitting

Advanced Materials

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Synthesis of Novel CoS ₂ Nanodendrites with High Performance Supercapacitors. International Journal of Electrochemical Science, 2016, , 6791-6798.	0.5	16
2	Mesoporous CuCo ₂ O ₄ nanoparticles as an efficient cathode catalyst for Li-O ₂ batteries. Journal of Power Sources, 2016, 325, 506-512.	4.0	62
4	Efficient Water Splitting Catalyzed by Cobalt Phosphide-Based Nanoneedle Arrays Supported on Carbon Cloth. ChemSusChem, 2016, 9, 472-477.	3.6	185
5	Phase Transformation Engineering in Cobalt Diselenide Realizing Enhanced Catalytic Activity for Hydrogen Evolution in an Alkaline Medium. Advanced Materials, 2016, 28, 7527-7532.	11.1	307
6	Rapid Synthesis of Cobalt Nitride Nanowires: Highly Efficient and Low-Cost Catalysts for Oxygen Evolution. Angewandte Chemie - International Edition, 2016, 55, 8670-8674.	7.2	624
7	3,5-Diamino-1,2,4-triazole as a Nitrogen precursor to synthesize highly efficient Co-N/C non-precious metal bifunctional catalyst for oxygen reduction reaction and oxygen evolution reaction. International Journal of Hydrogen Energy, 2016, 41, 12995-13004.	3.8	25
8	Ordered Mesoporous Cobalt Phosphate with Crystallized Walls toward Highly Active Water Oxidation Electrocatalysts. Small, 2016, 12, 1709-1715.	5.2	153
9	A Perovskite Electrocatalyst for Efficient Hydrogen Evolution Reaction. Advanced Materials, 2016, 28, 6442-6448.	11.1	429
10	Synergistic Cocatalytic Effect of Carbon Nanodots and Co ₃ O ₄ Nanoclusters for the Photoelectrochemical Water Oxidation on Hematite. Angewandte Chemie, 2016, 128, 5945-5949.	1.6	42
11	Hierarchical NiCo ₂ O ₄ Hollow Microcuboids as Bifunctional Electrocatalysts for Overall Water Splitting. Angewandte Chemie - International Edition, 2016, 55, 6290-6294.	7.2	722
12	Cobalt-Doping in Molybdenum Carbide Nanowires Toward Efficient Electrocatalytic Hydrogen Evolution. Advanced Functional Materials, 2016, 26, 5590-5598.	7.8	400
13	Rapid Synthesis of Cobalt Nitride Nanowires: Highly Efficient and Low-Cost Catalysts for Oxygen Evolution. Angewandte Chemie, 2016, 128, 8812-8816.	1.6	132
14	Rapid synthesis of ultralong Fe(OH) ₃ :Cu(OH) ₂ core-shell nanowires self-supported on copper foam as a highly efficient 3D electrode for water oxidation. Chemical Communications, 2016, 52, 14470-14473.	2.2	68
15	Hydrotalcite-like Ni(OH) ₂ Nanosheets in Situ Grown on Nickel Foam for Overall Water Splitting. ACS Applied Materials & Interfaces, 2016, 8, 33601-33607.	4.0	204
16	Controllable synthesis of three dimensional electrodeposited Co-P nanosphere arrays as efficient electrocatalysts for overall water splitting. RSC Advances, 2016, 6, 52761-52771.	1.7	51
17	Co-Te-Se Nano-Compounds as Electrocatalysts for Hydrogen Evolution Reaction. Journal of the Electrochemical Society, 2016, 163, H625-H629.	1.3	12
18	Co ₃ O ₄ nanosheets as a high-performance catalyst for oxygen evolution proceeding via a double two-electron process. Chemical Communications, 2016, 52, 6705-6708.	2.2	64
19	Engineering Band Edge Positions of Nickel Oxyhydroxide through Facet Selection. Journal of Physical Chemistry C, 2016, 120, 8104-8108.	1.5	34

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20	Highly Efficient and Robust Nickel Phosphides as Bifunctional Electrocatalysts for Overall Water-Splitting. ACS Applied Materials & Interfaces, 2016, 8, 10826-10834.	4.0	205
21	A self-standing nanoporous MoP ₂ nanosheet array: an advanced pH-universal catalytic electrode for the hydrogen evolution reaction. Journal of Materials Chemistry A, 2016, 4, 7169-7173.	5.2	204
22	Carbon-coated hollow mesoporous FeP microcubes: an efficient and stable electrocatalyst for hydrogen evolution. Journal of Materials Chemistry A, 2016, 4, 8974-8977.	5.2	137
23	Hierarchical MoS ₂ @MoP core-shell heterojunction electrocatalysts for efficient hydrogen evolution reaction over a broad pH range. Nanoscale, 2016, 8, 11052-11059.	2.8	160
24	An efficient bifunctional electrocatalyst for water splitting based on cobalt phosphide. Nanotechnology, 2016, 27, 23LT01.	1.3	54
25	In situ decomposition of metal-organic frameworks into ultrathin nanosheets for the oxygen evolution reaction. Nano Research, 2016, 9, 1856-1865.	5.8	78
26	One-pot synthesis of hierarchical Ni ₂ P/MoS ₂ hybrid electrocatalysts with enhanced activity for hydrogen evolution reaction. Applied Surface Science, 2016, 383, 276-282.	3.1	81
27	Uniform Deposition of Co ₃ O ₄ Nanosheets on Exfoliated MoS ₂ Nanosheets as Advanced Catalysts for Water Splitting. Electrochimica Acta, 2016, 212, 890-897.	2.6	34
28	Electrochemical Preparation of Ru/Co Bi-layered Catalysts on Ti Substrates for the Oxygen Evolution Reaction. Bulletin of the Korean Chemical Society, 2016, 37, 1270-1277.	1.0	5
29	Construction of a cobalt-embedded nitrogen-doped carbon material with the desired porosity derived from the confined growth of MOFs within graphene aerogels as a superior catalyst towards HER and ORR. Journal of Materials Chemistry A, 2016, 4, 15536-15545.	5.2	85
30	Nanostructured Bifunctional Redox Electrocatalysts. Small, 2016, 12, 5656-5675.	5.2	174
31	Ternary Fe _x Co _{1-x} P Nanowire Array as a Robust Hydrogen Evolution Reaction Electrocatalyst with Pt-like Activity: Experimental and Theoretical Insight. Nano Letters, 2016, 16, 6617-6621.	4.5	618
32	Fabrication of zero to three dimensional nanostructured molybdenum sulfides and their electrochemical and photocatalytic applications. Nanoscale, 2016, 8, 18250-18269.	2.8	79
33	Ni ₂ P@CoP hybrid nanosheet arrays supported on carbon cloth as an efficient flexible cathode for hydrogen evolution. Journal of Materials Chemistry A, 2016, 4, 16992-16999.	5.2	148
34	An Ni@P/C electro-catalyst with improved activity for the carbohydrazide oxidation reaction. RSC Advances, 2016, 6, 91956-91959.	1.7	10
35	Facile synthesis of ternary Ag/C/SnO ₂ hollow spheres with enhanced activity for hydrazine electro-oxidation. Materials Letters, 2016, 185, 346-350.	1.3	5
36	Mechanistic Insights on Ternary Ni ₂ xCo _x P for Hydrogen Evolution and Their Hybrids with Graphene as Highly Efficient and Robust Catalysts for Overall Water Splitting. Advanced Functional Materials, 2016, 26, 6785-6796.	7.8	500
37	Carbon-Coated Co ³⁺ -Rich Cobalt Selenide Derived from ZIF-67 for Efficient Electrochemical Water Oxidation. ACS Applied Materials & Interfaces, 2016, 8, 20534-20539.	4.0	198

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38	The effect of cobalt ion on the hydrogen evolution reaction in sulfate solution. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 17793-17800.	3.8	12
39	Recent developments of carbon-based electrocatalysts for hydrogen evolution reaction. <i>Nano Energy</i> , 2016, 28, 29-43.	8.2	603
40	Iron-doped nickel disulfide nanoarray: A highly efficient and stable electrocatalyst for water splitting. <i>Nano Research</i> , 2016, 9, 3346-3354.	5.8	184
41	Assembling pore-rich FeP nanorods on the CNT backbone as an advanced electrocatalyst for oxygen evolution. <i>Journal of Materials Chemistry A</i> , 2016, 4, 13005-13010.	5.2	82
42	Two-step synthesis of binary Ni-Fe sulfides supported on nickel foam as highly efficient electrocatalysts for the oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2016, 4, 13499-13508.	5.2	250
43	3D structured porous CoP ₃ nanoneedle arrays as an efficient bifunctional electrocatalyst for the evolution reaction of hydrogen and oxygen. <i>Journal of Materials Chemistry A</i> , 2016, 4, 14539-14544.	5.2	131
44	Synthetic methods and electrochemical applications for transition metal phosphide nanomaterials. <i>RSC Advances</i> , 2016, 6, 87188-87212.	1.7	58
45	Self-Supported Cedarlike Semimetallic Cu ₃ P Nanoarrays as a 3D High-Performance Janus Electrode for Both Oxygen and Hydrogen Evolution under Basic Conditions. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 23037-23048.	4.0	170
46	Cobalt Carbonate Hydroxide Nanowire Array on Ti Mesh: An Efficient and Robust 3D Catalyst for On-Demand Hydrogen Generation from Alkaline NaBH ₄ Solution. <i>Chemistry - A European Journal</i> , 2016, 22, 14831-14835.	1.7	25
47	Facile synthesis of ZnCo ₂ O ₄ mesoporous structures with enhanced electrocatalytic oxygen evolution reaction properties. <i>RSC Advances</i> , 2016, 6, 92699-92704.	1.7	38
48	Ultrastable nitrogen-doped carbon encapsulating molybdenum phosphide nanoparticles as highly efficient electrocatalyst for hydrogen generation. <i>Nanoscale</i> , 2016, 8, 17256-17261.	2.8	83
49	Highly active nonprecious metal hydrogen evolution electrocatalyst: ultrafine molybdenum carbide nanoparticles embedded into a 3D nitrogen-implanted carbon matrix. <i>NPG Asia Materials</i> , 2016, 8, e293-e293.	3.8	100
50	Efficient water oxidation through strongly coupled graphitic C ₃ N ₄ coated cobalt hydroxide nanowires. <i>Journal of Materials Chemistry A</i> , 2016, 4, 12940-12946.	5.2	88
51	Topotactic Consolidation of Monocrystalline CoZn Hydroxides for Advanced Oxygen Evolution Electrodes. <i>Angewandte Chemie</i> , 2016, 128, 10482-10486.	1.6	30
52	Topotactic Consolidation of Monocrystalline CoZn Hydroxides for Advanced Oxygen Evolution Electrodes. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 10326-10330.	7.2	43
53	Progress on Electrocatalysts of Hydrogen Evolution Reaction Based on Carbon Fiber Materials. <i>Chinese Journal of Analytical Chemistry</i> , 2016, 44, 1447-1457.	0.9	33
54	A review on noble-metal-free bifunctional heterogeneous catalysts for overall electrochemical water splitting. <i>Journal of Materials Chemistry A</i> , 2016, 4, 17587-17603.	5.2	1,037
55	Synergistic-Effect-Controlled CoTe ₂ /Carbon Nanotube Hybrid Material for Efficient Water Oxidation. <i>Journal of Physical Chemistry C</i> , 2016, 120, 28093-28099.	1.5	39

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56	In situ preparation of $\text{Ca}_{0.5}\text{Mn}_{0.5}\text{O/C}$ as a novel high-activity catalyst for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2016, 4, 19147-19153.	5.2	17
57	Graphene oxide co-doped with nitrogen and sulfur and decorated with cobalt phosphide nanorods: An efficient hybrid catalyst for electrochemical hydrogen evolution. <i>Electrochimica Acta</i> , 2016, 222, 246-256.	2.6	57
58	CuCo Hybrid Oxides as Bifunctional Electrocatalyst for Efficient Water Splitting. <i>Advanced Functional Materials</i> , 2016, 26, 8555-8561.	7.8	251
59	Cobalt phosphide nanowall arrays supported on carbon cloth: an efficient monolithic non-noble-metal hydrogen evolution catalyst. <i>Nanotechnology</i> , 2016, 27, 475702.	1.3	19
60	Self-supported three-dimensional mesoporous semimetallic WP_2 nanowire arrays on carbon cloth as a flexible cathode for efficient hydrogen evolution. <i>Nanoscale</i> , 2016, 8, 19779-19786.	2.8	84
61	Coupled molybdenum carbide and reduced graphene oxide electrocatalysts for efficient hydrogen evolution. <i>Nature Communications</i> , 2016, 7, 11204.	5.8	803
62	Recent Trends and Perspectives in Electrochemical Water Splitting with an Emphasis on Sulfide, Selenide, and Phosphide Catalysts of Fe, Co, and Ni: A Review. <i>ACS Catalysis</i> , 2016, 6, 8069-8097.	5.5	1,936
63	Fabrication of amorphous CoMoS_4 as a bifunctional electrocatalyst for water splitting under strong alkaline conditions. <i>Nanoscale</i> , 2016, 8, 18887-18892.	2.8	91
64	Hierarchical nickel-cobalt phosphide yolk-shell spheres as highly active and stable bifunctional electrocatalysts for overall water splitting. <i>Nanoscale</i> , 2016, 8, 19129-19138.	2.8	140
65	Highly active Co-Mo/C/NRGO composite as an efficient oxygen electrode for water oxygen redox cycle. <i>Journal of Materials Chemistry A</i> , 2016, 4, 18100-18106.	5.2	40
66	Hierarchical NiCo_2O_4 Hollow Microcuboids as Bifunctional Electrocatalysts for Overall Water Splitting. <i>Angewandte Chemie</i> , 2016, 128, 6398-6402.	1.6	536
67	Synergistic Cocatalytic Effect of Carbon Nanodots and Co_3O_4 Nanoclusters for the Photoelectrochemical Water Oxidation on Hematite. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 5851-5855.	7.2	187
68	Interface Engineering of $\text{MoS}_2/\text{Ni}_3\text{S}_2$ Heterostructures for Highly Enhanced Electrochemical Overall Water Splitting Activity. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 6702-6707.	7.2	1,159
69	Interconnected urchin-like cobalt phosphide microspheres film for highly efficient electrochemical hydrogen evolution in both acidic and basic media. <i>Journal of Materials Chemistry A</i> , 2016, 4, 10114-10117.	5.2	103
70	Electrodeposited SiO_2 film: a promising interlayer of a highly active Ti electrode for the oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2016, 4, 11949-11956.	5.2	28
71	Magnetic Ni-Co alloys induced by water gas shift reaction, Ni-Co oxides by CO oxidation and their supercapacitor applications. <i>Applied Surface Science</i> , 2016, 386, 393-404.	3.1	27
72	An electrodeposited cobalt-selenide-based film as an efficient bifunctional electrocatalyst for full water splitting. <i>Journal of Materials Chemistry A</i> , 2016, 4, 10933-10939.	5.2	130
73	Molybdenum Polysulfide Anchored on Porous Zr-Metal Organic Framework To Enhance the Performance of Hydrogen Evolution Reaction. <i>Journal of Physical Chemistry C</i> , 2016, 120, 12539-12548.	1.5	80

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74	Cobalt-Modified Covalent Organic Framework as a Robust Water Oxidation Electrocatalyst. <i>Chemistry of Materials</i> , 2016, 28, 4375-4379.	3.2	368
75	Facile synthesis of novel NiSe ₂ /Ni ₃ S ₂ nanocubes supported on nickel foam with enhanced activity for hydrazine electrooxidation. <i>Materials Letters</i> , 2016, 175, 118-121.	1.3	10
76	An Alkaline-Stable, Metal Hydroxide Mimicking Metal-Organic Framework for Efficient Electrocatalytic Oxygen Evolution. <i>Journal of the American Chemical Society</i> , 2016, 138, 8336-8339.	6.6	453
77	Interface Engineering of MoS ₂ /Ni ₃ S ₂ Heterostructures for Highly Enhanced Electrochemical Overall Water Splitting Activity. <i>Angewandte Chemie</i> , 2016, 128, 6814-6819.	1.6	403
78	Well-dispersed CoS ₂ nano-octahedra grown on a carbon fibre network as efficient electrocatalysts for hydrogen evolution reaction. <i>Catalysis Science and Technology</i> , 2016, 6, 4545-4553.	2.1	62
79	Electro-catalyst based on cerium doped cobalt oxide for oxygen evolution reaction in electrochemical water splitting. <i>Journal of Materials Science: Materials in Electronics</i> , 2016, 27, 5294-5302.	1.1	44
80	Amorphous Ni-B alloy nanoparticle film on Ni foam: rapid alternately dipping deposition for efficient overall water splitting. <i>Nanotechnology</i> , 2016, 27, 12LT01.	1.3	86
81	Nickel Nanoparticles Encapsulated in Few-Layer Nitrogen-Doped Graphene Derived from Metal-Organic Frameworks as Efficient Bifunctional Electrocatalysts for Overall Water Splitting. <i>Advanced Materials</i> , 2017, 29, 1605957.	11.1	507
82	A general approach to cobalt-based homobimetallic phosphide ultrathin nanosheets for highly efficient oxygen evolution in alkaline media. <i>Energy and Environmental Science</i> , 2017, 10, 893-899.	15.6	412
83	Thickness-control of ultrathin two-dimensional cobalt hydroxide nanosheets with enhanced oxygen evolution reaction performance. <i>Chemical Engineering Journal</i> , 2017, 316, 225-231.	6.6	70
84	IrNi nanoparticle-decorated flower-shaped NiCo ₂ O ₄ nanostructures: controllable synthesis and enhanced electrochemical activity for oxygen evolution reaction. <i>Science China Materials</i> , 2017, 60, 119-130.	3.5	32
85	Electrodeposited Co-Fe as an oxygen evolution catalyst for rechargeable zinc-air batteries. <i>Electrochemistry Communications</i> , 2017, 75, 73-77.	2.3	33
86	Cobalt Assisted Synthesis of IrCu Hollow Octahedral Nanocages as Highly Active Electrocatalysts toward Oxygen Evolution Reaction. <i>Advanced Functional Materials</i> , 2017, 27, 1604688.	7.8	186
87	Atomic-layer-deposited ultrafine MoS ₂ nanocrystals on cobalt foam for efficient and stable electrochemical oxygen evolution. <i>Nanoscale</i> , 2017, 9, 2711-2717.	2.8	88
88	Revelation of the Excellent Intrinsic Activity of MoS ₂ /NiS/MoO ₃ Nanowires for Hydrogen Evolution Reaction in Alkaline Medium. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 7084-7090.	4.0	94
89	Template synthesis of CoSe ₂ /Co ₃ Se ₄ nanotubes: tuning of their crystal structures for photovoltaics and hydrogen evolution in alkaline medium. <i>Journal of Materials Chemistry A</i> , 2017, 5, 4513-4526.	5.2	165
90	MOF Template-Directed Fabrication of Hierarchically Structured Electrocatalysts for Efficient Oxygen Evolution Reaction. <i>Advanced Energy Materials</i> , 2017, 7, 1602643.	10.2	281
91	Energy-efficient electrolytic hydrogen generation using a Cu ₃ P nanoarray as a bifunctional catalyst for hydrazine oxidation and water reduction. <i>Inorganic Chemistry Frontiers</i> , 2017, 4, 420-423.	3.0	101

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92	Complex Hollow Nanostructures: Synthesis and Energy-Related Applications. <i>Advanced Materials</i> , 2017, 29, 1604563.	11.1	627
93	Nanostructured CoP: An efficient catalyst for degradation of organic pollutants by activating peroxymonosulfate. <i>Journal of Hazardous Materials</i> , 2017, 329, 92-101.	6.5	141
94	High-performance urea electrolysis towards less energy-intensive electrochemical hydrogen production using a bifunctional catalyst electrode. <i>Journal of Materials Chemistry A</i> , 2017, 5, 3208-3213.	5.2	295
95	In Situ Construction of Nickel Phosphosulfide (Ni ₅ P ₄ S) Active Species on 3D Ni Foam through Chemical Vapor Deposition for Electrochemical Hydrogen Evolution. <i>ChemElectroChem</i> , 2017, 4, 1108-1116.	1.7	24
96	A microwave-assisted synthesis of CoO@Co core-shell structures coupled with N-doped reduced graphene oxide used as a superior multi-functional electrocatalyst for hydrogen evolution, oxygen reduction and oxygen evolution reactions. <i>Journal of Materials Chemistry A</i> , 2017, 5, 5865-5872.	5.2	78
97	Supramolecular gel-assisted synthesis Co ₂ P particles anchored in multielement co-doped graphene as efficient bifunctional electrocatalysts for oxygen reduction and evolution. <i>Electrochimica Acta</i> , 2017, 231, 344-353.	2.6	60
98	Non-Noble Metal-based Carbon Composites in Hydrogen Evolution Reaction: Fundamentals to Applications. <i>Advanced Materials</i> , 2017, 29, 1605838.	11.1	1,199
99	In situ electrochemical surface derivation of cobalt phosphate from a Co(CO ₃) _{0.5} (OH)·0.11H ₂ O nanoarray for efficient water oxidation in neutral aqueous solution. <i>Nanoscale</i> , 2017, 9, 3752-3756.	2.8	82
100	MoS ₂ -Ni ₃ S ₂ Heteronanorods as Efficient and Stable Bifunctional Electrocatalysts for Overall Water Splitting. <i>ACS Catalysis</i> , 2017, 7, 2357-2366.	5.5	963
101	Hollow Iron-Vanadium Composite Spheres: A Highly Efficient Iron-Based Water Oxidation Electrocatalyst without the Need for Nickel or Cobalt. <i>Angewandte Chemie</i> , 2017, 129, 3337-3341.	1.6	26
102	NiS ₂ nanosheet array: A high-active bifunctional electrocatalyst for hydrazine oxidation and water reduction toward energy-efficient hydrogen production. <i>Materials Today Energy</i> , 2017, 3, 9-14.	2.5	63
103	Facile Synthesis of Unique Hexagonal Nanoplates of Zn/Co Hydroxy Sulfate for Efficient Electrocatalytic Oxygen Evolution Reaction. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 8134-8141.	4.0	53
104	Graphene and Their Hybrid Electrocatalysts for Water Splitting. <i>ChemCatChem</i> , 2017, 9, 1554-1568.	1.8	88
105	Al-Doped CoP nanoarray: a durable water-splitting electrocatalyst with superhigh activity. <i>Nanoscale</i> , 2017, 9, 4793-4800.	2.8	268
106	A nickel-borate nanoarray: a highly active 3D oxygen-evolving catalyst electrode operating in near-neutral water. <i>Chemical Communications</i> , 2017, 53, 3070-3073.	2.2	79
107	Pt-like electrocatalytic behavior of Ru-MoO ₂ nanocomposites for the hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 5475-5485.	5.2	213
108	Self-Assembled Coral-like Hierarchical Architecture Constructed by NiSe ₂ Nanocrystals with Comparable Hydrogen-Evolution Performance of Precious Platinum Catalyst. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 7154-7159.	4.0	153
109	Supercritical CO ₂ Assisted Preparation of Supported Molybdenum Phosphide for Hydrotreating Catalysis. <i>ChemCatChem</i> , 2017, 9, 2352-2357.	1.8	8

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110	High-Efficiency and Durable Water Oxidation under Mild pH Conditions: An Iron Phosphate-Borate Nanosheet Array as a Non-Noble-Metal Catalyst Electrode. <i>Inorganic Chemistry</i> , 2017, 56, 3131-3135.	1.9	51
111	Interconnected Network of Core-Shell CoP@CoBiPi for Efficient Water Oxidation Electrocatalysis under Near Neutral Conditions. <i>ChemSusChem</i> , 2017, 10, 1370-1374.	3.6	59
112	Dominating Role of Ni ⁰ on the Interface of Ni/NiO for Enhanced Hydrogen Evolution Reaction. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 7139-7147.	4.0	206
113	Hollow Iron-Vanadium Composite Spheres: A Highly Efficient Iron-Based Water Oxidation Electrocatalyst without the Need for Nickel or Cobalt. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 3289-3293.	7.2	216
114	Regulating the active species of Ni(OH) ₂ using CeO ₂ : 3D CeO ₂ /Ni(OH) ₂ /carbon foam as an efficient electrode for the oxygen evolution reaction. <i>Chemical Science</i> , 2017, 8, 3211-3217.	3.7	141
115	Enhancing Electrocatalytic Activity for Hydrogen Evolution by Strongly Coupled Molybdenum Nitride@Nitrogen-Doped Carbon Porous Nano-Octahedrons. <i>ACS Catalysis</i> , 2017, 7, 3540-3547.	5.5	306
116	In situ formation of a 3D core/shell structured Ni ₃ N@Ni-Bi nanosheet array: an efficient non-noble-metal bifunctional electrocatalyst toward full water splitting under near-neutral conditions. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7806-7810.	5.2	196
117	Recent Advances in Earth-Abundant Heterogeneous Electrocatalysts for Photoelectrochemical Water Splitting. <i>Small Methods</i> , 2017, 1, 1700090.	4.6	106
118	Recent Advances in Atomic Metal Doping of Carbon-based Nanomaterials for Energy Conversion. <i>Small</i> , 2017, 13, 1700191.	5.2	290
119	Core-Shell NiFe-LDH@NiFe-B Nanoarray: In Situ Electrochemical Surface Derivation Preparation toward Efficient Water Oxidation Electrocatalysis in near-Neutral Media. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 19502-19506.	4.0	48
120	One-Step Fabrication of Monolithic Electrodes Comprising Co ₉ S ₈ Particles Supported on Cobalt Foam for Efficient and Durable Oxygen Evolution Reaction. <i>Chemistry - A European Journal</i> , 2017, 23, 8749-8755.	1.7	64
121	Template-free synthesis of mesoporous manganese oxides with catalytic activity in the oxygen evolution reaction. <i>Sustainable Energy and Fuels</i> , 2017, 1, 780-788.	2.5	31
122	Design and synthesis of integrally structured Ni ₃ N nanosheets/carbon microfibers/Ni ₃ N nanosheets for efficient full water splitting catalysis. <i>Journal of Materials Chemistry A</i> , 2017, 5, 9377-9390.	5.2	123
123	N-doped graphene wrapped hexagonal metallic cobalt hierarchical nanosheet as a highly efficient water oxidation electrocatalyst. <i>Journal of Materials Chemistry A</i> , 2017, 5, 8897-8902.	5.2	50
124	Binary platinum alloy electrodes for hydrogen and oxygen evolutions by seawater splitting. <i>Applied Surface Science</i> , 2017, 413, 72-82.	3.1	42
125	Cobalt-Borate Nanoarray: An Efficient and Durable Electrocatalyst for Water Oxidation under Benign Conditions. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 15383-15387.	4.0	30
126	New Efficient Electrocatalyst for the Hydrogen Evolution Reaction: Erecting a V ₂ Se ₉ @Poly(3,4-ethylenedioxythiophene) Nanosheet Array with a Specific Active Facet Exposed. <i>ACS Energy Letters</i> , 2017, 2, 1099-1104.	8.8	42
127	Highly efficient oxygen evolution from CoS ₂ /CNT nanocomposites via a one-step electrochemical deposition and dissolution method. <i>Nanoscale</i> , 2017, 9, 6886-6894.	2.8	55

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128	Cobalt nickel boride as an active electrocatalyst for water splitting. <i>Journal of Materials Chemistry A</i> , 2017, 5, 12379-12384.	5.2	214
129	Bimetallic Nickel-Substituted Cobalt-Borate Nanowire Array: An Earth-Abundant Water Oxidation Electrocatalyst with Superior Activity and Durability at Near Neutral pH. <i>Small</i> , 2017, 13, 1700394.	5.2	95
130	General Formation of Monodisperse IrM (M = Ni, Co, Fe) Bimetallic Nanoclusters as Bifunctional Electrocatalysts for Acidic Overall Water Splitting. <i>Advanced Functional Materials</i> , 2017, 27, 1700886.	7.8	321
131	A porous Ni ₃ N nanosheet array as a high-performance non-noble-metal catalyst for urea-assisted electrochemical hydrogen production. <i>Inorganic Chemistry Frontiers</i> , 2017, 4, 1120-1124.	3.0	225
132	A Nitrogen Doping Method for CoS ₂ Electrocatalysts with Enhanced Water Oxidation Performance. <i>ACS Catalysis</i> , 2017, 7, 4214-4220.	5.5	181
133	Recent advances in metal-nitrogen-carbon catalysts for electrochemical water splitting. <i>Materials Chemistry Frontiers</i> , 2017, 1, 2155-2173.	3.2	109
134	Facile synthesis of ultrafine Ru nanocrystal supported N-doped graphene as an exceptional hydrogen evolution electrocatalyst in both alkaline and acidic media. <i>Sustainable Energy and Fuels</i> , 2017, 1, 1028-1033.	2.5	46
135	CoV ₂ O ₆ -V ₂ O ₅ Coupled with Porous N-Doped Reduced Graphene Oxide Composite as a Highly Efficient Electrocatalyst for Oxygen Evolution. <i>ACS Energy Letters</i> , 2017, 2, 1327-1333.	8.8	84
136	Crystallinity-Modulated Electrocatalytic Activity of a Nickel(II) Borate Thin Layer on Ni ₃ B for Efficient Water Oxidation. <i>Angewandte Chemie</i> , 2017, 129, 6672-6677.	1.6	34
137	Crystallinity-Modulated Electrocatalytic Activity of a Nickel(II) Borate Thin Layer on Ni ₃ B for Efficient Water Oxidation. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 6572-6577.	7.2	271
138	Annealing temperature dependent catalytic water oxidation activity of iron oxyhydroxide thin films. <i>Journal of Energy Chemistry</i> , 2017, 26, 757-761.	7.1	42
139	Design of ultralong single-crystal nanowire-based bifunctional electrodes for efficient oxygen and hydrogen evolution in a mild alkaline electrolyte. <i>Journal of Materials Chemistry A</i> , 2017, 5, 10895-10901.	5.2	23
140	Formation of Uniform FeP Hollow Microspheres Assembled by Nanosheets for Efficient Hydrogen Evolution Reaction. <i>ChemElectroChem</i> , 2017, 4, 2052-2058.	1.7	27
141	Phase-controllable synthesis of cobalt hydroxide for electrocatalytic oxygen evolution. <i>Dalton Transactions</i> , 2017, 46, 10545-10548.	1.6	70
142	Cu, Co-Embedded N-Enriched Mesoporous Carbon for Efficient Oxygen Reduction and Hydrogen Evolution Reactions. <i>Advanced Energy Materials</i> , 2017, 7, 1700193.	10.2	487
143	Self-Standing CoP Nanosheets Array: A Three-Dimensional Bifunctional Catalyst Electrode for Overall Water Splitting in both Neutral and Alkaline Media. <i>ChemElectroChem</i> , 2017, 4, 1840-1845.	1.7	345
144	Synthesis of Zn _{0.3} Co _{2.7} O ₄ porous willow-leaf like structure for enhanced electrocatalytic oxygen evolution reaction. <i>Materials Letters</i> , 2017, 198, 196-200.	1.3	5
145	Ruthenium-cobalt nanoalloys encapsulated in nitrogen-doped graphene as active electrocatalysts for producing hydrogen in alkaline media. <i>Nature Communications</i> , 2017, 8, 14969.	5.8	656

#	ARTICLE	IF	CITATIONS
146	A nanostructured nickel-cobalt alloy with an oxide layer for an efficient oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 10669-10677.	5.2	98
147	Enhanced Electrocatalysis for Energy-Efficient Hydrogen Production over CoP Catalyst with Nonelectroactive Zn as a Promoter. <i>Advanced Energy Materials</i> , 2017, 7, 1700020.	10.2	519
148	Electrochemical Hydrazine Oxidation Catalyzed by Iron Phosphide Nanosheets Array toward Energy-Efficient Electrolytic Hydrogen Production from Water. <i>ChemistrySelect</i> , 2017, 2, 3401-3407.	0.7	28
149	Flower-like CoS ₂ /MoS ₂ nanocomposite with enhanced electrocatalytic activity for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 12246-12253.	3.8	81
150	Ternary mixed metal Fe-doped NiCo ₂ O ₄ nanowires as efficient electrocatalysts for oxygen evolution reaction. <i>Applied Surface Science</i> , 2017, 416, 371-378.	3.1	98
151	CoO _x -carbon nanotubes hybrids integrated on carbon cloth as a new generation of 3D porous hydrogen evolution promoters. <i>Journal of Materials Chemistry A</i> , 2017, 5, 10510-10516.	5.2	45
152	Tuning Electronic Structures of Nonprecious Ternary Alloys Encapsulated in Graphene Layers for Optimizing Overall Water Splitting Activity. <i>ACS Catalysis</i> , 2017, 7, 469-479.	5.5	342
153	Controlled synthesis of Mo-doped Ni ₃ S ₂ nano-rods: an efficient and stable electro-catalyst for water splitting. <i>Journal of Materials Chemistry A</i> , 2017, 5, 1595-1602.	5.2	148
154	Promoting Active Species Generation by Electrochemical Activation in Alkaline Media for Efficient Electrocatalytic Oxygen Evolution in Neutral Media. <i>Nano Letters</i> , 2017, 17, 578-583.	4.5	191
155	Engineering the Electrical Conductivity of Lamellar Silver-Doped Cobalt(II) Selenide Nanobelts for Enhanced Oxygen Evolution. <i>Angewandte Chemie</i> , 2017, 129, 334-338.	1.6	38
156	Engineering the Electrical Conductivity of Lamellar Silver-Doped Cobalt(II) Selenide Nanobelts for Enhanced Oxygen Evolution. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 328-332.	7.2	172
157	Hydrogen evolution kinetics on Ni cathodes modified by spontaneous deposition of Ag or Cu. <i>Journal of Energy Chemistry</i> , 2017, 26, 466-475.	7.1	27
158	Ternary MnO ₂ /NiCo ₂ O ₄ /NF with hierarchical structure and synergistic interaction as efficient electrocatalysts for oxygen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2017, 719, 314-321.	2.8	57
159	Highly efficient and durable water oxidation in a near-neutral carbonate electrolyte electrocatalyzed by a core-shell structured NiO@Ni-Ci nanosheet array. <i>Sustainable Energy and Fuels</i> , 2017, 1, 1287-1291.	2.5	27
160	Single-Step Electrodeposited Molybdenum Incorporated Nickel Sulfide Thin Films from Low-Cost Precursors as Highly Efficient Hydrogen Evolution Electrocatalysts in Acid Medium. <i>Journal of Physical Chemistry C</i> , 2017, 121, 11108-11116.	1.5	42
161	Water splitting in near-neutral media: using an Mn-Co-based nanowire array as a complementary electrocatalyst. <i>Journal of Materials Chemistry A</i> , 2017, 5, 12091-12095.	5.2	36
162	Earth-abundant amorphous catalysts for electrolysis of water. <i>Chinese Journal of Catalysis</i> , 2017, 38, 991-1005.	6.9	66
163	Bimetallic (Fe _x Ni _{1-x}) ₂ P nanoarrays as exceptionally efficient electrocatalysts for oxygen evolution in alkaline and neutral media. <i>Nano Energy</i> , 2017, 38, 553-560.	8.2	220

#	ARTICLE	IF	CITATIONS
164	Delocalized Spin States in 2D Atomic Layers Realizing Enhanced Electrocatalytic Oxygen Evolution. <i>Advanced Materials</i> , 2017, 29, 1701687.	11.1	127
165	Impact of the Co:Cu Ratio in CoCu-Containing Oxidic Solids on their Activity for the Water Splitting Reaction. <i>ChemElectroChem</i> , 2017, 4, 2109-2116.	1.7	8
166	Amorphous Nickel-Cobalt-Borate Nanosheet Arrays for Efficient and Durable Water Oxidation Electrocatalysis under Near-Neutral Conditions. <i>Chemistry - A European Journal</i> , 2017, 23, 9741-9745.	1.7	33
167	Integrated 3D MoSe ₂ @Ni _{0.85} Se Nanowire Network with Synergistic Cooperation as Highly Efficient Electrocatalysts for Hydrogen Evolution Reaction in Alkaline Medium. <i>Electrochimica Acta</i> , 2017, 246, 712-719.	2.6	69
168	Electrochemical deposition of Pt on carbon fiber cloth utilizing Pt mesh counter electrode during hydrogen evolution reaction for electrocatalytic hydrogenation reduction of p-nitrophenol. <i>New Journal of Chemistry</i> , 2017, 41, 7012-7019.	1.4	16
169	Manganese Copper Sulfide Nanocomposites: Structure Tailoring and Photo/Electrocatalytic Hydrogen Generation. <i>ChemCatChem</i> , 2017, 9, 4148-4154.	1.8	10
170	Unraveling the Hydrogen Evolution Reaction Active Sites in N-Functionalized Interconnected Graphene Quantum Dots. <i>ChemistrySelect</i> , 2017, 2, 4511-4515.	0.7	7
171	Electronic and Morphological Dual Modulation of Cobalt Carbonate Hydroxides by Mn Doping toward Highly Efficient and Stable Bifunctional Electrocatalysts for Overall Water Splitting. <i>Journal of the American Chemical Society</i> , 2017, 139, 8320-8328.	6.6	745
172	Co-based nanowire films as complementary hydrogen- and oxygen-evolving electrocatalysts in neutral electrolyte. <i>Catalysis Science and Technology</i> , 2017, 7, 2689-2694.	2.1	39
173	Periodical trends in [Co ₆ E(CO) ₁₆]- clusters: Structural, synthetic and energy changes produced by substitution of P with As. <i>Journal of Organometallic Chemistry</i> , 2017, 849-850, 130-136.	0.8	4
174	Air Flow Assisted One Step Synthesis of Porous Carbon with Selected Area Enriched Ag/ZnO Nanocomposites. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 5651-5656.	3.2	5
175	Bimetallic Ni-Mo nitride nanotubes as highly active and stable bifunctional electrocatalysts for full water splitting. <i>Journal of Materials Chemistry A</i> , 2017, 5, 13648-13658.	5.2	191
176	Bottom-up synthesis of fully sp ² hybridized three-dimensional microporous graphitic frameworks as metal-free catalysts. <i>Journal of Materials Chemistry A</i> , 2017, 5, 12080-12085.	5.2	44
177	Self-assembled two-dimensional copper oxide nanosheet bundles as an efficient oxygen evolution reaction (OER) electrocatalyst for water splitting applications. <i>Journal of Materials Chemistry A</i> , 2017, 5, 12747-12751.	5.2	170
178	Modulating electronic structure of CoP electrocatalysts towards enhanced hydrogen evolution by Ce chemical doping in both acidic and basic media. <i>Nano Energy</i> , 2017, 38, 290-296.	8.2	212
179	Graphdiyne-Supported NiCo ₂ S ₄ Nanowires: A Highly Active and Stable 3D Bifunctional Electrode Material. <i>Small</i> , 2017, 13, 1700936.	5.2	194
180	Porous Co-Mo phosphide nanotubes: an efficient electrocatalyst for hydrogen evolution. <i>Journal of Materials Science</i> , 2017, 52, 10406-10417.	1.7	39
181	0D/2D heterojunctions of molybdenum carbide-tungsten carbide quantum dots/N-doped graphene nanosheets as superior and durable electrocatalysts for hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 18494-18501.	5.2	39

#	ARTICLE	IF	CITATIONS
182	Enhanced Interfacial Charge Transfer on a Tungsten Trioxide Photoanode with Immobilized Molecular Iridium Catalyst. <i>ChemSusChem</i> , 2017, 10, 3268-3275.	3.6	22
183	Ternary CoS ₂ /MoS ₂ /RGO electrocatalyst with CoMoS phase for efficient hydrogen evolution. <i>Applied Surface Science</i> , 2017, 412, 138-145.	3.1	84
184	Three-Dimensional Nickel-Borate Nanosheets Array for Efficient Oxygen Evolution at Near-Neutral pH. <i>Chemistry - A European Journal</i> , 2017, 23, 6959-6963.	1.7	43
185	Core-Shell Structured Ni ₂ @Ni ₃ Nanoarray for Efficient Water Oxidation at Near-Neutral pH. <i>ChemCatChem</i> , 2017, 9, 3138-3143.	1.8	32
186	In situ surface derivation of an Fe-Co-Bi layer on an Fe-doped Co ₃ O ₄ nanoarray for efficient water oxidation electrocatalysis under near-neutral conditions. <i>Journal of Materials Chemistry A</i> , 2017, 5, 6388-6392.	5.2	68
187	Gas-templating of hierarchically structured Ni-Co-P for efficient electrocatalytic hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7564-7570.	5.2	47
188	Phase-controlled synthesis of polymorphic tungsten diphosphide with hybridization of monoclinic and orthorhombic phases as a novel electrocatalyst for efficient hydrogen evolution. <i>Journal of Power Sources</i> , 2017, 349, 138-143.	4.0	27
189	A cobalt-borate nanosheet array: an efficient and durable non-noble-metal electrocatalyst for water oxidation at near neutral pH. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7305-7308.	5.2	79
190	The effects of Al substitution and partial dissolution on ultrathin NiFeAl trinary layered double hydroxide nanosheets for oxygen evolution reaction in alkaline solution. <i>Nano Energy</i> , 2017, 35, 350-357.	8.2	237
191	Large-scale hierarchical oxide nanostructures for high-performance electrocatalytic water splitting. <i>Nano Energy</i> , 2017, 35, 207-214.	8.2	101
192	Electrospinning Hetero-Nanofibers of Fe ₃ C-Mo ₂ C/Nitrogen-Doped Carbon as Efficient Electrocatalysts for Hydrogen Evolution. <i>ChemSusChem</i> , 2017, 10, 2597-2604.	3.6	100
193	Decorating unoxidized-carbon nanotubes with homogeneous Ni-Co spinel nanocrystals show superior performance for oxygen evolution/reduction reactions. <i>Scientific Reports</i> , 2017, 7, 45384.	1.6	48
194	A general approach to synthesise ultrathin NiM (M = Fe, Co, Mn) hydroxide nanosheets as high-performance low-cost electrocatalysts for overall water splitting. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7769-7775.	5.2	94
195	Cobalt carbonate hydroxide hydrate nanowires array: a three-dimensional catalyst electrode for effective water oxidation. <i>Micro and Nano Letters</i> , 2017, 12, 264-266.	0.6	19
196	A nickel-borate-phosphate nanoarray for efficient and durable water oxidation under benign conditions. <i>Inorganic Chemistry Frontiers</i> , 2017, 4, 840-844.	3.0	46
197	Sulfurizing-Induced Hollowing of Co ₉ S ₈ Microplates with Nanosheet Units for Highly Efficient Water Oxidation. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 11634-11641.	4.0	129
198	Microwave Effects on Co-Pi Cocatalysts Deposited on γ -Fe ₂ O ₃ for Application to Photocatalytic Oxygen Evolution. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 10349-10354.	4.0	36
199	Efficient electrocatalysis of overall water splitting by ultrasmall Ni ₃ Co ₃ S ₄ coupled Ni ₃ S ₂ nanosheet arrays. <i>Nano Energy</i> , 2017, 35, 161-170.	8.2	339

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200	Sulfur and Nitrogen Dual-Doped Molybdenum Phosphide Nanocrystallites as an Active and Stable Hydrogen Evolution Reaction Electrocatalyst in Acidic and Alkaline Media. <i>ACS Catalysis</i> , 2017, 7, 3030-3038.	5.5	210
201	Novel Iron/Cobalt-Containing Polypyrrole Hydrogel-Derived Trifunctional Electrocatalyst for Self-Powered Overall Water Splitting. <i>Advanced Functional Materials</i> , 2017, 27, 1606497.	7.8	320
202	N-doped nanoporous Co ₃ O ₄ nanosheets with oxygen vacancies as oxygen evolving electrocatalysts. <i>Nanotechnology</i> , 2017, 28, 165402.	1.3	105
203	Cobalt-borate nanowire array as a high-performance catalyst for oxygen evolution reaction in near-neutral media. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7291-7294.	5.2	120
204	Nano-structured hybrid molybdenum carbides/nitrides generated in situ for HER applications. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7764-7768.	5.2	64
205	Hybrids of Cobalt/Iron Phosphides Derived from Bimetal-Organic Frameworks as Highly Efficient Electrocatalysts for Oxygen Evolution Reaction. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 362-370.	4.0	223
206	Cu(OH) ₂ @CoCO ₃ (OH) ₂ Core-Shell Heterostructure Nanowire Array: An Efficient 3D Anodic Catalyst for Oxygen Evolution and Methanol Electrooxidation. <i>Small</i> , 2017, 13, 1602755.	5.2	133
207	Coupling Molecularly Ultrathin Sheets of NiFe-Layered Double Hydroxide on NiCo ₂ O ₄ Nanowire Arrays for Highly Efficient Overall Water-Splitting Activity. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 1488-1495.	4.0	244
208	Multifunctional Carbon-Based Metal-Free Electrocatalysts for Simultaneous Oxygen Reduction, Oxygen Evolution, and Hydrogen Evolution. <i>Advanced Materials</i> , 2017, 29, 1604942.	11.1	606
209	One-Dimensional Earth-Abundant Nanomaterials for Water-Splitting Electrocatalysts. <i>Advanced Science</i> , 2017, 4, 1600380.	5.6	253
210	Porous NiCo Diselenide Nanosheets Arrayed on Carbon Cloth as Promising Advanced Catalysts Used in Water Splitting. <i>Electrochimica Acta</i> , 2017, 225, 503-513.	2.6	46
211	Ternary NiCo ₂ P _x Nanowires as pH-Universal Electrocatalysts for Highly Efficient Hydrogen Evolution Reaction. <i>Advanced Materials</i> , 2017, 29, 1605502.	11.1	544
212	Recent developments in electrochemical water oxidation. <i>Current Opinion in Electrochemistry</i> , 2017, 1, 40-45.	2.5	50
213	CoP nanoparticles combined with WS ₂ nanosheets as efficient electrocatalytic hydrogen evolution reaction catalyst. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 3947-3954.	3.8	50
214	Self-supported ternary Co _{0.5} Mn _{0.5} P/carbon cloth (CC) as a high-performance hydrogen evolution electrocatalyst. <i>Nano Research</i> , 2017, 10, 1001-1009.	5.8	39
215	Interface Engineered WC@WS ₂ Nanostructure for Enhanced Hydrogen Evolution Catalysis. <i>Advanced Functional Materials</i> , 2017, 27, 1605802.	7.8	122
216	Carbon-Based Microbial Fuel Cell Electrodes: From Conductive Supports to Active Catalysts. <i>Advanced Materials</i> , 2017, 29, 1602547.	11.1	252
217	Three-dimensional metal-organic framework derived porous CoP ₃ concave polyhedrons as superior bifunctional electrocatalysts for the evolution of hydrogen and oxygen. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 2104-2110.	1.3	117

#	ARTICLE	IF	CITATIONS
218	Single-unit-cell thick Co ₉ S ₈ nanosheets from preassembled Co ₁₄ nanoclusters. <i>Chemical Communications</i> , 2017, 53, 416-419.	2.2	7
219	Energy-Saving Electrolytic Hydrogen Generation: Ni ₂ P Nanoarray as a High-Performance Non-Noble-Metal Electrocatalyst. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 842-846.	7.2	668
220	Energy-Saving Electrolytic Hydrogen Generation: Ni ₂ P Nanoarray as a High-Performance Non-Noble-Metal Electrocatalyst. <i>Angewandte Chemie</i> , 2017, 129, 860-864.	1.6	140
221	High-Performance Electrolytic Oxygen Evolution in Neutral Media Catalyzed by a Cobalt Phosphate Nanoarray. <i>Angewandte Chemie</i> , 2017, 129, 1084-1088.	1.6	65
222	High-Performance Electrolytic Oxygen Evolution in Neutral Media Catalyzed by a Cobalt Phosphate Nanoarray. <i>Angewandte Chemie - International Edition</i> , 2017, 56, 1064-1068.	7.2	348
223	Thin MoS ₂ nanosheets grafted MOFs-derived porous Co-N-C flakes grown on electrospun carbon nanofibers as self-supported bifunctional catalysts for overall water splitting. <i>Journal of Materials Chemistry A</i> , 2017, 5, 23898-23908.	5.2	131
224	Polyoxometalate-Surfactant Hybrids Directed Assembly of Ni ₃ S ₂ into Hollow Microsphere as Pt-Comparable Electrocatalyst for Hydrogen Evolution Reaction in Alkaline Medium. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 40162-40170.	4.0	40
225	Iridium-Based Multimetallic Porous Hollow Nanocrystals for Efficient Overall Water Splitting. <i>Advanced Materials</i> , 2017, 29, 1703798.	11.1	460
226	Nanostructured Nickel Cobaltite Antispinel as Bifunctional Electrocatalyst for Overall Water Splitting. <i>Journal of Physical Chemistry C</i> , 2017, 121, 25888-25897.	1.5	39
227	A Zn-doped Ni ₃ S ₂ nanosheet array as a high-performance electrochemical water oxidation catalyst in alkaline solution. <i>Chemical Communications</i> , 2017, 53, 12446-12449.	2.2	315
228	Nanostructured NiCo@NiCoOx core-shell layer as efficient and robust electrocatalyst for oxygen evolution reaction. <i>Electrochimica Acta</i> , 2017, 254, 337-347.	2.6	34
229	3D nickel-cobalt diselenide nanonetwork for highly efficient oxygen evolution. <i>Science Bulletin</i> , 2017, 62, 1373-1379.	4.3	69
230	Flower-Like Nickel Phosphide Microballs Assembled by Nanoplates with Exposed High-Energy (001) Facets: Efficient Electrocatalyst for the Hydrogen Evolution Reaction. <i>ChemSusChem</i> , 2017, 10, 4899-4908.	3.6	55
231	Replacing oxygen evolution with sodium sulfide electro-oxidation toward energy-efficient electrochemical hydrogen production: Using cobalt phosphide nanoarray as a bifunctional catalyst. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 26289-26295.	3.8	15
232	Recovered spinel MnCo ₂ O ₄ from spent lithium-ion batteries for enhanced electrocatalytic oxygen evolution in alkaline medium. <i>Dalton Transactions</i> , 2017, 46, 14382-14392.	1.6	72
233	Encased Copper Boosts the Electrocatalytic Activity of N-Doped Carbon Nanotubes for Hydrogen Evolution. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 36857-36864.	4.0	75
234	Engineering Co ₉ S ₈ /WS ₂ array films as bifunctional electrocatalysts for efficient water splitting. <i>Journal of Materials Chemistry A</i> , 2017, 5, 23361-23368.	5.2	117
235	CoSe _x nanocrystalline-dotted CoCo layered double hydroxide nanosheets: a synergetic engineering process for enhanced electrocatalytic water oxidation. <i>Nanoscale</i> , 2017, 9, 16256-16263.	2.8	38

#	ARTICLE	IF	CITATIONS
236	Overall Water Splitting with Room-Temperature Synthesized NiFe Oxyfluoride Nanoporous Films. <i>ACS Catalysis</i> , 2017, 7, 8406-8412.	5.5	91
237	Oxygen Vacancies Dominated NiS ₂ /CoS ₂ Interface Porous Nanowires for Portable Zn-Air Batteries Driven Water Splitting Devices. <i>Advanced Materials</i> , 2017, 29, 1704681.	11.1	533
238	Structure Confined Porous Mo ₂ C for Efficient Hydrogen Evolution. <i>Advanced Functional Materials</i> , 2017, 27, 1703933.	7.8	148
239	Highly Efficient Bifunctional Catalyst of NiCo ₂ O ₄ @NiO@Ni Core/Shell Nanocone Array for Stable Overall Water Splitting. <i>Particle and Particle Systems Characterization</i> , 2017, 34, 1700228.	1.2	16
240	A Ni(OH) ₂ -CoS ₂ hybrid nanowire array: a superior non-noble-metal catalyst toward the hydrogen evolution reaction in alkaline media. <i>Nanoscale</i> , 2017, 9, 16632-16637.	2.8	95
241	Engineering a nanotubular mesoporous cobalt phosphide electrocatalyst by the Kirkendall effect towards highly efficient hydrogen evolution reactions. <i>Nanoscale</i> , 2017, 9, 16313-16320.	2.8	43
242	Complex Nanostructures from Materials based on Metal-Organic Frameworks for Electrochemical Energy Storage and Conversion. <i>Advanced Materials</i> , 2017, 29, 1703614.	11.1	629
243	Bifunctional electro-catalytic performances of CoWO ₄ nanocubes for water redox reactions (OER/ORR). <i>RSC Advances</i> , 2017, 7, 45615-45623.	1.7	94
244	Synthesis of Self-Supported Amorphous CoMoO ₄ Nanowire Array for Highly Efficient Hydrogen Evolution Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 10093-10098.	3.2	98
245	In situ growth of cobalt@cobalt-borate core-shell nanosheets as highly-efficient electrocatalysts for oxygen evolution reaction in alkaline/neutral medium. <i>Nanoscale</i> , 2017, 9, 16059-16065.	2.8	64
246	Dealloying-directed synthesis of efficient mesoporous CoFe-based catalysts towards the oxygen evolution reaction and overall water splitting. <i>Nanoscale</i> , 2017, 9, 16467-16475.	2.8	67
247	Hierarchically Porous Co ₃ C/Co-N-C/G Modified Graphitic Carbon: A Trifunctional Corrosion-Resistant Electrode for Oxygen Reduction, Hydrogen Evolution and Oxygen Evolution Reactions. <i>Electrochimica Acta</i> , 2017, 257, 40-48.	2.6	58
248	Molybdenum carbide on hierarchical porous carbon synthesized from Cu-MoO ₂ as efficient electrocatalysts for electrochemical hydrogen generation. <i>Nano Energy</i> , 2017, 41, 749-757.	8.2	103
249	A Cu ₃ P-CoP hybrid nanowire array: a superior electrocatalyst for acidic hydrogen evolution reactions. <i>Chemical Communications</i> , 2017, 53, 12012-12015.	2.2	110
250	Recent advances in cobalt phosphide based materials for energy-related applications. <i>Journal of Materials Chemistry A</i> , 2017, 5, 22913-22932.	5.2	121
251	Hierarchical Porous NC@CuCo Nitride Nanosheet Networks: Highly Efficient Bifunctional Electrocatalyst for Overall Water Splitting and Selective Electrooxidation of Benzyl Alcohol. <i>Advanced Functional Materials</i> , 2017, 27, 1704169.	7.8	267
252	Dual-Ligand Synergistic Modulation: A Satisfactory Strategy for Simultaneously Improving the Activity and Stability of Oxygen Evolution Electrocatalysts. <i>ACS Catalysis</i> , 2017, 7, 8184-8191.	5.5	109
253	Metal-Organic-Framework-Derived Yolk-Shell-Structured Cobalt-Based Bimetallic Oxide Polyhedron with High Activity for Electrocatalytic Oxygen Evolution. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 31777-31785.	4.0	58

#	ARTICLE	IF	CITATIONS
254	Surface Amorphization: A Simple and Effective Strategy toward Boosting the Electrocatalytic Activity for Alkaline Water Oxidation. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 8518-8522.	3.2	51
255	Symmetric synergy of hybrid Co ₂ WS ₂ electrocatalysts for the hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 15552-15558.	5.2	81
256	One-Step Growth of Iron-Nickel Bimetallic Nanoparticles on FeNi Alloy Foils: Highly Efficient Advanced Electrodes for the Oxygen Evolution Reaction. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 28627-28634.	4.0	116
257	Plasma-Assisted Synthesis of Self-Supporting Porous CoNPs@C Nanosheet as Efficient and Stable Bifunctional Electrocatalysts for Overall Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 31913-31921.	4.0	34
258	In situ-generated Co@nitrogen-doped carbon nanotubes derived from MOFs for efficient hydrogen evolution under both alkaline and acidic conditions. <i>New Journal of Chemistry</i> , 2017, 41, 10966-10971.	1.4	31
259	Selective Etching of Nitrogen-Doped Carbon by Steam for Enhanced Electrochemical CO ₂ Reduction. <i>Advanced Energy Materials</i> , 2017, 7, 1701456.	10.2	203
260	Gold atom-decorated CoSe ₂ nanobelts with engineered active sites for enhanced oxygen evolution. <i>Journal of Materials Chemistry A</i> , 2017, 5, 20202-20207.	5.2	57
261	Insight of synergistic effect of different active metal ions in layered double hydroxides on their electrochemical behaviors. <i>Electrochimica Acta</i> , 2017, 253, 302-310.	2.6	67
262	Co ₃ O ₄ Nanowire Arrays toward Superior Water Oxidation Electrocatalysis in Alkaline Media by Surface Amorphization. <i>Chemistry - A European Journal</i> , 2017, 23, 15601-15606.	1.7	29
263	Architecting a Mesoporous N-Doped Graphitic Carbon Framework Encapsulating CoTe ₂ as an Efficient Oxygen Evolution Electrocatalyst. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 36146-36153.	4.0	73
264	Metallic Transition Metal Selenide Holey Nanosheets for Efficient Oxygen Evolution Electrocatalysis. <i>ACS Nano</i> , 2017, 11, 9550-9557.	7.3	273
265	Mo ₂ C@NC@MoS _x porous nanospheres with sandwich shell based on MoO ₄ ²⁻ -polymer precursor for efficient hydrogen evolution in both acidic and alkaline media. <i>Carbon</i> , 2017, 124, 555-564.	5.4	57
266	Heterogeneous Bimetallic Phosphide/Sulfide Nanocomposite for Efficient Solar-Energy-Driven Overall Water Splitting. <i>ACS Nano</i> , 2017, 11, 10303-10312.	7.3	187
267	NiSe ₂ nanoparticles embedded in CNT networks: Scalable synthesis and superior electrocatalytic activity for the hydrogen evolution reaction. <i>Electrochemistry Communications</i> , 2017, 83, 51-55.	2.3	84
268	Graphene- and Phosphorene-like Boron Layers with Contrasting Activities in Highly Active Mo ₂ B ₄ for Hydrogen Evolution. <i>Journal of the American Chemical Society</i> , 2017, 139, 12915-12918.	6.6	104
269	Co-intercalation of multiple active units into graphene by pyrolysis of hydrogen-bonded precursors for zinc-air batteries and water splitting. <i>Journal of Materials Chemistry A</i> , 2017, 5, 20882-20891.	5.2	34
270	Facilitating Active Species Generation by Amorphous NiFe-B Layer Formation on NiFe-LDH Nanoarray for Efficient Electrocatalytic Oxygen Evolution at Alkaline pH. <i>Chemistry - A European Journal</i> , 2017, 23, 11499-11503.	1.7	69
271	Remarkable enhancement of the alkaline oxygen evolution reaction activity of NiCo ₂ O ₄ by an amorphous borate shell. <i>Inorganic Chemistry Frontiers</i> , 2017, 4, 1546-1550.	3.0	34

#	ARTICLE	IF	CITATIONS
272	Cost-effective Alkaline Water Electrolysis Based on Nitrogen- and Phosphorus-Doped Self-Supportive Electrocatalysts. <i>Advanced Materials</i> , 2017, 29, 1702095.	11.1	175
273	Bifunctional Transition Metal Hydroxysulfides: Room-Temperature Sulfurization and Their Applications in Zn-Air Batteries. <i>Advanced Materials</i> , 2017, 29, 1702327.	11.1	334
274	An amorphous FeMoS ₄ nanorod array toward efficient hydrogen evolution electrocatalysis under neutral conditions. <i>Chemical Communications</i> , 2017, 53, 9000-9003.	2.2	124
275	Facile and one-step synthesis of a free-standing 3D MoS ₂ @rGO/Mo binder-free electrode for efficient hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 18081-18087.	5.2	39
276	Homologous Catalysts Based on Fe-Doped CoP Nanoarrays for High-Performance Full Water Splitting under Benign Conditions. <i>ChemSusChem</i> , 2017, 10, 3188-3192.	3.6	58
277	Cobalt-based nanosheet arrays as efficient electrocatalysts for overall water splitting. <i>Journal of Materials Chemistry A</i> , 2017, 5, 17640-17646.	5.2	40
278	Efficient Water-Splitting Electrodes Based on Laser-Induced Graphene. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 26840-26847.	4.0	103
279	Nitrogen doped NiS ₂ nanoarrays with enhanced electrocatalytic activity for water oxidation. <i>Journal of Materials Chemistry A</i> , 2017, 5, 17811-17816.	5.2	69
280	Anchoring Ni ₂ P Sheets on NiCo ₂ O ₄ Nanocone Arrays as Optimized Bifunctional Electrocatalyst for Water Splitting. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700481.	1.9	59
281	Probing the Crystal Plane Effect of Co ₃ O ₄ for Enhanced Electrocatalytic Performance toward Efficient Overall Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 27736-27744.	4.0	144
282	Strong Surface Hydrophilicity in Co-Based Electrocatalysts for Water Oxidation. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 26867-26873.	4.0	57
283	Self-Templating Construction of Hollow Amorphous CoMoS ₄ Nanotube Array towards Efficient Hydrogen Evolution Electrocatalysis at Neutral pH. <i>Chemistry - A European Journal</i> , 2017, 23, 12718-12723.	1.7	48
284	Bimetallic iron cobalt oxide self-supported on Ni-Foam: An efficient bifunctional electrocatalyst for oxygen and hydrogen evolution reaction. <i>Electrochimica Acta</i> , 2017, 249, 253-262.	2.6	124
285	Spinel: Controlled Preparation, Oxygen Reduction/Evolution Reaction Application, and Beyond. <i>Chemical Reviews</i> , 2017, 117, 10121-10211.	23.0	1,157
286	Molten salt synthesis of Co-entrapped, N-doped porous carbon as efficient hydrogen evolving electrocatalysts. <i>Materials Letters</i> , 2017, 209, 256-259.	1.3	10
287	Cobalt Nanoparticles Encapsulated in Porous Carbons Derived from Core-Shell ZIF67@ZIF8 as Efficient Electrocatalysts for Oxygen Evolution Reaction. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 28685-28694.	4.0	142
288	Co Nanoparticles/Co, N, S Tri-doped Graphene Templated from In-Situ-Formed Co, S Co-doped g-C ₃ N ₄ as an Active Bifunctional Electrocatalyst for Overall Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 28566-28576.	4.0	121
289	Topotactic transition of $\hat{1}\pm$ -Co(OH) ₂ to $\hat{1}^2$ -Co(OH) ₂ anchored on CoO nanoparticles during electrochemical water oxidation: synergistic electrocatalytic effects. <i>Chemical Communications</i> , 2017, 53, 9809-9812.	2.2	48

#	ARTICLE	IF	CITATIONS
290	Hierarchical Porous Co ₉ S ₈ /Nitrogen-Doped Carbon@MoS ₂ Polyhedrons as pH Universal Electrocatalysts for Highly Efficient Hydrogen Evolution Reaction. ACS Applied Materials & Interfaces, 2017, 9, 28394-28405.	4.0	179
291	Anion-exchange synthesis of a nanoporous crystalline CoB ₂ O ₄ nanowire array for high-performance water oxidation electrocatalysis in borate solution. Nanoscale, 2017, 9, 12343-12347.	2.8	21
292	Green Synthesis of Triaryl Phosphates with POCl ₃ in Water. ChemistrySelect, 2017, 2, 11007-11011.	0.7	5
293	Ultrathin N-Doped Mo ₂ C Nanosheets with Exposed Active Sites as Efficient Electrocatalyst for Hydrogen Evolution Reactions. ACS Nano, 2017, 11, 12509-12518.	7.3	350
294	Electronic Modulation of Electrocatalytically Active Center of Cu ₇ S ₄ Nanodisks by Cobalt-Doping for Highly Efficient Oxygen Evolution Reaction. ACS Nano, 2017, 11, 12230-12239.	7.3	139
295	Effective and Durable Co Single Atomic Cocatalysts for Photocatalytic Hydrogen Production. ACS Applied Materials & Interfaces, 2017, 9, 42734-42741.	4.0	92
296	Hierarchically structured graphene-carbon nanotube-cobalt hybrid electrocatalyst for seawater battery. Journal of Power Sources, 2017, 372, 31-37.	4.0	25
297	Porous PLGA microspheres with recruited ions and doxorubicin for triple-combination therapy of larger hepatocellular carcinoma. Journal of Materials Chemistry B, 2017, 5, 9025-9032.	2.9	5
298	An extremely active and durable Mo ₂ C/graphene-like carbon based electrocatalyst for hydrogen evolution reaction. Materials Today Energy, 2017, 6, 230-237.	2.5	18
299	Anion-Regulated Selective Generation of Cobalt Sites in Carbon: Toward Superior Bifunctional Electrocatalysis. Advanced Materials, 2017, 29, 1703436.	11.1	58
300	Striking hierarchical urchin-like peapodded NiCo ₂ O ₄ @C as advanced bifunctional electrocatalyst for overall water splitting. Journal of Power Sources, 2017, 372, 46-53.	4.0	54
301	Bimetallic NiCoP Nanosheets Array for High-Performance Urea Electro-Oxidation and Less Energy-Intensive Electrolytic Hydrogen Production. ChemistrySelect, 2017, 2, 10285-10289.	0.7	49
302	Ni ₃ N@Ni-Ci nanoarray as a highly active and durable non-noble-metal electrocatalyst for water oxidation at near-neutral pH. Journal of Catalysis, 2017, 356, 165-172.	3.1	140
303	Synergistic Activity of Co and Fe in Amorphous Co _x Fe _{1-x} B Catalyst for Efficient Oxygen Evolution Reaction. ACS Applied Materials & Interfaces, 2017, 9, 40333-40343.	4.0	145
304	Colloidal synthesis of monodisperse trimetallic IrNiFe nanoparticles as highly active bifunctional electrocatalysts for acidic overall water splitting. Journal of Materials Chemistry A, 2017, 5, 24836-24841.	5.2	85
305	Boosting electrochemical water oxidation through replacement of O _h Co sites in cobalt oxide spinel with manganese. Chemical Communications, 2017, 53, 8018-8021.	2.2	151
306	Sugar Blowing-Induced Porous Cobalt Phosphide/Nitrogen-Doped Carbon Nanostructures with Enhanced Electrochemical Oxidation Performance toward Water and Other Small Molecules. Small, 2017, 13, 1700796.	5.2	65
307	In Situ Derived Co _{1-x} B Nanoarray: A High-Efficiency and Durable 3D Bifunctional Electrocatalyst for Overall Alkaline Water Splitting. Small, 2017, 13, 1700805.	5.2	293

#	ARTICLE	IF	CITATIONS
308	Ultrathin Two-Dimensional Nanostructured Materials for Highly Efficient Water Oxidation. <i>Small</i> , 2017, 13, 1700806.	5.2	116
309	Bimetallic thin film NiCo@NiCo ₂ @NC as a superior bifunctional electrocatalyst for overall water splitting in alkaline media. <i>Journal of Materials Chemistry A</i> , 2017, 5, 15901-15912.	5.2	109
310	Cobalt/molybdenum carbide@N-doped carbon as a bifunctional electrocatalyst for hydrogen and oxygen evolution reactions. <i>Journal of Materials Chemistry A</i> , 2017, 5, 16929-16935.	5.2	258
311	Metal-organic framework derived hollow CoS ₂ nanotube arrays: an efficient bifunctional electrocatalyst for overall water splitting. <i>Nanoscale Horizons</i> , 2017, 2, 342-348.	4.1	247
312	A facile approach for graphdiyne preparation under atmosphere for an advanced battery anode. <i>Chemical Communications</i> , 2017, 53, 8074-8077.	2.2	142
313	Integrated design and construction of WP/W nanorod array electrodes toward efficient hydrogen evolution reaction. <i>Chemical Engineering Journal</i> , 2017, 327, 705-712.	6.6	72
314	Ni nanoparticles embedded in N doped carbon nanotubes derived from a metal organic framework with improved performance for oxygen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 16149-16156.	3.8	49
315	Fe-Doped CoP Nanoarray: A Monolithic Multifunctional Catalyst for Highly Efficient Hydrogen Generation. <i>Advanced Materials</i> , 2017, 29, 1602441.	11.1	834
316	The adsorption of ethynyl on bimetallic AlCoO _n (n= 1-5) clusters: Density functional calculations. <i>Computational and Theoretical Chemistry</i> , 2017, 1099, 14-20.	1.1	1
317	Highly active non-precious metal electrocatalyst for the hydrogen evolution reaction based on nitrogen-doped graphene supported MoO ₂ /WN/Mo ₂ N. <i>Journal of Alloys and Compounds</i> , 2017, 692, 614-621.	2.8	41
318	Spray-drying of milk for oxygen evolution electrocatalyst and solar water splitting. <i>Journal of Colloid and Interface Science</i> , 2017, 487, 118-122.	5.0	8
319	Synergistic Effect of Cobalt and Iron in Layered Double Hydroxide Catalysts for the Oxygen Evolution Reaction. <i>ChemSusChem</i> , 2017, 10, 156-165.	3.6	117
320	Fullerene-Like Nickel Oxysulfide Hollow Nanospheres as Bifunctional Electrocatalysts for Water Splitting. <i>Small</i> , 2017, 13, 1602637.	5.2	39
321	Novel CoxSy/WS ₂ nanosheets supported on carbon cloth as efficient electrocatalyst for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 4165-4173.	3.8	78
322	Co-Fe-Se ultrathin nanosheet-fabricated microspheres for efficient electrocatalysis of hydrogen evolution. <i>Journal of Applied Electrochemistry</i> , 2017, 47, 361-367.	1.5	14
323	Use of Cobalt Polyphthalocyanine and Graphene as Precursors to Construct an Efficient Co ₉ S ₈ /N, S Electro-catalyst for the Oxygen Electrode Reaction in Harsh Media. <i>ChemCatChem</i> , 2017, 9, 308-315.	1.8	20
324	CoO functionalized IrO ₂ -Sb ₂ O ₅ -SnO ₂ anode with an enhanced activity and stability for electrocatalytic oxygen evolution. <i>Journal of Alloys and Compounds</i> , 2017, 696, 257-265.	2.8	24
325	Mn Doping of CoP Nanosheets Array: An Efficient Electrocatalyst for Hydrogen Evolution Reaction with Enhanced Activity at All pH Values. <i>ACS Catalysis</i> , 2017, 7, 98-102.	5.5	461

#	ARTICLE	IF	CITATIONS
326	Effect of Chromium Doping on Electrochemical Water Oxidation Activity by Co_3CrO_4 Spinel Catalysts. ACS Catalysis, 2017, 7, 443-451.	5.5	92
327	Fabrication of bridge like Pt@MWCNTs/ CoS_2 electrocatalyst on conductive polymer matrix for electrochemical hydrogen evolution. Chemical Engineering Journal, 2017, 308, 275-288.	6.6	40
328	Self-supported ternary Ni-Fe-P nanosheets derived from metal-organic frameworks as efficient overall water splitting electrocatalysts. Electrochimica Acta, 2017, 258, 423-432.	2.6	90
329	A MnCo_2S_4 nanowire array as an earth-abundant electrocatalyst for an efficient oxygen evolution reaction under alkaline conditions. Journal of Materials Chemistry A, 2017, 5, 17211-17215.	5.2	146
330	Atomically Dispersed Metal Sites in MOF-Based Materials for Electrocatalytic and Photocatalytic Energy Conversion. Angewandte Chemie - International Edition, 2018, 57, 9604-9633.	7.2	452
331	In situ electrodeposition of CoP nanoparticles on carbon nanomaterial doped polyphenylene sulfide flexible electrode for electrochemical hydrogen evolution. Applied Surface Science, 2018, 442, 1-11.	3.1	24
332	Al-Doped Ni_2P nanosheet array: a superior and durable electrocatalyst for alkaline hydrogen evolution. Chemical Communications, 2018, 54, 2894-2897.	2.2	108
333	Precision and correctness in the evaluation of electrocatalytic water splitting: revisiting activity parameters with a critical assessment. Energy and Environmental Science, 2018, 11, 744-771.	15.6	1,055
334	Exploring redox activity in a LiCoPO_4 - $\text{LiCo}_2\text{P}_3\text{O}_{10}$ tailored positive electrode for 5 V lithium ion batteries: rigid band behavior of the electronic structure and stability of the delithiated phase. Journal of Materials Chemistry A, 2018, 6, 4966-4970.	5.2	7
335	Traditional NiCo_2S_4 Phase with Porous Nanosheets Array Topology on Carbon Cloth: A Flexible, Versatile and Fabulous Electrocatalyst for Overall Water and Urea Electrolysis. ACS Sustainable Chemistry and Engineering, 2018, 6, 5011-5020.	3.2	164
336	Imidazolate-mediated assembled structures of Co-LDH sheets for efficient electrocatalytic oxygen evolution. Journal of Materials Chemistry A, 2018, 6, 4636-4641.	5.2	50
337	Core-Shell NiO@NiEP Hybrid Nanosheet Array for Synergistically Enhanced Oxygen Evolution Electrocatalysis: Experimental and Theoretical Insights. Chemistry - an Asian Journal, 2018, 13, 944-949.	1.7	9
338	Elaborately assembled core-shell structured metal sulfides as a bifunctional catalyst for highly efficient electrochemical overall water splitting. Nano Energy, 2018, 47, 494-502.	8.2	383
339	Ultrathin NiCo_2P_x nanosheets strongly coupled with CNTs as efficient and robust electrocatalysts for overall water splitting. Journal of Materials Chemistry A, 2018, 6, 7420-7427.	5.2	302
340	A structurally versatile nickel phosphite acting as a robust bifunctional electrocatalyst for overall water splitting. Energy and Environmental Science, 2018, 11, 1287-1298.	15.6	205
341	Atomar dispergierte Metallzentren in Metallorganischen Gerüststrukturen für die elektrokatalytische und photokatalytische Energieumwandlung. Angewandte Chemie, 2018, 130, 9750-9780.	1.6	58
342	Self-Templated Synthesis of Co_1S Porous Hexagonal Microplates for Efficient Electrocatalytic Oxygen Evolution. ChemElectroChem, 2018, 5, 1167-1172.	1.7	13
343	Cobalt phosphide nanowires as efficient co-catalyst for photocatalytic hydrogen evolution over $\text{Zn}_0.5\text{Cd}_0.5\text{S}$. Applied Catalysis B: Environmental, 2018, 230, 210-219.	10.8	142

#	ARTICLE	IF	CITATIONS
344	Recent development on carbon based heterostructures for their applications in energy and environment: A review. <i>Journal of Industrial and Engineering Chemistry</i> , 2018, 64, 16-59.	2.9	146
345	Hierarchical CoTe ₂ Nanowire Array: An Effective Oxygen Evolution Catalyst in Alkaline Media. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 4481-4485.	3.2	44
346	Folded nanosheet-like Co _{0.85} Se array for overall water splitting. <i>Journal of Solid State Electrochemistry</i> , 2018, 22, 1785-1794.	1.2	19
347	Probing the active sites of Co ₃ O ₄ for the acidic oxygen evolution reaction by modulating the Co ²⁺ /Co ³⁺ ratio. <i>Journal of Materials Chemistry A</i> , 2018, 6, 5678-5686.	5.2	134
348	Total Water Splitting Catalyzed by Co@Ir Core-Shell Nanoparticles Encapsulated in Nitrogen-Doped Porous Carbon Derived from Metal-Organic Frameworks. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 5105-5114.	3.2	113
349	Cobalt layered double hydroxide nanosheets synthesized in water-methanol solution as oxygen evolution electrocatalysts. <i>Journal of Materials Chemistry A</i> , 2018, 6, 5999-6006.	5.2	103
350	P-Doped Ag Nanoparticles Embedded in N-Doped Carbon Nanoflake: An Efficient Electrocatalyst for the Hydrogen Evolution Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 4499-4503.	3.2	193
351	Syntheses of nickel sulfides from 1,2-bis(diphenylphosphino)ethane nickel(II)dithiolates and their application in the oxygen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 5985-5995.	3.8	18
352	Non-Precious Bimetallic CoCr Nanostructures Entrapped in Bamboo-Like Nitrogen-Doped Graphene Tube As a Robust Bifunctional Electrocatalyst for Total Water Splitting. <i>ACS Applied Energy Materials</i> , 2018, 1, 1116-1126.	2.5	41
353	Room temperature-formed iron-doped nickel hydroxide on nickel foam as a 3D electrode for low polarized and high-current-density oxygen evolution. <i>Chemical Communications</i> , 2018, 54, 3262-3265.	2.2	43
354	Ultrasmall Ir nanoparticles for efficient acidic electrochemical water splitting. <i>Inorganic Chemistry Frontiers</i> , 2018, 5, 1121-1125.	3.0	49
355	CaMoO ₄ nanosheet arrays for efficient and durable water oxidation electrocatalysis under alkaline conditions. <i>Chemical Communications</i> , 2018, 54, 5066-5069.	2.2	30
356	3D Network nanostructured NiCoP nanosheets supported on N-doped carbon coated Ni foam as a highly active bifunctional electrocatalyst for hydrogen and oxygen evolution reactions. <i>Frontiers of Chemical Science and Engineering</i> , 2018, 12, 417-424.	2.3	28
357	Freestanding Non-Precious Metal Electrocatalysts for Oxygen Evolution and Reduction Reactions. <i>ChemElectroChem</i> , 2018, 5, 1786-1804.	1.7	32
358	Mixed Valent, Distorted Cobalt Ludwigite (Co ₃ BO ₅ /Co ₃ O ₂ BO ₃) and Its Composite with Reduced Multiwalled Carbon Nanotubes (rMWCNT) in Enhancing the Domain Edge-Sharing Oxygen as Superior Water Oxidation Electrocatalysts. <i>ChemElectroChem</i> , 2018, 5, 1670-1676.	1.7	11
359	MoSe ₂ nanosheet/MoO ₂ nanobelt/carbon nanotube membrane as flexible and multifunctional electrodes for full water splitting in acidic electrolyte. <i>Nanoscale</i> , 2018, 10, 9268-9275.	2.8	56
360	CoP Embedded in Hierarchical N-Doped Carbon Nanotube Frameworks as Efficient Catalysts for the Hydrogen Evolution Reaction. <i>ChemElectroChem</i> , 2018, 5, 1644-1651.	1.7	46
361	Optimizing nanosheet nickel cobalt oxide as an anode material for bifunctional electrochemical energy storage and oxygen electrocatalysis. <i>Electrochimica Acta</i> , 2018, 274, 279-287.	2.6	24

#	ARTICLE	IF	CITATIONS
362	Nitrogen-Doped Cobalt Oxide Nanostructures Derived from Cobalt-Alanine Complexes for High-Performance Oxygen Evolution Reactions. <i>Advanced Functional Materials</i> , 2018, 28, 1800886.	7.8	302
363	Novel insight into the epitaxial growth mechanism of six-fold symmetrical $\text{Co}(\text{OH})_2/\text{Co}(\text{OH})\text{F}$ hierarchical hexagrams and their water oxidation activity. <i>Electrochimica Acta</i> , 2018, 271, 526-536.	2.6	42
364	Surface Engineering of a Nickel Oxide-Nickel Hybrid Nanoarray as a Versatile Catalyst for Both Superior Water and Urea Oxidation. <i>Inorganic Chemistry</i> , 2018, 57, 4693-4698.	1.9	51
365	Defect electrocatalytic mechanism: concept, topological structure and perspective. <i>Materials Chemistry Frontiers</i> , 2018, 2, 1250-1268.	3.2	119
366	Oxidized Laser-Induced Graphene for Efficient Oxygen Electrocatalysis. <i>Advanced Materials</i> , 2018, 30, e1707319.	11.1	94
367	Particle-in-box nanostructured materials created via spatially confined pyrolysis as high performance bifunctional catalysts for electrochemical overall water splitting. <i>Nano Energy</i> , 2018, 48, 489-499.	8.2	90
368	Defect-rich $(\text{CoS})_2/\text{CoS}$ @ CoS_9/S_8 nanosheets derived from monomolecular precursor pyrolysis with excellent catalytic activity for hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2018, 6, 7977-7987.	5.2	46
369	A Hierarchical MoP Nanoflake Array Supported on Ni Foam: A Bifunctional Electrocatalyst for Overall Water Splitting. <i>Small Methods</i> , 2018, 2, 1700369.	4.6	106
370	Porous Microrod Arrays Constructed by Carbon-Confined $\text{NiCo}@\text{NiCoO}_2$ Core@Shell Nanoparticles as Efficient Electrocatalysts for Oxygen Evolution. <i>Advanced Materials</i> , 2018, 30, e1705442.	11.1	366
371	Enhanced Photoelectrochemical Water Oxidation on BiVO_4 with Mesoporous Cobalt Nitride Sheets as Oxygen-Evolution Cocatalysts. <i>European Journal of Inorganic Chemistry</i> , 2018, 2018, 2557-2563.	1.0	14
372	An Fe-MOF nanosheet array with superior activity towards the alkaline oxygen evolution reaction. <i>Inorganic Chemistry Frontiers</i> , 2018, 5, 1405-1408.	3.0	97
373	Nitrogen-doped mesoporous SiC materials with catalytically active cobalt nanoparticles for the efficient and selective hydrogenation of nitroarenes. <i>Scientific Reports</i> , 2018, 8, 2567.	1.6	23
374	Tuning active sites on cobalt/nitrogen doped graphene for electrocatalytic hydrogen and oxygen evolution. <i>Electrochimica Acta</i> , 2018, 265, 497-506.	2.6	56
375	In situ growth of NiTe nanosheet film on nickel foam as electrocatalyst for oxygen evolution reaction. <i>Electrochemistry Communications</i> , 2018, 88, 29-33.	2.3	63
376	Phosphorus-Doped Co_3O_4 Nanowire Array: A Highly Efficient Bifunctional Electrocatalyst for Overall Water Splitting. <i>ACS Catalysis</i> , 2018, 8, 2236-2241.	5.5	517
377	A review of anion-regulated multi-anion transition metal compounds for oxygen evolution electrocatalysis. <i>Inorganic Chemistry Frontiers</i> , 2018, 5, 521-534.	3.0	123
378	Recent Progress on Multimetal Oxide Catalysts for the Oxygen Evolution Reaction. <i>Advanced Energy Materials</i> , 2018, 8, 1702774.	10.2	615
379	Liquid Exfoliated $\text{Co}(\text{OH})_2$ Nanosheets as Low-Cost, Yet High-Performance, Catalysts for the Oxygen Evolution Reaction. <i>Advanced Energy Materials</i> , 2018, 8, 1702965.	10.2	92

#	ARTICLE	IF	CITATIONS
380	Multiscale Principles To Boost Reactivity in Gas-Involving Energy Electrocatalysis. <i>Accounts of Chemical Research</i> , 2018, 51, 881-889.	7.6	437
381	Cathodic electrochemical activation of Co ₃ O ₄ nanoarrays: a smart strategy to significantly boost the hydrogen evolution activity. <i>Chemical Communications</i> , 2018, 54, 2150-2153.	2.2	58
382	Template-directed synthesis of sulphur doped NiCoFe layered double hydroxide porous nanosheets with enhanced electrocatalytic activity for the oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2018, 6, 3224-3230.	5.2	170
383	Accelerated Hydrogen Evolution Kinetics on NiFe-layered Double Hydroxide Electrocatalysts by Tailoring Water Dissociation Active Sites. <i>Advanced Materials</i> , 2018, 30, 1706279.	11.1	601
384	A platinum oxide decorated amorphous cobalt oxide hydroxide nanosheet array towards alkaline hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2018, 6, 3864-3868.	5.2	67
385	Development of Highly Active Bifunctional Electrocatalyst Using Co ₃ O ₄ on Carbon Nanotubes for Oxygen Reduction and Oxygen Evolution. <i>Scientific Reports</i> , 2018, 8, 2543.	1.6	108
386	Co ₃ O ₄ and Fe ₃ O ₄ Nanoparticles/Films Synthesized in a Vapor-Fed Flame Aerosol Reactor for Oxygen Evolution. <i>ACS Applied Energy Materials</i> , 2018, 1, 655-665.	2.5	20
387	High Activity Hydrogen Evolution Catalysis by Uniquely Designed Amorphous/Metal Interface of Core-shell Phosphosulfide/N-Doped CNTs. <i>Advanced Energy Materials</i> , 2018, 8, 1702806.	10.2	39
388	Electrocatalytic N-Doped Graphitic Nanofiber Metal/Metal Oxide Nanoparticle Composites. <i>Small</i> , 2018, 14, e1703459.	5.2	61
389	Noble Metal-Free Nanocatalysts with Vacancies for Electrochemical Water Splitting. <i>Small</i> , 2018, 14, e1703323.	5.2	250
390	Strongly electrophilic heteroatoms confined in atomic CoOOH nanosheets realizing efficient electrocatalytic water oxidation. <i>Journal of Materials Chemistry A</i> , 2018, 6, 3202-3210.	5.2	63
391	POM & MOF-based Electrocatalysts for Energy-related Reactions. <i>ChemCatChem</i> , 2018, 10, 1703-1730.	1.8	107
392	Facile Synthesis of Mesoporous and Thin-Walled Ni-Co Sulfide Nanotubes as Efficient Electrocatalysts for Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2018, 1, 495-502.	2.5	28
393	Ultrathin Co ₃ O ₄ Nanomeshes for the Oxygen Evolution Reaction. <i>ACS Catalysis</i> , 2018, 8, 1913-1920.	5.5	435
394	Carbon Nanosheets Containing Discrete Co-N-B-C Active Sites for Efficient Oxygen Electrocatalysis and Rechargeable Zn-Air Batteries. <i>ACS Nano</i> , 2018, 12, 1894-1901.	7.3	419
395	Co ₃ O ₄ -doped Co/CoFe nanoparticles encapsulated in carbon shells as bifunctional electrocatalysts for rechargeable Zn-Air batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 3730-3737.	5.2	98
396	Cobalt-vanadium bimetal-based nanoplates for efficient overall water splitting. <i>Science China Materials</i> , 2018, 61, 80-90.	3.5	52
397	CoHPi Nanoflakes for Enhanced Oxygen Evolution Reaction. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 6288-6298.	4.0	67

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398	Ultrathin Ir nanowires as high-performance electrocatalysts for efficient water splitting in acidic media. <i>Nanoscale</i> , 2018, 10, 1892-1897.	2.8	122
399	<i>In situ</i> development of amorphous Mn-Co-P shell on MnCo ₂ O ₄ nanowire array for superior oxygen evolution electrocatalysis in alkaline media. <i>Chemical Communications</i> , 2018, 54, 1077-1080.	2.2	49
400	Hierarchically structured multi-shell nanotube arrays by self-assembly for efficient water oxidation. <i>Nanoscale</i> , 2018, 10, 2887-2893.	2.8	20
401	Efficient Hydrogen Evolution Electrocatalysis at Alkaline pH by Interface Engineering of Ni ₂ P-CeO ₂ . <i>Inorganic Chemistry</i> , 2018, 57, 548-552.	1.9	78
402	Multifunctional electrocatalysts derived from conducting polymer and metal organic framework complexes. <i>Nano Energy</i> , 2018, 45, 127-135.	8.2	166
403	Ultrathin CoFe-Borate Layer Coated CoFe-Layered Double Hydroxide Nanosheets Array: A Non-Noble-Metal 3D Catalyst Electrode for Efficient and Durable Water Oxidation in Potassium Borate. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 1527-1531.	3.2	134
404	Nitrogen-doped, oxygen-functionalized, edge- and defect-rich vertically aligned graphene for highly enhanced oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2018, 6, 2176-2183.	5.2	64
405	Hierarchical Nanoboxes Composed of Co ₉ S ₈ -MoS ₂ Nanosheets as Efficient Electrocatalysts for the Hydrogen Evolution Reaction. <i>Chemistry - an Asian Journal</i> , 2018, 13, 413-420.	1.7	47
406	Designing and facilely synthesizing a series of cobalt nitride (Co ₄ N) nanocatalysts as non-enzymatic glucose sensors: A comparative study toward the influences of material structures on electrocatalytic activities. <i>Talanta</i> , 2018, 181, 154-164.	2.9	27
407	Sub-nanometer Co ₃ O ₄ clusters anchored on TiO ₂ (B) nano-sheets: Pt replaceable Co-catalysts for H ₂ evolution. <i>Nanoscale</i> , 2018, 10, 2596-2602.	2.8	50
408	Integration of FeOOH and Zeolitic Imidazolate Framework-Derived Nanoporous Carbon as an Efficient Electrocatalyst for Water Oxidation. <i>Advanced Energy Materials</i> , 2018, 8, 1702598.	10.2	79
409	A Co ₂ P/WC Nano-Heterojunction Covered with N-Doped Carbon as Highly Efficient Electrocatalyst for Hydrogen Evolution Reaction. <i>ChemSusChem</i> , 2018, 11, 1082-1091.	3.6	85
410	Cobalt Iron Hydroxide as a Precious Metal-Free Bifunctional Electrocatalyst for Efficient Overall Water Splitting. <i>Small</i> , 2018, 14, 1702568.	5.2	190
411	Highly active and stable electrocatalytic hydrogen evolution catalyzed by nickel, iron doped cobalt disulfide@reduced graphene oxide nanohybrid electrocatalysts. <i>Materials Today Energy</i> , 2018, 7, 44-50.	2.5	39
412	Ultrafine PtO ₂ nanoparticles coupled with a Co(OH)F nanowire array for enhanced hydrogen evolution. <i>Chemical Communications</i> , 2018, 54, 810-813.	2.2	65
413	Tuning Redox Transitions via Inductive Effect in Metal Oxides and Complexes, and Implications in Oxygen Electrocatalysis. <i>Joule</i> , 2018, 2, 225-244.	11.7	283
414	Few-Layer Iron Selenophosphate, FePSe ₃ : Efficient Electrocatalyst toward Water Splitting and Oxygen Reduction Reactions. <i>ACS Applied Energy Materials</i> , 2018, 1, 220-231.	2.5	80
415	Nanoporous Sulfur-Doped Copper Oxide (Cu ₂ O _x S) for Overall Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 745-752.	4.0	83

#	ARTICLE	IF	CITATIONS
416	CoC ₂ O ₄ ·2H ₂ O derived Co ₃ O ₄ nanorods array: a high-efficiency 1D electrocatalyst for alkaline oxygen evolution reaction. <i>Chemical Communications</i> , 2018, 54, 1533-1536.	2.2	99
417	In situ Formed Co(TCNQ) ₂ Metal-Organic Framework Array as a High-Efficiency Catalyst for Oxygen Evolution Reactions. <i>Chemistry - A European Journal</i> , 2018, 24, 2075-2079.	1.7	29
418	Co(OH) ₂ Nanoparticle-Encapsulating Conductive Nanowires Array: Room-Temperature Electrochemical Preparation for High-Performance Water Oxidation Electrocatalysis. <i>Advanced Materials</i> , 2018, 30, 1705366.	11.1	294
419	Graphene aerogels for efficient energy storage and conversion. <i>Energy and Environmental Science</i> , 2018, 11, 772-799.	15.6	435
420	Synthesis of Cobalt-Glycerate hierarchical structure and their conversion into hierarchical CoP nanospheres for the hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 2034-2042.	3.8	42
421	CoFe-CoFe ₂ O ₄ /N-doped carbon nanocomposite derived from in situ pyrolysis of a single source precursor as a superior bifunctional electrocatalyst for water splitting. <i>Electrochimica Acta</i> , 2018, 262, 18-26.	2.6	28
422	Bimetallic Ni-Fe phosphide nanocomposites with a controlled architecture and composition enabling highly efficient electrochemical water oxidation. <i>Journal of Materials Chemistry A</i> , 2018, 6, 2231-2238.	5.2	97
423	Carbon cloth-supported cobalt phosphide as an active matrix for constructing enzyme-based biosensor. <i>Journal of Solid State Electrochemistry</i> , 2018, 22, 1689-1696.	1.2	8
424	Selective phosphidation: an effective strategy toward CoP/CeO ₂ interface engineering for superior alkaline hydrogen evolution electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2018, 6, 1985-1990.	5.2	212
425	FeMoO ₄ nanorod array: a highly active 3D anode for water oxidation under alkaline conditions. <i>Inorganic Chemistry Frontiers</i> , 2018, 5, 665-668.	3.0	39
426	Current Mechanistic Understanding of Surface Reactions over Water-Splitting Photocatalysts. <i>CheM</i> , 2018, 4, 223-245.	5.8	87
427	Hierarchical cobalt oxide-functionalized silicon carbide nanowire array for efficient and robust oxygen evolution electro-catalysis. <i>Materials Today Energy</i> , 2018, 7, 37-43.	2.5	12
428	Enhanced Catalysis of Electrochemical Overall Water Splitting in Alkaline Media by Fe Doping in Ni ₃ S ₂ Nanosheet Arrays. <i>ACS Catalysis</i> , 2018, 8, 5431-5441.	5.5	499
429	Anion-Regulated Hydroxysulfide Monoliths as OER/ORR/HER Electrocatalysts and their Applications in Self-Powered Electrochemical Water Splitting. <i>Small Methods</i> , 2018, 2, 1800055.	4.6	91
430	Colloidal Synthesis of Mo-Ni Alloy Nanoparticles as Bifunctional Electrocatalysts for Efficient Overall Water Splitting. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800359.	1.9	42
431	Mo ₂ C and Its Composites Derived from Egg White for Hydrogen Evolution Reaction at All pH Range. <i>ChemistrySelect</i> , 2018, 3, 4683-4686.	0.7	4
432	The Flexibility of an Amorphous Cobalt Hydroxide Nanomaterial Promotes the Electrocatalysis of Oxygen Evolution Reaction. <i>Small</i> , 2018, 14, e1703514.	5.2	121
433	Metal-organic framework-derived Zn _{0.975} Co _{0.025} S/CoS ₂ embedded in N,S-codoped carbon nanotube/nanopolyhedra as an efficient electrocatalyst for overall water splitting. <i>Journal of Materials Chemistry A</i> , 2018, 6, 10441-10446.	5.2	69

#	ARTICLE	IF	CITATIONS
434	Facile Dispersion of Nanosized NiFeP for Highly Effective Catalysis of Oxygen Evolution Reaction. ACS Sustainable Chemistry and Engineering, 2018, 6, 7206-7211.	3.2	46
435	Facile synthesis of nanometer-sized NiFe layered double hydroxide/nitrogen-doped graphite foam hybrids for enhanced electrocatalytic oxygen evolution reactions. International Journal of Hydrogen Energy, 2018, 43, 7956-7963.	3.8	24
436	Highly effective electrochemical water oxidation by copper oxide film generated in situ from Cu(II) tricine complex. Chinese Journal of Catalysis, 2018, 39, 479-486.	6.9	8
437	Engineering Cobalt Defects in Cobalt Oxide for Highly Efficient Electrocatalytic Oxygen Evolution. ACS Catalysis, 2018, 8, 3803-3811.	5.5	430
438	Microwave-assisted synthesis of graphene-like cobalt sulfide freestanding sheets as an efficient bifunctional electrocatalyst for overall water splitting. Journal of Materials Chemistry A, 2018, 6, 7592-7607.	5.2	108
439	Highly Water Dispersible Polymer Acid-Doped Polyanilines as Low-Cost, Nafion-Free Ionomers for Hydrogen Evolution Reaction. ACS Applied Energy Materials, 2018, 1, 1512-1521.	2.5	18
440	Trace Amount of Platinum Supported on Carbonized Biomorphic Wood for Efficient Electrochemical Hydrogen Evolution in Alkaline Condition. ChemistrySelect, 2018, 3, 2140-2143.	0.7	1
441	Oxygen Species on Nitrogen-Doped Carbon Nanosheets as Efficient Active Sites for Multiple Electrocatalysis. ACS Applied Materials & Interfaces, 2018, 10, 11678-11688.	4.0	58
442	Stacked Porous Iron-Doped Nickel Cobalt Phosphide Nanoparticle: An Efficient and Stable Water Splitting Electrocatalyst. ACS Sustainable Chemistry and Engineering, 2018, 6, 6146-6156.	3.2	113
443	Systematic Study of Oxygen Evolution Activity and Stability on La _x Sr _{1-x} FeO ₃ Perovskite Electrocatalysts in Alkaline Media. ACS Applied Materials & Interfaces, 2018, 10, 11715-11721.	4.0	173
444	A functional design and synthesization for electrocatalytic hydrogen evolution material on MoS ₂ /Co ₃ S ₄ hybrid hollow nanostructure. Electrochimica Acta, 2018, 269, 262-273.	2.6	42
445	The Efficient Oxidation of Biomass-Derived 5-Hydroxymethyl Furfural to Produce 2,5-Diformylfuran Over Supported Cobalt Catalysts. Waste and Biomass Valorization, 2018, 9, 95-101.	1.8	21
446	Electrosynthesis of Co ₃ O ₄ and Co(OH) ₂ ultrathin nanosheet arrays for efficient electrocatalytic water splitting in alkaline and neutral media. Nano Research, 2018, 11, 323-333.	5.8	65
447	Electrocatalytic performance evaluation of cobalt hydroxide and cobalt oxide thin films for oxygen evolution reaction. Applied Surface Science, 2018, 427, 253-259.	3.1	140
448	Composition-Dependent Effect of the Calcination of Cobalt-, Nickel-, and Gallium-Based Layered Double Hydroxides to Mixed Metal Oxides in the Oxygen Evolution Reaction. ChemElectroChem, 2018, 5, 93-100.	1.7	17
449	Solar Hydrogen Energy Conversion Based on Water Splitting. Advanced Energy Materials, 2018, 8, 1701620.	10.2	429
450	Co(OH) ₂ hollow nanoflowers as highly efficient electrocatalysts for oxygen evolution reaction. Journal of Materials Research, 2018, 33, 568-580.	1.2	22
451	One-pot synthesis of in situ carbon-decorated Cu ₃ P particles with enhanced electrocatalytic hydrogen evolution performance. Journal of Materials Research, 2018, 33, 546-555.	1.2	29

#	ARTICLE	IF	CITATIONS
452	Advanced catalysts for sustainable hydrogen generation and storage via hydrogen evolution and carbon dioxide/nitrogen reduction reactions. <i>Progress in Materials Science</i> , 2018, 92, 64-111.	16.0	195
453	Organic-inorganic hybrids-directed ternary NiFeMoS anemone-like nanorods with scaly surface supported on nickel foam for efficient overall water splitting. <i>Chemical Engineering Journal</i> , 2018, 334, 922-931.	6.6	216
454	Hydrophilic cobalt sulfide nanosheets as a bifunctional catalyst for oxygen and hydrogen evolution in electrolysis of alkaline aqueous solution. <i>Journal of Colloid and Interface Science</i> , 2018, 509, 522-528.	5.0	65
455	Encapsulating Co ₂ P@C Core-Shell Nanoparticles in a Porous Carbon Sandwich as Dual-Doped Electrocatalyst for Hydrogen Evolution. <i>ChemSusChem</i> , 2018, 11, 376-388.	3.6	45
456	In Situ Antisolvent Approach to Hydrangea-like HCo ₃ O ₄ @NC@CoNi-LDH Core@Shell Superstructures for Highly Efficient Water Electrolysis. <i>Chemistry - A European Journal</i> , 2018, 24, 400-408.	1.7	21
457	Cobalt oxide nanosheets anchored onto nitrogen-doped carbon nanotubes as dual purpose electrodes for lithium-ion batteries and oxygen evolution reaction. <i>International Journal of Energy Research</i> , 2018, 42, 853-862.	2.2	30
458	Observing the Electrochemical Oxidation of Co Metal at the Solid/Liquid Interface Using Ambient Pressure X-ray Photoelectron Spectroscopy. <i>Journal of Physical Chemistry B</i> , 2018, 122, 666-671.	1.2	73
459	Self-supported CoMoS ₄ nanosheet array as an efficient catalyst for hydrogen evolution reaction at neutral pH. <i>Nano Research</i> , 2018, 11, 2024-2033.	5.8	147
460	Metal-organic frameworks for electrocatalysis. <i>Coordination Chemistry Reviews</i> , 2018, 373, 22-48.	9.5	360
461	Nickel-Copper Alloy Encapsulated in Graphitic Carbon Shells as Electrocatalysts for Hydrogen Evolution Reaction. <i>Advanced Energy Materials</i> , 2018, 8, 1701759.	10.2	225
462	Electrospun three dimensional Co/CoP@nitrogen-doped carbon nanofibers network for efficient hydrogen evolution. <i>Energy Storage Materials</i> , 2018, 12, 44-53.	9.5	152
463	Controllable Surface Reorganization Engineering on Cobalt Phosphide Nanowire Arrays for Efficient Alkaline Hydrogen Evolution Reaction. <i>Advanced Materials</i> , 2018, 30, 1703322.	11.1	215
464	Enhancing electrocatalytic hydrogen evolution of WP2 three-dimensional nanowire arrays via Mo doping. <i>Materials Letters</i> , 2018, 213, 315-318.	1.3	17
465	Engineering the Surface Structure of Binary/Ternary Ferrite Nanoparticles as High-Performance Electrocatalysts for the Oxygen Evolution Reaction. <i>ChemCatChem</i> , 2018, 10, 1075-1083.	1.8	19
466	A Co-MOF nanosheet array as a high-performance electrocatalyst for the oxygen evolution reaction in alkaline electrolytes. <i>Inorganic Chemistry Frontiers</i> , 2018, 5, 344-347.	3.0	90
467	Nitrogen-doped mesoporous carbon-armored cobalt nanoparticles as efficient hydrogen evolving electrocatalysts. <i>Journal of Colloid and Interface Science</i> , 2018, 514, 281-288.	5.0	12
468	An enhanced electrochemical energy conversion behavior of thermally treated thin film of 1-dimensional CoTe synthesized from aqueous solution at room temperature. <i>Electrochimica Acta</i> , 2018, 260, 365-371.	2.6	29
469	Ni(OH) ₂ Nanoparticles Embedded in Conductive Microrod Array: An Efficient and Durable Electrocatalyst for Alkaline Oxygen Evolution Reaction. <i>ACS Catalysis</i> , 2018, 8, 651-655.	5.5	123

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470	Metallic cobalt modified MnO ₂ /C nanocrystalline composites as an efficient bifunctional oxygen electrocatalyst. <i>Catalysis Science and Technology</i> , 2018, 8, 480-485.	2.1	23
471	Crystal-plane engineering of NiCo ₂ O ₄ electrocatalysts towards efficient overall water splitting. <i>Journal of Catalysis</i> , 2018, 357, 238-246.	3.1	158
472	Co ₃ O ₄ polyhedrons with enhanced electric conductivity as efficient water oxidation electrocatalysts in alkaline medium. <i>Journal of Materials Science</i> , 2018, 53, 4323-4333.	1.7	42
473	High-Performance Transition Metal Phosphide Alloy Catalyst for Oxygen Evolution Reaction. <i>ACS Nano</i> , 2018, 12, 158-167.	7.3	321
474	Phosphorus-driven mesoporous Co ₃ O ₄ nanosheets with tunable oxygen vacancies for the enhanced oxygen evolution reaction. <i>Electrochimica Acta</i> , 2018, 259, 962-967.	2.6	119
475	Facile formation of 2D Co ₂ P@Co ₃ O ₄ microsheets through in-situ topotactic conversion and surface corrosion: Bifunctional electrocatalysts towards overall water splitting. <i>Journal of Power Sources</i> , 2018, 374, 142-148.	4.0	102
476	Flower-like CoP microballs assembled with (002) facet nanowires via precursor route: Efficient electrocatalysts for hydrogen and oxygen evolution. <i>Electrochimica Acta</i> , 2018, 259, 830-840.	2.6	33
477	Metal-organic framework-derived CoNi-embedded carbon nanocages as efficient electrocatalysts for oxygen evolution reaction. <i>Ionics</i> , 2018, 24, 1773-1780.	1.2	13
478	Three-dimensional interconnected Ni(Fe)OxHy nanosheets on stainless steel mesh as a robust integrated oxygen evolution electrode. <i>Nano Research</i> , 2018, 11, 1294-1300.	5.8	103
479	Facile Synthesis of Fe-Doped Ni ₃ S ₂ Nanoparticles Supported on Ni Foam as Highly Active Electrocatalyst for Water Splitting. <i>IOP Conference Series: Earth and Environmental Science</i> , 0, 186, 012002.	0.2	1
480	Electronic Tuning of Co, Ni-Based Nanostructured (Hydr)oxides for Aqueous Electrocatalysis. <i>Advanced Functional Materials</i> , 2018, 28, 1804886.	7.8	87
481	Recent Progress on Layered Double Hydroxides and Their Derivatives for Electrocatalytic Water Splitting. <i>Advanced Science</i> , 2018, 5, 1800064.	5.6	515
482	A Universal Strategy for Constructing Seamless Graphdiyne on Metal Oxides to Stabilize the Electrochemical Structure and Interface. <i>Advanced Materials</i> , 2019, 31, e1806272.	11.1	59
483	Porous Ir-Sn Binary Oxide Nanorod Assembly as an Efficient Electrocatalyst for Water Oxidation. <i>International Journal of Electrochemical Science</i> , 2018, 13, 3235-3245.	0.5	6
484	High-performance alkaline hydrogen evolution electrocatalyzed by a Ni ₃ N/CeO ₂ nanohybrid. <i>Inorganic Chemistry Frontiers</i> , 2018, 5, 3042-3045.	3.0	24
485	Carbon-encapsulated multi-phase nanocomposite of W ₂ C@WC _{1-x} as a highly active and stable electrocatalyst for hydrogen generation. <i>Nanoscale</i> , 2018, 10, 21123-21131.	2.8	26
486	Gold doping induced strong enhancement of carbon quantum dots fluorescence and oxygen evolution reaction catalytic activity of amorphous cobalt hydroxide. <i>New Journal of Chemistry</i> , 2018, 42, 18794-18801.	1.4	14
487	One-step, room temperature generation of porous and amorphous cobalt hydroxysulfides from layered double hydroxides for superior oxygen evolution reactions. <i>Journal of Materials Chemistry A</i> , 2018, 6, 24311-24316.	5.2	88

#	ARTICLE	IF	CITATIONS
488	An ultrafine ruthenium nanocrystal with extremely high activity for the hydrogen evolution reaction in both acidic and alkaline media. <i>Chemical Communications</i> , 2018, 54, 13076-13079.	2.2	39
489	Study on the Stability of $\text{Co}_x\text{M}_{3-x}\text{O}_4$ (M = Ni, Mn and Ce) Nanowire Array Electrodes for Electrochemical Oxygen Evolution at Large Current Densities. <i>Journal of the Electrochemical Society</i> , 2018, 165, A3496-A3503.	1.3	10
490	Carbon-coated cobalt molybdenum oxide as a high-performance electrocatalyst for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 23101-23108.	3.8	9
491	Heterogeneous Molten Salt Design Strategy toward Coupling Cobalt–Cobalt Oxide and Carbon for Efficient Energy Conversion and Storage. <i>Advanced Energy Materials</i> , 2018, 8, 1800762.	10.2	51
492	Spiky Nickel Electrodes for Electrochemical Oxygen Evolution Catalysis by Femtosecond Laser Structuring. <i>International Journal of Electrochemistry</i> , 2018, 2018, 1-12.	2.4	10
493	Recent Advances of Cobalt-Based Electrocatalysts for Oxygen Electrode Reactions and Hydrogen Evolution Reaction. <i>Catalysts</i> , 2018, 8, 559.	1.6	107
494	In Situ O ₂ Generation for Biocatalytic Oxyfunctionalization Reactions. <i>ChemCatChem</i> , 2018, 10, 5366-5371.	1.8	19
495	Exploration of nanowire- and nanotube-based electrocatalysts for oxygen reduction and oxygen evolution reaction. <i>Materials Today Nano</i> , 2018, 3, 54-68.	2.3	32
496	Facile Synthesis of Gold-Supported Thin Film of Cobalt Oxide via AACVD for Enhanced Electrocatalytic Activity in Oxygen Evolution Reaction. <i>ECS Journal of Solid State Science and Technology</i> , 2018, 7, P711-P718.	0.9	9
497	Phosphorized MXene-Phase Molybdenum Carbide as an Earth-Abundant Hydrogen Evolution Electrocatalyst. <i>ACS Applied Energy Materials</i> , 2018, 1, 7206-7212.	2.5	88
498	Sulfur-Doped Dicobalt Phosphide Outperforming Precious Metals as a Bifunctional Electrocatalyst for Alkaline Water Electrolysis. <i>Chemistry of Materials</i> , 2018, 30, 8861-8870.	3.2	71
499	Effects of Metal Combinations on the Electrocatalytic Properties of Transition-Metal-Based Layered Double Hydroxides for Water Oxidation: A Perspective with Insights. <i>ACS Omega</i> , 2018, 3, 16529-16541.	1.6	42
500	Self-Supporting Porous Co-Based Films with Phase Separation Structure for Ultrastable Overall Water Electrolysis at Large Current Density. <i>Advanced Energy Materials</i> , 2018, 8, 1802445.	10.2	114
501	Bimetal Prussian Blue as a Continuously Variable Platform for Investigating the Composition–Activity Relationship of Phosphides-Based Electrocatalysts for Water Oxidation. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 35904-35910.	4.0	28
502	Layered Trichalcogenidophosphate: A New Catalyst Family for Water Splitting. <i>Nano-Micro Letters</i> , 2018, 10, 67.	14.4	65
503	One-pot synthesis of graphene-cobalt hydroxide composite nanosheets (Co/G NSs) for electrocatalytic water oxidation. <i>Scientific Reports</i> , 2018, 8, 13772.	1.6	9
504	Pulsed Electrodeposition of Co ₃ O ₄ Nanocrystals on One-Dimensional ZnO Scaffolds for Enhanced Electrochemical Water Oxidation. <i>ChemPlusChem</i> , 2018, 83, 889-889.	1.3	0
505	Ni–Co–Se Alloy Nanocrystals: Influence of the Composition on Their in Situ Transformation and Electrocatalytic Activity for the Oxygen Evolution Reaction. <i>ACS Applied Nano Materials</i> , 2018, 1, 5753-5762.	2.4	26

#	ARTICLE	IF	CITATIONS
506	The Effect of Metal Components in the Quaternary Electrocatalysts on the Morphology and Catalytic Performance of Transition Metal Phosphides. <i>Electroanalysis</i> , 2018, 30, 2584-2588.	1.5	4
507	Insight into Fe(Salen) Encapsulated Co-Porphyrin Framework Derived Thin Film for Efficient Oxygen Evolution Reaction. <i>Crystal Growth and Design</i> , 2018, 18, 7150-7157.	1.4	18
508	Electrochemical Energy Conversion and Storage with Zeolitic Imidazolate Framework Derived Materials: A Perspective. <i>ChemElectroChem</i> , 2018, 5, 3571-3588.	1.7	46
509	Insights on Tafel Constant in the Analysis of Hydrogen Evolution Reaction. <i>Journal of Physical Chemistry C</i> , 2018, 122, 23943-23949.	1.5	136
510	In Situ Raman Study of Amorphous and Crystalline Ni-Co Alloys for the Alkaline Oxygen Evolution Reaction. <i>Journal of the Electrochemical Society</i> , 2018, 165, J3122-J3129.	1.3	40
511	Bimetallic Hofmann-Type Metal-Organic Framework Nanoparticles for Efficient Electrocatalysis of Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 0, , .	2.5	22
512	Cobalt-Iron Oxide Nanoarrays Supported on Carbon Fiber Paper with High Stability for Electrochemical Oxygen Evolution at Large Current Densities. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 39809-39818.	4.0	60
513	Engineering Mesoporous NiO with Enriched Electrophilic Ni ³⁺ and O ²⁻ toward Efficient Oxygen Evolution. <i>Catalysts</i> , 2018, 8, 310.	1.6	25
514	Promise and Challenge of Phosphorus in Science, Technology, and Application. <i>Advanced Functional Materials</i> , 2018, 28, 1803471.	7.8	65
515	A Review of Fast Bubble-Driven Micromotors Powered by Biocompatible Fuel: Low-Concentration Fuel, Bioactive Fluid and Enzyme. <i>Micromachines</i> , 2018, 9, 537.	1.4	44
516	Novel Cobalt-Doped Ni _{0.85} Se Chalcogenides (Co _x Ni _{0.85-x} Se) as High Active and Stable Electrocatalysts for Hydrogen Evolution Reaction in Electrolysis Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 40491-40499.	4.0	84
517	Two-Dimensional Sandwich-Structured Mesoporous Mo ₂ C/Carbon/Graphene Nanohybrids for Efficient Hydrogen Production Electrocatalysts. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 40800-40807.	4.0	44
518	Highly Efficient Acidic Oxygen Evolution Electrocatalysis Enabled by Porous Ir-Cu Nanocrystals with Three-Dimensional Electrocatalytic Surfaces. <i>Chemistry of Materials</i> , 2018, 30, 8571-8578.	3.2	75
519	Constructing NiCo/Fe ₃ O ₄ Heteroparticles within MOF-74 for Efficient Oxygen Evolution Reactions. <i>Journal of the American Chemical Society</i> , 2018, 140, 15336-15341.	6.6	310
520	Co ₂ P-CoN Double Active Centers Confined in N-Doped Carbon Nanotube: Heterostructural Engineering for Trifunctional Catalysis toward HER, ORR, OER, and Zn-Air Batteries Driven Water Splitting. <i>Advanced Functional Materials</i> , 2018, 28, 1805641.	7.8	443
521	Ultrathin 2D Cobalt Zeolite-Imidazole Framework Nanosheets for Electrocatalytic Oxygen Evolution. <i>Advanced Science</i> , 2018, 5, 1801029.	5.6	92
522	Defect Engineering of Cobalt-Based Materials for Electrocatalytic Water Splitting. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 15954-15969.	3.2	151
523	Rational Design of Dodecahedral MnCo ₂ O _{4.5} Hollowed-Out Nanocages as Efficient Bifunctional Electrocatalysts for Oxygen Reduction and Evolution. <i>Advanced Energy Materials</i> , 2018, 8, 1802390.	10.2	63

#	ARTICLE	IF	CITATIONS
524	Self-Templating Construction of Porous CoSe ₂ Nanosheet Arrays as Efficient Bifunctional Electrocatalysts for Overall Water Splitting. ACS Sustainable Chemistry and Engineering, 2018, 6, 15374-15382.	3.2	89
525	Copper (0) Doping Makes Cobalt-Nickel Hydroxide a High-Efficiency Catalyst for Hydrogen Evolution Reaction. Journal of the Electrochemical Society, 2018, 165, H866-H871.	1.3	12
526	Ir/g-C ₃ N ₄ /Nitrogen-Doped Graphene Nanocomposites as Bifunctional Electrocatalysts for Overall Water Splitting in Acidic Electrolytes. ACS Applied Materials & Interfaces, 2018, 10, 39161-39167.	4.0	80
527	Large-Scale Synthesis of Co/CoO Encapsulated in Nitrogen-, Oxygen-, and Sulfur-Tridoped Three-Dimensional Porous Carbon as Efficient Electrocatalysts for Hydrogen Evolution Reaction. ACS Applied Energy Materials, 2018, 1, 6250-6259.	2.5	15
528	Engineering Ni(OH) ₂ Nanosheet on CoMoO ₄ Nanoplate Array as Efficient Electrocatalyst for Oxygen Evolution Reaction. ACS Sustainable Chemistry and Engineering, 2018, 6, 16086-16095.	3.2	64
529	Dynamic Migration of Surface Fluorine Anions on Cobalt-Based Materials to Achieve Enhanced Oxygen Evolution Catalysis. Angewandte Chemie, 2018, 130, 15697-15701.	1.6	11
530	Metallated azo-naphthalene diimide based redox-active porous organic polymer as an efficient water oxidation electrocatalyst. Journal of Materials Chemistry A, 2018, 6, 19834-19842.	5.2	31
531	A hierarchical CoTe ₂ –MnTe ₂ hybrid nanowire array enables high activity for oxygen evolution reactions. Chemical Communications, 2018, 54, 10993-10996.	2.2	125
532	MOF-derived porous Ni ₂ P nanosheets as novel bifunctional electrocatalysts for the hydrogen and oxygen evolution reactions. Journal of Materials Chemistry A, 2018, 6, 18720-18727.	5.2	149
533	Surface decorated cobalt sulfide as efficient catalyst for oxygen evolution reaction and its intrinsic activity. Journal of Catalysis, 2018, 367, 43-52.	3.1	39
534	Cobalt Nanocrystals Encapsulated in Heteroatom-Rich Porous Carbons Derived from Conjugated Microporous Polymers for Efficient Electrocatalytic Hydrogen Evolution. Small, 2018, 14, e1803232.	5.2	27
535	Hierarchical coral-like FeNi(OH)/Ni via mild corrosion of nickel as an integrated electrode for efficient overall water splitting. Chinese Journal of Catalysis, 2018, 39, 1736-1745.	6.9	34
536	Ni _{0.33} Co _{0.67} MoS ₄ nanosheets as a bifunctional electrolytic water catalyst for overall water splitting. Journal of Materials Chemistry A, 2018, 6, 19555-19562.	5.2	50
537	Preparation of Co–N carbon nanosheet oxygen electrode catalyst by controlled crystallization of cobalt salt precursors for all-solid-state Al–air battery. RSC Advances, 2018, 8, 22193-22198.	1.7	11
538	Charge State Manipulation of Cobalt Selenide Catalyst for Overall Seawater Electrolysis. Advanced Energy Materials, 2018, 8, 1801926.	10.2	264
539	Dynamic Migration of Surface Fluorine Anions on Cobalt-Based Materials to Achieve Enhanced Oxygen Evolution Catalysis. Angewandte Chemie - International Edition, 2018, 57, 15471-15475.	7.2	178
540	Necklace-like Multishelled Hollow Spinel Oxides with Oxygen Vacancies for Efficient Water Electrolysis. Journal of the American Chemical Society, 2018, 140, 13644-13653.	6.6	430
541	Earth-Abundant Transition-Metal-Based Electrocatalysts for Water Electrolysis to Produce Renewable Hydrogen. Chemistry - A European Journal, 2018, 24, 18334-18355.	1.7	203

#	ARTICLE	IF	CITATIONS
542	In Situ Vertical Growth of Fe ²⁺ /Ni Layered Double-Hydroxide Arrays on Fe ²⁺ /Ni Alloy Foil: Interfacial Layer Enhanced Electrocatalyst with Small Overpotential for Oxygen Evolution Reaction. ACS Energy Letters, 2018, 3, 2357-2365.	8.8	150
543	A Facile Strategy to Construct Amorphous Spinel-Based Electrocatalysts with Massive Oxygen Vacancies Using Ionic Liquid Dopant. Advanced Energy Materials, 2018, 8, 1800980.	10.2	156
544	Bifunctional sulfur-doped cobalt phosphide electrocatalyst outperforms all-noble-metal electrocatalysts in alkaline electrolyzer for overall water splitting. Nano Energy, 2018, 53, 286-295.	8.2	184
545	Ultrafast fabrication of nickel sulfide film on Ni foam for efficient overall water splitting. Nanoscale, 2018, 10, 17347-17353.	2.8	92
546	Cobalt phosphosulfide in the tetragonal phase: a highly active and durable catalyst for the hydrogen evolution reaction. Journal of Materials Chemistry A, 2018, 6, 12353-12360.	5.2	43
547	Few Layered N, P Dual-Doped Carbon-Encapsulated Ultrafine MoP Nanocrystal/MoP Cluster Hybrids on Carbon Cloth: An Ultrahigh Active and Durable 3D Self-Supported Integrated Electrode for Hydrogen Evolution Reaction in a Wide pH Range. Advanced Functional Materials, 2018, 28, 1801527.	7.8	142
548	FeS ₂ /CoS ₂ Interface Nanosheets as Efficient Bifunctional Electrocatalyst for Overall Water Splitting. Small, 2018, 14, e1801070.	5.2	273
549	M (Co, Ni), N and S tridoped carbon nanoplates as multifunctional catalysts for rechargeable Zn-air batteries and water electrolyzers. International Journal of Hydrogen Energy, 2018, 43, 11012-11021.	3.8	16
550	<i>In situ</i> growth of well-ordered NiFe-MOF-74 on Ni foam by Fe ²⁺ induction as an efficient and stable electrocatalyst for water oxidation. Chemical Communications, 2018, 54, 7046-7049.	2.2	176
551	Nanostructured Antireflective Iridium Oxide Coating for Water Oxidation. Journal of Physical Chemistry C, 2018, 122, 12207-12214.	1.5	14
552	Scalable cellulose-sponsored functionalized carbon nanorods induced by cobalt for efficient overall water splitting. Carbon, 2018, 137, 274-281.	5.4	50
553	Nitrogen-Doped CoP Electrocatalysts for Coupled Hydrogen Evolution and Sulfur Generation with Low Energy Consumption. Advanced Materials, 2018, 30, e1800140.	11.1	336
554	Two-Step Synthesis of Cobalt Iron Alloy Nanoparticles Embedded in Nitrogen-Doped Carbon Nanosheets/Carbon Nanotubes for the Oxygen Evolution Reaction. ChemSusChem, 2018, 11, 2358-2366.	3.6	41
555	Electrical and structural engineering of cobalt selenide nanosheets by Mn modulation for efficient oxygen evolution. Applied Catalysis B: Environmental, 2018, 236, 569-575.	10.8	122
556	Porous NiMoO ₄ /MoO ₃ hybrids as highly effective electrocatalysts for the water splitting reaction. Journal of Materials Chemistry A, 2018, 6, 12361-12369.	5.2	114
557	Facile synthesis of Co-CoOx/N-doped carbon nanotubes hybrids as efficient and bifunctional catalysts for hydrogen and oxygen evolution. Journal of Materials Science: Materials in Electronics, 2018, 29, 10744-10752.	1.1	14
558	Metal-Organic Framework Hybrid-Assisted Formation of Co ₃ O ₄ /Co-Fe Oxide Double-Shelled Nanoboxes for Enhanced Oxygen Evolution. Advanced Materials, 2018, 30, e1801211.	11.1	374
559	Carbon-Encapsulated WO ₃ Hybrids as Efficient Catalysts for Hydrogen Evolution. Advanced Materials, 2018, 30, e1705979.	11.1	140

#	ARTICLE	IF	CITATIONS
560	Efficient Co@CoP _x core-shell nanochains catalyst for the oxygen evolution reaction. <i>Inorganic Chemistry Frontiers</i> , 2018, 5, 1844-1848.	3.0	9
561	Structure-optimized CoP-carbon nanotube composite microspheres synthesized by spray pyrolysis for hydrogen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2018, 763, 652-661.	2.8	32
562	Scalable synthesis of porous hollow CoSe ₂ @MoSe ₂ /carbon microspheres for highly efficient hydrogen evolution reaction in acidic and alkaline media. <i>Journal of Materials Chemistry A</i> , 2018, 6, 12701-12707.	5.2	106
563	Oxygen-incorporated defect-rich MoP for highly efficient hydrogen production in both acidic and alkaline media. <i>Electrochimica Acta</i> , 2018, 281, 540-548.	2.6	44
564	Monitoring surface transformations of metal carbodiimide water oxidation catalysts by operando XAS and Raman spectroscopy. <i>Dalton Transactions</i> , 2018, 47, 10759-10766.	1.6	11
565	Self-supported transition metal phosphide based electrodes as high-efficient water splitting cathodes. <i>Frontiers of Chemical Science and Engineering</i> , 2018, 12, 494-508.	2.3	42
566	Engineering Morphologies of Cobalt Pyrophosphates Nanostructures toward Greatly Enhanced Electrocatalytic Performance of Oxygen Evolution Reaction. <i>Small</i> , 2018, 14, e1801068.	5.2	45
567	The rise of two-dimensional MoS ₂ for catalysis. <i>Frontiers of Physics</i> , 2018, 13, 1.	2.4	93
568	Depth-Profiling Microanalysis of CoNCN Water-Oxidation Catalyst Using a $\lambda = 46.9$ nm Plasma Laser for Nano-Ionization Mass Spectrometry. <i>Analytical Chemistry</i> , 2018, 90, 9234-9240.	3.2	15
569	New Iron-Cobalt Oxide Catalysts Promoting BiVO ₄ Films for Photoelectrochemical Water Splitting. <i>Advanced Functional Materials</i> , 2018, 28, 1802685.	7.8	248
570	Recent progress in single-atom electrocatalysts: concept, synthesis, and applications in clean energy conversion. <i>Journal of Materials Chemistry A</i> , 2018, 6, 14025-14042.	5.2	224
571	Mesoporous Silica Loaded with Molybdenum Phosphide Nanoparticles for Hydrogen Evolution. <i>Advances in Materials Science and Engineering</i> , 2018, 2018, 1-5.	1.0	0
572	Cobalt Single Atoms Immobilized N-Doped Carbon Nanotubes for Enhanced Bifunctional Catalysis toward Oxygen Reduction and Oxygen Evolution Reactions. <i>ACS Applied Energy Materials</i> , 2018, 1, 3283-3291.	2.5	90
573	Organophosphoric acid-derived CoP quantum dots@S,N-codoped graphite carbon as a trifunctional electrocatalyst for overall water splitting and Zn-air batteries. <i>Nanoscale</i> , 2018, 10, 14613-14626.	2.8	74
574	An ultrathin nickel-based film electrodeposited from a Ni-Tris molecular precursor for highly efficient electrocatalytic water oxidation. <i>Electrochimica Acta</i> , 2018, 283, 104-110.	2.6	12
575	Hollow Rh nanoparticles with nanoporous shell as efficient electrocatalyst for hydrogen evolution reaction. <i>Electrochimica Acta</i> , 2018, 282, 853-859.	2.6	35
576	Rapid cationic defect and anion dual-regulated layered double hydroxides for efficient water oxidation. <i>Nanoscale</i> , 2018, 10, 13638-13644.	2.8	74
577	Controllable 1D and 2D Cobalt Oxide and Cobalt Selenide Nanostructures as Highly Efficient Electrocatalysts for the Oxygen Evolution Reaction. <i>Chemistry - an Asian Journal</i> , 2018, 13, 2700-2707.	1.7	20

#	ARTICLE	IF	CITATIONS
578	Mo-doped Ni ₃ S ₂ Nanowires as High-Performance Electrocatalysts for Overall Water Splitting. <i>ChemElectroChem</i> , 2018, 5, 2564-2570.	1.7	38
579	Fast fabrication of ultrathin CoMn LDH nanoarray as flexible electrode for water oxidation. <i>Electrochimica Acta</i> , 2018, 283, 755-763.	2.6	46
580	Cobalt/Carbon Nanocomposite as Oxygen Evolution Reaction Electrocatalyst. <i>ChemElectroChem</i> , 2018, 5, 2681-2685.	1.7	11
581	Assembling Ni-Co phosphides/carbon hollow nanocages and nanosheets with carbon nanotubes into a hierarchical necklace-like nanohybrid for electrocatalytic oxygen evolution reaction. <i>Nanoscale</i> , 2018, 10, 13555-13564.	2.8	81
582	Nanoporous CoP ₃ Nanowire Array: Acid Etching Preparation and Application as a Highly Active Electrocatalyst for the Hydrogen Evolution Reaction in Alkaline Solution. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 11186-11189.	3.2	134
583	Boron- and Nitrogen-Codoped Molybdenum Carbide Nanoparticles Imbedded in a BCN Network as a Bifunctional Electrocatalyst for Hydrogen and Oxygen Evolution Reactions. <i>ACS Catalysis</i> , 2018, 8, 8296-8305.	5.5	126
584	A Polyimide Nanolayer as a Metal-Free and Durable Organic Electrode Toward Highly Efficient Oxygen Evolution. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 12563-12566.	7.2	36
585	Pulsed Electrodeposition of Co ₃ O ₄ Nanocrystals on One-Dimensional ZnO Scaffolds for Enhanced Electrochemical Water Oxidation. <i>ChemPlusChem</i> , 2018, 83, 934-940.	1.3	16
586	Rational inert-basal-plane activating design of ultrathin 1T phase MoS ₂ with a MoO ₃ heterostructure for enhancing hydrogen evolution performances. <i>Nanoscale</i> , 2018, 10, 16531-16538.	2.8	75
587	Hierarchical urchin-like peapodded core-shell-structured NiCo ₂ @Ni _{1/3} Co _{2/3} S ₂ @C catalyst with synergistically high-efficiency electrocatalytic properties toward hydrogen evolution reaction. <i>Journal of Catalysis</i> , 2018, 365, 351-358.	3.1	7
588	Spontaneous Formation of Noble- and Heavy-Metal-Free Alloyed Semiconductor Quantum Rods for Efficient Photocatalysis. <i>Advanced Materials</i> , 2018, 30, e1803351.	11.1	47
589	Oxygen Doping to Optimize Atomic Hydrogen Binding Energy on NiCoP for Highly Efficient Hydrogen Evolution. <i>Small</i> , 2018, 14, e1800421.	5.2	122
590	Cobalt nanocrystals embedded into N-doped carbon as highly active bifunctional electrocatalysts from pyrolysis of triazolebenzoate complex. <i>Electrochimica Acta</i> , 2018, 284, 733-741.	2.6	13
591	Sulfur-doped Rhenium Selenide Vertical Nanosheets: A High-Performance Electrocatalyst for Hydrogen Evolution. <i>ChemCatChem</i> , 2018, 10, 4424-4430.	1.8	28
592	Sea coral-like NiCo ₂ O ₄ @(Ni, Co)OOH heterojunctions for enhancing overall water-splitting. <i>Catalysis Science and Technology</i> , 2018, 8, 4151-4158.	2.1	16
593	Metal-organic-framework template-derived hierarchical porous CoP arrays for energy-saving overall water splitting. <i>Electrochimica Acta</i> , 2018, 284, 504-512.	2.6	57
594	CoP porous hexagonal nanoplates in situ grown on RGO as active and durable electrocatalyst for hydrogen evolution. <i>Electrochimica Acta</i> , 2018, 284, 534-541.	2.6	29
595	Host-Guest Engineering of Layered Double Hydroxides towards Efficient Oxygen Evolution Reaction: Recent Advances and Perspectives. <i>Catalysts</i> , 2018, 8, 214.	1.6	21

#	ARTICLE	IF	CITATIONS
596	Metal Organic Framework Derived Materials: Progress and Prospects for the Energy Conversion and Storage. <i>Advanced Materials</i> , 2018, 30, e1705146.	11.1	376
598	Full Water Splitting Electrocatalyzed by NiWO ₄ Nanowire Array. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 9555-9559.	3.2	124
599	MOF-Derived Ultrathin Cobalt Phosphide Nanosheets as Efficient Bifunctional Hydrogen Evolution Reaction and Oxygen Evolution Reaction Electrocatalysts. <i>Nanomaterials</i> , 2018, 8, 89.	1.9	66
600	Carbon Nitride Materials as Efficient Catalyst Supports for Proton Exchange Membrane Water Electrolyzers. <i>Nanomaterials</i> , 2018, 8, 432.	1.9	17
601	Recent advances in hydrogen evolution reaction catalysts on carbon/carbon-based supports in acid media. <i>Journal of Power Sources</i> , 2018, 398, 9-26.	4.0	163
602	Coupling confinement activating cobalt oxide ultra-small clusters for high-turnover oxygen evolution electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2018, 6, 15684-15689.	5.2	25
603	Construction of Hierarchically Structured CuO@CoP Anode for Efficient Oxygen Evolution Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 11303-11312.	3.2	42
604	Phase-selective synthesis of self-supported RuP films for efficient hydrogen evolution electrocatalysis in alkaline media. <i>Nanoscale</i> , 2018, 10, 13930-13935.	2.8	67
605	Metal-doped molybdenum nitride films for enhanced hydrogen evolution in near-neutral strongly buffered aerobic media. <i>Electrochimica Acta</i> , 2018, 283, 1525-1533.	2.6	39
606	Electroless Plating of Highly Efficient Bifunctional Boride-Based Electrodes toward Practical Overall Water Splitting. <i>Advanced Energy Materials</i> , 2018, 8, 1801372.	10.2	127
607	Probing Nitrogen Doping Effects in the Core-Shell Structured Catalysts for Bifunctional Electrocatalysis. <i>ChemCatChem</i> , 2018, 10, 4248-4252.	1.8	6
608	Quasi-single-crystalline CoO hexagrams with abundant defects for highly efficient electrocatalytic water oxidation. <i>Chemical Science</i> , 2018, 9, 6961-6968.	3.7	56
609	Heteroatom-doped nanoporous carbon from recyclable <i>Pueraria lobata</i> and its dual activities for oxygen reduction and hydrogen evolution reactions. <i>RSC Advances</i> , 2018, 8, 24392-24398.	1.7	0
610	Cobalt Oxide Materials for Oxygen Evolution Catalysis via Single-Source Precursor Chemistry. <i>Chemistry - A European Journal</i> , 2018, 24, 13890-13896.	1.7	7
611	Molybdenum Disulfide Nanoflakes Covered Carbonized Catkin Microtube Hybrids as Superior Catalysts for Electrochemical Hydrogen Evolution. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 11255-11264.	3.2	15
612	Controllable Synthesis of Ordered Mesoporous Mo ₂ C@Graphitic Carbon Core-Shell Nanowire Arrays for Efficient Electrocatalytic Hydrogen Evolution. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 18761-18770.	4.0	46
613	Ultra-high-performance tungsten-doped perovskites for the oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2018, 6, 9854-9859.	5.2	82
614	Low-Temperature Synthesis of Cuboid Silver Tetrathiotungstate (Ag ₂ WS ₄) as Electrocatalyst for Hydrogen Evolution Reaction. <i>Inorganic Chemistry</i> , 2018, 57, 5791-5800.	1.9	20

#	ARTICLE	IF	CITATIONS
615	Transition Metal Carbide Complex Architectures for Energy-Related Applications. Chemistry - A European Journal, 2018, 24, 16716-16736.	1.7	27
616	Nickel Molybdenum Nitride Nanorods Grown on Ni Foam as Efficient and Stable Bifunctional Electrocatalysts for Overall Water Splitting. ACS Applied Materials & Interfaces, 2018, 10, 30400-30408.	4.0	97
617	Graphite-graphene architecture stabilizing ultrafine Co ₃ O ₄ nanoparticles for superior oxygen evolution. Carbon, 2018, 140, 17-23.	5.4	20
618	Tuning the activity/stability balance of anion doped CoS Se ²⁺ dichalcogenides. Journal of Catalysis, 2018, 366, 50-60.	3.1	17
619	Carbon-Capped Zerovalent Nickel and Cobalt Nanoparticles as Multitask Hybrid Electrocatalysts. ACS Applied Energy Materials, 2018, 1, 4939-4949.	2.5	7
620	Hierarchical Co@FeS ₂ /CoS ₂ heterostructures as a superior bifunctional electrocatalyst. RSC Advances, 2018, 8, 28684-28691.	1.7	41
621	Ni(OH) ₂ @WP Hybrid Nanorod Arrays for Highly Efficient and Durable Hydrogen Evolution Reactions in Alkaline Media. ChemSusChem, 2018, 11, 3618-3624.	3.6	35
622	Novel Cobalt Germanium Hydroxide for Electrochemical Water Oxidation. ACS Applied Materials & Interfaces, 2018, 10, 30357-30366.	4.0	22
623	Monodisperse and Tiny Co ₂ N _{0.67} Nanocrystals Uniformly Embedded over Two Curving Surfaces of Hollow Carbon Microfibers as Efficient Electrocatalyst for Oxygen Evolution Reaction. ACS Applied Nano Materials, 2018, 1, 4461-4473.	2.4	23
624	Metal-Organic-Framework-Derived Hollow CoS _x @MoS ₂ Microcubes as Superior Bifunctional Electrocatalysts for Hydrogen Evolution and Oxygen Evolution Reactions. ACS Sustainable Chemistry and Engineering, 2018, 6, 12961-12968.	3.2	89
625	Highly efficient ferromagnetic Co B O catalyst for hydrogen generation. International Journal of Hydrogen Energy, 2018, 43, 17164-17171.	3.8	22
626	Self-Supported NiSe ₂ Nanowire Arrays on Carbon Fiber Paper as Efficient and Stable Electrode for Hydrogen Evolution Reaction. ACS Sustainable Chemistry and Engineering, 2018, 6, 11884-11891.	3.2	37
627	Fe@CoP Electrocatalyst Derived from a Bimetallic Prussian Blue Analogue for Large-Current-Density Oxygen Evolution and Overall Water Splitting. Advanced Science, 2018, 5, 1800949.	5.6	318
628	Morphological and structure dual modulation of cobalt-based layer double hydroxides by Ni doping and 2-methylimidazole inducting as bifunctional electrocatalysts for overall water splitting. Journal of Power Sources, 2018, 400, 172-182.	4.0	32
629	A 3D porous Ni-CeO ₂ nanosheet array as a highly efficient electrocatalyst toward alkaline hydrogen evolution. Dalton Transactions, 2018, 47, 12667-12670.	1.6	11
630	Nanometric Ni ₅ P ₄ Clusters Nested on NiCo ₂ O ₄ for Efficient Hydrogen Production via Alkaline Water Electrolysis. Advanced Energy Materials, 2018, 8, 1801690.	10.2	99
631	Highly Efficient Bifunctional Electrocatalyst Using Structurally Architected N-doped Cobalt Oxide. ChemistrySelect, 2018, 3, 8752-8762.	0.7	11
632	Overall Water-Splitting Electrocatalysts Based on 2D CoNi-Metal-Organic Frameworks and Its Derivative. Advanced Materials Interfaces, 2018, 5, 1800849.	1.9	66

#	ARTICLE	IF	CITATIONS
633	A Polyimide Nanolayer as a Metal-Free and Durable Organic Electrode Toward Highly Efficient Oxygen Evolution. <i>Angewandte Chemie</i> , 2018, 130, 12743-12746.	1.6	9
634	Recent progress on earth abundant electrocatalysts for oxygen evolution reaction (OER) in alkaline medium to achieve efficient water splitting – A review. <i>Journal of Power Sources</i> , 2018, 400, 31-68.	4.0	418
635	Free-Sustaining Three-Dimensional S235 Steel-Based Porous Electrocatalyst for Highly Efficient and Durable Oxygen Evolution. <i>ChemSusChem</i> , 2018, 11, 3661-3671.	3.6	24
636	Optimization of the Activity of Ni-Based Nanostructures for the Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2018, 1, 4554-4563.	2.5	21
637	Plasma-activated Co ₃ (PO ₄) ₂ nanosheet arrays with Co ³⁺ -Rich surfaces for overall water splitting. <i>Journal of Power Sources</i> , 2018, 400, 190-197.	4.0	86
638	Double Perovskites as Model Bifunctional Catalysts toward Rational Design: The Correlation between Electrocatalytic Activity and Complex Spin Configuration. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 19746-19754.	4.0	41
639	Ultrafine MoP Nanoparticles Well Embedded in Carbon Nanosheets as Electrocatalyst with High Active Site Density for Hydrogen Evolution. <i>ChemElectroChem</i> , 2018, 5, 2256-2262.	1.7	23
640	Molybdenum carbide/phosphide hybrid nanoparticles embedded P, N co-doped carbon nanofibers for highly efficient hydrogen production in acidic, alkaline solution and seawater. <i>Electrochimica Acta</i> , 2018, 281, 710-716.	2.6	53
641	An ultrafine platinum-cobalt alloy decorated cobalt nanowire array with superb activity toward alkaline hydrogen evolution. <i>Nanoscale</i> , 2018, 10, 12302-12307.	2.8	199
642	Three-Dimensional Cathode Constructed through Confined-Growth of FeP Nanocrystals in Ordered Mesoporous Carbon Film Coated on Carbon Cloth for Efficient Hydrogen Production. <i>ChemCatChem</i> , 2018, 10, 3441-3446.	1.8	7
643	Three-dimensional-networked Ni ₂ P/Ni ₃ S ₂ heteronanoflake arrays for highly enhanced electrochemical overall-water-splitting activity. <i>Nano Energy</i> , 2018, 51, 26-36.	8.2	378
644	Generation of Pd@Ni-CNTs from Polyethylene Wastes and Their Application in the Electrochemical Hydrogen Evolution Reaction. <i>ChemistrySelect</i> , 2018, 3, 5321-5325.	0.7	13
645	Efficient n+p-Si photocathodes for solar H ₂ production catalyzed by Co-W-S and stabilized by Ti buffer layer. <i>Applied Catalysis B: Environmental</i> , 2018, 237, 158-165.	10.8	32
646	Fabrication of Porous CoO ₃ /mC@MoS ₂ Composite Loaded on g-C ₃ N ₄ Nanosheets as a Highly Efficient Dual Electrocatalyst for Oxygen Reduction and Hydrogen Evolution Reactions. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 9257-9268.	3.2	39
647	Single Tungsten Atoms Supported on MOF-Derived N-Doped Carbon for Robust Electrochemical Hydrogen Evolution. <i>Advanced Materials</i> , 2018, 30, e1800396.	11.1	427
648	Carbon nanotube encapsulated in nitrogen and phosphorus co-doped carbon as a bifunctional electrocatalyst for oxygen reduction and evolution reactions. <i>Carbon</i> , 2018, 139, 156-163.	5.4	97
649	Hierarchical cobalt sulfide with vertical in-plane edge structure for enhanced electrocatalytic oxygen evolution reaction. <i>Electrochimica Acta</i> , 2018, 281, 348-356.	2.6	28
650	Co _{0.5} Ni _{0.5} P nanoparticles embedded in carbon layers for efficient electrochemical water splitting. <i>Journal of Alloys and Compounds</i> , 2018, 764, 88-95.	2.8	29

#	ARTICLE	IF	CITATIONS
651	In Situ Hydrothermal Synthesis MoS ₂ /Guar Gum Carbon Nanoflowers as Advanced Electrocatalysts for Electrocatalytic Hydrogen Evolution. ACS Sustainable Chemistry and Engineering, 2018, 6, 8688-8696.	3.2	34
652	Platinum Nanostructure/Nitrogen-Doped Carbon Hybrid: Enhancing its Base Media HER/HOR Activity through Bifunctionality of the Catalyst. ChemSusChem, 2018, 11, 2388-2401.	3.6	62
653	Ultrathin two-dimensional cobalt-organic framework nanosheets for high-performance electrocatalytic oxygen evolution. Journal of Materials Chemistry A, 2018, 6, 22070-22076.	5.2	249
654	Ru ₂ P Nanoparticle Decorated P/N-Doped Carbon Nanofibers on Carbon Cloth as a Robust Hierarchical Electrocatalyst with Platinum-Comparable Activity toward Hydrogen Evolution. ACS Applied Energy Materials, 2018, 1, 3143-3150.	2.5	49
655	Fabrication of Amorphous Cu-Co-P Nanofilms on CuCo ₂ O ₄ Nanoarrays by in Situ Electrochemical Reduction for Efficient Hydrogen Evolution in Alkaline Solution. European Journal of Inorganic Chemistry, 2018, 2018, 3565-3569.	1.0	8
656	Three-dimensional NiCu layered double hydroxide nanosheets array on carbon cloth for enhanced oxygen evolution. Electrochimica Acta, 2018, 282, 735-742.	2.6	57
657	Boosting water oxidation electrocatalysts with surface engineered amorphous cobalt hydroxide nanoflakes. Nanoscale, 2018, 10, 12991-12996.	2.8	55
658	Metal-Organic Frameworks for Energy. Advanced Energy Materials, 2019, 9, 1801307.	10.2	160
659	Polypyrrole encapsulating TiB ₂ as newly-emerged electrocatalyst for highly boosted hydrogen evolution reaction. Ceramics International, 2019, 45, 23298-23303.	2.3	13
660	Ultrathin carbon coated mesoporous Ni-NiFe ₂ O ₄ nanosheet arrays for efficient overall water splitting. Electrochimica Acta, 2019, 321, 134652.	2.6	37
661	Facile one-step fabrication of bimetallic Co-Ni-P hollow nanospheres anchored on reduced graphene oxide as highly efficient electrocatalyst for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2019, 44, 24140-24150.	3.8	28
662	Cation-tunable flower-like (Ni _x Fe _{1-x}) ₂ P@graphitized carbon films as ultra-stable electrocatalysts for overall water splitting in alkaline media. Journal of Materials Chemistry A, 2019, 7, 20357-20368.	5.2	17
663	Construction of hierarchical Mo ₂ C nanoparticles onto hollow N-doped carbon polyhedrons for efficient hydrogen evolution reaction. Electrochimica Acta, 2019, 321, 134680.	2.6	33
664	A Cobalt-Iron Double-Atom Catalyst for the Oxygen Evolution Reaction. Journal of the American Chemical Society, 2019, 141, 14190-14199.	6.6	401
665	Microporous core-shell Co ₁₁ (HPO ₃) ₈ (OH) ₆ /Co ₁₁ (PO ₃) ₈ O ₆ nanowires for highly efficient electrocatalytic oxygen evolution reaction. Applied Catalysis B: Environmental, 2019, 259, 118091.	10.8	24
666	Pyrolysis of a self-supported dodecyl sulfate anion-intercalated Co(OH) ₂ nanosheet with enlarged amorphous phase content towards enhanced activity for alkaline water oxidation. Chemical Communications, 2019, 55, 11211-11214.	2.2	4
667	Fe-Doped Ni ₃ S ₂ Nanowires with Surface-Restricted Oxidation Toward High-Current-Density Overall Water Splitting. ChemElectroChem, 2019, 6, 4550-4559.	1.7	48
668	Facile Protocol for Alkaline Electrolyte Purification and Its Influence on a Ni-Co Oxide Catalyst for the Oxygen Evolution Reaction. ACS Catalysis, 2019, 9, 8165-8170.	5.5	59

#	ARTICLE	IF	CITATIONS
669	Anisotropic iron-doping patterns in two-dimensional cobalt oxide nanoislands on Au(111). <i>Nano Research</i> , 2019, 12, 2364-2372.	5.8	4
670	Preparation of Yolk-Shell Structured $\text{Co}_x\text{Fe}_y\text{P}$ with Enhanced OER Performance. <i>ChemSusChem</i> , 2019, 12, 4461-4470.	3.6	53
671	Screening highly active perovskites for hydrogen-evolving reaction via unifying ionic electronegativity descriptor. <i>Nature Communications</i> , 2019, 10, 3755.	5.8	139
672	Hierarchical Cobalt-Doped Molybdenum-Nickel Nitride Nanowires as Multifunctional Electrocatalysts. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 27751-27759.	4.0	59
673	Electronic-reconstruction-enhanced hydrogen evolution catalysis in oxide polymorphs. <i>Nature Communications</i> , 2019, 10, 3149.	5.8	42
674	Amorphous multinary phyllosilicate catalysts for electrochemical water oxidation. <i>Journal of Materials Chemistry A</i> , 2019, 7, 18380-18387.	5.2	21
675	Fluorographdiyne: A Metal-Free Catalyst for Applications in Water Reduction and Oxidation. <i>Angewandte Chemie</i> , 2019, 131, 14035-14041.	1.6	34
676	Defect engineering of cobalt microspheres by S doping and electrochemical oxidation as efficient bifunctional and durable electrocatalysts for water splitting at high current densities. <i>Journal of Power Sources</i> , 2019, 436, 226887.	4.0	48
677	Influence of the S:Ni ratio in raw materials on the Ni_xS_y electrocatalysts. <i>Applied Surface Science</i> , 2019, 491, 590-594.	3.1	18
678	Chemical Doped Ternary and Quaternary Transition-Metal-Based Electrocatalysts for Hydrogen Evolution Reaction. <i>ChemCatChem</i> , 2019, 11, 4998-5012.	1.8	7
679	Zn-Co electrocatalysts in lithium-O ₂ batteries: temperature and rotating cathode effects on the electrodeposition. <i>Journal of Solid State Electrochemistry</i> , 2019, 23, 2533-2540.	1.2	5
680	Fabrication of C/Co-FeS ₂ /CoS ₂ with Highly Efficient Hydrogen Evolution Reaction. <i>Catalysts</i> , 2019, 9, 556.	1.6	10
681	P-Doped Iron-Nickel Sulfide Nanosheet Arrays for Highly Efficient Overall Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 27667-27676.	4.0	155
682	Fluorographdiyne: A Metal-Free Catalyst for Applications in Water Reduction and Oxidation. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 13897-13903.	7.2	123
683	Bimetal-Organic Framework Derived High-Valence State Cu-Doped Co_3O_4 Porous Nanosheet Arrays for Efficient Oxygen Evolution and Water Splitting. <i>ChemCatChem</i> , 2019, 11, 4420-4426.	1.8	37
684	Microstructural Engineering of Heterogeneous Co Interface for Oxygen and Hydrogen Evolution. <i>ChemElectroChem</i> , 2019, 6, 3708-3713.	1.7	5
685	Nanostructured Co-based bifunctional electrocatalysts for energy conversion and storage: current status and perspectives. <i>Journal of Materials Chemistry A</i> , 2019, 7, 18674-18707.	5.2	277
686	Ni-Co-Mo-O nanosheets decorated with NiCo nanoparticles as advanced electrocatalysts for highly efficient hydrogen evolution. <i>Applied Catalysis B: Environmental</i> , 2019, 258, 117953.	10.8	68

#	ARTICLE	IF	CITATIONS
687	Ni@RuM (M=Ni or Co) core@shell nanocrystals with high mass activity for overall water-splitting catalysis. <i>Science China Materials</i> , 2019, 62, 1868-1876.	3.5	21
688	Ternary Phase Diagram-Facilitated Rapid Screening of Double Perovskites As Electrocatalysts for the Oxygen Evolution Reaction. <i>Chemistry of Materials</i> , 2019, 31, 5919-5926.	3.2	26
689	Channel-Rich RuCu Nanosheets for pH-Universal Overall Water Splitting Electrocatalysis. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 13983-13988.	7.2	274
690	Amorphous N-Doped Cobalt Borophosphate Nanoparticles as Robust and Durable Electrocatalyst for Water Oxidation. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 13981-13988.	3.2	20
691	Channel-Rich RuCu Nanosheets for pH-Universal Overall Water Splitting Electrocatalysis. <i>Angewandte Chemie</i> , 2019, 131, 14121-14126.	1.6	58
692	Sucrose leavening-induced hierarchically porous carbon enhanced the hydrogen evolution reaction performance of Pt nanoparticles. <i>Electrochimica Acta</i> , 2019, 320, 134603.	2.6	38
693	An advanced FeCoNi nitro-sulfide hierarchical structure from deep eutectic solvents for enhanced oxygen evolution reaction. <i>Chemical Communications</i> , 2019, 55, 10174-10177.	2.2	23
694	Electrochemical Synthesis of Cation Vacancy-Enriched Ultrathin Bimetallic Oxyhydroxide Nanoplatelets for Enhanced Water Oxidation. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 25958-25966.	4.0	25
695	Metal-organic framework-derived materials for electrochemical energy applications. <i>EnergyChem</i> , 2019, 1, 100001.	10.1	438
696	Promotion of the Electrocatalytic Oxygen Evolution Reaction by Chemical Coupling of CoOOH Particles to 3D Branched MnOOH Rods. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 13015-13022.	3.2	29
697	Bipolar Electrochemistry as a Simple Synthetic Route toward Nanoscale Transition of Mo_2B_5 and W_2B_5 for Enhanced Hydrogen Evolution Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 0, , .	3.2	6
698	A Trimodal Porous Cobalt-Based Electrocatalyst for Enhanced Oxygen Evolution. <i>Advanced Materials Interfaces</i> , 2019, 6, 1900381.	1.9	10
699	Recent Progress on Surface Reconstruction of Earth-Abundant Electrocatalysts for Water Oxidation. <i>Small</i> , 2019, 15, e1901980.	5.2	158
700	Ce-doped CoS_2 pyrite with weakened O_2 adsorption suppresses catalyst leaching and stabilizes electrocatalytic H_2 evolution. <i>Journal of Materials Chemistry A</i> , 2019, 7, 17775-17781.	5.2	35
701	Hyperbranched Co_2P nanocrystals with 3D morphology for hydrogen generation in both alkaline and acidic media. <i>RSC Advances</i> , 2019, 9, 20612-20617.	1.7	5
702	Facile synthesis of nanostructured molybdenum carbide/nitrogen-doped CNT-RGO composite via a modified urea glass route for efficient hydrogen evolution. <i>Journal of Alloys and Compounds</i> , 2019, 805, 113-119.	2.8	16
703	Enhanced Hydrogen Evolution Reaction Performance of NiCo_2P by Filling Oxygen Vacancies by Phosphorus in Thin-Coating CeO_2 . <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 32460-32468.	4.0	46
704	Ni^{II} -Fe Phosphate/Ni Foam Electrode: Facile Hydrothermal Synthesis and Ultralong Oxygen Evolution Reaction Durability. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 18332-18340.	3.2	40

#	ARTICLE	IF	CITATIONS
705	Interface engineering of Ni ₅ P ₂ nanoparticles and a mesoporous PtRu film heterostructure on Ni foam for enhanced hydrogen evolution. <i>Nanotechnology</i> , 2019, 30, 485403.	1.3	1
706	Electroactive Li incorporated cobalt oxide nanostructures for photocatalytic applications. <i>Materials Research Express</i> , 2019, 6, 1150d6.	0.8	25
707	Design of 2D Nanocrystalline Fe ₂ Ni ₂ N Coated onto Graphene Nanohybrid Sheets for Efficient Electrocatalytic Oxygen Evolution. <i>ACS Applied Energy Materials</i> , 2019, 2, 8502-8510.	2.5	25
708	Unveiling the Activity Origin of Electrocatalytic Oxygen Evolution over Isolated Ni Atoms Supported on a N-Doped Carbon Matrix. <i>Advanced Materials</i> , 2019, 31, e1904548.	11.1	256
709	The Aurivillius Compound CoBi ₂ O ₂ F ₄ – an Efficient Catalyst for Electrolytic Water Oxidation after Liquid Exfoliation. <i>ChemCatChem</i> , 2019, 11, 6105-6110.	1.8	12
710	Metal-Organic Framework-Derived Fe/Co-based Bifunctional Electrode for H ₂ Production through Water and Urea Electrolysis. <i>ChemSusChem</i> , 2019, 12, 4810-4823.	3.6	64
711	From Bad Electrochemical Practices to an Environmental and Waste Reducing Approach for the Generation of Active Hydrogen Evolving Electrodes. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 17383-17392.	7.2	24
712	Pore Surface Engineering of Covalent Triazine Frameworks@MoS ₂ Electrocatalyst for the Hydrogen Evolution Reaction. <i>ChemSusChem</i> , 2019, 12, 5032-5040.	3.6	38
713	Trifunctional layered electrodeposited nickel iron hydroxide electrocatalyst with enhanced performance towards the oxidation of water, urea and hydrazine. <i>Journal of Colloid and Interface Science</i> , 2019, 557, 10-17.	5.0	74
714	Accelerated oxygen evolution kinetics on NiFeAl-layered double hydroxide electrocatalysts with defect sites prepared by electrodeposition. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 28556-28565.	3.8	33
715	In-situ electrodeposited flower-like NiFeO H/rGO on nickel foam for oxygen evolution reaction. <i>Journal of Fuel Chemistry and Technology</i> , 2019, 47, 1083-1089.	0.9	2
716	Electrodeposition of cobalt nanoparticles: An analysis of the mechanisms behind the deviation from three-dimensional diffusion-control. <i>Journal of Electroanalytical Chemistry</i> , 2019, 851, 113413.	1.9	18
717	Modulating Electronic Structure of Cobalt Phosphide Precatalysts via Dual-Metal Incorporation for Highly Efficient Overall Water Splitting. <i>ACS Applied Energy Materials</i> , 2019, 2, 8022-8030.	2.5	19
718	From Bad Electrochemical Practices to an Environmental and Waste Reducing Approach for the Generation of Active Hydrogen Evolving Electrodes. <i>Angewandte Chemie</i> , 2019, 131, 17544-17553.	1.6	3
719	Toward Flexible and Wearable Embroidered Supercapacitors from Cobalt Phosphides-Decorated Conductive Fibers. <i>Nano-Micro Letters</i> , 2019, 11, 89.	14.4	38
720	Phosphorus and Yttrium Codoped Co(OH)F Nanoarray as Highly Efficient and Bifunctional Electrocatalysts for Overall Water Splitting. <i>Small</i> , 2019, 15, e1904105.	5.2	40
721	O-Doping Boosts the Electrochemical Oxygen Reduction Activity of a Single Fe Site in Hydrophilic Carbon with Deep Mesopores. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 45825-45831.	4.0	37
722	Rapid solvent-evaporation strategy for three-dimensional cobalt-based complex hierarchical architectures as catalysts for water oxidation. <i>Scientific Reports</i> , 2019, 9, 15681.	1.6	11

#	ARTICLE	IF	CITATIONS
725	Molecular Electrocatalysts for the Hydrogen Evolution Reaction: Input from Quantum Chemistry. <i>ChemSusChem</i> , 2019, 12, 4905-4915.	3.6	33
726	Probing the catalytic activity of pristine and doped Pd and Ni metal clusters towards H ₂ O molecule. <i>Computational and Theoretical Chemistry</i> , 2019, 1170, 112624.	1.1	2
727	Synthesis and electrocatalytic activity of Ni _{0.85} Se/MoS ₂ for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 26109-26117.	3.8	18
728	Sol-gel electrospun ZnMn ₂ O ₄ nanofibers as bifunctional electrocatalysts for hydrogen and oxygen evolution reactions. <i>Materials Research Express</i> , 2019, 6, 1150g7.	0.8	3
730	Cobalt nitride nanoflakes supported on Ni foam as a high-performance bifunctional catalyst for hydrogen production via urea electrolysis. <i>Journal of Chemical Sciences</i> , 2019, 131, 1.	0.7	8
731	Laser-driven nanomaterials and laser-enabled nanofabrication for industrial applications. , 2019, , 181-203.		15
732	Graphene Nanoarchitectonics: Recent Advances in Graphene-Based Electrocatalysts for Hydrogen Evolution Reaction. <i>Advanced Materials</i> , 2019, 31, e1903415.	11.1	289
733	Photocatalytic Hydrogen Production Based on a Serial Metal-Salen Complexes and the Reaction Mechanism. <i>ChemCatChem</i> , 2019, 11, 6324-6331.	1.8	25
734	Triplet-Triplet Annihilation Upconversion for Photocatalytic Hydrogen Evolution. <i>Chemistry - A European Journal</i> , 2019, 25, 16270-16276.	1.7	36
735	MOF-Derived Ni-Doped CoS ₂ Grown on Carbon Fiber Paper for Efficient Oxygen Evolution Reaction. <i>ChemElectroChem</i> , 2019, 6, 1206-1212.	1.7	42
736	Supramolecular Anchoring of Octahedral Molybdenum Clusters onto Graphene and Their Synergies in Photocatalytic Water Reduction. <i>Inorganic Chemistry</i> , 2019, 58, 15443-15454.	1.9	34
737	Electrochemical exfoliation of hierarchical Co ₃ O ₄ microflowers and their conversion into CoP as high-efficiency hydrogen evolution electrocatalyst. <i>Electrochimica Acta</i> , 2019, 322, 134768.	2.6	7
738	Theory-Driven Design and Targeting Synthesis of a Highly-Conjugated Basal-Plane 2D Covalent Organic Framework for Metal-Free Electrocatalytic OER. <i>ACS Energy Letters</i> , 2019, 4, 2251-2258.	8.8	124
739	Insight into a class of cobalt nitrides for oxygen evolution catalysis: Nitrogen-rich matters. <i>Electrochimica Acta</i> , 2019, 323, 134684.	2.6	17
740	In situ growth of minimal Ir-incorporated CoxNi _{1-x} O nanowire arrays on Ni foam with improved electrocatalytic activity for overall water splitting. <i>Chinese Journal of Catalysis</i> , 2019, 40, 1576-1584.	6.9	25
741	3D carbon coated NiCo ₂ S ₄ nanowires doped with nitrogen for electrochemical energy storage and conversion. <i>Journal of Colloid and Interface Science</i> , 2019, 556, 449-457.	5.0	37
742	Advanced electrospun nanomaterials for highly efficient electrocatalysis. <i>Inorganic Chemistry Frontiers</i> , 2019, 6, 3012-3040.	3.0	60
743	One-pot Synthesis of Coral-like Ru/Carbon Composites as Superior Electrocatalysts for the Hydrogen Evolution Reaction. <i>International Journal of Electrochemical Science</i> , 2019, , 8097-8109.	0.5	0

#	ARTICLE	IF	CITATIONS
744	N-Doped Mo ₂ C Nanobelts/Graphene Nanosheets Bonded with Hydroxy Nanocellulose as Flexible and Edible Electrode for Hydrogen Evolution Reaction. <i>IScience</i> , 2019, 19, 1090-1100.	1.9	37
745	New Insight on Hydrogen Evolution Reaction Activity of MoP ₂ from Theoretical Perspective. <i>Nanomaterials</i> , 2019, 9, 1270.	1.9	9
746	Design and synthesis of NiS@CoS@CC with abundant heterointerfaces as high-efficiency hydrogen evolution electrocatalyst. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 26753-26763.	3.8	24
747	Preparative History vs Driving Force in Water Oxidation Catalysis: Parameter Space Studies of Cobalt Spinels. <i>ACS Omega</i> , 2019, 4, 15444-15456.	1.6	9
748	Controlled synthesis of tubular ferrite MFe ₂ O ₄ (M = Fe, Co, Ni) microstructures with efficiently electrocatalytic activity for water splitting. <i>Electrochimica Acta</i> , 2019, 324, 134883.	2.6	26
749	In-situ growth of NCNT and encapsulation of Co ₉ S ₈ /Co as a sustainable multifunctional electrocatalyst. <i>Journal of Colloid and Interface Science</i> , 2019, 557, 291-300.	5.0	10
750	Recent Advances and Prospective in Ruthenium-Based Materials for Electrochemical Water Splitting. <i>ACS Catalysis</i> , 2019, 9, 9973-10011.	5.5	491
751	Phosphorus-doped Co ₃ Mo ₃ C/Co/CNFs hybrid: A remarkable electrocatalyst for hydrogen evolution reaction. <i>Electrochimica Acta</i> , 2019, 325, 134962.	2.6	20
752	Facile Synthesis of 3d Transition-Metal-Doped γ -Co(OH) ₂ Nanomaterials in Water-Methanol Mediated with Ammonia for Oxygen Evolution Reaction. <i>ACS Omega</i> , 2019, 4, 16612-16618.	1.6	33
753	Co-N-C electrocatalysts derived from nitrogen containing conjugated polymers for hydrogen evolution. <i>Materials Today: Proceedings</i> , 2019, 6, 73-78.	0.9	2
754	Zeolitic-imidazolate-framework-derived Co@Co ₃ O ₄ embedded into iron, nitrogen, sulfur Co-doped reduced graphene oxide as efficient electrocatalysts for overall water splitting and zinc-air batteries. <i>Electrochimica Acta</i> , 2019, 323, 134821.	2.6	33
755	Photodeposited CoO as highly active phases to boost water oxidation on BiVO ₄ /WO ₃ photoanode. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 25652-25661.	3.8	21
756	Structural evolution of CoMoO ₄ to CoOOH by ion electrochemical etching for boosting oxygen evolution reaction. <i>Journal of Power Sources</i> , 2019, 442, 227252.	4.0	65
757	A simple strategy to construct cobalt oxide-based high-efficiency electrocatalysts with oxygen vacancies and heterojunctions. <i>Electrochimica Acta</i> , 2019, 326, 134979.	2.6	32
758	Laser Synthesis of Iridium Nanospheres for Overall Water Splitting. <i>Materials</i> , 2019, 12, 3028.	1.3	19
759	Concentrated-acid triggered superfast generation of porous amorphous cobalt oxide toward efficient water oxidation catalysis in alkaline solution. <i>Chemical Communications</i> , 2019, 55, 1797-1800.	2.2	19
760	Metal-organic frameworks-based catalysts for electrochemical oxygen evolution. <i>Materials Horizons</i> , 2019, 6, 684-702.	6.4	149
761	Sustainable synthesis of nitrogen-doped porous carbon with improved electrocatalytic performance for hydrogen evolution. <i>New Journal of Chemistry</i> , 2019, 43, 3078-3083.	1.4	10

#	ARTICLE	IF	CITATIONS
762	An efficient amplification strategy for N-doped NiCo ₂ O ₄ with oxygen vacancies and partial Ni/Co-nitrides as a dual-function electrode for both supercapatteries and hydrogen electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2019, 7, 1468-1478.	5.2	64
763	Recent advances in layered double hydroxide electrocatalysts for the oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 5069-5089.	5.2	422
764	Downshifted d-Band Center of Ru/MWCNTs by Turbostratic Carbon Nitride for Efficient and Robust Hydrogen Evolution in Alkali. <i>ChemCatChem</i> , 2019, 11, 1970-1976.	1.8	36
765	Bimetallic metal-organic framework nanosheets as efficient electrocatalysts for oxygen evolution reaction. <i>Journal of Solid State Chemistry</i> , 2019, 272, 32-37.	1.4	47
766	A perovskite oxide with a tunable pore-size derived from a general salt-template strategy as a highly efficient electrocatalyst for the oxygen evolution reaction. <i>Chemical Communications</i> , 2019, 55, 2445-2448.	2.2	23
767	Iron incorporation affecting the structure and boosting catalytic activity of Cox-Fey-P for efficient hydrogen evolution. <i>Applied Surface Science</i> , 2019, 478, 103-109.	3.1	4
768	Surface-Activated Amorphous Iron Borides (Fe _x B) as Efficient Electrocatalysts for Oxygen Evolution Reaction. <i>Advanced Materials Interfaces</i> , 2019, 6, 1801690.	1.9	35
769	Highly active oxygen evolution reaction model electrode based on supported gas-phase NiFe clusters. <i>Catalysis Today</i> , 2019, 334, 59-67.	2.2	20
770	NiFe-based nanostructures on nickel foam as highly efficiently electrocatalysts for oxygen and hydrogen evolution reactions. <i>Journal of Energy Chemistry</i> , 2019, 39, 39-53.	7.1	157
771	Defect-Rich NiCeO _x Electrocatalyst with Ultrahigh Stability and Low Overpotential for Water Oxidation. <i>ACS Catalysis</i> , 2019, 9, 1605-1611.	5.5	113
772	Tube-in-tube tin dioxide superstructures with enhanced lithium storage performance. <i>Chemical Communications</i> , 2019, 55, 2222-2225.	2.2	9
773	Atomic Heterointerface-Induced Local Charge Distribution and Enhanced Water Adsorption Behavior in a Cobalt Phosphide Electrocatalyst for Self-Powered Highly Efficient Overall Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 9023-9032.	4.0	39
774	Hierarchical CoS ₂ /Ni ₃ S ₂ /CoNiO _x nanorods with favorable stability at 1 A cm ² for electrocatalytic water oxidation. <i>Chemical Communications</i> , 2019, 55, 1564-1567.	2.2	15
775	Hollow carbon shells enhanced by confined ruthenium as cost-efficient and superior catalysts for the alkaline hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 6676-6685.	5.2	74
776	Facile synthesis of nanoporous Ni-Fe-P bifunctional catalysts with high performance for overall water splitting. <i>Journal of Materials Chemistry A</i> , 2019, 7, 2518-2523.	5.2	78
777	Polyoxometalate-assisted formation of CoSe/MoSe ₂ heterostructures with enhanced oxygen evolution activity. <i>Journal of Materials Chemistry A</i> , 2019, 7, 3317-3326.	5.2	94
778	Construction of nickel-doped cobalt hydroxides hexagonal nanoplates for advanced oxygen evolution electrocatalysis. <i>Journal of Colloid and Interface Science</i> , 2019, 553, 713-719.	5.0	15
779	Recent progress in the hybrids of transition metals/carbon for electrochemical water splitting. <i>Journal of Materials Chemistry A</i> , 2019, 7, 14380-14390.	5.2	111

#	ARTICLE	IF	CITATIONS
780	Nickel-iron selenide polyhedral nanocrystal with optimized surface morphology as a high-performance bifunctional electrocatalyst for overall water splitting. <i>Applied Surface Science</i> , 2019, 488, 326-334.	3.1	47
781	An easy synthesis of Ni-Co doped hollow C-N tubular nanocomposites as excellent cathodic catalysts of alkaline and neutral zinc-air batteries. <i>Science China Materials</i> , 2019, 62, 1251-1264.	3.5	37
782	FeS ₂ @C Core-Shell Nanochains as Efficient Electrocatalysts for Hydrogen Evolution Reaction. <i>ACS Applied Nano Materials</i> , 2019, 2, 3889-3896.	2.4	28
783	Novel Graphene Hydrogel/B α -Doped Graphene Quantum Dots Composites as Trifunctional Electrocatalysts for Zn ²⁺ Air Batteries and Overall Water Splitting. <i>Advanced Energy Materials</i> , 2019, 9, 1900945.	10.2	150
784	Optimizing the synthesis of Co/Co ²⁺ -Fe nanoparticles/N-doped carbon composite materials as bifunctional oxygen electrocatalysts. <i>Electrochimica Acta</i> , 2019, 318, 281-289.	2.6	17
785	Sustainable and efficient hydrogen evolution over a noble metal-free WP double modified Zn _x Cd _{1-x} S photocatalyst driven by visible-light. <i>Dalton Transactions</i> , 2019, 48, 11122-11135.	1.6	41
786	Interfacial N ²⁺ -Cu ²⁺ -S coordination mode of CuSCN/C ₃ N ₄ with enhanced electrocatalytic activity for hydrogen evolution. <i>Nanoscale</i> , 2019, 11, 12938-12945.	2.8	13
787	Recent advances in metal sulfides: from controlled fabrication to electrocatalytic, photocatalytic and photoelectrochemical water splitting and beyond. <i>Chemical Society Reviews</i> , 2019, 48, 4178-4280.	18.7	810
788	The mechanistic role of a support ²⁺ -catalyst interface in electrocatalytic water reduction by Co ₃ O ₄ supported nanocarbon florets. <i>Nanoscale</i> , 2019, 11, 13532-13540.	2.8	16
789	Co _{5.47} N/rGO@NF as a High-Performance Bifunctional Catalyst for Urea-Assisted Hydrogen Evolution. <i>Catalysis Letters</i> , 2019, 149, 3111-3118.	1.4	7
790	Metal ²⁺ -Organic-Framework-Derived Co ²⁺ -Fe Bimetallic Oxygen Reduction Electrocatalysts for Alkaline Fuel Cells. <i>Journal of the American Chemical Society</i> , 2019, 141, 10744-10750.	6.6	176
791	Contemporaneous oxidation state manipulation to accelerate intermediate desorption for overall water electrolysis. <i>Chemical Communications</i> , 2019, 55, 8313-8316.	2.2	7
792	Cobalt Oxide Supported on Phosphorus-Doped g-C ₃ N ₄ as an Efficient Electrocatalyst for Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2019, 2, 4718-4729.	2.5	62
793	Nano μ -Structured Nickel ²⁺ -Cobalt Hydroxide/Ni ₂ P ₂ O ₇ Assembly on Nickel Foam: An Outstanding Electrocatalyst for Alkaline Oxygen Evolution Reaction. <i>ChemCatChem</i> , 2019, 11, 4256-4261.	1.8	20
794	Copper coordination polymer electrocatalyst for strong hydrogen evolution reaction activity in neutral medium: influence of coordination environment and network structure. <i>Catalysis Science and Technology</i> , 2019, 9, 4347-4354.	2.1	21
795	Tailoring of Metal Boride Morphology via Anion for Efficient Water Oxidation. <i>Advanced Energy Materials</i> , 2019, 9, 1901503.	10.2	79
796	Facile Synthesis of Monodispersed β -Ni(OH) ₂ Microspheres Assembled by Ultrathin Nanosheets and Its Performance for Oxygen Evolution Reduction. <i>Frontiers in Materials</i> , 2019, 6, .	1.2	30
797	ZnCo ₂ S ₄ nanosheet array anchored on nickel foam as electrocatalyst for electrochemical water splitting. <i>Electrochemistry Communications</i> , 2019, 105, 106487.	2.3	28

#	ARTICLE	IF	CITATIONS
798	C ₆₀ -Adsorbed Single-Walled Carbon Nanotubes as Metal-Free, pH-Universal, and Multifunctional Catalysts for Oxygen Reduction, Oxygen Evolution, and Hydrogen Evolution. <i>Journal of the American Chemical Society</i> , 2019, 141, 11658-11666.	6.6	220
799	Mixed Transition Metal Oxide with Vacancy-Induced Lattice Distortion for Enhanced Catalytic Activity of Oxygen Evolution Reaction. <i>ACS Catalysis</i> , 2019, 9, 7099-7108.	5.5	85
800	Hydrogen Evolution Enhancement over a Cobalt-Based Schottky Interface. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 27641-27647.	4.0	34
801	A Cobalt-Based Amorphous Bifunctional Electrocatalysts for Water-Splitting Evolved from a Single-Source Lazulite Cobalt Phosphate. <i>Advanced Functional Materials</i> , 2019, 29, 1808632.	7.8	157
802	Noble-Metal-Free Colloidal-Copper Based Low Overpotential Water Oxidation Electrocatalyst. <i>ChemCatChem</i> , 2019, 11, 6022-6030.	1.8	22
803	Fe-Doped Nickel Hydroxide/Nickel Oxyhydroxide Function as an Efficient Catalyst for the Oxygen Evolution Reaction. <i>ChemElectroChem</i> , 2019, 6, 3488-3498.	1.7	43
804	Transition metal electrocatalysts encapsulated into N-doped carbon nanotubes on reduced graphene oxide nanosheets: efficient water splitting through synergistic effects. <i>Journal of Materials Chemistry A</i> , 2019, 7, 15145-15155.	5.2	75
805	CeO ₂ /Co(OH) ₂ hybrid electrocatalysts for efficient hydrogen and oxygen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2019, 800, 450-455.	2.8	53
806	Topological Formation of a Mo-Ni-Based Hollow Structure as a Highly Efficient Electrocatalyst for the Hydrogen Evolution Reaction in Alkaline Solutions. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 21998-22004.	4.0	56
807	Effect of Ion Diffusion in Cobalt Molybdenum Bimetallic Sulfide toward Electrocatalytic Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 21634-21644.	4.0	47
808	Water-Soluble Defect-Rich MoS ₂ Ultrathin Nanosheets for Enhanced Hydrogen Evolution. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 3282-3289.	2.1	50
809	Ambient electrochemical N ₂ reduction to NH ₃ under alkaline conditions enabled by a layered K ₂ Ti ₄ O ₉ nanobelt. <i>Chemical Communications</i> , 2019, 55, 7546-7549.	2.2	16
810	Facile Synthesis of CoFe ₂ O ₄ -CoFe _x /C Nanofibers Electrocatalyst for the Oxygen Evolution Reaction. <i>Journal of the Electrochemical Society</i> , 2019, 166, H412-H417.	1.3	8
811	High-throughput calculations of catalytic properties of bimetallic alloy surfaces. <i>Scientific Data</i> , 2019, 6, 76.	2.4	76
812	Hydrothermal synthesis of Co ₂ P-modified MoS ₂ : a highly efficient non-precious metal catalyst of light. <i>Ionics</i> , 2019, 25, 5003-5011.	1.2	2
813	An Fe-doped NiV LDH ultrathin nanosheet as a highly efficient electrocatalyst for efficient water oxidation. <i>Inorganic Chemistry Frontiers</i> , 2019, 6, 1890-1896.	3.0	61
814	Amorphous outperforms crystalline nanomaterials: surface modifications of molecularly derived CoP electro(pre)catalysts for efficient water-splitting. <i>Journal of Materials Chemistry A</i> , 2019, 7, 15749-15756.	5.2	113
815	High-efficiency bifunctional electrocatalyst based on 3D freestanding Cu foam in situ armored CoNi alloy nanosheet arrays for overall water splitting. <i>Journal of Power Sources</i> , 2019, 427, 184-193.	4.0	47

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816	Multifunctional Dicyandiamide Blowing-Induced Formation of Electrocatalysts for the Hydrogen Evolution Reaction. <i>ACS Omega</i> , 2019, 4, 10347-10353.	1.6	7
817	Electrodeposited Ni Co P hierarchical nanostructure as a cost-effective and durable electrocatalyst with superior activity for bifunctional water splitting. <i>Journal of Power Sources</i> , 2019, 429, 156-167.	4.0	120
818	Zn ₃ Co ₁ MoS ₃ Microboxes from Metal-Organic Frameworks as Efficient Electrocatalysts for Hydrogen Evolution Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 9800-9807.	3.2	11
819	MoS ₂ nanosheets decorated Ni(OH) ₂ nanorod array for active overall water splitting. <i>Journal of Alloys and Compounds</i> , 2019, 796, 86-92.	2.8	49
820	Ultrathin MoS ₂ alloy nanosheets anchored on carbon nanotubes as advanced catalysts for hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 16110-16119.	3.8	23
821	Mesoporous spinel NiFe oxide cubes as advanced electrocatalysts for oxygen evolution. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 16368-16377.	3.8	22
822	Awakening Solar Hydrogen Evolution of MoS ₂ in Alkaescent Electrolyte through Doping with Co. <i>ChemSusChem</i> , 2019, 12, 3336-3342.	3.6	27
823	Ultrafine and highly-dispersed bimetal Ni ₂ P/Co ₂ P encapsulated by hollow N-doped carbon nanospheres for efficient hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 14908-14917.	3.8	90
824	Synthesis from a layered double hydroxide precursor for a highly efficient oxygen evolution reaction. <i>Inorganic Chemistry Frontiers</i> , 2019, 6, 1793-1798.	3.0	21
825	Functional macroporous iron-phosphorous films by electrodeposition on colloidal crystal templates. <i>Electrochimica Acta</i> , 2019, 313, 211-222.	2.6	6
826	3D graphene decorated with hexagonal micro-coin of Co(OH) ₂ : A competent electrocatalyst for hydrogen and oxygen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 14770-14779.	3.8	28
827	Vertical CoP Nanoarray Wrapped by N-Doped Carbon for Hydrogen Evolution Reaction in Both Acidic and Alkaline Conditions. <i>Advanced Energy Materials</i> , 2019, 9, 1803970.	10.2	284
828	Metal-Organic Frameworks as Porous Templates for Enhanced Cobalt Oxide Electrocatalyst Performance. <i>ACS Applied Energy Materials</i> , 2019, 2, 3306-3313.	2.5	7
829	Iron-Doped Ni ₅ P ₄ Ultrathin Nanoporous Nanosheets for Water Splitting and On-Demand Hydrogen Release via NaBH ₄ Hydrolysis. <i>ACS Applied Nano Materials</i> , 2019, 2, 3091-3099.	2.4	33
830	Synergistic coupling of CoFe-LDH arrays with NiFe-LDH nanosheet for highly efficient overall water splitting in alkaline media. <i>Applied Catalysis B: Environmental</i> , 2019, 253, 131-139.	10.8	503
831	Investigation of Fe-Based Integrated Electrodes for Water Oxidation in Neutral and Alkaline Solutions. <i>Journal of Physical Chemistry C</i> , 2019, 123, 12313-12320.	1.5	16
832	Enhanced electrocatalytic hydrodechlorination of 2,4-dichlorophenoxyacetic acid by a Pd-Co ₃ O ₄ /Ni foam electrode. <i>RSC Advances</i> , 2019, 9, 12124-12133.	1.7	16
833	Preparation of 3D nanostructured MnCo ₂ S ₄ as a robust electrocatalyst for overall water splitting. <i>ChemistrySelect</i> , 2019, 4, 4499-4505.	0.7	11

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834	Facile construction of N-doped Mo ₂ C@CNT composites with 3D nanospherical structures as an efficient electrocatalyst for hydrogen evolution reaction. <i>Ionics</i> , 2019, 25, 4273-4283.	1.2	19
835	MOF-templated cobalt nanoparticles embedded in nitrogen-doped porous carbon: a bifunctional electrocatalyst for overall water splitting. <i>Nanoscale Advances</i> , 2019, 1, 2293-2302.	2.2	26
836	Templated synthesis of titanium dioxide tube-in-tube superstructures with enhanced photocatalytic and lithium storage performance. <i>Chemical Engineering Journal</i> , 2019, 370, 1434-1439.	6.6	10
837	Nanostructured core-shell cobalt chalcogenides for efficient water oxidation in alkaline electrolyte. <i>Electrochimica Acta</i> , 2019, 312, 234-241.	2.6	29
838	A bimetallic Co ₄ Mo ₈ cluster built from Mo ₈ oxothiomolybdate capped by a Co ₄ -thiacalix[4]arene unit: the observation of the Co-Mo synergistic effect for binder-free electrocatalysts. <i>Journal of Materials Chemistry A</i> , 2019, 7, 12893-12899.	5.2	39
839	Self-standing and efficient bifunctional electrocatalyst for overall water splitting under alkaline media enabled by Mo _{1-x} Co _x S ₂ nanosheets anchored on carbon fiber paper. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 13205-13213.	3.8	17
840	Single Atoms and Clusters Based Nanomaterials for Hydrogen Evolution, Oxygen Evolution Reactions, and Full Water Splitting. <i>Advanced Energy Materials</i> , 2019, 9, 1900624.	10.2	538
841	Co ₃ /CoMoP Heterogeneous Nanosheet Arrays as Robust Electrocatalyst for pH-Universal Hydrogen Evolution Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 9309-9317.	3.2	97
842	N-doped TiO ₂ nanotube arrays with uniformly embedded Co _x P nanoparticles for high-efficiency hydrogen evolution reaction. <i>RSC Advances</i> , 2019, 9, 11676-11682.	1.7	9
843	Ru doping in Ni(OH) ₂ to accelerate water reduction kinetics for efficient hydrogen evolution reaction. <i>Applied Surface Science</i> , 2019, 485, 506-512.	3.1	48
844	Morphological and Interfacial Engineering of Cobalt-Based Electrocatalysts by Carbon Dots for Enhanced Water Splitting. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 7047-7057.	3.2	65
845	Ultrasmlal Co ₂ P ₂ O ₇ nanocrystals anchored on nitrogen-doped graphene as efficient electrocatalysts for the oxygen reduction reaction. <i>New Journal of Chemistry</i> , 2019, 43, 6492-6499.	1.4	13
846	Ni ₃ N/NF as Bifunctional Catalysts for Both Hydrogen Generation and Urea Decomposition. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 13168-13175.	4.0	147
847	NiCoMo Hydroxide Nanosheet Arrays Synthesized via Chloride Corrosion for Overall Water Splitting. <i>ACS Energy Letters</i> , 2019, 4, 952-959.	8.8	243
848	Nanocrystalline Fe ₆₀ Co ₂₀ Si ₁₀ B ₁₀ as a cathode catalyst for alkaline water electrolysis: Impact of surface activation. <i>Electrochimica Acta</i> , 2019, 306, 688-697.	2.6	9
849	Preparation and characterization of active and cost-effective nickel/platinum electrocatalysts for hydrogen evolution electrocatalysis. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 8079-8088.	3.8	13
850	Electrocatalytic and Enhanced Photocatalytic Applications of Sodium Niobate Nanoparticles Developed by Citrate Precursor Route. <i>Scientific Reports</i> , 2019, 9, 4488.	1.6	75
851	Grain boundaries modified uniformly-conjoint metal/oxides via binder strategy as efficient bifunctional electrocatalysts. <i>Journal of Materials Chemistry A</i> , 2019, 7, 10010-10018.	5.2	27

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852	Ionic-State Cobalt and Iron Co-doped Carbon Dots with Superior Electrocatalytic Activity for the Oxygen Evolution Reaction. <i>ChemElectroChem</i> , 2019, 6, 2088-2094.	1.7	26
853	Mo-doped Cobalt Phosphide Nanosheets for Efficient Hydrogen Generation in an Alkaline Media. <i>Energy Technology</i> , 2019, 7, 1900021.	1.8	21
854	Active Site Identification and Evaluation Criteria of In Situ Grown CoTe and NiTe Nanoarrays for Hydrogen Evolution and Oxygen Evolution Reactions. <i>Small Methods</i> , 2019, 3, 1900113.	4.6	78
855	Iron-substituted Co-Ni phosphides immobilized on Ni foam as efficient self-supported 3D hierarchical electrocatalysts for oxygen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 8156-8165.	3.8	50
856	Rational design of three-phase interfaces for electrocatalysis. <i>Nano Research</i> , 2019, 12, 2055-2066.	5.8	135
857	Support and Interface Effects in Water-splitting Electrocatalysts. <i>Advanced Materials</i> , 2019, 31, e1808167.	11.1	531
858	Hierarchical Porous Ni ₃ S ₄ with Enriched High-Valence Ni Sites as a Robust Electrocatalyst for Efficient Oxygen Evolution Reaction. <i>Advanced Functional Materials</i> , 2019, 29, 1900315.	7.8	281
859	Graphene-Quantum-Dots-induced facile growth of porous molybdenum doped Ni ₃ S ₂ nanoflakes as efficient bifunctional electrocatalyst for overall water splitting. <i>Electrochimica Acta</i> , 2019, 304, 487-494.	2.6	36
860	Self-generated N-doped anodized stainless steel mesh for an efficient and stable overall water splitting electrocatalyst. <i>Applied Surface Science</i> , 2019, 480, 655-664.	3.1	55
861	Progress in Electrocatalytic Hydrogen Evolution Based on Monolayer Molybdenum Disulfide. <i>Frontiers in Chemistry</i> , 2019, 7, 131.	1.8	17
862	3D Metallic Ti@Ni _{0.85} Se with Triple Hierarchy as High-Efficiency Electrocatalyst for Overall Water Splitting. <i>ChemSusChem</i> , 2019, 12, 2271-2277.	3.6	22
863	Mesoporous Ultrathin Cobalt Oxides Nanosheets Grown on Carbon Cloth as a High-Performance Electrode for Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2019, 2, 1977-1987.	2.5	18
864	Electrospun cobalt-ZIF micro-fibers for efficient water oxidation under unique pH conditions. <i>Catalysis Science and Technology</i> , 2019, 9, 1847-1856.	2.1	43
865	Hierarchical Co ₃ O ₄ Nano-Micro Arrays Featuring Superior Activity as Cathode in a Flexible and Rechargeable Zinc-Air Battery. <i>Advanced Science</i> , 2019, 6, 1802243.	5.6	148
866	A Highly Active and Robust CoP/CoS ₂ -Based Electrocatalyst Toward Overall Water Splitting. <i>Electrocatalysis</i> , 2019, 10, 253-261.	1.5	18
867	Three-dimensional VOx/NiS/NF nanosheets as efficient electrocatalyst for oxygen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 10156-10162.	3.8	75
868	In-situ surface-derivation of Ni-Mo bimetal sulfides nanosheets on Co ₃ O ₄ nanoarrays as an advanced overall water splitting electrocatalyst in alkaline solution. <i>Journal of Alloys and Compounds</i> , 2019, 791, 328-335.	2.8	27
869	Co ₂ Ni alloy/N-doped CNTs composite as efficient hydrogen evolution reaction catalyst in alkaline medium. <i>Journal of Alloys and Compounds</i> , 2019, 791, 779-785.	2.8	32

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870	Oriented Transformation of Co ^{II} LDH into 2D/3D ZIF-67 to Achieve Co ^{II} -N ^{II} -C Hybrids for Efficient Overall Water Splitting. <i>Advanced Energy Materials</i> , 2019, 9, 1803918.	10.2	260
871	Engineering Ternary Pyrite-Type CoPS Nanosheets with an Ultrathin Porous Structure for Efficient Electrocatalytic Water Splitting. <i>ChemElectroChem</i> , 2019, 6, 2852-2859.	1.7	13
872	Recent progress in atomic layer deposition of molybdenum disulfide: a mini review. <i>Science China Materials</i> , 2019, 62, 913-924.	3.5	24
873	Metal-Organic Gel-Derived Multimetal Oxides as Effective Electrocatalysts for the Oxygen Evolution Reaction. <i>ChemSusChem</i> , 2019, 12, 2480-2486.	3.6	27
874	Two-dimensional dual carbon-coupled defective nickel quantum dots towards highly efficient overall water splitting. <i>Applied Catalysis B: Environmental</i> , 2019, 250, 213-223.	10.8	101
875	Electroactive Edge-Site-Enriched $\text{Co}_0.9\text{Fe}_{0.1}(\text{OH})_x$ Nanoplates for Efficient Overall Water Splitting. <i>ChemElectroChem</i> , 2019, 6, 2415-2422.	1.7	4
876	Interfacial Electronic Structure Modulation of NiTe Nanoarrays with NiS Nanodots Facilitates Electrocatalytic Oxygen Evolution. <i>Advanced Materials</i> , 2019, 31, e1900430.	11.1	298
877	Synthesis of $\text{Ni}_{4.5}\text{Fe}_{4.5}\text{S}_8/\text{Ni}_3\text{S}_2$ film on Ni_3Fe alloy foam as an excellent electrocatalyst for the oxygen evolution reaction. <i>RSC Advances</i> , 2019, 9, 10231-10236.	1.7	8
878	Pt (111) quantum dot decorated flower-like Fe_2O_3 (104) thin film nanosheets as a highly efficient bifunctional electrocatalyst for overall water splitting. <i>Journal of Materials Chemistry A</i> , 2019, 7, 11379-11386.	5.2	31
879	Transition Metal (Fe, Co and Ni) Carbide-Nitride (M ⁿ C ⁿ N) Nanocatalysts: Structure and Electrocatalytic Applications. <i>ChemCatChem</i> , 2019, 11, 2780-2792.	1.8	46
880	IrW nanobranches as an advanced electrocatalyst for pH-universal overall water splitting. <i>Nanoscale</i> , 2019, 11, 8898-8905.	2.8	59
881	Porous NiCu alloy cathode with oriented pore structure for hydrogen evolution reaction by freeze casting. <i>Journal of Porous Materials</i> , 2019, 26, 1533-1539.	1.3	8
882	All-In-One Deep Eutectic Solvent toward Cobalt-Based Electrocatalyst for Oxygen Evolution Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 8964-8971.	3.2	22
883	Iron-Salen Complex and Co^{2+} Ion-Derived Cobalt-Iron Hydroxide/Carbon Nanohybrid as an Efficient Oxygen Evolution Electrocatalyst. <i>Advanced Science</i> , 2019, 6, 1900117.	5.6	29
884	Hydrogel-Derived Honeycomb $\text{Ni}_3\text{S}_4/\text{Ni}_2\text{P}$ as an Efficient Oxygen Evolution Catalyst. <i>Chemistry - A European Journal</i> , 2019, 25, 7561-7568.	1.7	38
885	Flower-like nickel-cobalt oxide nanomaterials as bi-functional catalyst for electrochemical water splitting. <i>Materials Research Bulletin</i> , 2019, 116, 98-105.	2.7	45
886	Cobalt (oxy)hydroxide nanosheet arrays with exceptional porosity and rich defects as a highly efficient oxygen evolution electrocatalyst under neutral conditions. <i>Journal of Materials Chemistry A</i> , 2019, 7, 10217-10224.	5.2	23
887	Edge/Defect Sites in $\text{Co}_{1-x}\text{Fe}_x(\text{OH})_y$ Nanoplates Responsible for Water Oxidation Activity. <i>ChemSusChem</i> , 2019, 12, 2755-2762.	3.6	5

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888	Amorphous CoFe Double Hydroxides Decorated with NaED Doped CNTs for Efficient Electrochemical Oxygen Evolution. <i>ChemSusChem</i> , 2019, 12, 2679-2688.	3.6	26
889	Noble Metal-Free Photocatalysts Consisting of Graphitic Carbon Nitride, Nickel Complex, and Nickel Oxide Nanoparticles for Efficient Hydrogen Generation. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 14986-14996.	4.0	42
890	Porous aluminum electrodes with 3D channels and zig-zag edges for efficient hydrogen evolution. <i>Chemical Communications</i> , 2019, 55, 5447-5450.	2.2	7
891	Controlled phase evolution from Cu _{0.33} Co _{0.67} S ₂ to Cu ₃ Co ₆ S ₈ hexagonal nanosheets as oxygen evolution reaction catalysts. <i>RSC Advances</i> , 2019, 9, 9729-9736.	1.7	11
892	Porous NiCoP nanowalls as promising electrode with high-area and mass capacitance for supercapacitors. <i>Science China Materials</i> , 2019, 62, 1115-1126.	3.5	42
893	Vertically standing MoP nanosheet arrays on Mo substrate: An integrated binder-free electrode for highly efficient and stable hydrogen evolution. <i>Journal of Alloys and Compounds</i> , 2019, 792, 732-741.	2.8	21
894	A strong coupled 2D metal-organic framework and ternary layered double hydroxide hierarchical nanocomposite as an excellent electrocatalyst for the oxygen evolution reaction. <i>Electrochimica Acta</i> , 2019, 307, 275-284.	2.6	49
895	Noble-metal-free electrocatalyst based on a mixed CoNi metal-organic framework for oxygen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2019, 792, 69-76.	2.8	30
896	Hierarchical nanoporous Ni(Cu) alloy anchored on amorphous NiFeP as efficient bifunctional electrocatalysts for hydrogen evolution and hydrazine oxidation. <i>Journal of Catalysis</i> , 2019, 373, 180-189.	3.1	85
897	Single-atom ruthenium based catalyst for enhanced hydrogen evolution. <i>Applied Catalysis B: Environmental</i> , 2019, 249, 91-97.	10.8	146
898	Anion engineering of exfoliated CoAl layered double hydroxides on hematite photoanode toward highly efficient photoelectrochemical water splitting. <i>Chemical Engineering Journal</i> , 2019, 366, 523-530.	6.6	43
899	Rational Design of Nanoarray Architectures for Electrocatalytic Water Splitting. <i>Advanced Functional Materials</i> , 2019, 29, 1808367.	7.8	298
900	Effect of Co(NO ₃) ₂ ·6H ₂ O thermal decomposition temperature on the nano-Co ₃ O ₄ product morphology and electrocatalysis of water oxidation. <i>Journal of Applied Electrochemistry</i> , 2019, 49, 251-259.	1.5	16
901	Spherical Murray-Type Assembly of Co@N-C Nanoparticles as a High-Performance Trifunctional Electrocatalyst. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 9925-9933.	4.0	49
902	Interface Engineering of Co(OH) ₂ /Ag/FeP Hierarchical Superstructure as Efficient and Robust Electrocatalyst for Overall Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 7936-7945.	4.0	68
903	Ni(<i>scp</i>)-doped anionic metal-organic framework nanowire arrays for enhancing the oxygen evolution reaction. <i>Chemical Communications</i> , 2019, 55, 4023-4026.	2.2	24
904	<i>In situ</i> structural evolution of a nickel boride catalyst: synergistic geometric and electronic optimization for the oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 5288-5294.	5.2	69
905	An Efficient Electrocatalyst by Electroless Cobalt@Nickel@Phosphorus Alloy Plating on Three-Dimensional Graphene for Hydrogen Evolution Reaction. <i>Journal of the Electrochemical Society</i> , 2019, 166, D69-D76.	1.3	11

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906	Obstacles of solar-powered photocatalytic water splitting for hydrogen production: A perspective from energy flow and mass flow. <i>Energy</i> , 2019, 172, 1079-1086.	4.5	99
907	Improved oxygen evolution activity of IrO ₂ by <i>in situ</i> engineering of an ultra-small Ir sphere shell utilizing a pulsed laser. <i>Nanoscale</i> , 2019, 11, 4407-4413.	2.8	105
908	Recent Advances in the Development of Water Oxidation Electrocatalysts at Mild pH. <i>Small</i> , 2019, 15, e1805103.	5.2	206
909	Monolithic electrode integrated of ultrathin NiFeP on 3D strutted graphene for bifunctionally efficient overall water splitting. <i>Nano Energy</i> , 2019, 58, 870-876.	8.2	166
910	Metal-organic framework derived Co ₃ O ₄ /MoS ₂ heterostructure for efficient bifunctional electrocatalysts for oxygen evolution reaction and hydrogen evolution reaction. <i>Applied Catalysis B: Environmental</i> , 2019, 248, 202-210.	10.8	309
911	Comprehensive review on the techno-economics of sustainable large-scale clean hydrogen production. <i>Journal of Cleaner Production</i> , 2019, 220, 593-609.	4.6	392
912	“Bulk” Ir ₂ /2H-MoS ₂ with Tunable Phases and Residual S, N Co-Doped Carbon as a Highly Active and Durable Catalyst for Hydrogen Evolution. <i>ACS Applied Energy Materials</i> , 2019, 2, 2022-2033.	2.5	20
913	A ternary cobalt–molybdenum–vanadium layered double hydroxide nanosheet array as an efficient bifunctional electrocatalyst for overall water splitting. <i>Chemical Communications</i> , 2019, 55, 3521-3524.	2.2	121
914	Nitrogen-doped-carbon-coated hexagonal cobalt oxyhydroxide/reduced graphene oxide nanocomposite for sensitive and selective detection of nitrite in human hepatoma cells. <i>Nanotechnology</i> , 2019, 30, 265502.	1.3	6
915	Microwave Synthesis of Ultrathin Nickel Hydroxide Nanosheets with Iron Incorporation for Electrocatalytic Water Oxidation. <i>ACS Applied Energy Materials</i> , 2019, 2, 1961-1968.	2.5	24
916	Facile synthesis of porous carbon/Ni ₁₂ P ₅ composites for electrocatalytic hydrogen evolution. <i>New Journal of Chemistry</i> , 2019, 43, 4160-4167.	1.4	13
917	Bifunctional oxygen electrocatalyst derived from photochlorinated graphene for rechargeable solid-state Zn-air battery. <i>Journal of Colloid and Interface Science</i> , 2019, 543, 84-95.	5.0	25
918	One-Step Preparation of Cobalt Nanoparticle-Embedded Carbon for Effective Water Oxidation Electrocatalysis. <i>ChemElectroChem</i> , 2019, 6, 1996-1999.	1.7	11
919	Nitrogen and sulfur-codoped porous carbon derived from a BSA/ionic liquid polymer complex: multifunctional electrode materials for water splitting and supercapacitors. <i>RSC Advances</i> , 2019, 9, 5189-5196.	1.7	8
920	Oxomolybdate anchored on copper for electrocatalytic hydrogen production over the entire pH range. <i>Applied Catalysis B: Environmental</i> , 2019, 249, 227-234.	10.8	14
921	Highly efficient oxygen evolution electrocatalysts based on nanosheet-shaped CuS <i>in situ</i> grown on carbon cloth. <i>Ceramics International</i> , 2019, 45, 10664-10671.	2.3	32
922	Core–Shell MoS ₂ @CoO Electrocatalyst for Water Splitting in Neutral and Alkaline Solutions. <i>Journal of Physical Chemistry C</i> , 2019, 123, 5833-5839.	1.5	38
923	An Amorphous Cobalt Borate Nanosheet-Coated Cobalt Boride Hybrid for Highly Efficient Alkaline Water Oxidation Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 5620-5625.	3.2	51

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924	Vertically aligned NiP ₂ nanosheets with interlaced mesh network for highly efficient water splitting under alkaline and acid solutions. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 6535-6543.	3.8	35
925	First-Principles Simulations for Morphology and Structural Evolutions of Catalysts in Oxygen Evolution Reaction. <i>ChemSusChem</i> , 2019, 12, 1846-1857.	3.6	26
926	Carbon paste electrode modified with AgFeO ₂ as an electrocatalyst with excellent activity for water reduction and oxidation. <i>Journal of Electroanalytical Chemistry</i> , 2019, 836, 158-164.	1.9	9
927	Facile efficient earth abundant NiO/C composite electrocatalyst for the oxygen evolution reaction. <i>RSC Advances</i> , 2019, 9, 5701-5710.	1.7	21
928	Carbon Nanotube-Based Non-Precious Metal Electrode Catalysts for Fuel Cells, Water Splitting and Zinc-Air Batteries. <i>ChemCatChem</i> , 2019, 11, 5929-5944.	1.8	32
929	Gold-Supported Nanostructured NiFeCoPr Hydroxide as a High-Performance Supercapacitor Electrode and Electrocatalyst toward the Oxygen Evolution Reaction. <i>Inorganic Chemistry</i> , 2019, 58, 15841-15852.	1.9	17
930	S-Edge-rich Mo _x S _y arrays vertically grown on carbon aerogels as superior bifunctional HER/OER electrocatalysts. <i>Nanoscale</i> , 2019, 11, 20284-20294.	2.8	32
931	Synergistic engineering of architecture and composition in Ni _x Co _{1-x} MoO ₄ @CoMoO ₄ nanobrush arrays towards efficient overall water splitting electrocatalysis. <i>Nanoscale</i> , 2019, 11, 22820-22831.	2.8	37
932	Amorphous FeNi-bimetallic infinite coordination polymers as advanced electrocatalysts for the oxygen evolution reaction. <i>Chemical Communications</i> , 2019, 55, 12567-12570.	2.2	24
933	Pd-coated Ru nanocrystals supported on N-doped graphene as HER and ORR electrocatalysts. <i>Chemical Communications</i> , 2019, 55, 13928-13931.	2.2	51
934	An Fe stabilized metallic phase of NiS ₂ for the highly efficient oxygen evolution reaction. <i>Nanoscale</i> , 2019, 11, 23217-23225.	2.8	66
935	Morphological interference of two different cobalt oxides derived from a hydrothermal protocol and a single two-dimensional metal organic framework precursor to stabilize the β ² -phase of PVDF for flexible piezoelectric nanogenerators. <i>Nanoscale</i> , 2019, 11, 22989-22999.	2.8	47
936	Binary nickel iron phosphide composites with oxidized surface groups as efficient electrocatalysts for the oxygen evolution reaction. <i>Sustainable Energy and Fuels</i> , 2019, 3, 3518-3524.	2.5	17
937	<i>In situ</i> grown cobalt phosphide (CoP) on perovskite nanofibers as an optimized trifunctional electrocatalyst for Zn-air batteries and overall water splitting. <i>Journal of Materials Chemistry A</i> , 2019, 7, 26607-26617.	5.2	92
938	Paradoxical Observance of Intrinsic and Geometric Oxygen Evolution Electrocatalysis in Phase-Tuned Cobalt Oxide/Hydroxide Nanoparticles. <i>ACS Applied Nano Materials</i> , 2019, 2, 7957-7968.	2.4	13
939	Nickel-molybdenum nitride nanoplate electrocatalysts for concurrent electrolytic hydrogen and formate productions. <i>Nature Communications</i> , 2019, 10, 5335.	5.8	339
940	Noble metal-free two dimensional carbon-based electrocatalysts for water splitting. <i>BMC Materials</i> , 2019, 1, .	6.8	21
941	Hierarchical NiCo ₂ O ₄ /NiFe/Pt heterostructures supported on nickel foam as bifunctional electrocatalysts for efficient oxygen/hydrogen production. <i>RSC Advances</i> , 2019, 9, 34995-35002.	1.7	3

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942	Selective acid leaching: a simple way to engineer cobalt oxide nanostructures for the electrochemical oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 23130-23139.	5.2	29
943	Multiple modulations of pyrite nickel sulfides via metal heteroatom doping engineering for boosting alkaline and neutral hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2019, 7, 25628-25640.	5.2	69
944	Thermally induced top-down nanostructuring for the synthesis of a core/shell-structured CoO/CoS electrocatalyst. <i>Journal of Materials Chemistry A</i> , 2019, 7, 26557-26565.	5.2	14
945	Cobalt Nitride Supported on Nickel Foam as Bifunctional Catalyst Electrodes for Urea Electrolysis-Assisted Hydrogen Generation. <i>Nano</i> , 2019, 14, 1950152.	0.5	3
946	A review on copper vanadate-based nanostructures for photocatalysis energy production. <i>International Journal of Energy Research</i> , 2019, 43, 9-28.	2.2	43
947	Enhancement of the hydrogen evolution performance by finely tuning the morphology of Co-based catalyst without changing chemical composition. <i>Nano Research</i> , 2019, 12, 191-196.	5.8	18
948	Cu-Ni-CoSex quaternary porous nanocubes as enhanced Pt-free electrocatalysts for highly efficient dye-sensitized solar cells and hydrogen evolution in alkaline medium. <i>Chemical Engineering Journal</i> , 2019, 357, 11-20.	6.6	47
949	Cobalt vanadate nanoparticles as bifunctional oxygen electrocatalysts for rechargeable seawater batteries. <i>Journal of Industrial and Engineering Chemistry</i> , 2019, 72, 250-254.	2.9	19
950	MoS ₂ @NiO Composite Nanostructures: An Advanced Nonprecious Catalyst for Hydrogen Evolution Reaction in Alkaline Media. <i>Advanced Functional Materials</i> , 2019, 29, 1807562.	7.8	83
951	Ni _x Co _{3-4x} O ₄ Nanoneedle Arrays Grown on Ni Foam as an Efficient Bifunctional Electrocatalyst for Full Water Splitting. <i>Chemistry - an Asian Journal</i> , 2019, 14, 480-485.	1.7	21
952	Microwave-assisted synthesis of cobalt phosphide using ionic liquid as Co and P dual-source for hydrogen evolution reaction. <i>Electrochimica Acta</i> , 2019, 295, 1027-1033.	2.6	17
953	Hydrogen evolution reaction catalyzed by nickel/nickel phosphide nanospheres synthesized through electrochemical methods. <i>Electrochimica Acta</i> , 2019, 298, 229-236.	2.6	27
954	Graphene oxide/cobalt-based nanohybrid electrodes for robust hydrogen generation. <i>Applied Catalysis B: Environmental</i> , 2019, 245, 167-176.	10.8	21
955	Ultrahigh length-to-diameter ratio nickel phosphide nanowires as pH-wide electrocatalyst for efficient hydrogen evolution. <i>Electrochimica Acta</i> , 2019, 298, 943-949.	2.6	23
956	Dual Tuning of Ultrathin Ni-Co(OH) ₂ Nanosheets by Solvent Engineering and Coordination Competition for Efficient Oxygen Evolution. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 3527-3535.	3.2	56
957	Co-CoO-Co ₃ O ₄ /N-doped carbon derived from metal-organic framework: The addition of carbon black for boosting oxygen electrocatalysis and Zn-Air battery. <i>Electrochimica Acta</i> , 2019, 295, 966-977.	2.6	72
958	Designing transition metal alloy nanoparticles embedded hierarchically porous carbon nanosheets as high-efficiency electrocatalysts toward full water splitting. <i>Journal of Colloid and Interface Science</i> , 2019, 537, 280-294.	5.0	28
959	The Synergetic Benefits of Passivation Layer and Catalytic Layer on Hematite for Efficient Water Splitting. <i>Energy Technology</i> , 2019, 7, 1800899.	1.8	7

#	ARTICLE	IF	CITATIONS
960	Superior overall water splitting electrocatalysis in acidic conditions enabled by bimetallic Ir-Ag nanotubes. <i>Nano Energy</i> , 2019, 56, 330-337.	8.2	120
961	2D Fe-containing cobalt phosphide/cobalt oxide lateral heterostructure with enhanced activity for oxygen evolution reaction. <i>Nano Energy</i> , 2019, 56, 109-117.	8.2	223
962	Modulated electrochemical oxygen evolution catalyzed by MoS ₂ nanoflakes from atomic layer deposition. <i>Nanotechnology</i> , 2019, 30, 095402.	1.3	22
963	Direct synthesis of parallel doped N-MoP/N-CNT as highly active hydrogen evolution reaction catalyst. <i>Science China Materials</i> , 2019, 62, 690-698.	3.5	21
964	Facile electrosynthesis of Fe (Ni/Co) hydroxyphosphate as a bifunctional electrocatalyst for efficient water splitting. <i>Journal of Industrial and Engineering Chemistry</i> , 2019, 70, 116-123.	2.9	21
965	Synthesis of 1D to 3D nanostructured NiCo ₂ S ₄ on nickel foam and their application in oxygen evolution reaction. <i>Applied Surface Science</i> , 2019, 476, 600-607.	3.1	33
966	Carbon Dots Decorated Hierarchical NiCo ₂ S ₄ /Ni ₃ S ₂ Composite for Efficient Water Splitting. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 2610-2618.	3.2	49
967	Highly Active Cobalt/Tungsten Carbide@N-Doped Porous Carbon Nanomaterials Derived from Metal-Organic Frameworks as Bifunctional Catalysts for Overall Water Splitting. <i>Energy Technology</i> , 2019, 7, 1800969.	1.8	40
968	Effective surface roughening of three-dimensional copper foam via sulfurization treatment as a bifunctional electrocatalyst for water splitting. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 1620-1626.	3.8	37
969	Reaction Packaging CoSe ₂ Nanoparticles in N-Doped Carbon Polyhedra with Bifunctionality for Overall Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 3372-3381.	4.0	70
970	Effective Fabrication and Electrochemical Oxygen Evolution Reaction Activity of Gold Multipod Nanoparticle Core@Cobalt Sulfide Shell Nanohybrids. <i>ACS Applied Nano Materials</i> , 2019, 2, 678-688.	2.4	16
971	Bimetallic Nickel Cobalt Sulfide as Efficient Electrocatalyst for Zn@Air Battery and Water Splitting. <i>Nano-Micro Letters</i> , 2019, 11, 2.	14.4	179
972	Surface modification of CuO nanoflake with Co ₃ O ₄ nanowire for oxygen evolution reaction and electrocatalytic reduction of CO ₂ in water to syngas. <i>Electrochimica Acta</i> , 2019, 299, 281-288.	2.6	26
973	Metal-organic frameworks derived bundled N-doped carbon nanowires confined cobalt phosphide nanocrystals as a robust electrocatalyst for hydrogen production. <i>Electrochimica Acta</i> , 2019, 299, 423-429.	2.6	42
974	Improved electrochemical performance of nickel-cobalt hydroxides by electrodeposition of interlayered reduced graphene oxide. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 3658-3667.	3.8	13
975	1D hollow MFe ₂ O ₄ (M = Cu, Co, Ni) fibers by Solution Blow Spinning for oxygen evolution reaction. <i>Journal of Colloid and Interface Science</i> , 2019, 540, 59-65.	5.0	99
976	Nanosheet-like Co ₃ (OH) ₂ (HPO ₄) ₂ as a Highly Efficient and Stable Electrocatalyst for Oxygen Evolution Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 3083-3091.	3.2	39
977	Promotion of Overall Water Splitting Activity Over a Wide pH Range by Interfacial Electrical Effects of Metallic NiCo-nitrides Nanoparticle/NiCo ₂ O ₄ Nanoflake/graphite Fibers. <i>Advanced Science</i> , 2019, 6, 1801829.	5.6	122

#	ARTICLE	IF	CITATIONS
978	Ultra-dispersed molybdenum phosphide and phosphosulfide nanoparticles on hierarchical carbonaceous scaffolds for hydrogen evolution electrocatalysis. <i>Applied Catalysis B: Environmental</i> , 2019, 245, 656-661.	10.8	108
979	Three-dimensional Core@Shell Co@CoMoO ₄ nanowire arrays as efficient alkaline hydrogen evolution electro-catalysts. <i>Applied Catalysis B: Environmental</i> , 2019, 246, 41-49.	10.8	78
980	RuO ₂ nanocluster as a 4-in-1 electrocatalyst for hydrogen and oxygen electrochemistry. <i>Nano Energy</i> , 2019, 55, 49-58.	8.2	66
981	Hierarchical Cobalt Sulfide/Molybdenum Sulfide Heterostructure as Bifunctional Electrocatalyst towards Overall Water Splitting. <i>ChemElectroChem</i> , 2019, 6, 430-438.	1.7	49
982	PtCo bimetallic nanoparticles encapsulated in N-doped carbon nanorod arrays for efficient electrocatalysis. <i>Carbon</i> , 2019, 142, 206-216.	5.4	56
983	An Oxygen Vacancy-Rich Semiconductor-Supported Bifunctional Catalyst for Efficient and Stable Zinc-Air Batteries. <i>Advanced Materials</i> , 2019, 31, e1806761.	11.1	133
984	Pristine Transition-Metal-Based Metal-Organic Frameworks for Electrocatalysis. <i>ChemElectroChem</i> , 2019, 6, 1273-1299.	1.7	78
985	Efficient bifunctional vanadium-doped Ni ₃ S ₂ nanorod array for overall water splitting. <i>Inorganic Chemistry Frontiers</i> , 2019, 6, 443-450.	3.0	54
986	The Vital Balance of Graphitization and Defect Engineering for Efficient Bifunctional Oxygen Electrocatalyst Based on N-doping Carbon/CNT Frameworks. <i>ChemCatChem</i> , 2019, 11, 861-867.	1.8	34
987	Boosting Photoelectrochemical Water Oxidation with Cobalt Phosphide Nanosheets on Porous BiVO ₄ . <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 769-778.	3.2	36
988	Hollow Ni-V-Mo Chalcogenide Nanopetals as Bifunctional Electrocatalyst for Overall Water Splitting. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 1622-1632.	3.2	36
989	Controlled synthesis of 3D porous structured cobalt-iron based nanosheets by electrodeposition as asymmetric electrodes for ultra-efficient water splitting. <i>Applied Catalysis B: Environmental</i> , 2019, 244, 583-593.	10.8	105
990	A Nanosized CoNi Hydroxide@Hydroxysulfide Core-Shell Heterostructure for Enhanced Oxygen Evolution. <i>Advanced Materials</i> , 2019, 31, e1805658.	11.1	203
991	Phase-Controlled Cobalt Phosphide Nanoparticles Coupled with N, P, S Co-Doped Hollow Carbon Polyhedrons as Efficient Catalysts for Both Alkaline and Acidic Hydrogen Evolution. <i>Energy Technology</i> , 2019, 7, 1800757.	1.8	5
992	Synthesis and Applications of Graphdiyne-Based Metal-Free Catalysts. <i>Advanced Materials</i> , 2019, 31, e1803762.	11.1	143
993	Porous two-dimensional layered molybdenum compounds coupled with N-doped carbon based electrocatalysts for hydrogen evolution reaction. <i>Applied Surface Science</i> , 2019, 465, 724-729.	3.1	15
994	Modulierung der elektronischen Strukturen anorganischer Nanomaterialien für eine effiziente elektrokatalytische Wasserspaltung. <i>Angewandte Chemie</i> , 2019, 131, 4532-4551.	1.6	34
995	Modulating Electronic Structures of Inorganic Nanomaterials for Efficient Electrocatalytic Water Splitting. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 4484-4502.	7.2	340

#	ARTICLE	IF	CITATIONS
996	Ultrafastly Interweaving Graphdiyne Nanochain on Arbitrary Substrates and Its Performance as a Supercapacitor Electrode. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 2599-2607.	4.0	58
997	A highly efficient hydrogen generation electrolysis system using alkaline zinc hydroxide solution. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 72-81.	3.8	15
998	Co-Fe binary metal oxide electrocatalyst with synergistic interface structures for efficient overall water splitting. <i>Catalysis Today</i> , 2020, 351, 44-49.	2.2	52
999	Recent Development of Ni/Fe-Based Micro/Nanostructures toward Photo/Electrochemical Water Oxidation. <i>Advanced Energy Materials</i> , 2020, 10, 1900954.	10.2	358
1000	Molten salt-assisted synthesis of bulk CoOOH as a water oxidation catalyst. <i>Journal of Energy Chemistry</i> , 2020, 42, 5-10.	7.1	38
1001	Self-Supported Transition-Metal-Based Electrocatalysts for Hydrogen and Oxygen Evolution. <i>Advanced Materials</i> , 2020, 32, e1806326.	11.1	986
1002	Size-dependent catalytic activity of cobalt phosphides for hydrogen evolution reaction. <i>Journal of Energy Chemistry</i> , 2020, 43, 121-128.	7.1	51
1003	Borate crosslinking synthesis of structure tailored carbon-based bifunctional electrocatalysts directly from guar gum hydrogels for efficient overall water splitting. <i>Carbon</i> , 2020, 157, 153-163.	5.4	30
1004	One-step construction of a transition-metal surface decorated with metal sulfide nanoparticles: A high-efficiency electrocatalyst for hydrogen generation. <i>Journal of Colloid and Interface Science</i> , 2020, 558, 1-8.	5.0	31
1005	Multifunctional Transition Metal-Based Phosphides in Energy-Related Electrocatalysis. <i>Advanced Energy Materials</i> , 2020, 10, 1902104.	10.2	322
1006	A Facile Synthesis of FeCo Nanoparticles Encapsulated in Hierarchical N-Doped Carbon Nanotube/Nanofiber Hybrids for Overall Water Splitting. <i>ChemCatChem</i> , 2020, 12, 932-943.	1.8	39
1007	Compositional Control as the Key for Achieving Highly Efficient OER Electrocatalysis with Cobalt Phosphates Decorated Nanocarbon Florets. <i>Small</i> , 2020, 16, e1903334.	5.2	66
1008	Nickel-manganese bimetallic phosphides porous nanosheet arrays as highly active bifunctional hydrogen and oxygen evolution electrocatalysts for overall water splitting. <i>Electrochimica Acta</i> , 2020, 329, 135121.	2.6	43
1009	Relative Efficacy of Co ₄ Embedded Graphene (X=N, S, B, and P) Electrocatalysts towards Hydrogen Evolution Reaction: Is Nitrogen Really the Best Choice?. <i>ChemCatChem</i> , 2020, 12, 536-543.	1.8	32
1010	Hierarchical three-dimensional framework interface assembled from oxygen-doped cobalt phosphide layer-shelled metal nanowires for efficient electrocatalytic water splitting. <i>Applied Catalysis B: Environmental</i> , 2020, 261, 118268.	10.8	87
1011	A review on non-noble metal based electrocatalysis for the oxygen evolution reaction. <i>Arabian Journal of Chemistry</i> , 2020, 13, 4294-4309.	2.3	138
1012	Charge Transfer Engineering via Multiple Heteroatom Doping in Dual Carbon-Coupled Cobalt Phosphides for Highly Efficient Overall Water Splitting. <i>Applied Catalysis B: Environmental</i> , 2020, 268, 118404.	10.8	73
1013	Magnetic field assisted synthesis of Co ₂ P hollow nanoparticles with controllable shell thickness for hydrogen evolution reaction. <i>Electrochimica Acta</i> , 2020, 330, 135191.	2.6	11

#	ARTICLE	IF	CITATIONS
1014	Fabrication of a Hierarchical Ni(OH) ₂ @Ni ₃ S ₂ /Ni Foam Electrode from a Prussian Blue Analogue-Based Composite with Enhanced Electrochemical Capacitive and Electrocatalytic Properties. Chemistry - A European Journal, 2020, 26, 1111-1116.	1.7	6
1015	Bimetallic nanoparticles decorated hollow nanoporous carbon framework as nanozyme biosensor for highly sensitive electrochemical sensing of uric acid. Biosensors and Bioelectronics, 2020, 150, 111869.	5.3	82
1016	Interface engineering in transition metal carbides for electrocatalytic hydrogen generation and nitrogen fixation. Materials Horizons, 2020, 7, 32-53.	6.4	61
1017	In-situ formed N doped bamboo-like carbon nanotube decorated with Fe-Ni-Cr nanoparticles as efficient electrocatalysts for overall water-splitting. Materials Chemistry and Physics, 2020, 241, 122375.	2.0	13
1018	Oscillation of Work Function during Reducible Metal Oxide Catalysis and Correlation with the Activity Property. ChemCatChem, 2020, 12, 85-89.	1.8	3
1019	Hydrogen enrichment on diesel engine with biogas in dual fuel mode. International Journal of Hydrogen Energy, 2020, 45, 7128-7140.	3.8	78
1020	Prussian blue analogues and their derived nanomaterials for electrocatalytic water splitting. Coordination Chemistry Reviews, 2020, 407, 213156.	9.5	167
1021	Bond Electronegativity as Hydrogen Evolution Reaction Catalyst Descriptor for Transition Metal (TM) Tj ETQq1 1 0.784314 rgBT /Overlo	3.2	45
1022	A one-pot "shielding-to-etching" strategy to synthesize amorphous MoS ₂ modified CoS/Co _{0.85} Se heterostructured nanotube arrays for boosted energy-saving H ₂ generation. Nanoscale, 2020, 12, 991-1001.	2.8	33
1023	Platinum nanoparticles on defect-rich nitrogen-doped hollow carbon as an efficient electrocatalyst for hydrogen evolution reactions. RSC Advances, 2020, 10, 930-937.	1.7	9
1024	Surface Phosphation of 3D NiCo ₂ O ₄ Nanowires Grown on Ni Foam as an Efficient Bifunctional Catalyst for Water Splitting. Nano, 2020, 15, 2050024.	0.5	9
1025	Identifying the role of Ni and Fe in Ni-Fe co-doped orthorhombic CoSe ₂ for driving enhanced electrocatalytic activity for oxygen evolution reaction. Electrochimica Acta, 2020, 335, 135682.	2.6	39
1026	Au-Decorated CoOOH Nanoplate Hierarchical Hollow Structure for Plasmon-Enhanced Electrocatalytic Water Oxidation. ACS Applied Energy Materials, 2020, 3, 943-950.	2.5	16
1028	Vertically stacked bilayer heterostructure CoFe ₂ O ₄ @Ni ₃ S ₂ on a 3D nickel foam as a high-performance electrocatalyst for the oxygen evolution reaction. New Journal of Chemistry, 2020, 44, 1455-1462.	1.4	23
1029	MoC based Mott-Schottky electrocatalyst for boosting the hydrogen evolution reaction performance. Sustainable Energy and Fuels, 2020, 4, 407-416.	2.5	34
1030	The synergistic effect of nitrogen and fluorine co-doping in graphene quantum dot catalysts for full water splitting and supercapacitor. Applied Surface Science, 2020, 507, 145157.	3.1	68
1031	Peroxymonosulfate activation by Co ₉ S ₈ @S and N co-doped biochar for sulfamethoxazole degradation. Chemical Engineering Journal, 2020, 385, 123933.	6.6	128
1032	Ternary boron-, phosphorus- and oxygen-doped amorphous nickel nanoalloys for enhanced activity towards the oxygen evolution reaction. Electrochemistry Communications, 2020, 111, 106649.	2.3	9

#	ARTICLE	IF	CITATIONS
1033	Core-shell cobalt particles Co@CoO loaded on nitrogen-doped graphene for photocatalytic water-splitting. International Journal of Hydrogen Energy, 2020, 45, 1629-1639.	3.8	23
1034	Recent advances in cobalt-based electrocatalysts for hydrogen and oxygen evolution reactions. Journal of Alloys and Compounds, 2020, 821, 153542.	2.8	191
1035	Co ₃ O ₄ - γ -Fe ₂ O ₃ Nanocrystal Heterostructures with Enhanced Coercivity and Blocking Temperature. Journal of Physical Chemistry C, 2020, 124, 1623-1630.	1.5	1
1036	Hollow Cobalt Sulfide Nanoparticles: A Robust and Low-Cost pH-Universal Oxygen Evolution Electrocatalyst. ACS Applied Energy Materials, 2020, 3, 977-986.	2.5	36
1037	Photoelectrochemistry of Ferrites: Theoretical Predictions vs. Experimental Results. Zeitschrift Fur Physikalische Chemie, 2020, 234, 719-776.	1.4	24
1038	Defect enhanced CoP/Reduced graphene oxide electrocatalytic hydrogen production with pt-like activity. Applied Catalysis B: Environmental, 2020, 265, 118576.	10.8	34
1039	Porosity-Engineering of MXene as a Support Material for a Highly Efficient Electrocatalyst toward Overall Water Splitting. ChemSusChem, 2020, 13, 945-955.	3.6	55
1040	Highly conductive Mn ₃ O ₄ /MnS heterostructures building multi-shelled hollow microspheres for high-performance supercapacitors. Chemical Engineering Journal, 2020, 392, 123890.	6.6	54
1041	Rare earth perovskite modified cobalt disulfide catalysts controlled by reaction solvent synthesis to form a p-n heterojunction. Applied Surface Science, 2020, 505, 143937.	3.1	22
1042	Rambutan-like hollow carbon spheres decorated with vacancy-rich nickel oxide for energy conversion and storage. , 2020, 2, 122-130.		68
1043	Investigation of anion doping effect to boost overall water splitting. Journal of Catalysis, 2020, 381, 84-95.	3.1	25
1044	Boron-Modified Electron Transfer in Metallic 1T MoSe ₂ for Enhanced Inherent Activity on Per-Catalytic Site toward Hydrogen Evolution. Advanced Materials Interfaces, 2020, 7, 1901560.	1.9	22
1045	Developments and Perspectives in 3d Transition-Metal-Based Electrocatalysts for Neutral and Near-Neutral Water Electrolysis. Advanced Energy Materials, 2020, 10, 1902666.	10.2	226
1046	Temperature and doping-tuned coordination environments around electroactive centers in Fe-doped γ -Ni(OH) ₂ for excellent water splitting. Sustainable Energy and Fuels, 2020, 4, 1522-1531.	2.5	24
1047	Electro-synthesized Co(OH) ₂ @CoSe with Co-OH active sites for overall water splitting electrocatalysis. Nanoscale Advances, 2020, 2, 792-797.	2.2	30
1048	Direct synthesis of bifunctional nanorods from a Co-adenine-MoO ₃ hybrid for overall water splitting. Materials Chemistry Frontiers, 2020, 4, 546-554.	3.2	17
1049	Metal-organic frameworks and their derivatives with graphene composites: preparation and applications in electrocatalysis and photocatalysis. Journal of Materials Chemistry A, 2020, 8, 2934-2961.	5.2	170
1050	Stacked Co ₆ W ₆ C nanocrystals anchored on N-doping carbon nanofibers with excellent electrocatalytic performance for HER in wide-range pH. International Journal of Hydrogen Energy, 2020, 45, 1901-1910.	3.8	14

#	ARTICLE	IF	CITATIONS
1051	Self-supported Hierarchical Fe(PO ₃) ₂ @Cu ₃ P nanotube arrays for efficient hydrogen evolution in alkaline media. <i>Journal of Alloys and Compounds</i> , 2020, 820, 153185.	2.8	23
1052	Eutectoid-structured WC/W ₂ C heterostructures: A new platform for long-term alkaline hydrogen evolution reaction at low overpotentials. <i>Nano Energy</i> , 2020, 68, 104335.	8.2	98
1053	Content-dependent electroactivity enhancement of nickel hexacyanoferrate/multi-walled carbon nanotubes electrocatalyst: Cost-efficient construction and promising application for alkaline water splitting. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 2754-2764.	3.8	12
1054	Earth-abundant transition-metal-based bifunctional catalysts for overall electrochemical water splitting: A review. <i>Journal of Alloys and Compounds</i> , 2020, 819, 153346.	2.8	253
1055	Metal hydroxide hybridized tungsten carbide nanorod arrays for enhancing hydrogen evolution in alkaline media. <i>Applied Surface Science</i> , 2020, 509, 144912.	3.1	10
1056	Selectively Etching Vanadium Oxide to Modulate Surface Vacancies of Unary Metal-Based Electrocatalysts for High-Performance Water Oxidation. <i>Advanced Energy Materials</i> , 2020, 10, 1903571.	10.2	64
1057	One-dimensional CoMoS ₄ nanorod arrays as an efficient electrocatalyst for hydrogen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2020, 821, 153245.	2.8	8
1058	Novel Heterostructure of a MXene@NiFe-LDH Nanohybrid with Superior Peroxidase-Like Activity for Sensitive Colorimetric Detection of Glutathione. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 520-526.	3.2	77
1059	Ultrasonication-assisted and gram-scale synthesis of Co-LDH nanosheet aggregates for oxygen evolution reaction. <i>Nano Research</i> , 2020, 13, 79-85.	5.8	83
1060	Oxygen vacancies enriched Co ₃ O ₄ nanoflowers with single layer porous structures for water splitting. <i>Electrochimica Acta</i> , 2020, 331, 135456.	2.6	47
1061	Si-Based Water Oxidation Photoanodes Conjugated with Earth-Abundant Transition Metal-Based Catalysts. , 2020, 2, 107-126.		35
1062	Plasma-assisted synthesis of hierarchical NiCo _x Py nanosheets as robust and stable electrocatalyst for hydrogen evolution reaction in both acidic and alkaline media. <i>Electrochimica Acta</i> , 2020, 331, 135431.	2.6	26
1063	Nitrogen-coordinated metallic cobalt disulfide self-encapsulated in graphitic carbon for electrochemical water oxidation. <i>Applied Catalysis B: Environmental</i> , 2020, 268, 118449.	10.8	44
1064	Surface Activation and Reconstruction of Non-Oxide-Based Catalysts Through in Situ Electrochemical Tuning for Oxygen Evolution Reactions in Alkaline Media. <i>ACS Catalysis</i> , 2020, 10, 463-493.	5.5	196
1065	Ce-doped CoP nanoparticles embedded in carbon nanotubes as an efficient and durable catalyst for hydrogen evolution. <i>Nanotechnology</i> , 2020, 31, 125402.	1.3	15
1066	Hydrogen from solar energy, a clean energy carrier from a sustainable source of energy. <i>International Journal of Energy Research</i> , 2020, 44, 4110-4131.	2.2	272
1067	Facile electrochemical preparation of nonprecious Co-Cu alloy catalysts for hydrogen production in proton exchange membrane water electrolysis. <i>International Journal of Energy Research</i> , 2020, 44, 2833-2844.	2.2	22
1068	Interplanar Growth of 2D Non-Van der Waals Co ₂ -Based Heterostructures for Efficient Overall Water Splitting. <i>Advanced Energy Materials</i> , 2020, 10, 2002214.	10.2	36

#	ARTICLE	IF	CITATIONS
1069	High-density nickel phosphide nanoparticles loaded reduced graphene oxide on nickel foam for enhanced alkaline and neutral water splitting. <i>Electrochimica Acta</i> , 2020, 362, 137172.	2.6	18
1070	1D-CoSe ₂ nanoarray: a designed structure for efficient hydrogen evolution and symmetric supercapacitor characteristics. <i>Dalton Transactions</i> , 2020, 49, 14191-14200.	1.6	42
1071	Atomic-Scale Dynamic Interaction of H_2O Molecules with Cu Surface. <i>Physical Review Letters</i> , 2020, 125, 156101.	2.9	11
1072	Electrochemical Oxygen Evolution Reaction Activity of Tin Sulfide Nanostructures. <i>ChemistrySelect</i> , 2020, 5, 11703-11707.	0.7	0
1073	Bifunctional Single Atom Electrocatalysts: Coordination-Performance Correlations and Reaction Pathways. <i>ACS Nano</i> , 2020, 14, 13279-13293.	7.3	107
1074	MnS-Nanoparticles-Decorated Three-Dimensional Graphene Hybrid as Highly Efficient Bifunctional Electrocatalyst for Hydrogen Evolution Reaction and Oxygen Reduction Reaction. <i>Catalysts</i> , 2020, 10, 1141.	1.6	9
1075	A Novel Heterostructure Based on RuMo Nanoalloys and N-Doped Carbon as an Efficient Electrocatalyst for the Hydrogen Evolution Reaction. <i>Advanced Materials</i> , 2020, 32, e2005433.	11.1	151
1076	2D Metal-Organic Framework Derived Co ₃ O ₄ for the Oxygen Evolution Reaction and High-Performance Lithium-Ion Batteries. <i>ChemNanoMat</i> , 2020, 6, 1770-1775.	1.5	5
1077	Amorphous/Crystalline Heterostructured Cobalt-Vanadium-Iron (Oxy)hydroxides for Highly Efficient Oxygen Evolution Reaction. <i>Advanced Energy Materials</i> , 2020, 10, 2002215.	10.2	198
1078	Recent Progress of Ruthenium-Based Nanomaterials for Electrochemical Hydrogen Evolution. <i>ChemElectroChem</i> , 2020, 7, 4526-4534.	1.7	22
1079	Optimization and aging of Pt nanowires supported on single-walled carbon nanotubes as a cathode catalyst in polymer electrolyte membrane water electrolyser. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 19121-19132.	3.8	4
1080	Constructing multifunctional "Nanoplatelet-on-Nanoarray"™ electrocatalyst with unprecedented activity towards novel selective organic oxidation reactions to boost hydrogen production. <i>Applied Catalysis B: Environmental</i> , 2020, 278, 119339.	10.8	93
1081	Interfacing metals and compounds for enhanced hydrogen evolution from water splitting. <i>MRS Bulletin</i> , 2020, 45, 548-554.	1.7	1
1082	Ferrites for electrocatalytic water splitting applications. , 2020, , 123-145.		2
1083	In-situ Formation of Amorphous Co-Al-P Layer on CoAl Layered Double Hydroxide Nanoarray as Neutral Electrocatalysts for Hydrogen Evolution Reaction. <i>Frontiers in Chemistry</i> , 2020, 8, 552795.	1.8	7
1084	Bifunctional CoFeVO _x Catalyst for Solar Water Splitting by using Multijunction and Heterojunction Silicon Solar Cells. <i>Advanced Materials Technologies</i> , 2020, 5, 2000592.	3.0	13
1085	Fabrication strategies of porous precious-metal-free bifunctional electrocatalysts for overall water splitting: Recent advances. <i>Green Energy and Environment</i> , 2021, 6, 620-643.	4.7	57
1086	Designing an Fe ^{III} -Doped Nickel Sulfide/Carbon Nanotube Hybrid Catalyst for Alkaline Electrolyte Membrane Water Electrolyzers and Zn-Air Battery Performances. <i>ACS Applied Energy Materials</i> , 2020, 3, 10961-10975.	2.5	17

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1087	Cobalt-Molybdenum Bimetal Phosphides Encapsulated in Carbon as Efficient and Durable Electrocatalyst for Hydrogen Evolution. <i>ChemistrySelect</i> , 2020, 5, 14312-14319.	0.7	12
1088	Development and performance of A-site rich perovskite-type material for enhanced oxygen evolution reaction in alkaline electrolyte. <i>Journal of Materials Science: Materials in Electronics</i> , 2020, 31, 21272-21278.	1.1	2
1089	Activity boosting of a metal-organic framework by Fe-Doping for electrocatalytic hydrogen evolution and oxygen evolution. <i>Journal of Solid State Chemistry</i> , 2020, 292, 121696.	1.4	11
1090	Enhanced Electrocatalytic Activity of Murdochite-Type Ni ₆ MnO ₈ for Water Oxidation via Surface Reconstruction. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 39205-39214.	4.0	18
1091	Ru-doped 3D flower-like bimetallic phosphide with a climbing effect on overall water splitting. <i>Applied Catalysis B: Environmental</i> , 2020, 279, 119396.	10.8	251
1092	Facile one-step in-situ encapsulation of non-noble metal Co ₂ P nanoparticles embedded into B, N, P tri-doped carbon nanotubes for efficient hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 24312-24321.	3.8	26
1093	Urea-assisted enhanced electrocatalytic activity of MoS ₂ -Ni ₃ S ₂ for overall water splitting. <i>Inorganic Chemistry Frontiers</i> , 2020, 7, 3588-3597.	3.0	32
1094	Emerging Strategies for Developing High-Performance Perovskite-Based Materials for Electrochemical Water Splitting. <i>Energy & Fuels</i> , 2020, 34, 10547-10567.	2.5	52
1095	Nitrogen doped carbon quantum dots conjugated with AgNi alloy nanoparticles as potential electrocatalyst for efficient water splitting. <i>Journal of Alloys and Compounds</i> , 2020, 847, 156492.	2.8	15
1096	Cobalt oxide micro flowers derived from hydrothermal synthesised cobalt sulphide pre-catalyst for enhanced water oxidation. <i>Electrochimica Acta</i> , 2020, 355, 136802.	2.6	18
1097	Interface engineering of oxygen-vacancy-rich NiCo ₂ O ₄ /NiCoP heterostructure as an efficient bifunctional electrocatalyst for overall water splitting. <i>Catalysis Science and Technology</i> , 2020, 10, 5559-5565.	2.1	43
1098	Unveiling the Occurrence of Co(III) in NiCo Layered Electroactive Hydroxides: The Role of Distorted Environments. <i>Chemistry - A European Journal</i> , 2020, 26, 17081-17090.	1.7	10
1099	Transition-Metal-Substituted Cobalt Carbonate Hydroxide Nanostructures as Electrocatalysts in Alkaline Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2020, 3, 7335-7344.	2.5	25
1100	CoMoP/NiFe-Layered Double-Hydroxide Hierarchical Nanosheet Arrays Standing on Ni Foam for Efficient Overall Water Splitting. <i>ACS Applied Energy Materials</i> , 2020, 3, 8075-8085.	2.5	74
1101	Recent advance and prospectives of electrocatalysts based on transition metal selenides for efficient water splitting. <i>Nano Energy</i> , 2020, 78, 105234.	8.2	250
1102	Breaking the scaling relationship via dual metal doping in a cobalt spinel for the OER: a computational prediction. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 18672-18680.	1.3	5
1103	Phase-Dependent Reactivity of Nickel Molybdates for Electrocatalytic Urea Oxidation. <i>ACS Applied Energy Materials</i> , 2020, 3, 7535-7542.	2.5	41
1104	Metal-Organic Framework-Derived Co ₂ P Nanoparticle/Multi-Doped Porous Carbon as a Trifunctional Electrocatalyst. <i>Advanced Materials</i> , 2020, 32, e2003649.	11.1	261

#	ARTICLE	IF	CITATIONS
1105	Facile synthesis of porous iridium-palladium-plumbum wire-like nanonetworks with boosted catalytic performance for hydrogen evolution reaction. <i>Journal of Colloid and Interface Science</i> , 2020, 580, 99-107.	5.0	12
1106	DFT Study on the Hydrogen Evolution Reaction on CoP(110) Surface. <i>IOP Conference Series: Materials Science and Engineering</i> , 2020, 729, 012065.	0.3	0
1107	Novel 13X Zeolite/PANI electrocatalyst for hydrogen and oxygen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 28337-28349.	3.8	38
1108	Iridium-based nanomaterials for electrochemical water splitting. <i>Nano Energy</i> , 2020, 78, 105270.	8.2	192
1109	Metallic single-atoms confined in carbon nanomaterials for the electrocatalysis of oxygen reduction, oxygen evolution, and hydrogen evolution reactions. <i>Catalysis Science and Technology</i> , 2020, 10, 6420-6448.	2.1	33
1110	Reversible Water-Induced Phase Changes of Cobalt Oxide Nanoparticles. <i>ACS Nano</i> , 2020, 14, 15450-15457.	7.3	9
1111	Ce _{0.8} Sr _{0.2} Co _x Fe _{1-x} O ₃ (x=0.2, 0.5, 0.8) – A Perovskite-type Nanocomposite for Application in the Oxygen Evolution Reaction in Alkaline Media. <i>Electroanalysis</i> , 2020, 32, 3131-3144.	1.5	3
1112	Activating Co nanoparticles on P-doped carbon nitride via enhancing Mott-Schottky effect by constructing interfacial chemical bonding for the efficient dehydrogenation of ammonia-borane. <i>Applied Surface Science</i> , 2020, 533, 146999.	3.1	16
1113	Lattice-strain Engineering of Homogeneous NiS _{0.5} Se _{0.5} Core-shell Nanostructure as a Highly Efficient and Robust Electrocatalyst for Overall Water Splitting. <i>Advanced Materials</i> , 2020, 32, e2000231.	11.1	158
1114	Iron-based phosphides as electrocatalysts for the hydrogen evolution reaction: recent advances and future prospects. <i>Journal of Materials Chemistry A</i> , 2020, 8, 19729-19745.	5.2	295
1115	The lightest solid meets the lightest gas: an overview of carbon aerogels and their composites for hydrogen related applications. <i>Nanoscale</i> , 2020, 12, 19536-19556.	2.8	41
1116	Mesoporous Nanoarchitectures for Electrochemical Energy Conversion and Storage. <i>Advanced Materials</i> , 2020, 32, e2004654.	11.1	109
1117	Amorphous-crystalline Co ₂ B ₃ P Catalyst for Synergistically Enhanced Hydrogen Evolution Reaction. <i>ChemCatChem</i> , 2020, 12, 6259-6264.	1.8	13
1118	Fabrication of Magnetic Superstructure NiFe ₂ O ₄ @MOF-74 and Its Derivative for Electrocatalytic Hydrogen Evolution with AC Magnetic Field. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 45987-45996.	4.0	45
1119	P-doped nickel sulfide nanosheet arrays for alkaline overall water splitting. <i>Catalysis Science and Technology</i> , 2020, 10, 7581-7590.	2.1	18
1120	Template Construction of Porous CoP/COP ₂ Microflowers Threaded with Carbon Nanotubes toward High-Efficiency Oxygen Evolution and Hydrogen Evolution Electrocatalysts. <i>Inorganic Chemistry</i> , 2020, 59, 12232-12239.	1.9	13
1121	Enhancing the water splitting performance <i>via</i> decorating Co ₃ O ₄ nanoarrays with ruthenium doping and phosphorization. <i>RSC Advances</i> , 2020, 10, 27235-27241.	1.7	9
1122	A Ni/Fe complex incorporated into a covalent organic framework as a single-site heterogeneous catalyst for efficient oxygen evolution reaction. <i>Inorganic Chemistry Frontiers</i> , 2020, 7, 3925-3931.	3.0	25

#	ARTICLE	IF	CITATIONS
1123	Metal oxide-based materials as an emerging family of hydrogen evolution electrocatalysts. <i>Energy and Environmental Science</i> , 2020, 13, 3361-3392.	15.6	370
1124	Oxygen Reduction and Evolution Reaction (ORR and OER) Bifunctional Electrocatalyst Operating in a Wide pH Range for Cathodic Application in Li-Air Batteries. <i>ACS Applied Energy Materials</i> , 2020, 3, 9417-9427.	2.5	42
1125	Construction of a Pliable Electrode System for Effective Electrochemical Oxygen Evolution Reaction: Direct Growth of Nickel/Iron/Selenide Nanohybrids on Nickel Foil. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 13859-13867.	3.2	12
1126	Tailoring the electronic structure by constructing the heterointerface of RuO ₂ -NiO for overall water splitting with ultralow overpotential and extra-long lifetime. <i>Journal of Materials Chemistry A</i> , 2020, 8, 18945-18954.	5.2	29
1127	Regulating the pore structure and oxygen vacancies of cobaltic oxide hollow dodecahedra for an enhanced oxygen evolution reaction. <i>NPG Asia Materials</i> , 2020, 12, .	3.8	38
1128	Phosphomolybdic Acid-Bipolar Membrane: An Efficient and Reversible Coupling for Alkaline Water Electrolysis. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 18528-18534.	3.2	8
1129	Deep Eutectic Solvent-Mediated Construction of Oxygen Vacancy-Rich Fe-Based Electrocatalysts for Efficient Oxygen Evolution Reaction. <i>Advanced Sustainable Systems</i> , 2020, 4, 2000038.	2.7	13
1130	Nanocomposites of cobalt benzene tricarboxylic acid MOF with rGO: An efficient and robust electrocatalyst for oxygen evolution reaction (OER). <i>Renewable Energy</i> , 2020, 156, 1040-1054.	4.3	108
1131	Sulfur vacancies promoting Fe-doped Ni ₃ S ₂ nanopyramid arrays as efficient bifunctional electrocatalysts for overall water splitting. <i>Sustainable Energy and Fuels</i> , 2020, 4, 3326-3333.	2.5	44
1132	In-plane intergrowth CoS ₂ /MoS ₂ nanosheets: binary metal-organic framework evolution and efficient alkaline HER electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2020, 8, 11435-11441.	5.2	74
1133	Advancement of Platinum (Pt)-Free (Non-Pt Precious Metals) and/or Metal-Free (Non-Precious-Metals) Electrocatalysts in Energy Applications: A Review and Perspectives. <i>Energy & Fuels</i> , 2020, 34, 6634-6695.	2.5	100
1134	Cobalt-based layered double hydroxides revisited: evidence for oxidizing radical generation. <i>New Journal of Chemistry</i> , 2020, 44, 10022-10032.	1.4	3
1135	Vacancy Occupation-Driven Polymorphic Transformation in Cobalt Ditungstate for Boosted Oxygen Evolution Reaction. <i>ACS Nano</i> , 2020, 14, 6968-6979.	7.3	100
1136	Multifunctional Active-Center-Transferable Platinum/Lithium Cobalt Oxide Heterostructured Electrocatalysts towards Superior Water Splitting. <i>Angewandte Chemie</i> , 2020, 132, 14641-14648.	1.6	17
1137	Multifunctional Active-Center-Transferable Platinum/Lithium Cobalt Oxide Heterostructured Electrocatalysts towards Superior Water Splitting. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 14533-14540.	7.2	152
1138	High-performance metal-organic framework-perovskite hybrid as an important component of the air-electrode for rechargeable Zn-Air battery. <i>Journal of Power Sources</i> , 2020, 468, 228377.	4.0	52
1139	Canonical-Like HER Activity of Cr _{1-x} Mo _x B ₂ Solid Solution: Overpowering Pt/C at High Current Density. <i>Advanced Materials</i> , 2020, 32, e2000855.	11.1	61
1140	3D freestanding flower-like nickel-cobalt layered double hydroxides enriched with oxygen vacancies as efficient electrocatalysts for water oxidation. <i>Sustainable Materials and Technologies</i> , 2020, 25, e00170.	1.7	8

#	ARTICLE	IF	CITATIONS
1141	Synergy of Cobalt Iron Tetrathiomolybdate Coated on Cobalt Iron Carbonate Hydroxide Hydrate Nanowire Arrays for Overall Water Splitting. <i>ChemElectroChem</i> , 2020, 7, 2309-2313.	1.7	9
1142	Regulating the charge diffusion of two-dimensional cobalt-iron hydroxide/graphene composites for high-rate water oxidation. <i>Journal of Materials Chemistry A</i> , 2020, 8, 11573-11581.	5.2	18
1143	Polyaniline engineering defect-induced nitrogen doped carbon-supported Co ₃ O ₄ hybrid composite as a high-efficiency electrocatalyst for oxygen evolution reaction. <i>Applied Surface Science</i> , 2020, 526, 146626.	3.1	36
1144	Mechanistic study on nickel-molybdenum based electrocatalysts for the hydrogen evolution reaction. <i>Journal of Catalysis</i> , 2020, 388, 122-129.	3.1	32
1145	Catalytic Performances of NiCuP@rGO and NiCuN@rGO for Oxygen Reduction and Oxygen Evolution Reactions in Alkaline Electrolyte. <i>ChemistrySelect</i> , 2020, 5, 5855-5863.	0.7	4
1146	Amorphous CoO coupled carbon dots as a spongy porous bifunctional catalyst for efficient photocatalytic water oxidation and CO ₂ reduction. <i>Chinese Journal of Catalysis</i> , 2020, 41, 1826-1836.	6.9	76
1147	Exploring the artificially induced nonstoichiometric effect of Li ₂ RuO ₃ as a reactive promoter on electrocatalytic behavior. <i>Energy and Environmental Science</i> , 2020, 13, 2167-2177.	15.6	26
1148	The γ -NH _x Group Induced Formation of 3D γ -Co(OH) ₂ Curly Nanosheet Aggregates as Efficient Oxygen Evolution Electrocatalysts. <i>Small</i> , 2020, 16, 2001973.	5.2	22
1149	Highly efficient water splitting over a RuO ₂ /F-doped graphene electrocatalyst with ultra-low ruthenium content. <i>Inorganic Chemistry Frontiers</i> , 2020, 7, 2188-2194.	3.0	29
1150	Strong electronic coupled FeNi ₃ /Fe ₂ (MoO ₄) ₃ nanohybrids for enhancing the electrocatalytic activity for the oxygen evolution reaction. <i>Inorganic Chemistry Frontiers</i> , 2020, 7, 2791-2798.	3.0	5
1151	Dual Role of Silver Moieties Coupled with Ordered Mesoporous Cobalt Oxide towards Electrocatalytic Oxygen Evolution Reaction. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 16544-16552.	7.2	64
1152	NiCo-LDHs derived NiCo ₂ S ₄ nanostructure coated by MoS ₂ nanosheets as high-efficiency bifunctional electrocatalysts for overall water splitting. <i>Surface and Coatings Technology</i> , 2020, 397, 126065.	2.2	23
1153	RuCo alloy bimodal nanoparticles embedded in N-doped carbon: a superior pH-universal electrocatalyst outperforms benchmark Pt for the hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2020, 8, 12810-12820.	5.2	69
1154	CuGeO ₃ micro-nanomaterial as Electrocatalyst for hydrogen evolution reaction. <i>Catalysis Communications</i> , 2020, 144, 106075.	1.6	7
1155	CoNiSe ₂ Nanostructures for Clean Energy Production. <i>ACS Omega</i> , 2020, 5, 14702-14710.	1.6	27
1156	Mesoporous anion-cation-codoped Co ₉ S ₈ nanorings for enhanced electrocatalytic oxygen evolution reactions. <i>Nanotechnology</i> , 2020, 31, 334001.	1.3	6
1157	Dual Role of Silver Moieties Coupled with Ordered Mesoporous Cobalt Oxide towards Electrocatalytic Oxygen Evolution Reaction. <i>Angewandte Chemie</i> , 2020, 132, 16687.	1.6	23
1158	Functionalization of metal oxides with thiocyanate groups: A general strategy for boosting oxygen evolution reaction in neutral media. <i>Nano Energy</i> , 2020, 76, 105079.	8.2	16

#	ARTICLE	IF	CITATIONS
1159	Simultaneous tuning of the cation content and pore structure of cobalt-iron bimetal phosphide to enhance the electrochemical oxygen evolution. <i>Journal of Alloys and Compounds</i> , 2020, 842, 155784.	2.8	9
1160	Ultralow Ru Loading Transition Metal Phosphides as High-Efficient Bifunctional Electrocatalyst for a Solar-Driven Hydrogen Generation System. <i>Advanced Energy Materials</i> , 2020, 10, 2000814.	10.2	174
1161	A cobalt-phosphorus nanoparticle decorated N-doped carbon nanosheet array for efficient and durable hydrogen evolution at alkaline pH. <i>Sustainable Energy and Fuels</i> , 2020, 4, 3884-3887.	2.5	127
1162	Construction of echinoids-like MoS ₂ @NiS ₂ electrocatalyst for efficient and robust water oxidation. <i>Electrochimica Acta</i> , 2020, 353, 136527.	2.6	23
1163	Ultrafine Mo-Doped Co ₂ P Nanorods Anchored on Reduced Graphene Oxide as Efficient Electrocatalyst for the Hydrogen Evolution Reaction*. <i>Chinese Physics Letters</i> , 2020, 37, 058201.	1.3	3
1164	Compositional engineering of sulfides, phosphides, carbides, nitrides, oxides, and hydroxides for water splitting. <i>Journal of Materials Chemistry A</i> , 2020, 8, 13415-13436.	5.2	124
1165	Silver nanoplate-pillared mesoporous nano-clays for surface enhanced raman scattering. <i>Journal of Industrial and Engineering Chemistry</i> , 2020, 89, 250-256.	2.9	4
1166	Normal-pulse-voltage-assisted <i>in situ</i> fabrication of graphene-wrapped MOF-derived CuO nanoflowers for water oxidation. <i>Chemical Communications</i> , 2020, 56, 8750-8753.	2.2	24
1167	A zeolite-type CoFe selenite via in-situ transformation of layered double hydroxide boosting the water oxidation performance in alkaline electrolyte. <i>Chemical Engineering Journal</i> , 2020, 399, 125799.	6.6	14
1168	Microwave-Hydrothermal Tuning of Spinel-Type Co ₃ O ₄ Water Oxidation Catalysts. <i>Frontiers in Chemistry</i> , 2020, 8, 473.	1.8	8
1169	Boosting Activity on Co ₄ N Porous Nanosheet by Coupling CeO ₂ for Efficient Electrochemical Overall Water Splitting at High Current Densities. <i>Advanced Functional Materials</i> , 2020, 30, 1910596.	7.8	218
1170	Graphene Quantum Dots-Based Advanced Electrode Materials: Design, Synthesis and Their Applications in Electrochemical Energy Storage and Electrocatalysis. <i>Advanced Energy Materials</i> , 2020, 10, 2001275.	10.2	109
1171	FeNiMo trimetallic nanoparticles encapsulated in carbon cages as efficient hydrogen evolution reaction electrocatalysts. <i>Materials Advances</i> , 2020, 1, 54-60.	2.6	16
1172	Dual-doping of ruthenium and nickel into Co ₃ O ₄ for improving the oxygen evolution activity. <i>Materials Chemistry Frontiers</i> , 2020, 4, 1390-1396.	3.2	26
1173	Growth of Lattice Coherent Co ₉ S ₈ /Co ₃ O ₄ Nano-Heterostructure for Maximizing the Catalysis of Co-Based Composites. <i>ChemCatChem</i> , 2020, 12, 2431-2435.	1.8	9
1174	In situ construction of tandem nitrogen-doped MoP nanocrystals for high-efficient electrocatalytic hydrogen evolution. <i>Electrochimica Acta</i> , 2020, 342, 136059.	2.6	11
1175	Facile synthesis of Fe-Ni bimetallic N-doped carbon framework for efficient electrochemical hydrogen evolution reaction. <i>Materials Today Energy</i> , 2020, 16, 100387.	2.5	26
1176	General Strategy to Fabricate Metal-Incorporated Pyrolysis-Free Covalent Organic Framework for Efficient Oxygen Evolution Reaction. <i>Inorganic Chemistry</i> , 2020, 59, 4995-5003.	1.9	49

#	ARTICLE	IF	CITATIONS
1177	Nickel induced electronic structural regulation of cobalt hydroxide for enhanced water oxidation. <i>Journal of Materials Chemistry A</i> , 2020, 8, 6699-6708.	5.2	29
1178	In situ fabrication of 3D self-supporting cobalt phosphate-modified graphite felt electrocatalysts for oxygen evolution reaction in neutral solution. <i>Journal of Electroanalytical Chemistry</i> , 2020, 862, 114031.	1.9	7
1179	A dinuclear iron complex as an efficient electrocatalyst for homogeneous water oxidation reaction. <i>Catalysis Science and Technology</i> , 2020, 10, 2830-2837.	2.1	18
1180	Fabrication of γ -Fe ₂ O ₃ Nanowires from Abundant and Low-cost Fe Plate for Highly Effective Electrocatalytic Water Splitting. <i>Scientific Reports</i> , 2020, 10, 5407.	1.6	25
1181	N- & S-co-doped carbon nanofiber network embedded with ultrafine NiCo nanoalloy for efficient oxygen electrocatalysis and Zn-air batteries. <i>Nanoscale</i> , 2020, 12, 9581-9589.	2.8	35
1182	Electronic Modulation of Nickel Disulfide toward Efficient Water Electrolysis. <i>Small</i> , 2020, 16, e1905885.	5.2	52
1183	Nature-inspired electrocatalysts and devices for energy conversion. <i>Chemical Society Reviews</i> , 2020, 49, 3107-3141.	18.7	84
1184	Recent Advances in Self-Supported Layered Double Hydroxides for Oxygen Evolution Reaction. <i>Research</i> , 2020, 2020, 3976278.	2.8	57
1185	Sulfur and molybdenum Co-doped graphitic carbon nitride as a superior water dissociation electrocatalyst for alkaline hydrogen evolution reaction. <i>Ceramics International</i> , 2020, 46, 14178-14187.	2.3	20
1186	Self-assembly of 0D/2D homostructure for enhanced hydrogen evolution. <i>Materials Today</i> , 2020, 36, 83-90.	8.3	24
1187	MOF-derived ZnCo ₂ O ₄ porous micro-rice with enhanced electro-catalytic activity for the oxygen evolution reaction and glucose oxidation. <i>RSC Advances</i> , 2020, 10, 9063-9069.	1.7	34
1188	Strain-modulated Ni ₃ Al alloy promotes oxygen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2020, 844, 156094.	2.8	21
1189	Ni-Fe nanocubes embedded with Pt nanoparticles for hydrogen and oxygen evolution reactions. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 20832-20842.	3.8	40
1190	Formation, Structure, and Function of Hydrogenated and Fluorinated Long-Chain Phosphonate-Modified Single-Walled Carbon Nanotubes with Bidentate Bonds. <i>ChemistrySelect</i> , 2020, 5, 6594-6607.	0.7	6
1191	CuO@CoFe Layered Double Hydroxide Core-Shell Heterostructure as an Efficient Water Oxidation Electrocatalyst under Mild Alkaline Conditions. <i>Inorganic Chemistry</i> , 2020, 59, 9491-9495.	1.9	52
1192	Role of perovskites as a bifunctional catalyst for electrochemical water splitting: A review. <i>International Journal of Energy Research</i> , 2020, 44, 9714-9747.	2.2	38
1193	Waste cotton fabric derived porous carbon containing Fe ₃ O ₄ /NiS nanoparticles for electrocatalytic oxygen evolution. <i>Journal of Materials Science and Technology</i> , 2020, 59, 92-99.	5.6	25
1194	In situ templating synthesis of mesoporous Ni-Fe electrocatalyst for oxygen evolution reaction. <i>RSC Advances</i> , 2020, 10, 23321-23330.	1.7	11

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1195	Electrospun fibrous active bimetallic electrocatalyst for hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 21502-21511.	3.8	20
1196	Synthesis of confining cobalt nanoparticles within SiO ₂ /nitrogen-doped carbon framework derived from sustainable bamboo leaves as oxygen electrocatalysts for rechargeable Zn-air batteries. <i>Chemical Engineering Journal</i> , 2020, 401, 126005.	6.6	75
1197	High entropy alloy electrocatalysts: a critical assessment of fabrication and performance. <i>Journal of Materials Chemistry A</i> , 2020, 8, 14844-14862.	5.2	108
1198	Cadmium Hydroxide: A Missing Non-Noble Metal Hydroxide Electrocatalyst for the Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2020, 3, 1305-1310.	2.5	20
1199	Preparation of ultrathin molybdenum disulfide dispersed on graphene via cobalt doping: A bifunctional catalyst for hydrogen and oxygen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 9583-9591.	3.8	25
1200	Co ²⁺ /NiFe layered double hydroxide nanosheets as an efficient electrocatalyst for the electrochemical evolution of oxygen. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 9368-9379.	3.8	40
1201	Synergistic Modulation of Active Sites and Charge Transport: N/S Co-doped C Encapsulated NiCo ₂ O ₄ /NiO Hollow Microrods for Boosting Oxygen Evolution Catalysis. <i>Inorganic Chemistry</i> , 2020, 59, 4080-4089.	1.9	19
1202	Hollow nanosheet array of phosphorus-anion-decorated cobalt disulfide as an efficient electrocatalyst for overall water splitting. <i>Chemical Engineering Journal</i> , 2020, 390, 124556.	6.6	84
1203	Hierarchical trimetallic sulfide FeCo ₂ S ₄ @NiCo ₂ S ₄ nanosheet arrays supported on a Ti mesh: An efficient 3D bifunctional electrocatalyst for full water splitting. <i>Electrochimica Acta</i> , 2020, 340, 135957.	2.6	52
1204	Non-noble metal single-atom catalysts prepared by wet chemical method and their applications in electrochemical water splitting. <i>Journal of Energy Chemistry</i> , 2020, 47, 333-345.	7.1	104
1205	Novel self-supported MoS ₂ /FeS ₂ nanocomposite as an excellent electrocatalyst for hydrogen evolution. <i>Solid State Sciences</i> , 2020, 101, 106156.	1.5	8
1206	High-Entropy Perovskite Fluorides: A New Platform for Oxygen Evolution Catalysis. <i>Journal of the American Chemical Society</i> , 2020, 142, 4550-4554.	6.6	208
1207	Single-Step Electrochemical Synthesis of Cobalt Nanoclusters Embedded on Dense Graphite Sheets for Electrocatalysis of the Oxygen Evolution Reaction. <i>ACS Applied Nano Materials</i> , 2020, 3, 2705-2712.	2.4	9
1208	A flower-like CoS ₂ /MoS ₂ heteronanosheet array as an active and stable electrocatalyst toward the hydrogen evolution reaction in alkaline media. <i>RSC Advances</i> , 2020, 10, 8973-8981.	1.7	19
1209	Two-sites are better than one: revisiting the OER mechanism on CoOOH by DFT with electrode polarization. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 7031-7038.	1.3	45
1210	Microwave-Induced Plasma Synthesis of Defect-Rich, Highly Ordered Porous Phosphorus-Doped Cobalt Oxides for Overall Water Electrolysis. <i>Journal of Physical Chemistry C</i> , 2020, 124, 9971-9978.	1.5	26
1211	Integrating ZnCo ₂ O ₄ submicro/nanospheres with Co _x Se _y nanosheets for the oxygen evolution reaction and zinc-air batteries. <i>Sustainable Energy and Fuels</i> , 2020, 4, 2184-2191.	2.5	12
1212	Interface engineering of copper-cobalt based heterostructure as bifunctional electrocatalysts for overall water splitting. <i>Ceramics International</i> , 2020, 46, 13125-13132.	2.3	20

#	ARTICLE	IF	CITATIONS
1213	Hierarchical CuO@ZnCo LDH heterostructured nanowire arrays toward enhanced water oxidation electrocatalysis. <i>Nanoscale</i> , 2020, 12, 5359-5362.	2.8	97
1214	1D/2D Cobalt-Based Nano hybrids as Electrocatalysts for Hydrogen Generation. <i>Advanced Functional Materials</i> , 2020, 30, 1908467.	7.8	25
1215	Transition metal M (M = Co, Ni, and Fe) and boron co-modulation in Rh-based aerogels for highly efficient and pH-universal hydrogen evolution electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2020, 8, 5595-5600.	5.2	30
1216	Atomic Doping and Anion Reconstructed CoF ₂ Electrocatalyst for Oxygen Evolution Reaction. <i>Advanced Materials Interfaces</i> , 2020, 7, 1901939.	1.9	18
1217	Enriched active surface structure in nanosized tungsten-cobalt oxides electrocatalysts for efficient oxygen redox reactions. <i>Applied Surface Science</i> , 2020, 513, 145831.	3.1	21
1218	Vertically Aligned Metal-Organic Framework Derived from Sacrificial Cobalt Nanowire Template Interconnected with Nickel Foam Supported Selenite Network as an Integrated 3D Electrode for Overall Water Splitting. <i>Inorganic Chemistry</i> , 2020, 59, 3817-3827.	1.9	42
1219	Rational Construction of a WS ₂ /CoS ₂ Heterostructure Electrocatalyst for Efficient Hydrogen Evolution at All pH Values. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 4474-4480.	3.2	63
1220	Ni ₂ P/rGO/NF Nanosheets As a Bifunctional High-Performance Electrocatalyst for Water Splitting. <i>Materials</i> , 2020, 13, 744.	1.3	11
1221	Recent advances in ternary layered double hydroxide electrocatalysts for the oxygen evolution reaction. <i>New Journal of Chemistry</i> , 2020, 44, 9981-9997.	1.4	76
1222	ZIF-derived porous carbon composites coated on NiCo ₂ S ₄ nanotubes array toward efficient water splitting. <i>Nanotechnology</i> , 2020, 31, 195402.	1.3	8
1223	Probing into the effect of heterojunctions between Cu/Mo ₂ C/Mo ₂ N on HER performance. <i>Catalysis Science and Technology</i> , 2020, 10, 2213-2220.	2.1	17
1224	Versatile Route To Fabricate Precious-Metal Phosphide Electrocatalyst for Acid-Stable Hydrogen Oxidation and Evolution Reactions. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 11737-11744.	4.0	37
1225	Hydrogen evolution behavior of nickel coated TiO ₂ . <i>International Journal of Hydrogen Energy</i> , 2020, 45, 34879-34887.	3.8	11
1226	CoNi-based metal-organic framework nanoarrays supported on carbon cloth as bifunctional electrocatalysts for efficient water-splitting. <i>New Journal of Chemistry</i> , 2020, 44, 1694-1698.	1.4	21
1227	A three-dimensional porous CoSnS@CNT nanoarchitecture as a highly efficient bifunctional catalyst for boosted OER performance and photocatalytic degradation. <i>Nanoscale</i> , 2020, 12, 3879-3887.	2.8	34
1228	Co/Cu-modified NiO film grown on nickel foam as a highly active and stable electrocatalyst for overall water splitting. <i>Dalton Transactions</i> , 2020, 49, 1776-1784.	1.6	20
1229	Atomic Modulation, Structural Design, and Systematic Optimization for Efficient Electrochemical Nitrogen Reduction. <i>Advanced Science</i> , 2020, 7, 1902390.	5.6	73
1230	Three-dimensional hierarchically porous iridium oxide-nitrogen doped carbon hybrid: An efficient bifunctional catalyst for oxygen evolution and hydrogen evolution reaction in acid. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 6036-6046.	3.8	30

#	ARTICLE	IF	CITATIONS
1231	CoSe ₂ nanobelt coupled with CoMoO ₄ nanosheet as efficient electrocatalysts for hydrogen and oxygen evolution reaction. <i>Environmental Science and Ecotechnology</i> , 2020, 1, 100004.	6.7	14
1232	Synchronously integration of Co, Fe dual-metal doping in Ru@C and CDs for boosted water splitting performances in alkaline media. <i>Applied Catalysis B: Environmental</i> , 2020, 267, 118657.	10.8	82
1233	Piezopotential augmented photo- and photoelectro-catalysis with a built-in electric field. <i>Chinese Journal of Catalysis</i> , 2020, 41, 534-549.	6.9	75
1234	One-step electrodeposition of Ni _x Fe _{3x} O ₄ /Ni hybrid nanosheet arrays as highly active and robust electrocatalysts for the oxygen evolution reaction. <i>Green Chemistry</i> , 2020, 22, 1710-1719.	4.6	33
1235	Self-assembly of homointerface engineered IrCo _{0.14} bracelet-like nanorings as efficient and stable bifunctional catalysts for electrochemical water splitting in acidic media. <i>Electrochimica Acta</i> , 2020, 337, 135738.	2.6	16
1236	Recent advances in pristine tri-metallic metal-organic frameworks toward the oxygen evolution reaction. <i>Nanoscale</i> , 2020, 12, 4816-4825.	2.8	83
1237	Agaric-derived N-doped carbon nanorod arrays@nanosheet networks coupled with molybdenum carbide nanoparticles as highly efficient pH-universal hydrogen evolution electrocatalysts. <i>Nanoscale</i> , 2020, 12, 5159-5169.	2.8	26
1238	Single-Atom Catalysts for Electrochemical Hydrogen Evolution Reaction: Recent Advances and Future Perspectives. <i>Nano-Micro Letters</i> , 2020, 12, 21.	14.4	159
1239	Copper-based homogeneous and heterogeneous catalysts for electrochemical water oxidation. <i>Nanoscale</i> , 2020, 12, 4187-4218.	2.8	79
1240	Stringing Bimetallic Metal-Organic Framework-Derived Cobalt Phosphide Composite for High-Efficiency Overall Water Splitting. <i>Advanced Science</i> , 2020, 7, 1903195.	5.6	214
1241	Facile synthesis of CoSe nanoparticles encapsulated in N-doped carbon nanotubes-grafted N-doped carbon nanosheets for water splitting. <i>Electrochimica Acta</i> , 2020, 337, 135685.	2.6	27
1242	A hierarchical CoMoO ₄ nanoparticle decorated nanoplate array as an electrocatalyst toward improved alkaline oxygen evolution reaction. <i>Sustainable Energy and Fuels</i> , 2020, 4, 1595-1599.	2.5	14
1243	Reversible ternary nickel-cobalt-iron catalysts for intermittent water electrolysis. <i>EcoMat</i> , 2020, 2, e12012.	6.8	14
1244	Unraveling the electrocatalytically active sites and stability of Co & Co oxides on nanocarbon for oxygen evolution reaction in acid solution. <i>Journal of Energy Chemistry</i> , 2020, 49, 8-13.	7.1	16
1245	Prussian blue analog nanocubes tuning synthesis of coral-like Ni ₃ S ₂ @MIL-53(NiFeCo) core-shell nanowires array and boosting oxygen evolution reaction. <i>Journal of Power Sources</i> , 2020, 451, 227295.	4.0	22
1246	An amorphous carbon nitride/NiO/CoN-based composite: a highly efficient nonprecious electrode for supercapacitors and the oxygen evolution reaction. <i>Nanoscale</i> , 2020, 12, 7024-7034.	2.8	28
1247	Interfacial Engineering of Cobalt Nitrides and Mesoporous Nitrogen-Doped Carbon: Toward Efficient Overall Water-Splitting Activity with Enhanced Charge-Transfer Efficiency. <i>ACS Energy Letters</i> , 2020, 5, 692-700.	8.8	125
1248	Recent Advances on Water-Splitting Electrocatalysis Mediated by Noble-Metal-Based Nanostructured Materials. <i>Advanced Energy Materials</i> , 2020, 10, 1903120.	10.2	560

#	ARTICLE	IF	CITATIONS
1249	Fundamental aspects and recent advances in transition metal nitrides as electrocatalysts for hydrogen evolution reaction: A review. <i>Current Opinion in Solid State and Materials Science</i> , 2020, 24, 100805.	5.6	262
1250	LaF ₃ Nanosheet-induced Epitaxial Growth: Hollow (Co, Ni) ₂ P/LaF ₃ Nanotube Arrays Built by Porous Heterojunction Walls Grown on Ni Foam as Active Electrocatalyst for Hydrogen Evolution Reaction. <i>Inorganic Chemistry</i> , 2020, 59, 7000-7011.	1.9	16
1251	General strategy for fabrication of N-doped carbon nanotube/reduced graphene oxide aerogels for dissipation and conversion of electromagnetic energy. <i>Journal of Materials Chemistry C</i> , 2020, 8, 7847-7857.	2.7	51
1252	Multi-channel V-doped CoP hollow nanofibers as high-performance hydrogen evolution reaction electrocatalysts. <i>Nanoscale</i> , 2020, 12, 9144-9151.	2.8	40
1253	Bulk and Surface Properties Regulation of Single/Double Perovskites to Realize Enhanced Oxygen Evolution Reactivity. <i>ChemSusChem</i> , 2020, 13, 3045-3052.	3.6	32
1254	Achieving Increased Electrochemical Accessibility and Lowered Oxygen Evolution Reaction Activation Energy for Co ²⁺ Sites with a Simple Anion Preoxidation. <i>Journal of Physical Chemistry C</i> , 2020, 124, 9673-9684.	1.5	33
1255	Designing transition-metal-boride-based electrocatalysts for applications in electrochemical water splitting. <i>Nanoscale</i> , 2020, 12, 9327-9351.	2.8	88
1256	Fast cation exchange of layered sodium transition metal oxides for boosting oxygen evolution activity and enhancing durability. <i>Journal of Materials Chemistry A</i> , 2020, 8, 8075-8083.	5.2	9
1257	NiCoO ₂ -carbon composite as an efficient bifunctional catalyst for electrochemical water splitting. <i>Ionics</i> , 2020, 26, 3959-3967.	1.2	3
1258	Electrocatalysts Based on Transition Metal Borides and Borates for the Oxygen Evolution Reaction. <i>Chemistry - A European Journal</i> , 2020, 26, 11661-11672.	1.7	43
1259	Self-Supported 3D Ultrathin Cobalt-Nickel-Boron Nanoflakes as an Efficient Electrocatalyst for the Oxygen Evolution Reaction. <i>ChemSusChem</i> , 2020, 13, 3662-3670.	3.6	25
1260	Highly efficient CoMoS heterostructure derived from vertically anchored Co ₅ Mo ₁₀ polyoxometalate for electrocatalytic overall water splitting. <i>Chemical Engineering Journal</i> , 2020, 394, 124849.	6.6	67
1261	Halides-assisted electrochemical synthesis of Cu/Cu ₂ O/CuO core-shell electrocatalyst for oxygen evolution reaction. <i>Journal of Power Sources</i> , 2020, 457, 228058.	4.0	34
1262	Three-dimensional Ni ₂ P-MoP ₂ mesoporous nanorods array as self-standing electrocatalyst for highly efficient hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 15063-15075.	3.8	28
1263	Chemical potentials of electric double layers at metal-electrolyte interfaces: dependence on electrolyte concentration and electrode materials, and application to field-effect transistors. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 12395-12402.	1.3	4
1264	Crystalline ZnO and ZnO / TiO ₂ nanoparticles derived from tert-butyl mercaptoethyl carbamatozinc(II) chelate: Electrocatalytic studies for H ₂ generation in alkaline electrolytes. <i>International Journal of Energy Research</i> , 2020, 44, 6725-6744.	2.2	11
1265	Preparation of nano-Co ₃ O ₄ -coated Albizia procera-derived carbon by direct thermal decomposition method for electrochemical water oxidation. <i>Arabian Journal of Chemistry</i> , 2020, 13, 4785-4796.	2.3	30
1266	Recent progress of precious-metal-free electrocatalysts for efficient water oxidation in acidic media. <i>Journal of Energy Chemistry</i> , 2020, 51, 113-133.	7.1	66

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1267	Engineering cobalt oxide by interfaces and pore architectures for enhanced electrocatalytic performance for overall water splitting. <i>Nanoscale</i> , 2020, 12, 11201-11208.	2.8	67
1268	Assembled 3D MOF on 2D Nanosheets for Self-boosting Catalytic Synthesis of N-doped Carbon Nanotube Encapsulated Metallic Co Electrocatalysts for Overall Water Splitting. <i>Applied Catalysis B: Environmental</i> , 2020, 271, 118939.	10.8	136
1269	Prussian blue- and Prussian blue analogue-derived materials: progress and prospects for electrochemical energy conversion. <i>Materials Today Energy</i> , 2020, 16, 100404.	2.5	68
1270	Synergistic cerium doping and MXene coupling in layered double hydroxides as efficient electrocatalysts for oxygen evolution. <i>Journal of Energy Chemistry</i> , 2021, 52, 412-420.	7.1	89
1271	Metal-organic framework derived NiCoP hollow polyhedrons electrocatalyst for pH-universal hydrogen evolution reaction. <i>Chinese Chemical Letters</i> , 2021, 32, 119-124.	4.8	54
1272	Recent Advances in 1D Electrospun Nanocatalysts for Electrochemical Water Splitting. <i>Small Structures</i> , 2021, 2, 2000048.	6.9	157
1273	Porous Ni-Mo bimetallic hybrid electrocatalyst by intermolecular forces in precursors for enhanced hydrogen generation. <i>Chemical Engineering Journal</i> , 2021, 405, 126962.	6.6	28
1274	An account of the strategies to enhance the water splitting efficiency of noble-metal-free electrocatalysts. <i>Journal of Energy Chemistry</i> , 2021, 59, 160-190.	7.1	48
1275	Reduction-induced surface reconstruction to fabricate cobalt hydroxide/molybdenum oxide hybrid nanosheets for promoted oxygen evolution reaction. <i>Chemical Engineering Journal</i> , 2021, 413, 127540.	6.6	25
1276	Free-standing nanoporous NiMnFeMo alloy: An efficient non-precious metal electrocatalyst for water splitting. <i>Chemical Engineering Journal</i> , 2021, 404, 126530.	6.6	88
1277	Facilitating active species by decorating CeO ₂ on Ni ₃ S ₂ nanosheets for efficient water oxidation electrocatalysis. <i>Chinese Journal of Catalysis</i> , 2021, 42, 482-489.	6.9	61
1278	Enhancing water splitting via weakening H ₂ and O ₂ adsorption on NiCo-LDH@CdS due to interstitial nitrogen doping: A close look at the mechanism of electron transfer. <i>Journal of Energy Chemistry</i> , 2021, 57, 118-130.	7.1	9
1279	Recent progress in water splitting and hybrid supercapacitors based on nickel-vanadium layered double hydroxides. <i>Journal of Energy Chemistry</i> , 2021, 57, 496-515.	7.1	65
1280	Surface amorphized nickel hydroxy sulphide for efficient hydrogen evolution reaction in alkaline medium. <i>Chemical Engineering Journal</i> , 2021, 408, 127275.	6.6	64
1281	Electronic modulation and interface engineering of electrospun nanomaterials-based electrocatalysts toward water splitting. , 2021, 3, 101-128.		134
1282	Nanocarbon-based metal-free and non-precious metal bifunctional electrocatalysts for oxygen reduction and oxygen evolution reactions. <i>Journal of Energy Chemistry</i> , 2021, 58, 610-628.	7.1	30
1283	Surface reconstruction of Ni doped Co-Fe Prussian blue analogues for enhanced oxygen evolution. <i>Catalysis Science and Technology</i> , 2021, 11, 1110-1115.	2.1	22
1284	Highly active sites of NiVB nanoparticles dispersed onto graphene nanosheets towards efficient and pH-universal overall water splitting. <i>Journal of Energy Chemistry</i> , 2021, 58, 237-246.	7.1	114

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1285	DNA as template and P-source for synthesis of Co ₂ P/Co ₂ N core-shell nanostructure embedded in N-doped carbon nanofiber derived from electrospun precursor for oxygen evolution reaction. <i>Electrochimica Acta</i> , 2021, 367, 137562.	2.6	12
1286	A hierarchical CoP@NiCo-LDH nanoarray as an efficient and flexible catalyst electrode for the alkaline oxygen evolution reaction. <i>Sustainable Energy and Fuels</i> , 2021, 5, 391-395.	2.5	14
1287	Iron doped vanadium sulfide anemone like nanorod structure for electrochemical water oxidation. <i>Current Applied Physics</i> , 2021, 21, 192-198.	1.1	2
1288	Transition-Metal Carbides as Hydrogen Evolution Reduction Electrocatalysts: Synthetic Methods and Optimization Strategies. <i>Chemistry - A European Journal</i> , 2021, 27, 5074-5090.	1.7	41
1289	Highly Efficient Alkaline Water Splitting with Ru-Doped Co ²⁺ /V Layered Double Hydroxide Nanosheets as a Bifunctional Electrocatalyst. <i>ChemSusChem</i> , 2021, 14, 730-737.	3.6	63
1290	Metal organic framework derived Ni _{0.15} Co _{0.85} S ₂ @MoS ₂ heterostructure as an efficient and stable electrocatalyst for hydrogen evolution. <i>Separation and Purification Technology</i> , 2021, 254, 117629.	3.9	9
1291	Interface engineering of transitional metal sulfide-MoS ₂ heterostructure composites as effective electrocatalysts for water-splitting. <i>Journal of Materials Chemistry A</i> , 2021, 9, 2070-2092.	5.2	136
1292	One-Pot Hydrothermal Synthesis of Ni ₃ S ₂ /MoS ₂ /FeOOH Hierarchical Microspheres on Ni Foam as a High-Efficiency and Durable Dual-Function Electrocatalyst for Overall Water Splitting. <i>ChemElectroChem</i> , 2021, 8, 665-674.	1.7	14
1293	V-Bridged-Co ₂ O to Eliminate Charge Transfer Barriers and Drive Lattice Oxygen Oxidation during Water-Splitting. <i>Advanced Functional Materials</i> , 2021, 31, 2008822.	7.8	40
1294	Electrocatalytic Hydrogen Production Trilogy. <i>Angewandte Chemie</i> , 2021, 133, 19702-19723.	1.6	114
1295	Rational Engineering Co _x O _y Nanosheets via Phosphorous and Sulfur Dual-Coupling for Enhancing Water Splitting and Zn-Air Battery. <i>Advanced Functional Materials</i> , 2021, 31, 2007822.	7.8	44
1296	Integrated transition metal and compounds with carbon nanomaterials for electrochemical water splitting. <i>Journal of Materials Chemistry A</i> , 2021, 9, 3786-3827.	5.2	140
1297	Improving the electrocatalytic performance of sustainable Co/carbon materials for the oxygen evolution reaction by ultrasound and microwave assisted synthesis. <i>Sustainable Energy and Fuels</i> , 2021, 5, 720-731.	2.5	21
1298	Unprecedented electrocatalytic oxygen evolution performances by cobalt-incorporated molybdenum carbide microflowers with controlled charge re-distribution. <i>Journal of Materials Chemistry A</i> , 2021, 9, 1770-1783.	5.2	13
1299	Collaboration between a Pt-dimer and neighboring Co-Pd atoms triggers efficient pathways for oxygen reduction reaction. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 1822-1834.	1.3	16
1300	Fe-Based Mesoporous Nanostructures for Electrochemical Conversion and Storage of Energy. <i>Batteries and Supercaps</i> , 2021, 4, 429-444.	2.4	15
1301	Highly selective electrocatalytic Cl ⁻ oxidation reaction by oxygen-modified cobalt nanoparticles immobilized carbon nanofibers for coupling with brine water remediation and H ₂ production. <i>Nano Research</i> , 2021, 14, 1443-1449.	5.8	13
1302	An open-structured carbon fiber brush electrode for efficient hydrogen evolution by inducing oriented bubble transport. <i>Chemical Engineering Journal</i> , 2021, 407, 127159.	6.6	5

#	ARTICLE	IF	CITATIONS
1303	Needle-like CoP/rGO growth on nickel foam as an efficient electrocatalyst for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 9690-9698.	3.8	34
1304	One-step synthesis of interwoven MoS ₂ -CoNi ₂ S ₄ heterostructures as high-activity water oxidation electrocatalysts. <i>Catalysis Today</i> , 2021, 364, 132-139.	2.2	11
1305	On the Stability of Co ₃ O ₄ Oxygen Evolution Electrocatalysts in Acid. <i>ChemCatChem</i> , 2021, 13, 459-467.	1.8	32
1306	Multicomponent Co ₉ S ₈ @MoS ₂ nanohybrids as a novel trifunctional electrocatalyst for efficient methanol electrooxidation and overall water splitting. <i>Journal of Colloid and Interface Science</i> , 2021, 586, 538-550.	5.0	45
1307	CO ₂ -emission-free electrocatalytic CH ₃ OH selective upgrading with high productivity at large current densities for energy saved hydrogen co-generation. <i>Nano Energy</i> , 2021, 80, 105530.	8.2	76
1308	Metal-organic frameworks-derived Ru-doped Co ₂ P/N-doped carbon composite nanosheet arrays as bifunctional electrocatalysts for hydrogen evolution and urea oxidation. <i>Chemical Engineering Journal</i> , 2021, 408, 127308.	6.6	99
1309	Electrochemical synergies of Fe-Ni bimetallic MOF CNTs catalyst for OER in water splitting. <i>Journal of Alloys and Compounds</i> , 2021, 850, 156583.	2.8	139
1310	Electrocatalytic Hydrogen Production Trilogy. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 19550-19571.	7.2	220
1311	Iron-group electrocatalysts for ambient nitrogen reduction reaction in aqueous media. <i>Nano Research</i> , 2021, 14, 555-569.	5.8	137
1312	Recent advancements in MOF based catalysts for applications in electrochemical and photoelectrochemical water splitting: A review. <i>International Journal of Energy Research</i> , 2021, 45, 1190-1226.	2.2	133
1313	Electronic Structure Tuning of 2D Metal (Hydr)oxides Nanosheets for Electrocatalysis. <i>Small</i> , 2021, 17, e2002240.	5.2	90
1314	Proton exchange membrane and bio-Fenton micro fuel cells for energy harvesting, gas leakage detection, and dye degradation. <i>RSC Advances</i> , 2021, 11, 12720-12728.	1.7	3
1315	Controlled growth of porous oxygen-deficient NiCo ₂ O ₄ nanobelts as high-efficiency electrocatalysts for oxygen evolution reaction. <i>Catalysis Science and Technology</i> , 2021, 11, 264-271.	2.1	11
1316	Constructing NiSe ₂ @MoS ₂ nano-heterostructures on a carbon fiber paper for electrocatalytic oxygen evolution. <i>RSC Advances</i> , 2021, 11, 26928-26936.	1.7	9
1317	Core-shell Cu _{1.94} S-MnS nanoheterostructures synthesized by cation exchange for enhanced photocatalytic hydrogen evolution. <i>CrystEngComm</i> , 2021, 23, 6291-6299.	1.3	11
1318	High-performance anion exchange membrane alkaline seawater electrolysis. <i>Journal of Materials Chemistry A</i> , 2021, 9, 9586-9592.	5.2	67
1319	Ni-CoFe ₂ O ₄ electrocatalyst prepared on Ni foam by one-step hydrothermal method for efficient overall water splitting. <i>Journal of Materials Science</i> , 2021, 56, 8575-8587.	1.7	7
1320	In situ transformation of sea urchin-like Ni ₃ Co ₂ P@NF as an efficient bifunctional electrocatalyst for overall water splitting. <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 1951-1961.	1.1	9

#	ARTICLE	IF	CITATIONS
1321	Design strategies toward transition metal selenide-based catalysts for electrochemical water splitting. <i>Sustainable Energy and Fuels</i> , 2021, 5, 1347-1365.	2.5	30
1322	Metal-organic frameworks and their derivatives as electrocatalysts for the oxygen evolution reaction. <i>Chemical Society Reviews</i> , 2021, 50, 2663-2695.	18.7	333
1323	Sacrificial species approach to designing robust transition metal phosphide cathodes for alkaline water electrolysis in discontinuous operation. <i>Journal of Materials Chemistry A</i> , 2021, 9, 16713-16724.	5.2	13
1324	A morphology controlled surface sulfurized CoMn_2O_4 microspike electrocatalyst for water splitting with excellent OER rate for binder-free electrocatalytic oxygen evolution. <i>Journal of Materials Chemistry A</i> , 2021, 9, 12255-12264.	5.2	58
1325	Nanostructured RuO_2 - Co_3O_4 @ RuCo -EO with low Ru loading as a high-efficiency electrochemical oxygen evolution catalyst. <i>RSC Advances</i> , 2021, 11, 11779-11785.	1.7	5
1326	2D-structured V-doped Ni(Co,Fe) phosphides with enhanced charge transfer and reactive sites for highly efficient overall water splitting electrocatalysts. <i>Journal of Materials Chemistry A</i> , 2021, 9, 12203-12213.	5.2	45
1327	Synthesis of iron and vanadium co-doped mesoporous cobalt oxide: An efficient and robust catalysts for electrochemical water oxidation. <i>International Journal of Energy Research</i> , 2021, 45, 9422-9437.	2.2	12
1328	Organically Capped Iridium Nanoparticles as High-Performance Bifunctional Electrocatalysts for Full Water Splitting in Both Acidic and Alkaline Media: Impacts of Metal-Ligand Interfacial Interactions. <i>ACS Catalysis</i> , 2021, 11, 1179-1188.	5.5	65
1329	Surface self-reconstruction of nickel foam triggered by hydrothermal corrosion for boosted water oxidation. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 1501-1508.	3.8	40
1330	Cobalt-Oxo Complexes. , 2021, , 825-845.		0
1331	Fluorination activates the basal plane HER activity of ReS_2 : a combined experimental and theoretical study. <i>Journal of Materials Chemistry A</i> , 2021, 9, 14451-14458.	5.2	21
1332	Layered double hydroxide-based electrocatalysts for the oxygen evolution reaction: identification and tailoring of active sites, and superaerophobic nanoarray electrode assembly. <i>Chemical Society Reviews</i> , 2021, 50, 8790-8817.	18.7	331
1333	Solar-assisted co-electrolysis of glycerol and water for concurrent production of formic acid and hydrogen. <i>Journal of Materials Chemistry A</i> , 2021, 9, 19975-19983.	5.2	18
1334	Electrochemical synthesis of core-shell nanoparticles by seed-mediated selective deposition. <i>Chemical Science</i> , 2021, 12, 13557-13563.	3.7	8
1335	Controllable atomic defect engineering in layered $\text{Ni}_x\text{Fe}_{1-x}(\text{OH})_2$ nanosheets for electrochemical overall water splitting. <i>Journal of Materials Chemistry A</i> , 2021, 9, 14432-14443.	5.2	84
1336	Electrochemical biomass upgrading on CoOOH nanosheets in a hybrid water electrolyzer. <i>Green Chemistry</i> , 2021, 23, 2525-2530.	4.6	31
1337	Electrokinetic Analysis of Methanol-Assisted Water Oxidation on Silver Oxide Supported Alumina Nanopowders. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
1338	Earth-Abundant Amorphous Electrocatalysts for Electrochemical Hydrogen Production: A Review. <i>Advanced Energy and Sustainability Research</i> , 2021, 2, 2000071.	2.8	30

#	ARTICLE	IF	CITATIONS
1339	Bimetallic Metal-Organic Framework-Derived Graphitic Carbon-Coated Small Co/VN Nanoparticles as Advanced Trifunctional Electrocatalysts. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 2462-2471.	4.0	27
1340	Hierarchical sheet-on-sheet heterojunction array of a $\text{Ni}(\text{OH})_2/\text{Fe}(\text{OH})_3$ self-supporting anode for effective overall alkaline water splitting. <i>Dalton Transactions</i> , 2021, 50, 12547-12554.	1.6	11
1341	A-site perovskite oxides: an emerging functional material for electrocatalysis and photocatalysis. <i>Journal of Materials Chemistry A</i> , 2021, 9, 6650-6670.	5.2	146
1342	Nanostructured multifunctional electrocatalysts for efficient energy conversion systems: Recent perspectives. <i>Nanotechnology Reviews</i> , 2021, 10, 137-157.	2.6	28
1343	Porphyrim-based frameworks for oxygen electrocatalysis and catalytic reduction of carbon dioxide. <i>Chemical Society Reviews</i> , 2021, 50, 2540-2581.	18.7	249
1344	Self-Supported Nickel-Iron Layered Double Hydroxide and Multi-Walled Carbon Nanotube Composite as a Bifunctional Catalyst for Highly Efficient Overall Water Splitting. <i>Nano</i> , 2021, 16, 2150003.	0.5	2
1345	Morphological and reactive optimization of $\text{g-C}_3\text{N}_4$ -derived Co,N-codoped carbon nanotubes for hydrogen evolution reaction. <i>New Journal of Chemistry</i> , 2021, 45, 6308-6314.	1.4	4
1346	Hierarchical fibrous bimetallic electrocatalyst based on ZnO-MoS ₂ composite nanostructures as high performance for hydrogen evolution reaction. <i>Journal of Electroanalytical Chemistry</i> , 2021, 883, 115061.	1.9	19
1347	Designing High-Valence Metal Sites for Electrochemical Water Splitting. <i>Advanced Functional Materials</i> , 2021, 31, 2009779.	7.8	195
1348	Thermal Puffing Promoting the Synthesis of N-Doped Hierarchical Porous Carbon-Co ₂ Composites for Alkaline Water Reduction. <i>ACS Omega</i> , 2021, 6, 6474-6481.	1.6	3
1349	Interface and composition engineering of vanadium doped cobalt nickel sulfide/phosphide heterostructure for efficient water splitting. <i>Electrochimica Acta</i> , 2021, 368, 137602.	2.6	18
1350	Mo-doping induced edge-rich cobalt iron oxide ultrathin nanomeshes as efficient bifunctional electrocatalysts for overall water splitting. <i>Electrochimica Acta</i> , 2021, 368, 137651.	2.6	22
1351	Controlled Synthesis and Structure Engineering of Transition Metal-Based Nanomaterials for Oxygen and Hydrogen Electrocatalysis in Zinc-Air Battery and Water-Splitting Devices. <i>ChemSusChem</i> , 2021, 14, 1659-1673.	3.6	12
1352	Heterogenization of Ionic liquid Boosting Electrochemical Oxygen Reduction Performance of Co ₃ O ₄ Supported on Graphene Oxide. <i>ChemCatChem</i> , 2021, 13, 1546-1551.	1.8	6
1353	Unravelling the Origin of Enhanced Electrochemical Performance in CoSe ₂ -MoSe ₂ Interfaces. <i>ChemCatChem</i> , 2021, 13, 2017-2024.	1.8	7
1354	Electrochemically Controlled Synthesis of Ultrathin Nickel Hydroxide Nanosheets for Electrocatalytic Oxygen Evolution. <i>Inorganic Chemistry</i> , 2021, 60, 3365-3374.	1.9	24
1355	Heteroatom (N, O, and S)-Based Biomolecule-Functionalized Graphene Oxide: A Bifunctional Electrocatalyst for Enhancing Hydrazine Oxidation and Oxygen Reduction Reactions. <i>Energy & Fuels</i> , 2021, 35, 6823-6834.	2.5	34
1357	Synthesis of Iron Phosphide Nanoclusters by an Electroless Plating Method for Enhanced Oxygen Evolution Reaction. <i>Journal of Electronic Materials</i> , 2021, 50, 3071-3077.	1.0	4

#	ARTICLE	IF	CITATIONS
1358	Recent Progress in Cost-effective and Stable AuAg/Cu-nanostructured Catalyst for Electrochemical Water Splitting. Applied Science and Convergence Technology, 2021, 30, 65-69.	0.3	1
1359	Fabrication of highly dispersed Mo_2C coupled with Co-Ni via self- Ni -template as bifunctional electrocatalysts. International Journal of Energy Research, 2021, 45, 10989-11001.	2.2	12
1360	Construction of interfacial engineering on CoP nanowire arrays with CoFe-LDH nanosheets for enhanced oxygen evolution reaction. FlatChem, 2021, 26, 100225.	2.8	25
1361	Boosting oxygen evolution through phase and electronic modulation of highly dispersed tungsten carbide with nickel doping. Journal of Colloid and Interface Science, 2021, 585, 258-266.	5.0	14
1362	Three-dimensional Porous Co Doped VN Nanosheet Arrays as Cathode Electrode for Alkaline Water Electrolysis. ChemCatChem, 2021, 13, 2444-2450.	1.8	7
1363	Novel 3D graphene ornamented with CoO nanoparticles as an efficient bifunctional electrocatalyst for oxygen and hydrogen evolution reactions. Materials Chemistry and Physics, 2021, 261, 124237.	2.0	14
1364	Modulating electronic structure of metal-organic frameworks by introducing atomically dispersed Ru for efficient hydrogen evolution. Nature Communications, 2021, 12, 1369.	5.8	360
1365	Rejuvenating the Geometric Electrocatalytic OER Performance of Crystalline Co_3O_4 by Microstructure Engineering with Sulfate. Chemistry - an Asian Journal, 2021, 16, 988-998.	1.7	5
1366	$\text{Co}_3\text{P}@ \text{Co}_3\text{O}_4$ Nanocomposite on Cobalt Foam as Efficient Bifunctional Electrocatalysts for Hydrazine-Assisted Hydrogen Production. ACS Sustainable Chemistry and Engineering, 2021, 9, 4688-4701.	3.2	45
1367	Activating Edge-Mo of 2H-MoS_2 via Coordination with Pyridinic $\text{N}^{\ominus}\text{C}$ for pH-Universal Hydrogen Evolution Electrocatalysis. ACS Catalysis, 2021, 11, 4486-4497.	5.5	74
1368	<i>In Situ</i> Synthesis of $\text{Co}_3\text{O}_4/\text{CoFe}_2\text{O}_4$ Derived from a Metal-Organic Framework on Nickel Foam: High-Performance Electrocatalyst for Water Oxidation. ACS Applied Energy Materials, 2021, 4, 2951-2959.	2.5	34
1369	Priority of Mixed Diamine Ligands in Cobalt Dithiolene Complex-Catalyzed H_2 Evolution: A Theoretical Study. Inorganic Chemistry, 2021, 60, 6688-6695.	1.9	1
1370	Hydrogen Nanometrology in Advanced Carbon Nanomaterial Electrodes. Nanomaterials, 2021, 11, 1079.	1.9	3
1371	Hierarchical Co and Nb dual-doped MoS_2 nanosheets shelled micro- TiO_2 hollow spheres as effective multifunctional electrocatalysts for HER, OER, and ORR. Nano Energy, 2021, 82, 105750.	8.2	220
1372	Unusual Formation of $\text{CoS}_{0.61}\text{Se}_{0.25}$ Anion Solid Solution with Sulfur Defects to Promote Electrocatalytic Water Reduction. ACS Applied Energy Materials, 2021, 4, 2976-2982.	2.5	12
1373	Simultaneous synthesis of bimetallic@3D graphene electrocatalyst for HER and OER. Frontiers of Materials Science, 2021, 15, 305-315.	1.1	3
1374	Ultrasound assisted synthesis of highly active nanoflower-like CoMoS_4 electrocatalyst for oxygen and hydrogen evolution reactions. Ultrasonics Sonochemistry, 2021, 72, 105454.	3.8	43
1375	Accelerating H_2 Evolution by Anodic Semi-dehydrogenation of Tetrahydroisoquinolines in Water over Co_3O_4 Nanoribbon Arrays Decorated Nickel Foam. Chemistry - A European Journal, 2021, 27, 7502-7506.	1.7	11

#	ARTICLE	IF	CITATIONS
1376	Three-dimensional flower-like WP2 nanowire arrays grown on Ni foam for full water splitting. <i>Applied Surface Science</i> , 2021, 546, 148926.	3.1	18
1377	Electrodeposited nanostructured flakes of cobalt, manganese and nickel-based sulfide (CoMnNiS) for electrocatalytic alkaline oxygen evolution reaction (OER). <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 12292-12307.	1.1	16
1378	Highly active sites of Pt/Er dispersed N-doped hierarchical porous carbon for trifunctional electrocatalyst. <i>Chemical Engineering Journal</i> , 2021, 409, 128205.	6.6	94
1379	Copper telluride nanowires for high performance electrocatalytic water oxidation in alkaline media. <i>Journal of Power Sources</i> , 2021, 491, 229628.	4.0	23
1380	Promoting the electrocatalytic activity of platinum film for hydrogen evolution reaction by phosphorus doping. <i>Materials Chemistry and Physics</i> , 2021, 263, 124412.	2.0	5
1381	In Situ Synthesis of Superhydrophilic Amorphous NiFe Prussian Blue Analogues for the Oxygen Evolution Reaction at a High Current Density. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 5693-5704.	3.2	26
1382	Morphological and Elemental Investigations on Co-Fe-O Thin Films Deposited by Pulsed Laser Deposition for Alkaline Water Oxidation: Charge Exchange Efficiency as the Prevailing Factor in Comparison with the Adsorption Process. <i>Catalysis Letters</i> , 2022, 152, 438-451.	1.4	4
1383	Stable, Efficient, Copper Coordination Polymer-Derived Heterostructured Catalyst for Oxygen Evolution under pH-Universal Conditions. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 25461-25471.	4.0	7
1384	An Inclusive Review on Recent Advancements of Cadmium Sulfide Nanostructures and its Hybrids for Photocatalytic and Electrocatalytic Applications. <i>Molecular Catalysis</i> , 2021, 508, 111575.	1.0	24
1385	Recent progress in doping-induced structural and electronic modification in Cu-SnCo interconnected network enhanced efficient performance evidence for the hydrogen evolution reaction: current state and prospects. <i>Journal of Porous Materials</i> , 2021, 28, 1335-1344.	1.3	2
1386	A setaria-shaped Pd/Ni-NC electrocatalyst for high efficient hydrogen evolution reaction. <i>Chemical Engineering Journal Advances</i> , 2021, 6, 100101.	2.4	9
1387	Bimetallic NiCo-NiCoO ₂ nano-heterostructures embedded on copper foam as a self-supported bifunctional electrode for water oxidation and hydrogen production in alkaline media. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 18936-18948.	3.8	35
1388	Superficial state regulation in double-anion-coupled Ni nanostructure for efficient hydrogen evolution reaction. <i>Journal Physics D: Applied Physics</i> , 2021, 54, 285502.	1.3	3
1389	Electronic structure modulation of CoSe ₂ nanowire arrays by tin doping toward efficient hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 17133-17142.	3.8	22
1390	Anion engineering of hierarchical Co-A (A=O, Se, P) hexagrams for efficient electrocatalytic oxygen evolution reaction. <i>Chinese Chemical Letters</i> , 2021, 32, 3241-3244.	4.8	16
1391	Effect of Co Doping on Electrocatalytic Performance of Co-NiS ₂ /CoS ₂ Heterostructures. <i>Nanomaterials</i> , 2021, 11, 1245.	1.9	3
1392	A mini-review of noble-metal-free electrocatalysts for overall water splitting in non-alkaline electrolytes. <i>Materials Reports Energy</i> , 2021, 1, 100024.	1.7	27
1393	Carbonized Wood Decorated with Cobalt-Nickel Binary Nanoparticles as a Low-Cost and Efficient Electrode for Water Splitting. <i>Advanced Functional Materials</i> , 2021, 31, 2010951.	7.8	54

#	ARTICLE	IF	CITATIONS
1394	Boosting Hydrazine Oxidation Reaction on CoP/Co Mottâ€“Schottky Electrocatalyst through Engineering Active Sites. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 4849-4856.	2.1	27
1395	Integration of Ni Doping and a Mo₂C/MoC Heterojunction for Hydrogen Evolution in Acidic and Alkaline Conditions. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 22646-22654.	4.0	44
1396	Recent advances in MXene-based nanoarchitectures as electrode materials for future energy generation and conversion applications. <i>Coordination Chemistry Reviews</i> , 2021, 435, 213806.	9.5	97
1397	Electrocatalysts for the hydrogen evolution reaction in alkaline and neutral media. A comparative review. <i>Journal of Power Sources</i> , 2021, 493, 229708.	4.0	151
1398	Activating Titanium Metal with H₂ Plasma for the Hydrogen Evolution Reaction. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 24682-24691.	4.0	20
1399	Unveiling the role of surface Pâ€“O group in P-doped Co3O4 for electrocatalytic oxygen evolution by On-chip micro-device. <i>Nano Energy</i> , 2021, 83, 105748.	8.2	46
1400	Improving oxygen vacancies by cobalt doping in MoO₂ nanorods for efficient electrocatalytic hydrogen evolution reaction. <i>Nano Select</i> , 2021, 2, 2148-2158.	1.9	9
1401	Regulating Intrinsic Electronic Structures of Transition-Metal-Based Catalysts and the Potential Applications for Electrocatalytic Water Splitting. , 2021, 3, 752-780.		62
1402	Syntheses, characterizations and water-electrolysis properties of 2D Î±- and Î²-PdSeO3 bulk and nanosheet semiconductors. <i>Journal of Solid State Chemistry</i> , 2021, 297, 122018.	1.4	1
1403	CoP-anchored high N-doped carbon@graphene sheet as bifunctional electrocatalyst for efficient overall water splitting. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 18224-18232.	3.8	18
1404	Formation of hierarchical Co-decorated Mo2C hollow spheres for enhanced hydrogen evolution. <i>Rare Metals</i> , 2021, 40, 2785-2792.	3.6	47
1405	An efficient way to improve water splitting electrocatalysis by electrodepositing cobalt phosphide nanosheets onto copper nanowires. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 19421-19432.	3.8	10
1406	N-doped hollow carbon spheres with controllable shell numbers for high-performance electrical double-layer capacitors. <i>Journal of Power Sources</i> , 2021, 493, 229679.	4.0	23
1407	Ni-based 3D hierarchical heterostructures achieved by selective electrodeposition as a bifunctional electrocatalyst for overall water splitting. <i>Electrochimica Acta</i> , 2021, 379, 138042.	2.6	26
1408	Cyanogel and its derived-materials: properties, preparation methods, and electrochemical applications. <i>Materials Today Energy</i> , 2021, 20, 100701.	2.5	7
1409	Interface engineering for enhancing electrocatalytic oxygen evolution reaction of CoS/CeO2 heterostructures. <i>Frontiers of Chemical Science and Engineering</i> , 2022, 16, 376-383.	2.3	6
1410	Facile synthesis of SnO2 nanostructures for enhanced electrochemical hydrogen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2021, 865, 158597.	2.8	15
1411	ZIF-12/Fe-Cu LDH Composite as a High Performance Electrocatalyst for Water Oxidation. <i>Frontiers in Chemistry</i> , 2021, 9, 686968.	1.8	12

#	ARTICLE	IF	CITATIONS
1412	Strategies to improve cobalt-based electrocatalysts for electrochemical water splitting. <i>Journal of Catalysis</i> , 2021, 398, 54-66.	3.1	58
1413	Acid-durable, high-performance cobalt phosphide catalysts for hydrogen evolution in proton exchange membrane water electrolysis. <i>International Journal of Energy Research</i> , 2021, 45, 16842-16855.	2.2	12
1414	Imidazolate-Framework Bimetal Electrocatalysts with a Mixed-Valence Surface Anchored on an rGO Matrix for Oxygen Reduction, Water Splitting, and Dye Degradation. <i>ACS Omega</i> , 2021, 6, 16029-16042.	1.6	16
1415	In-situ generated Ni-MOF/LDH heterostructures with abundant phase interfaces for enhanced oxygen evolution reaction. <i>Applied Catalysis B: Environmental</i> , 2021, 286, 119906.	10.8	133
1416	Direct growth of nickel-doped cobalt phosphide nanowire cluster on carbon cloth for efficient hydrogen evolution reaction. <i>Electrochemistry Communications</i> , 2021, 127, 107051.	2.3	11
1417	A review on cobalt phosphate-based materials as emerging catalysts for water splitting. <i>Ceramics International</i> , 2021, 47, 16385-16401.	2.3	40
1418	Co/WC@NC electrocatalysts derived from polyoxometalates (POM) for efficient hydrogen evolution. <i>Nanotechnology</i> , 2021, 32, 375602.	1.3	8
1419	Comparative study on supercapacitive and oxygen evolution reaction applications of hollow nanostructured cobalt sulfides. <i>Nanotechnology</i> , 2021, 32, 385401.	1.3	6
1420	Structural advantages and enhancement strategies of heterostructure water-splitting electrocatalysts. <i>Cell Reports Physical Science</i> , 2021, 2, 100443.	2.8	66
1421	Corrosion engineering derived Ga doped CoSe ₂ nanosheets intrinsically active for oxygen evolution reaction. <i>Journal of Power Sources</i> , 2021, 497, 229895.	4.0	23
1422	PdCo alloys@N-doped porous carbon supported on reduced graphene oxide as a highly efficient electrocatalyst for hydrogen evolution reaction. <i>Journal of Materials Science</i> , 2021, 56, 14222-14233.	1.7	15
1423	Cobalt Vanadium Oxide Nanoclusters for Oxygen Evolution Reaction. <i>ECS Journal of Solid State Science and Technology</i> , 2021, 10, 071003.	0.9	5
1424	Synthesis of hyperbranched Co-Ni-P nanocrystals and their splitting degree dependent HER performances. <i>Electrochimica Acta</i> , 2021, 381, 138286.	2.6	14
1425	Carbon-Based Catalysts for Selective Electrochemical Nitrogen-to-Ammonia Conversion. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 7687-7703.	3.2	41
1426	Versatile noble-metal-free electrocatalyst synergistically accelerating for the highly comprehensive understanding evidence for Electrochemical Water Splitting: Future Achievements & Perspectives. <i>Surfaces and Interfaces</i> , 2021, 24, 101104.	1.5	10
1427	Efficient oxygen evolution reaction in SrCo _{0.8} Fe _{0.2} O _{3-δ} perovskite and surface reconstruction for practical zinc-air batteries. <i>Applied Surface Science</i> , 2021, 552, 149509.	3.1	16
1429	Iodide Oxidation Reaction Catalyzed by Ruthenium-Tin Surface Alloy Oxide for Efficient Production of Hydrogen and Iodine Simultaneously. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 8803-8812.	3.2	14
1430	Photoelectrochemical Water-Splitting Using Cu-Based Electrodes for Hydrogen Production: A Review. <i>Advanced Materials</i> , 2021, 33, e2007285.	11.1	127

#	ARTICLE	IF	CITATIONS
1431	Metal hydride mediated water splitting: Electrical energy saving and decoupled H ₂ /O ₂ generation. <i>Materials Today</i> , 2021, 47, 16-24.	8.3	13
1432	Self-Supporting Electrodes for Gas-Involved Key Energy Reactions. <i>Advanced Functional Materials</i> , 2021, 31, 2104620.	7.8	39
1433	A universal CoO/CoSe ₂ heterostructure electrocatalyst towards hydrogen evolution reaction via in-situ partial surface-oxidation-selenization method. <i>Materials Chemistry and Physics</i> , 2021, 267, 124644.	2.0	9
1435	NiCo ₂ S ₄ microspheres grown on N, S co-doped reduced graphene oxide as an efficient bifunctional electrocatalyst for overall water splitting in alkaline and neutral pH. <i>Nano Research</i> , 2022, 15, 950-958.	5.8	75
1436	Dual-Phase Carbon with Co Single Atoms and Nanoparticles as a Bifunctional Oxygen Electrocatalyst for Rechargeable Zn-Air Batteries. <i>Advanced Functional Materials</i> , 2021, 31, 2103360.	7.8	107
1437	Ambient synthesis of iron-nickel amorphous coordination polymer nanosheet arrays for highly efficient oxygen evolution electrocatalysis. <i>Journal of Alloys and Compounds</i> , 2021, 868, 159218.	2.8	8
1438	Bifunctional Electrolyzation for Simultaneous Organic Pollutant Degradation and Hydrogen Generation. <i>ACS ES&T Engineering</i> , 2021, 1, 1360-1368.	3.7	16
1439	MoS ₂ Decoration Followed by P Inclusion over Ni-Co Bimetallic Metal-Organic Framework-Derived Heterostructures for Water Splitting. <i>Inorganic Chemistry</i> , 2021, 60, 10772-10780.	1.9	22
1440	Regulating the electronic structure of ultrathin Ni-based chalcogenide nanosheets through iron modification towards high electrocatalytic activities. <i>Chemical Engineering Journal</i> , 2021, 416, 129098.	6.6	28
1441	Co-Ni alloy nanoparticles supported by carbon nanofibers for hydrogen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2021, 868, 159172.	2.8	24
1442	High-Performance Ni ₃ Co ₃ O ₄ /Ti ₃ C ₂ T _x -HT Interfacial Nanohybrid for Electrochemical Overall Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 34308-34319.	4.0	24
1443	Do multinuclear 3d metal catalysts achieve O-O bond formation via radical coupling or via water nucleophilic attack? WNA leads the way in [Co ₄ O ₄] ⁿ⁺ . <i>Chem Catalysis</i> , 2021, 1, 407-422.	2.9	9
1444	Microwave sintered porous CoCrFeNiMo high entropy alloy as an efficient electrocatalyst for alkaline oxygen evolution reaction. <i>Journal of Materials Science and Technology</i> , 2021, 79, 171-177.	5.6	73
1445	A-site Cation Defects (Ba _{0.5} Sr _{0.5}) _{1-x} Co ₁₄ O ₂₈ Perovskites as Active Oxygen Evolution Reaction Catalyst in Alkaline Electrolyte. <i>Chinese Journal of Chemistry</i> , 2021, 39, 2692-2698.	2.6	14
1446	Ni Nanoparticles Grown on SiO ₂ Supports Using a Carbon Interlayer Sacrificial Strategy for Chemoselective Hydrogenation of Nitrobenzene and <i>m</i> -Cresol. <i>ACS Applied Nano Materials</i> , 2021, 4, 9353-9360.	2.4	4
1447	Synthesis of Co ₄ S ₃ /Co ₉ S ₈ nanosheets and comparison study toward the OER properties induced by different metal ion doping. <i>Chinese Chemical Letters</i> , 2022, 33, 1395-1402.	4.8	25
1448	Scalable Synthesis of Tungsten Disulfide Nanosheets for Alkali-Acid Electrocatalytic Sulfion Recycling and H ₂ Generation. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 21550-21557.	7.2	82
1449	MOF-Derived N-Doped Carbon-Encapsulated Metal/Alloy Electrocatalysts to Tune the Electronic Structure and Reactivity of Carbon Active Sites. <i>Chinese Journal of Chemistry</i> , 2021, 39, 2626-2637.	2.6	18

#	ARTICLE	IF	CITATIONS
1450	Nanoscale hetero-structured Co ²⁺ /Co(OH) ₂ composite/amorphous carbon core/shell bi-functional electrocatalysts electrochemically evolved from metastable hexagonal-phase cobalt for overall water splitting. <i>Electrochimica Acta</i> , 2021, 386, 138517.	2.6	8
1451	Pyrogallol[4]arene Coordination Nanocapsule Micelle as Bioinspired Water Reduction Catalyst. , 2021, 3, 1315-1320.		4
1452	Nano-manufacturing of Co(OH) ₂ @NC for efficient oxygen evolution/reduction reactions. <i>Journal of Materials Science and Technology</i> , 2021, 81, 131-138.	5.6	24
1453	Strategies for the enhanced water splitting activity over metal-organic frameworks-based electrocatalysts and photocatalysts. <i>Materials Today Nano</i> , 2021, 15, 100124.	2.3	28
1454	One-Pot Crystallization of 2D and 3D Cobalt-Based Metal-Organic Frameworks and Their High-Performance Electrocatalytic Oxygen Evolution. <i>Inorganic Chemistry</i> , 2021, 60, 12685-12690.	1.9	8
1455	Insight into the Structural Evolution of the Cobalt Oxides Nanoparticles upon Reduction Process: An <i>In Situ</i> Transmission Electron Microscopy Study. <i>ChemCatChem</i> , 2021, 13, 4350-4354.	1.8	2
1456	Scalable Synthesis of Tungsten Disulfide Nanosheets for Alkali-Acid Electrocatalytic Sulfion Recycling and H ₂ Generation. <i>Angewandte Chemie</i> , 2021, 133, 21720-21727.	1.6	4
1457	Effect of Infrared Oxide Catalysts on Water Splitting for Green Energy. <i>ChemElectroChem</i> , 2021, 8, 2944-2949.	1.7	6
1458	Activation of peroxymonosulfate by metal-organic frameworks derived Co _{1+x} Fe ₂ xO ₄ for organic dyes degradation: A new insight into the synergy effect of Co and Fe. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 105412.	3.3	12
1459	Activity and stability of Ir-based gas diffusion electrode for proton exchange membrane water electrolyzer. <i>Chemical Engineering Journal</i> , 2021, 420, 127696.	6.6	14
1460	Density Functional Theory and Molecular Dynamics Simulations of Nanoporous Graphene Membranes for Hydrogen Separation. <i>ACS Applied Nano Materials</i> , 2021, 4, 9440-9448.	2.4	6
1461	Facile electrochemical synthesis of Ni-Co-B film on Cu sheet for dual-electrocatalysis of hydrogen and oxygen evolution reactions. <i>Electrochimica Acta</i> , 2021, 389, 138691.	2.6	38
1462	Quantitative Evaluation of the Activity of Low-Spin Tetraivalent Nickel Ion Sites for the Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2021, 4, 10731-10738.	2.5	5
1463	Hierarchical Urchin-like Cobalt-Doped CuO for Enhanced Electrocatalytic Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2021, 4, 9412-9419.	2.5	16
1464	Recent development in electrocatalysts for hydrogen production through water electrolysis. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 32284-32317.	3.8	236
1465	Synergistic phosphorized NiFeCo and MXene interaction inspired the formation of high-valence metal sites for efficient oxygen evolution. <i>Journal of Materials Science and Technology</i> , 2022, 106, 90-97.	5.6	35
1466	FeNi ₂ P three-dimensional oriented nanosheet array bifunctional catalysts with better full water splitting performance than the full noble metal catalysts. <i>Journal of Colloid and Interface Science</i> , 2022, 608, 2192-2202.	5.0	20
1467	Laser-induced graphene electrodes for electrochemical ion sensing, pesticide monitoring, and water splitting. <i>Analytical and Bioanalytical Chemistry</i> , 2021, 413, 6201-6212.	1.9	16

#	ARTICLE	IF	CITATIONS
1468	Self-supported amorphous iridium oxide catalysts for highly efficient and durable oxygen evolution reaction in acidic media. <i>Electrochimica Acta</i> , 2021, 391, 138955.	2.6	19
1469	Cryptomelane nanorods coated with Ni ion doped Birnessite polymorphs as bifunctional efficient catalyst for the oxygen evolution reaction and degradation of organic contaminants. <i>Applied Organometallic Chemistry</i> , 2021, 35, e6432.	1.7	10
1470	Design and mechanistic study of advanced cobalt-based nanostructured catalysts for electrochemical carbon dioxide reduction. <i>Applied Catalysis B: Environmental</i> , 2022, 301, 120761.	10.8	16
1471	Electrodeposited of ultrathin VO _x -doped NiFe layer on porous NiCo phosphide for efficient overall water splitting. <i>Applied Physics Letters</i> , 2021, 119, .	1.5	6
1472	Mesoporous WC x Films with NiO-Protected Surface: Highly Active Electrocatalysts for the Alkaline Oxygen Evolution Reaction. <i>ChemSusChem</i> , 2021, 14, 4708-4717.	3.6	3
1473	Porous metal-organic framework (MOF)-based and MOF-derived electrocatalytic materials for energy conversion. <i>Materials Today Energy</i> , 2021, 21, 100816.	2.5	45
1474	La/Ce doped CoFe layered double hydroxides (LDH) highly enhanced oxygen evolution performance of water splitting. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 625, 126896.	2.3	31
1475	Novel monoclinic ABO ₄ oxide with single-crystal structure as next generation electrocatalyst for oxygen evolution reaction. <i>Chemical Engineering Journal</i> , 2021, 420, 130492.	6.6	12
1476	Co ₃ O ₄ @carbon with high Co ²⁺ /Co ³⁺ ratios derived from ZIF-67 supported on N-doped carbon nanospheres as stable bifunctional oxygen catalysts. <i>Materials Today Energy</i> , 2021, 21, 100737.	2.5	25
1477	Electrodeposited Cobalt Stannide: A Highly Efficient Oxygen Evolution Reaction Catalyst. <i>Journal of the Electrochemical Society</i> , 2021, 168, 096505.	1.3	3
1478	Charge Separated One-Dimensional Hybrid Cobalt/Nickel Phosphonate Frameworks: A Facile Approach to Design Bifunctional Electrocatalyst for Oxygen Evolution and Hydrogen Evolution Reactions. <i>Inorganic Chemistry</i> , 2021, 60, 15106-15111.	1.9	21
1479	The electronic properties and catalytic activity of precious-metals adsorbed silicene for hydrogen evolution reaction and oxygen evolution reaction. <i>Applied Surface Science</i> , 2021, 560, 150041.	3.1	27
1480	Electrocatalytic Hydrogen Evolution Reaction Related to Nanochannel Materials. <i>Small Structures</i> , 2021, 2, 2100076.	6.9	36
1481	Chiral-induced enhanced electrocatalytic behaviour of cysteine coated bifunctional Au-Ni bilayer thin film device for water splitting application. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 42160-42170.	3.8	8
1482	Fe ₂ P nanoparticles embedded on Ni ₂ P nanosheets as highly efficient and stable bifunctional electrocatalysts for water splitting. <i>Journal of Materials Science and Technology</i> , 2022, 105, 266-273.	5.6	29
1483	Recent Advances in Non-Enzymatic Glucose Sensors Based on Metal and Metal Oxide Nanostructures for Diabetes Management- A Review. <i>Frontiers in Chemistry</i> , 2021, 9, 748957.	1.8	60
1484	Improved catalytic efficiency and stability by surface activation in Fe-based amorphous alloys for hydrogen evolution reaction in acidic electrolyte. <i>Electrochimica Acta</i> , 2021, 390, 138815.	2.6	13
1485	Electrocatalytic Oxygen Evolution Reaction in Acidic Conditions: Recent Progress and Perspectives. <i>ChemSusChem</i> , 2021, 14, 4636-4657.	3.6	28

#	ARTICLE	IF	CITATIONS
1486	Nanostructured Metal Borides for Energy-Related Electrocatalysis: Recent Progress, Challenges, and Perspectives. <i>Small Methods</i> , 2021, 5, e2100699.	4.6	47
1487	Hierarchically assembling cobalt/nickel carbonate hydroxide on copper nitride nanowires for highly efficient water splitting. <i>Applied Catalysis B: Environmental</i> , 2021, 292, 120148.	10.8	62
1488	Boron nanosheets induced microstructure and charge transfer tailoring in carbon nanofibrous mats towards highly efficient water splitting. <i>Nano Energy</i> , 2021, 88, 106246.	8.2	15
1489	Heterogeneous Co@CoO composited P, N co-doped carbon nanofibers on carbon cloth as pH-tolerant electrocatalyst for efficient oxygen evolution. <i>Journal of Alloys and Compounds</i> , 2021, 877, 160279.	2.8	16
1490	Preparation of poly(caffeic acid)-CoP nanoparticle film on electrode surface and sensitive voltammetric detection of acetaminophen. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2021, 627, 127173.	2.3	3
1491	Efficiency and stability of hydrogen production from seawater using solid oxide electrolysis cells. <i>Applied Energy</i> , 2021, 300, 117439.	5.1	38
1492	MoS ₂ CoP heterostructure loaded on N, P-doped carbon as an efficient trifunctional catalyst for oxygen reduction, oxygen evolution, and hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 34252-34263.	3.8	32
1493	Rational design of core-shell-structured CoP @FeOOH for efficient seawater electrolysis. <i>Applied Catalysis B: Environmental</i> , 2021, 294, 120256.	10.8	141
1494	Recent progress in CoP-based materials for electrochemical water splitting. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 34194-34215.	3.8	38
1495	Construction of iron doped cobalt- vanadate- cobalt oxide with metal-organic framework oriented nanoflakes for portable rechargeable zinc-air batteries powered total water splitting. <i>Nano Energy</i> , 2021, 88, 106238.	8.2	72
1496	Self-supported amorphous nickel-iron phosphorus oxides hollow spheres on Ni-Fe foam for highly efficient overall water splitting. <i>Electrochimica Acta</i> , 2021, 392, 138996.	2.6	16
1497	Heterostructured CoO/Co ₃ O ₄ nanowire array on Titanium mesh as efficient electrocatalysts for hydrogen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2021, 881, 160603.	2.8	21
1498	Facile synthesis of porous Co _x Fe _{1-x} F ₂ microcubes derived from metal-organic frameworks for ultra-stable electrochemical oxygen evolution reaction. <i>Applied Surface Science</i> , 2021, 566, 150696.	3.1	4
1499	Synergistic effects in ordered Co oxides for boosting catalytic activity in advanced oxidation processes. <i>Applied Catalysis B: Environmental</i> , 2021, 297, 120463.	10.8	30
1500	Porous MoWN/MoWC@N C Nano-octahedrons synthesized via confined carburization and vapor deposition in MOFs as efficient trifunctional electrocatalysts for oxygen reversible catalysis and hydrogen production in the same electrolyte. <i>Journal of Colloid and Interface Science</i> , 2021, 601, 626-639.	5.0	10
1501	Exceptional lattice-oxygen participation on artificially controllable electrochemistry-induced crystalline-amorphous phase to boost oxygen-evolving performance. <i>Applied Catalysis B: Environmental</i> , 2021, 297, 120484.	10.8	41
1502	Cu induced formation of dendritic CoFeCu ternary alloys on Ni foam for efficient oxygen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2021, 880, 160523.	2.8	16
1503	Understanding the activity transport nexus in water and CO ₂ electrolysis: State of the art, challenges and perspectives. <i>Chemical Engineering Journal</i> , 2021, 424, 130501.	6.6	38

#	ARTICLE	IF	CITATIONS
1504	Dual-defective Co ₃ O ₄ nanoarrays enrich target intermediates and promise high-efficient overall water splitting. <i>Chemical Engineering Journal</i> , 2021, 424, 130328.	6.6	52
1505	High-efficient and durable overall water splitting performance by interfacial engineering of Fe-doped urchin-like Ni ₂ P/Ni ₃ S ₂ heterostructure. <i>Chemical Engineering Journal</i> , 2021, 424, 130434.	6.6	49
1506	Interlayer expanded nickel-iron layered double hydroxide by intercalation with sodium dodecyl sulfate for enhanced oxygen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2021, 882, 160752.	2.8	27
1507	Hierarchical Cu/Cu ₂ O structure derived from hexagonal Cu ₉ S ₅ nanocrystal with enhanced electrocatalytic ability for hydrogen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2021, 883, 160816.	2.8	9
1508	Modulating electronic structure of cobalt phosphide porous nanofiber by ruthenium and nickel dual doping for highly-efficiency overall water splitting at high current density. <i>Applied Catalysis B: Environmental</i> , 2021, 298, 120488.	10.8	93
1509	Utilizing the charge-transfer model to design promising electrocatalysts. <i>Current Opinion in Electrochemistry</i> , 2021, 30, 100805.	2.5	4
1510	Enhanced activity promoted by amorphous metal oxyhydroxides on CeO ₂ for alkaline oxygen evolution reaction. <i>Journal of Colloid and Interface Science</i> , 2021, 604, 719-726.	5.0	7
1511	Multifunctional electrocatalysts of nickel boride nanoparticles for superior hydrogen oxidation and water splitting. <i>Materials Today Energy</i> , 2021, 22, 100846.	2.5	24
1512	Inter-doped ruthenium–nickel oxide heterostructure nanosheets with dual active centers for electrochemical-/solar-driven overall water splitting. <i>Applied Catalysis B: Environmental</i> , 2021, 298, 120611.	10.8	55
1513	Co-doped Ni ₃ S ₂ porous nanocones as high-performance bifunctional electrocatalysts in water splitting. <i>Chemical Engineering Journal</i> , 2021, 425, 130455.	6.6	42
1514	Nanostructured NaFeS ₂ as a cost-effective and robust electrocatalyst for hydrogen and oxygen evolution with reduced overpotentials. <i>Chemical Engineering Journal</i> , 2021, 426, 131315.	6.6	20
1515	Hierarchically constructed Ag nanowires shelled with ultrathin Co-LDH nanosheets for advanced oxygen evolution reaction. <i>Applied Catalysis B: Environmental</i> , 2021, 298, 120601.	10.8	67
1516	The preparation of ionic liquid based iron phosphate/CNTs composite via microwave radiation for hydrogen evolution reaction and oxygen evolution reaction. <i>Arabian Journal of Chemistry</i> , 2021, 14, 103440.	2.3	6
1517	Ag nanoparticles modified crumpled borophene supported Co ₃ O ₄ catalyst showing superior oxygen evolution reaction (OER) performance. <i>Applied Catalysis B: Environmental</i> , 2021, 298, 120529.	10.8	118
1518	Multi-functional Co ₃ O ₄ embedded carbon nanotube architecture for oxygen evolution reaction and benzoin oxidation. <i>Journal of Molecular Liquids</i> , 2021, 343, 117616.	2.3	7
1519	Remarkable synergistic effect in cobalt-iron nitride/alloy nanosheets for robust electrochemical water splitting. <i>Journal of Energy Chemistry</i> , 2022, 65, 405-414.	7.1	81
1520	CoO/MnO heterostructure on three-dimensional nickel foam as efficient electrocatalyst for oxygen evolution reaction. <i>Journal of Physics and Chemistry of Solids</i> , 2022, 160, 110373.	1.9	9
1521	In situ surface reconstruction on LaCoO ₃ leads to enhanced hydrogen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2022, 891, 161754.	2.8	11

#	ARTICLE	IF	CITATIONS
1522	Interface engineering heterostructured MoS ₂ /WS ₂ -reduced graphene Oxide for enhanced hydrogen Evolution electrocatalysts. Separation and Purification Technology, 2021, 278, 119569.	3.9	10
1523	Spatial carrier separation in cobalt phosphate deposited ZnIn ₂ S ₄ nanosheets for efficient photocatalytic hydrogen evolution. Journal of Colloid and Interface Science, 2022, 606, 317-327.	5.0	27
1524	Design of binder-free hierarchical Mo-Fe-Ni phosphides nanowires array anchored on carbon cloth with high electrocatalytic capability toward hydrogen evolution reaction. Journal of Alloys and Compounds, 2022, 891, 162064.	2.8	18
1525	Ternary duplex FeCoNi alloy prepared by cathode plasma electrolytic deposition as a high-efficient electrocatalyst for oxygen evolution reaction. Journal of Alloys and Compounds, 2022, 891, 161934.	2.8	14
1526	Reactive molecular dynamics simulations of nickel-based heterometallic catalysts for hydrogen evolution in an alkaline KOH solution. Computational Materials Science, 2022, 201, 110860.	1.4	5
1527	Energy and environmental catalysis driven by stress and temperature-variation. Journal of Materials Chemistry A, 2021, 9, 12400-12432.	5.2	44
1528	Performance and durability of anion exchange membrane water electrolyzers using down-selected polymer electrolytes. Journal of Materials Chemistry A, 2021, 9, 22670-22683.	5.2	34
1529	Boosting alkaline hydrogen evolution performance with alkaline electro-activated ultrafine candied haws-shaped PtW/Ni nanoalloys. Dalton Transactions, 2021, 50, 11099-11105.	1.6	2
1530	A cobalt oxide@polypyrrole nanocomposite as an efficient and stable electrode material for electrocatalytic water oxidation. Sustainable Energy and Fuels, 2021, 5, 4710-4723.	2.5	5
1531	Interfacial modification of Co(OH) ₂ /Co ₃ O ₄ nanosheet heterostructure arrays for the efficient oxygen evolution reaction. Catalysis Science and Technology, 2021, 11, 3706-3714.	2.1	14
1532	Nano-spinel cobalt decorated sulphur doped graphene: an efficient and durable electrocatalyst for oxygen evolution reaction and non-enzymatic sensing of H ₂ O ₂ . New Journal of Chemistry, 2021, 45, 15544-15554.	1.4	3
1533	The <i>in situ</i> derivation of a NiFe-LDH ultra-thin layer on Ni-BDC nanosheets as a boosted electrocatalyst for the oxygen evolution reaction. CrystEngComm, 2021, 23, 1172-1180.	1.3	17
1534	MOFs@Derived Carbon@Based Metal Catalysts for Energy-Related Electrocatalysis. Small, 2021, 17, e2004398.	5.2	67
1535	A Co-MOF-derived Co ₉ S ₈ @NS-C electrocatalyst for efficient hydrogen evolution reaction. RSC Advances, 2021, 11, 5947-5957.	1.7	13
1536	Emerging carbon shell-encapsulated metal nanocatalysts for fuel cells and water electrolysis. Nanoscale, 2021, 13, 15116-15141.	2.8	46
1537	Review on Synthesis and Catalytic Coupling Mechanism of Highly Active Electrocatalysts for Water Splitting. Energy Technology, 2021, 9, 2000855.	1.8	11
1538	Structural Dynamics of Ultrathin Cobalt Oxide Nanoislands under Potential Control. Advanced Functional Materials, 2021, 31, 2009923.	7.8	26
1539	Recent progress in pristine MOF-based catalysts for electrochemical hydrogen evolution, oxygen evolution and oxygen reduction. Dalton Transactions, 2021, 50, 5732-5753.	1.6	48

#	ARTICLE	IF	CITATIONS
1540	A self-supported NiCo ₂ O ₄ /Cu _x O nanoforest with electronically modulated interfaces as an efficient electrocatalyst for overall water splitting. <i>Journal of Materials Chemistry A</i> , 2021, 9, 14466-14476.	5.2	52
1541	Hierarchical Co(OH)F Superstructure Built by Low-Dimensional Substructures for Electrocatalytic Water Oxidation. <i>Advanced Materials</i> , 2017, 29, 1700286.	11.1	227
1542	Designing Self-Supported Metal-Organic Framework Derived Catalysts for Electrochemical Water Splitting. <i>Chemistry - an Asian Journal</i> , 2020, 15, 607-623.	1.7	48
1543	History, Progress, and Development of Electrocatalysis. , 2020, , 401-424.		2
1544	Perovskite Materials in Electrocatalysis. <i>Materials Horizons</i> , 2020, , 209-250.	0.3	4
1545	A novel nickel-based honeycomb electrode with microtapered holes and abundant multivacancies for highly efficient overall water splitting. <i>Applied Catalysis B: Environmental</i> , 2020, 276, 119141.	10.8	35
1546	Iron doped Ni ₃ S ₂ nanorods directly grown on FeNi ₃ foam as an efficient bifunctional catalyst for overall water splitting. <i>Chemical Engineering Journal</i> , 2020, 396, 125315.	6.6	97
1547	Catalyst Engineering for Electrochemical Energy Conversion from Water to Water: Water Electrolysis and the Hydrogen Fuel Cell. <i>Engineering</i> , 2020, 6, 653-679.	3.2	75
1548	Nickel selenides as pre-catalysts for electrochemical oxygen evolution reaction: A review. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 15763-15784.	3.8	116
1549	Prediction of intrinsic electrocatalytic activity for hydrogen evolution reaction in Ti ₄ X ₃ (X = C, N). <i>Journal of Catalysis</i> , 2020, 387, 12-16.	3.1	27
1550	MoS ₂ quantum dots decorated ultrathin NiO nanosheets for overall water splitting. <i>Journal of Colloid and Interface Science</i> , 2020, 566, 411-418.	5.0	38
1551	Understanding the origin of high oxygen evolution reaction activity in the high Sr-doped perovskite. <i>Chinese Journal of Catalysis</i> , 2020, 41, 592-597.	6.9	20
1552	Electrodepositing ultra-thin Ni(OH) ₂ amorphous film on Ni ₂ P nanosheets array: an efficient strategy toward greatly enhanced alkaline hydrogen evolution reaction. <i>New Journal of Chemistry</i> , 2018, 42, 11285-11288.	1.4	16
1553	Surface/interface nanoengineering for rechargeable Zn-air batteries. <i>Energy and Environmental Science</i> , 2020, 13, 1132-1153.	15.6	344
1554	Progress in nickel chalcogenide electrocatalyzed hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2020, 8, 4174-4192.	5.2	189
1555	An organic polymer CuPPc-derived copper oxide as a highly efficient electrocatalyst for water oxidation. <i>Chemical Communications</i> , 2020, 56, 3797-3800.	2.2	9
1556	Full water splitting by a nanoporous CeO ₂ nanowire array under alkaline conditions. <i>Inorganic Chemistry Frontiers</i> , 2020, 7, 2533-2537.	3.0	20
1557	Carbon-based single atom catalysts for tailoring the ORR pathway: a concise review. <i>Journal of Materials Chemistry A</i> , 2021, 9, 24803-24829.	5.2	60

#	ARTICLE	IF	CITATIONS
1558	Design principles of noble metal-free electrocatalysts for hydrogen production in alkaline media: combining theory and experiment. <i>Nanoscale Advances</i> , 2021, 3, 6797-6826.	2.2	23
1559	Interfacial electronic coupling of ultrathin transition-metal hydroxide nanosheets with layered MXenes as a new prototype for platinum-like hydrogen evolution. <i>Energy and Environmental Science</i> , 2021, 14, 6419-6427.	15.6	154
1560	CoFe-LDH nanowire arrays on graphite felt: A high-performance oxygen evolution electrocatalyst in alkaline media. <i>Chinese Chemical Letters</i> , 2022, 33, 890-892.	4.8	110
1561	A highly efficient A-site deficient perovskite interlaced within two dimensional MXene nanosheets as an active electrocatalyst for hydrogen production. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 37476-37489.	3.8	20
1562	Ultrafine CoPt ₃ nanoparticles encapsulated in nitrogen-doped carbon nanospheres for efficient water electrolysis. <i>Electrochemical Science Advances</i> , 2022, 2, e2100082.	1.2	0
1563	Aiding Time-Dependent Laser Ablation to Direct 1T-MoS ₂ for an Improved Hydrogen Evolution Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 14744-14755.	3.2	12
1564	Nickel Nitrate Hydroxide Holey Nanosheets for Efficient Oxygen Evolution Electrocatalysis in Alkaline Condition. <i>Electrocatalysis</i> , 2022, 13, 37-46.	1.5	4
1565	Direct-grown nebulizer-sprayed nickel-copper mixed metal oxide nanocomposite films as bifunctional electrocatalyst for water splitting. <i>Ionics</i> , 2022, 28, 383-396.	1.2	9
1566	Facile Synthesis of Copper Oxide-Cobalt Oxide/Nitrogen-Doped Carbon (Cu ₂ O-Co ₃ O ₄ /CN) Composite for Efficient Water Splitting. <i>Applied Sciences (Switzerland)</i> , 2021, 11, 9974.	1.3	25
1567	Synergistic effect of isolated Co and Fe dual active sites boosting the photocatalytic hydrogen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2022, 895, 162290.	2.8	20
1568	One-Step Synthesis of Bifunctional Nickel Phosphide Nanowires as Electrocatalysts for Hydrogen and Oxygen Evolution Reactions. <i>Frontiers in Chemistry</i> , 2021, 9, 773018.	1.8	7
1569	Interfacial Engineering of 3D Hollow Mo-Based Carbide/Nitride Nanostructures. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 50524-50530.	4.0	16
1570	The distribution effect of sulfur vacancy in 2H-MoS ₂ monolayer on its H ₂ generation mechanism from density functional theory. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 242-249.	3.8	8
1571	Single-atom dispersed Cu or Co on 2H-MoS ₂ monolayer for improving electrocatalytic activity of overall water splitting. <i>Surfaces and Interfaces</i> , 2021, 27, 101538.	1.5	9
1572	Fe-doped NiCo Oxide Nanosheet Catalyst for Highly-Efficient Oxygen Evolution Reaction. , 0, , .		0
1573	High Value-Added Products From Recycling of Spent Lithium-Ion Batteries. , 2019, , 141-159.		0
1574	Interface engineering of Ni _{0.85} Se/Ni ₃ S ₂ nanostructure for highly enhanced hydrogen evolution in alkaline solution. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 305-313.	3.8	14
1575	Nickel iron oxide electrocatalysts for electrochemical OER activity. <i>Applied Nanoscience (Switzerland)</i> , 2021, 11, 2669-2677.	1.6	2

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1576	TNT/LaFeO ₃ composite as novel condition catalyst for ameliorating hydrogen evolution reaction. <i>Electrochemistry Communications</i> , 2021, 133, 107149.	2.3	1
1577	Recent advances of anion regulated NiFe-based electrocatalysts for water oxidation. <i>Sustainable Energy and Fuels</i> , 2021, 5, 6298-6309.	2.5	7
1578	Hierarchical Fe-Mn binary metal oxide core-shell nano-polyhedron as a bifunctional electrocatalyst for efficient water splitting. <i>Dalton Transactions</i> , 2021, 50, 17265-17274.	1.6	7
1579	Synthetic Engineering of the Pristine MOF/NiMn-LDH Nanocomposites as IrO ₂ -Like Electrocatalysts for Water Oxidation with High Stability. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
1580	Hydrogen production technologies - Membrane based separation, storage and challenges. <i>Journal of Environmental Management</i> , 2022, 302, 113963.	3.8	64
1581	PBA composites and their derivatives in energy and environmental applications. <i>Coordination Chemistry Reviews</i> , 2022, 451, 214260.	9.5	80
1582	The Synergetic Effect of MoSO ₂ /Graphite Nanosheets as Highly Efficient for Electrochemical Water Splitting in Acidic Media. <i>Science of Advanced Materials</i> , 2021, 13, 1574-1583.	0.1	0
1583	Dual Nanoislands on Ni/C Hybrid Nanosheet Activate Superior Hydrazine Oxidation-Assisted High-Efficiency H ₂ Production. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	6
1584	A needle-like cobalt-based bifunctional catalyst supported on carbon materials for effective overall water splitting. <i>Nanotechnology</i> , 2022, 33, 065704.	1.3	5
1585	Dual Nanoislands on Ni/C Hybrid Nanosheet Activate Superior Hydrazine Oxidation-Assisted High-Efficiency H ₂ Production. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	74
1586	Co-anion exchange prepared 2D structure Ni(Co,Fe)PS for efficient overall water electrolysis. <i>Applied Surface Science</i> , 2022, 576, 151720.	3.1	9
1587	Formation mechanism of high-entropy spinel thin film and its mechanical and magnetic properties: Linking high-entropy alloy to high-entropy ceramic. <i>Applied Surface Science</i> , 2022, 576, 151719.	3.1	21
1588	Facile Synthesis of Amorphous MoCo Lamellar Hydroxide for Alkaline Water Oxidation. <i>ChemSusChem</i> , 2022, 15, .	3.6	4
1589	Experimental and Theoretical Insights into the Borohydride-Based Reduction-Induced Metal Interdiffusion in Fe-Oxide@NiCo ₂ O ₄ for Enhanced Oxygen Evolution. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 53725-53735.	4.0	32
1590	Nickel-manganese double hydroxide mixed with reduced graphene oxide electrocatalyst for efficient ethylene glycol electrooxidation and hydrogen evolution reaction. <i>Synthetic Metals</i> , 2021, 282, 116959.	2.1	27
1591	One-dimensional metal-organic frameworks for electrochemical applications. <i>Advances in Colloid and Interface Science</i> , 2021, 298, 102562.	7.0	45
1592	Highly active oxygen evolution reaction electrocatalyst based on defective-CeO _{2-x} decorated MOF(Ni/Fe). <i>Electrochimica Acta</i> , 2022, 403, 139630.	2.6	13
1593	Tracking high-valent surface iron species in the oxygen evolution reaction on cobalt iron (oxy)hydroxides. <i>Energy and Environmental Science</i> , 2022, 15, 206-214.	15.6	59

#	ARTICLE	IF	CITATIONS
1594	Electrospun nano-Ir anchored mesoporous carbon nanofibers for hydrogen evolution reaction. <i>Chemical Physics</i> , 2022, 554, 111403.	0.9	3
1595	Modulating the Electronic Properties of MoS ₂ Nanosheets for Electrochemical Hydrogen Production: A Review. <i>ACS Applied Nano Materials</i> , 2021, 4, 11413-11427.	2.4	24
1596	Interface Catalysis of Nickel Molybdenum (NiMo) Alloys on Two-Dimensional (2D) MXene for Enhanced Hydrogen Electrochemistry. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 11361-11370.	2.1	26
1597	Technoeconomics of large-scale clean hydrogen production – A review. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 30788-30798.	3.8	22
1598	Enhanced Electrochemical Oxygen Evolution Reaction on Hydrogen Embrittled CoSe Surface. <i>Advanced Materials Interfaces</i> , 0, , 2101209.	1.9	2
1599	Crystallinity-Modulated Co ₂ V ₂ O ₄ Nanoplates for Efficient Electrochemical Water Oxidation. <i>ACS Catalysis</i> , 2021, 11, 14884-14891.	5.5	23
1600	Electrochemically Fabricated Superhydrophilic/Superaerophobic Manganese Oxide Nanowires at Discontinuous Solid-Liquid Interfaces for Enhanced Oxygen Evolution Performances. <i>Advanced Materials Interfaces</i> , 2022, 9, 2101478.	1.9	8
1601	Electrochemical performance of grown layer of Ni(OH) ₂ on nickel foam and treatment with phosphide and selenide for efficient water splitting. <i>Journal of the Indian Chemical Society</i> , 2022, 99, 100281.	1.3	15
1602	Old Materials for New Functions: Recent Progress on Metal Cyanide Based Porous Materials. <i>Advanced Science</i> , 2022, 9, e2104234.	5.6	24
1603	Recent progress in carbon-based materials boosting electrochemical water splitting. <i>Chinese Chemical Letters</i> , 2022, 33, 3623-3631.	4.8	28
1604	Green synthesis of molybdenum-based nanoparticles and their applications in energy conversion and storage: A review. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 31014-31057.	3.8	18
1605	Enhanced the electrochemical performance of mesh nano composite based catalyst for oxygen evolution reaction: Recent development. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 3556-3567.	3.8	5
1606	Tailoring the Morphology of Cost-Effective Vanadium Diboride Through Cobalt Substitution for Highly Efficient Alkaline Water Oxidation. <i>Inorganic Chemistry</i> , 2021, 60, 19457-19466.	1.9	11
1607	Nanoscale ZnO/Fe ₂ O ₃ Heterostructures: Toward Efficient and Low-Cost Photoanodes for Water Splitting. <i>Small Science</i> , 2022, 2, 2100104.	5.8	26
1608	Construction of Fe-doped CoP with hybrid nanostructures as a bifunctional catalyst for overall water splitting. <i>Dalton Transactions</i> , 2021, 50, 18069-18076.	1.6	14
1609	2D Bismuth nanosheet arrays as efficient alkaline hydrogen evolution electrocatalysts. <i>New Journal of Chemistry</i> , 2021, 45, 22758-22766.	1.4	6
1610	Intercalation of cobalt cations into Co ₉ S ₈ interlayers for highly efficient and stable electrocatalytic hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2022, 10, 3522-3530.	5.2	21
1611	Recent advances in MoS ₂ -based materials for electrocatalysis. <i>Chemical Communications</i> , 2022, 58, 2259-2278.	2.2	30

#	ARTICLE	IF	CITATIONS
1612	Electrocatalysis enabled transformation of earth-abundant water, nitrogen and carbon dioxide for a sustainable future. <i>Materials Advances</i> , 2022, 3, 1359-1400.	2.6	17
1613	NiCo nitride/carbon nanoflakes as low-cost bifunctional electrocatalysts for carbohydrate-assisted electrolytic H ₂ generation. <i>Materials Today Energy</i> , 2022, 24, 100948.	2.5	2
1614	Coupling surfactant-free Ru nanoclusters with defect carbon for efficient pH-universal hydrogen evolution. <i>Catalysis Communications</i> , 2022, 162, 106401.	1.6	1
1615	Thermo-selenized stainless steel as an efficient oxygen evolution electrode for water splitting and CO ₂ electrolysis in real water matrices. <i>Journal of Power Sources</i> , 2022, 521, 230953.	4.0	10
1616	Flower-like CuCoMoOx nanosheets decorated with CoCu nanoparticles as bifunctional electrocatalysts for hydrogen evolution reaction and water splitting. <i>Electrochimica Acta</i> , 2022, 404, 139748.	2.6	23
1617	Heterostructural CoFe ₂ O ₄ /CoO nanoparticles-embedded carbon nanotubes network for boosted overall water-splitting performance. <i>Electrochimica Acta</i> , 2022, 404, 139745.	2.6	34
1618	Restructuring electronic structure via W doped 1T MoS ₂ for enhancing hydrogen evolution reaction. <i>Applied Surface Science</i> , 2022, 579, 152216.	3.1	20
1619	Nanoarchitected porous Cu-CoP nanoplates as electrocatalysts for efficient oxygen evolution reaction. <i>Chemical Engineering Journal</i> , 2022, 432, 134303.	6.6	35
1620	Design and Synthesis of Hollow Nanostructures for Electrochemical Water Splitting. <i>Advanced Science</i> , 2022, 9, e2105135.	5.6	110
1621	MXene-supported copper-molybdenum sulfide nanostructures as catalysts for hydrogen evolution. <i>New Journal of Chemistry</i> , 2022, 46, 1127-1134.	1.4	4
1622	Nanocomposite design of graphene modified TiO ₂ for electrochemical sensing in phenol detection. <i>Korean Journal of Chemical Engineering</i> , 2022, 39, 209-215.	1.2	16
1623	Ultra-small Ru nanoparticles embedded on Fe-Ni(OH) ₂ nanosheets for efficient water splitting at a large current density with long-term stability of 680 hours. <i>Journal of Materials Chemistry A</i> , 2022, 10, 4817-4824.	5.2	46
1624	Interface engineering of metallic nickel nanoparticles/semiconductive nickel molybdate nanowires for efficiently electrocatalytic water splitting. <i>Materials Today Nano</i> , 2022, 18, 100176.	2.3	9
1625	Selenide-based 3D folded polymetallic nanosheets for a highly efficient oxygen evolution reaction. <i>Journal of Colloid and Interface Science</i> , 2022, 615, 256-264.	5.0	15
1626	Cobalt metal organic framework (Co-MOF) derived CoSe ₂ /C hybrid nanostructures for the electrochemical hydrogen evolution reaction supported by DFT studies. <i>New Journal of Chemistry</i> , 2022, 46, 2730-2738.	1.4	15
1627	Dumbbell-Shaped Ternary Transition-Metal (Cu, Ni, Co) Phosphate Bundles: A Promising Catalyst for the Oxygen Evolution Reaction. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 6570-6581.	4.0	24
1628	One-Step Synthesis of Heterostructural MoS ₂ -(FeNi) ₉ S ₈ on Ni-Fe Foam Synergistically Boosting for Efficient Fresh/Seawater Electrolysis. <i>ACS Applied Energy Materials</i> , 2022, 5, 1810-1821.	2.5	17
1629	An efficient amorphous ternary transition metal boride (WFeNiB) electrocatalyst for oxygen evolution from water. <i>Sustainable Energy and Fuels</i> , 2022, 6, 1345-1352.	2.5	9

#	ARTICLE	IF	CITATIONS
1630	In-situ synthesis of the thinnest In ₂ Se ₃ /In ₂ S ₃ /In ₂ Se ₃ sandwich-like heterojunction for photoelectrocatalytic water splitting. Chemistry - A European Journal, 2022, , .	1.7	2
1631	Highly active atomic Cu catalyst anchored on superlattice CoFe layered double hydroxide for efficient oxygen evolution electrocatalysis. International Journal of Hydrogen Energy, 2022, 47, 9876-9894.	3.8	9
1632	Nanostructure of the laser-modified transition metal nanocomposites for water splitting. Nanotechnology, 2022, , .	1.3	1
1633	Electrokinetic analysis of water oxidation on alumina supported silver oxide nanopowders. Journal of Electroanalytical Chemistry, 2022, 907, 116053.	1.9	6
1634	Tracking charge transfer pathways in SrTiO ₃ /CoP/Mo ₂ C nanofibers for enhanced photocatalytic solar fuel production. Chinese Journal of Catalysis, 2022, 43, 507-518.	6.9	59
1635	Self-supported cobalt oxide electrocatalysts with hierarchical chestnut burr-like nanostructure for efficient overall water splitting. Chemical Engineering Journal, 2022, 435, 134995.	6.6	15
1636	FexNi(1-x) coatings electrodeposited from choline chloride-urea mixture: Magnetic and electrocatalytic properties for water electrolysis. Materials Chemistry and Physics, 2022, 279, 125738.	2.0	7
1637	Porous metal oxide electrocatalytic nanomaterials for energy conversion: Oxygen defects and selection techniques. Coordination Chemistry Reviews, 2022, 457, 214389.	9.5	46
1638	Zn constructs micro/nano porous structure to boost efficient oxygen evolution reaction for bulk NiFe alloy. Journal of Alloys and Compounds, 2022, 903, 164004.	2.8	7
1639	Effects of Fe on electrocatalytic oxygen evolution reaction activity for CoFe layered double hydroxide nanosheets. Journal of Alloys and Compounds, 2022, 903, 163994.	2.8	12
1640	Exploring multifunctional behaviour of g-C ₃ N ₄ decorated BiVO ₄ /Ag ₂ CO ₃ hierarchical nanocomposite for simultaneous electrochemical detection of two nitroaromatic compounds and water splitting applications. Talanta, 2022, 241, 123257.	2.9	13
1641	Construction of single-atom catalysts for electro-, photo- and photoelectro-catalytic applications: State-of-the-art, opportunities, and challenges. Materials Today, 2022, 53, 217-237.	8.3	34
1642	Molten salt method synthesis of multivalent cobalt and oxygen vacancy modified Nitrogen-doped MXene as highly efficient hydrogen and oxygen Evolution reaction electrocatalysts. Journal of Colloid and Interface Science, 2022, 615, 831-839.	5.0	16
1643	Partially oxidized ruthenium aerogel as highly active bifunctional electrocatalyst for overall water splitting in both alkaline and acidic media. Applied Catalysis B: Environmental, 2022, 307, 121199.	10.8	45
1644	Construction of CuO/Cu/WO _{3-x} /WO ₃ /W self-supported electrodes by a dry chemical route for hydrogen evolution reaction. Applied Surface Science, 2022, 585, 152757.	3.1	11
1645	Spin regulation on (Co,Ni)Se ₂ /C@FeOOH hollow nanocage accelerates water oxidation. Chinese Journal of Catalysis, 2022, 43, 839-850.	6.9	26
1646	Pyrolysis-free, facile mechanochemical strategy toward cobalt single-atom/nitrogen-doped carbon for highly efficient water splitting. Chemical Engineering Journal, 2022, 433, 134089.	6.6	13
1647	Urchin-Like Conio ₂ Microspheres Supported on Reduced Graphene Oxide with N and S Co-Doped for Overall Water Splitting with Trace Load as the Bifunctional Electrocatalyst. SSRN Electronic Journal, 0, , .	0.4	0

#	ARTICLE	IF	CITATIONS
1648	Facile Hybrid Strategy of SrCo _{0.5} Fe _{0.3} Mo _{0.2} O _{3-δ} /Co ₃ O ₄ Heterostructure for Efficient Oxygen Evolution Reaction. SSRN Electronic Journal, 0, , .	0.4	0
1649	Water Oxidation on Cr ₁ Fe ₁ Co ₁ Ni ₁ High Entropy Alloy: Improvement Through Rejuvenation and Spin Polarization. SSRN Electronic Journal, 0, , .	0.4	0
1650	Fe-Doped CoFe-P Phosphides Nanosheets Dispersed on Nickel Foam Derived from Prussian Blue Analogues as Efficient Electrocatalysts for the Oxygen Evolution Reaction. SSRN Electronic Journal, 0, , .	0.4	0
1651	Defect-rich Fe-doped NiS/MoS ₂ heterostructured ultrathin nanosheets for efficient overall water splitting. Physical Chemistry Chemical Physics, 2022, 24, 8344-8350.	1.3	18
1652	Pt- and Pd-modified transition metal nitride catalysts for the hydrogen evolution reaction. Physical Chemistry Chemical Physics, 2022, 24, 12149-12157.	1.3	9
1653	In-Situ Electrochemical Surface Reconstruction of FeCoNi Trimetal Phosphides to Active Oxyhydroxide for Large-Current-Density Oxygen Evolution. SSRN Electronic Journal, 0, , .	0.4	0
1654	Layered 2D PtX ₂ (X = S, Se, Te) for the electrocatalytic HER in comparison with Mo/WX ₂ and Pt/C: are we missing the bigger picture?. Energy and Environmental Science, 2022, 15, 1461-1478.	15.6	37
1655	A high-density nickel-cobalt alloy embedded in nitrogen-doped carbon nanosheets for the hydrogen evolution reaction. Nanoscale, 2022, 14, 6202-6211.	2.8	17
1656	Template free-synthesis of cobalt-iron chalcogenides [Co _{0.8} Fe _{0.2} L ₂ , L = S, Se] and their robust bifunctional electrocatalysis for the water splitting reaction and Cr(VI) reduction. RSC Advances, 2022, 12, 7762-7772.	1.7	9
1657	A tetra Co(II) complex with an open cubane Co ₄ O ₄ core and square-pyramidal Co(II) and octahedral Co(III) centres: bifunctional electrocatalytic activity towards water splitting at neutral pH. Dalton Transactions, 2022, 51, 4510-4521.	1.6	9
1658	Recent progress of mesoporous carbons applied in electrochemical catalysis. New Carbon Materials, 2022, 37, 152-179.	2.9	13
1659	Biomimetic ZrO ₂ @ PdO nanocomposites: fabrication, characterization, and water splitting potential exploration. International Journal of Energy Research, 2022, 46, 8516-8526.	2.2	10
1660	Surface Modification towards Integral Bulk Catalysts of Transition Metal Borides for Hydrogen Evolution Reaction. Catalysts, 2022, 12, 222.	1.6	4
1661	Hydrogen Evolution Linked to Selective Oxidation of Glycerol over CoMoO ₄ —A Theoretically Predicted Catalyst. Advanced Energy Materials, 2022, 12, .	10.2	37
1662	Double Perovskite LaFe _{1-x} Ni _x O ₃ Coated with Sea Urchin-like Gold Nanoparticles Using Electrophoresis as the Photoelectrochemical Electrode to Enhance H ₂ Production via Surface Plasmon Resonance Effect. Nanomaterials, 2022, 12, 622.	1.9	4
1663	Nickel-Based Metal-Organic Frameworks as Electrocatalysts for the Oxygen Evolution Reaction (OER). Molecules, 2022, 27, 1241.	1.7	28
1664	Effect of cation configuration and solvation on the band positions of zinc ferrite (100). Photochemical and Photobiological Sciences, 2022, , 1.	1.6	0
1665	Hierarchical Ni/Ni(OH) ₂ -NiCo ₂ O ₄ Supported on Ni Foam as Efficient Bifunctional Electrocatalysts for Water Splitting. Journal of Physical Chemistry C, 2022, 126, 5493-5501.	1.5	14

#	ARTICLE	IF	CITATIONS
1666	Engineering Sulfur Vacancies in Spinel-Phase Co_3S_4 for Effective Electrocatalysis of the Oxygen Evolution Reaction. ACS Omega, 2022, 7, 12430-12441.	1.6	26
1667	An inclusive perspective on the recent development of tungsten-based catalysts for overall H_2O splitting : A review. International Journal of Energy Research, 2022, 46, 10228-10258.	2.2	6
1668	Amorphous CoV Phosphate Nanosheets as Efficient Oxygen Evolution Electrocatalyst. Chemistry - an Asian Journal, 2022, , .	1.7	1
1669	Low temperature autoignition of diesel fuel under dual operation with hydrogen and hydrogen-carriers. Energy Conversion and Management, 2022, 258, 115516.	4.4	14
1670	Role of cobalt precursors in the synthesis of Co_3O_4 hierarchical nanostructures toward the development of cobalt-based functional electrocatalysts for bifunctional water splitting in alkaline and acidic media. Journal of the Chinese Chemical Society, 0, , .	0.8	1
1671	Recycling cathode materials of spent lithium-ion batteries for advanced catalysts production. Journal of Power Sources, 2022, 528, 231220.	4.0	41
1672	High throughput preparation of Ni-Mo alloy thin films as efficient bifunctional electrocatalysts for water splitting. International Journal of Hydrogen Energy, 2022, 47, 15764-15774.	3.8	25
1673	Superassembly of Surface-Enriched Ru Nanoclusters from Trapping-Bonding Strategy for Efficient Hydrogen Evolution. ACS Nano, 2022, 16, 7993-8004.	7.3	54
1674	Engineering piezoelectricity and strain sensitivity in CdS to promote piezocatalytic hydrogen evolution. Chinese Journal of Catalysis, 2022, 43, 1277-1285.	6.9	65
1675	Fe-doped CoFeP phosphides nanosheets dispersed on nickel foam derived from Prussian blue analogues as efficient electrocatalysts for the oxygen evolution reaction. Journal of Solid State Chemistry, 2022, 311, 123084.	1.4	4
1676	Boosting the OER/ORR/HER activity of Ru-doped Ni/Co oxides heterostructure. Chemical Engineering Journal, 2022, 439, 135634.	6.6	49
1677	Optically transparent ultrathin NiCo alloy oxide film: Precise oxygen vacancy modulation and control for enhanced electrocatalysis of water oxidation. Applied Catalysis B: Environmental, 2022, 310, 121301.	10.8	33
1678	Cobalt nanoparticles embedded in porous N-doped carbon support as a superior catalyst for the p-nitrophenol reduction. Applied Surface Science, 2022, 592, 153292.	3.1	17
1679	Problems and Technology Development Trends of Hydrogen Production from Renewable Energy Power Electrolysis - A Review. , 2021, , .		7
1680	Machine-Learning Assisted Exploration: Toward the Next-Generation Catalyst for Hydrogen Evolution Reaction. Journal of the Electrochemical Society, 2021, 168, 126523.	1.3	4
1681	Hydrogen production coupled with water and organic oxidation based on layered double hydroxides. Exploration, 2021, 1, .	5.4	79
1682	High-performance Te-doped Co_3O_4 nanocatalysts for oxygen evolution reaction. International Journal of Energy Research, 2022, 46, 5963-5972.	2.2	10
1683	Cu/Co/CoS_2 embedded in S,N-doped carbon as highly efficient oxygen reduction and evolution electrocatalyst for rechargeable zinc-air batteries. Inorganic Chemistry Frontiers, 2022, 9, 2917-2927.	3.0	3

#	ARTICLE	IF	CITATIONS
1684	Co ₄ Nâ€“WN _x composite for efficient piezocatalytic hydrogen evolution. Dalton Transactions, 2022, 51, 7127-7134.	1.6	9
1685	A large scale self-supported W ₂ C nanoporous network for efficient hydrogen evolution reaction in alkaline media. Journal of Materials Chemistry A, 2022, 10, 10990-10997.	5.2	9
1686	Rational Design of Better Hydrogen Evolution Electrocatalysts for Water Splitting: A Review. Advanced Science, 2022, 9, e2200307.	5.6	121
1687	Template-assisted synthesis of single-atom catalysts supported on highly crystalline vanadium pentoxide for stable oxygen evolution. Chem Catalysis, 2022, 2, 1191-1210.	2.9	8
1688	Atomic Dispersion of Rh on Interconnected Mo ₂ C Nanosheet Network Intimately Embedded in 3D Ni _x MoO _y Nanorod Arrays for pHâ€“Universal Hydrogen Evolution. Energy and Environmental Materials, 2023, 6, .	7.3	4
1689	Charge Transfer of Interfacial Catalysts for Hydrogen Energy. , 2022, 4, 967-977.		35
1690	High Entropy Alloy Electrocatalytic Electrode toward Alkaline Glycerol Valorization Coupling with Acidic Hydrogen Production. Journal of the American Chemical Society, 2022, 144, 7224-7235.	6.6	156
1691	Interfacial Engineering of a Phase-Controlled Heterojunction for High-Efficiency HER, OER, and ORR Trifunctional Electrocatalysis. ACS Omega, 2022, 7, 13687-13696.	1.6	13
1692	High Configuration Entropy Activated Lattice Oxygen for O ₂ Formation on Perovskite Electrocatalyst. Advanced Functional Materials, 2022, 32, .	7.8	96
1693	Co ₃ O ₄ /stainless steel catalyst with synergistic effect of oxygen vacancies and phosphorus doping for overall water splitting. Tungsten, 2023, 5, 100-108.	2.0	36
1694	Hybrid Ni ₂ P/CoP Nanosheets as Efficient and Robust Electrocatalysts for Domestic Wastewater Splitting. Energy and Environmental Materials, 2023, 6, .	7.3	10
1695	RuCo Alloy Nanoparticles Embedded into N-Doped Carbon for High Efficiency Hydrogen Evolution Electrocatalyst. Energies, 2022, 15, 2908.	1.6	3
1696	High efficiency electrocatalyst of LaNiO ₃ @LaCoO ₃ nanoparticles on oxygen-evolution reaction. FlatChem, 2022, , 100371.	2.8	0
1697	Modifying electron injection kinetics for selective photoreduction of nitroarenes into cyclic and asymmetric azo compounds. Nature Communications, 2022, 13, 1940.	5.8	13
1698	Hierarchical nanoassembly of Ni/MoS ₂ @Ni ₁₂ P ₅ /ZnP ₂ achieved by a plasma assisted phosphorization with highly improved electrocatalytic activity for overall water splitting. Electrochimica Acta, 2022, 419, 140392.	2.6	13
1699	CdSe supported SnO ₂ nanocomposite with strongly hydrophilic surface for enhanced overall water splitting. Fuel, 2022, 321, 124086.	3.4	47
1703	Zeolitic imidazolate framework 67 based metal oxides derivatives as electrocatalysts for oxygen evolution reaction. , 2022, , 471-495.		1
1704	Structure and basic properties of transition metal oxides designed for application in water splitting. , 2022, , 131-160.		0

#	ARTICLE	IF	CITATIONS
1705	Chemical and electrochemical synthesis of cobalt hydroxides: selective phase transformation and application to distinct electrocatalytic reactions. <i>Journal of Materials Chemistry A</i> , 2022, 10, 12047-12054.	5.2	11
1706	Co($\text{Co}(\text{OAc})_2 \cdot 2\text{H}_2\text{O}$) 2-ethylhexanoate, a hydrophobic and highly soluble Co($\text{Co}(\text{OAc})_2 \cdot 2\text{H}_2\text{O}$) precursor for thin coatings for water electrolysis. <i>Materials Chemistry Frontiers</i> , 0, , .	3.2	1
1707	Bifunctional Mn-doped CoSe ₂ nanonetworks electrode for hybrid alkali/acid electrolytic H ₂ generation and glycerol upgrading. <i>Journal of Energy Chemistry</i> , 2022, 72, 424-431.	7.1	24
1708	Hollow carbon sphere-supported Pt/CoO hybrid with excellent hydrogen evolution activity and stability in acidic environment. <i>Applied Catalysis B: Environmental</i> , 2022, 314, 121503.	10.8	34
1709	Recent progress on layered double hydroxides: comprehensive regulation for enhanced oxygen evolution reaction. <i>Materials Today Energy</i> , 2022, , 101036.	2.5	6
1710	Metal-Functionalized Hydrogels as Efficient Oxygen Evolution Electrocatalysts. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 20919-20929.	4.0	7
1711	Magnetic-Field-Induced Strain Enhances Electrocatalysis of FeCo Alloys on Anode Catalysts for Water Splitting. <i>Metals</i> , 2022, 12, 800.	1.0	4
1712	CoFe ₂ O ₄ surface modification with conducting polypyrrole: employed as a highly active electrocatalyst for oxygen evolution reaction. <i>Journal of Materials Science: Materials in Electronics</i> , 2022, 33, 13244-13254.	1.1	6
1713	Electrocatalytic studies of siloxene sheets encrusted with cobalt chalcogenides (S, Se) for water splitting. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 40368-40378.	3.8	7
1714	3D Binder-free Integrated Electrodes Prepared by Phase Separation and Laser Induction (PSLI) Method for Oxygen Electrocatalysis and Zinc-air Battery. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	12
1715	The heterostructure of ceria and hybrid transition metal oxides with high electrocatalytic performance for water splitting and enzyme-free glucose detection. <i>Journal of Electroanalytical Chemistry</i> , 2022, 915, 116369.	1.9	11
1716	Hexagonal NiMoO ₄ -MoS ₂ nanosheet heterostructure as a bifunctional electrocatalyst for urea oxidation assisted overall water electrolysis. <i>New Journal of Chemistry</i> , 2022, 46, 10280-10288.	1.4	11
1717	Hierarchically fractal Co with highly exposed active facets and directed electron-transfer effect. <i>Chemical Communications</i> , 2022, 58, 6882-6885.	2.2	5
1718	P-modified hollow carbon mesoporous nanospheres decorated with ultrafine OsP alloy nanoparticles for nonacidic hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2022, 10, 13042-13047.	5.2	4
1719	Synergistic effect of S vacancies and P dopants in MoS ₂ /Mo ₂ C to promote electrocatalytic hydrogen evolution. <i>Inorganic Chemistry Frontiers</i> , 2022, 9, 3461-3469.	3.0	2
1720	Cobalt Formate, a Functional MOF: Electrocatalytic Water Oxidation. <i>Journal of Molecular and Engineering Materials</i> , 0, , .	0.9	0
1721	Oxygen-Plasma-Induced Hetero-Interface NiFe ₂ O ₄ /NiMoO ₄ Catalyst for Enhanced Electrochemical Oxygen Evolution. <i>Materials</i> , 2022, 15, 3688.	1.3	3
1722	Highly dispersed platinum on LaNi nanoparticles/nanoporous carbon for highly efficient electrocatalytic hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2022, , .	3.8	4

#	ARTICLE	IF	CITATIONS
1723	Cobalt-Based Co-Ordination Complex-Derived Nanostructure for Efficient Oxygen Evolution Reaction in Acidic and Alkaline Medium. SSRN Electronic Journal, 0, , .	0.4	0
1724	Closely Packed Cos ₂ /Mos ₂ Nanoarray Synthesized from Mof for Overall Water Splitting. SSRN Electronic Journal, 0, , .	0.4	0
1725	Generation of Pyridinic-N-Co(Fe) Active Sites in Fe-Co ₃ n/Cop/N-C Composite Nanosheet Array as an Efficient Electrocatalyst for Oxygen Evolution Reaction. SSRN Electronic Journal, 0, , .	0.4	0
1726	Defect Structure Regulation and Mass Transfer Improvement of Cobalt-Based Oxides for Enhanced Oxygen Evolution Reaction. SSRN Electronic Journal, 0, , .	0.4	0
1727	Post-decorated synthesis of metal-organic frameworks derived Ni/Ni ₃ S ₂ @CN electrocatalyst for efficient hydrogen evolution. Journal of Solid State Chemistry, 2022, 313, 123287.	1.4	4
1728	Recent Advances in Dual-Atom Site Catalysts for Efficient Oxygen and Carbon Dioxide Electrocatalysis. Small Methods, 2022, 6, .	4.6	36
1729	éžèµé†â±žãÿ°ã,-ãĒ-ã%°,ç””ã°žç”ÿç%°©è~ç”µæ°sãĒ-é«ãĒ/ãĒ-ãĒ©ç””çš,, ç”ç©†èžã±. Science China Materials, 2022, 65, 3273-3281.	1.4	4
1730	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
1731	Binary spindle-like cobalt-iron layered-double hydroxide as an efficient electrocatalyst for oxygen evaluation reaction. International Journal of Hydrogen Energy, 2022, 47, 21344-21351.	3.8	4
1732	Recent advances in transition metal selenides-based electrocatalysts: Rational design and applications in water splitting. Journal of Alloys and Compounds, 2022, 918, 165719.	2.8	45
1733	Pronounced effect of phosphidization on the performance of CoOx encapsulated N-doped carbon nanotubes towards oxygen evolution reaction. International Journal of Hydrogen Energy, 2022, 47, 22054-22062.	3.8	8
1734	Single-Atom Catalysts for Hydrogen Generation: Rational Design, Recent Advances, and Perspectives. Advanced Energy Materials, 2022, 12, .	10.2	42
1735	Self-activatable carbon nanotube@ruthenium-catechol coordination complex for hydrogen evolution reaction. Nanotechnology, 0, , .	1.3	0
1736	Recent Progress on Titanium Sesquioxide: Fabrication, Properties, and Applications. Advanced Functional Materials, 2022, 32, .	7.8	14
1737	Engineering self-supported ruthenium-titanium alloy oxide on 3D web-like titania as iodide oxidation reaction electrocatalyst to boost hydrogen production. Applied Catalysis B: Environmental, 2022, 316, 121608.	10.8	16
1738	Transition Metal Non-Oxides as Electrocatalysts: Advantages and Challenges. Small, 2022, 18, .	5.2	47
1739	Efficient and Stable Acidic Water Oxidation Enabled by Low-Concentration, High-Valence Iridium Sites. ACS Energy Letters, 2022, 7, 2228-2235.	8.8	25
1740	<i>In situ</i> coupling of lignin-derived carbon-encapsulated CoFe@Co _x N heterojunction for oxygen evolution reaction. AIChE Journal, 2022, 68, .	1.8	34

#	ARTICLE	IF	CITATIONS
1741	Entwined Co(OH) ₂ <i>In Situ</i> Anchoring on 3D Nickel Foam with Phenomenal Bifunctional Activity in Overall Water Splitting. <i>Energy & Fuels</i> , 2022, 36, 7006-7016.	2.5	15
1742	An electrochemical modification strategy to fabricate NiFeCuPt polymetallic carbon matrices on nickel foam as stable electrocatalysts for water splitting. <i>Chemical Science</i> , 2022, 13, 8876-8884.	3.7	8
1743	Construction of Ni ³⁺ -rich nanograss arrays for boosting alkaline water oxidation. <i>Chemical Communications</i> , 2022, 58, 8654-8657.	2.2	6
1744	Twin Boundaries Boost the Hydrogen Evolution Reaction on the Solid Solution of Nickel Tungsten. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
1745	Molybdenum-iron-cobalt oxyhydroxide with rich oxygen vacancies for the oxygen evolution reaction. <i>Nanoscale</i> , 2022, 14, 10873-10879.	2.8	12
1746	Flowery In ₂ MnSe ₄ Novel Electrocatalyst Developed via Anion Exchange Strategy for Efficient Water Splitting. <i>Nanomaterials</i> , 2022, 12, 2209.	1.9	46
1747	Subnanometric Ru clusters with upshifted D band center improve performance for alkaline hydrogen evolution reaction. <i>Nature Communications</i> , 2022, 13, .	5.8	262
1748	NiFe Layered Double Hydroxide Electrocatalysts for an Efficient Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2022, 5, 8592-8600.	2.5	23
1749	High Performance Cobalt-Vanadium Layered Double Hydroxide Nanosheets for Photoelectrochemical Reduction of Nitrogen. <i>European Journal of Inorganic Chemistry</i> , 2022, 2022, .	1.0	5
1750	Constructing a multi-bi-shelled cobalt-based electrocatalyst for the oxygen evolution reaction in CO ₂ electrolysis. <i>NPG Asia Materials</i> , 2022, 14, .	3.8	9
1751	Preparation of high entropy alloys and application to catalytical water electrolysis. <i>APL Materials</i> , 2022, 10, .	2.2	45
1752	Promoting surface reconstruction of NiFe layered double hydroxides via intercalating [Cr(C ₂ O ₄) ₃] ³⁻ for enhanced oxygen evolution. <i>Journal of Energy Chemistry</i> , 2022, 74, 140-148.	7.1	20
1753	Unfolding essence of nanoscience for improved water splitting hydrogen generation in the light of newly emergent nanocatalysts. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 26915-26955.	3.8	16
1754	Recent progress in first row transition metal Layered double hydroxide (LDH) based electrocatalysts towards water splitting: A review with insights on synthesis. <i>Coordination Chemistry Reviews</i> , 2022, 469, 214666.	9.5	125
1755	Robust NiFe foam-supported hureaultite sheet-like microstructures as highly-effective electrocatalyst for water oxidation with ultralong durability. <i>Journal of Alloys and Compounds</i> , 2022, 921, 166052.	2.8	1
1756	Recent advances in non-noble metal-based bifunctional electrocatalysts for overall seawater splitting. <i>Journal of Alloys and Compounds</i> , 2022, 922, 166113.	2.8	66
1757	β-FeO(OH) with multiple surface terminations: Intrinsically active for the electrocatalytic oxygen evolution reaction. <i>Dalton Transactions</i> , 2022, 51, 15094-15110.	1.6	9
1758	Co-doped Ni-Mo oxides: highly efficient and robust electrocatalysts for urea electrooxidation assisted hydrogen production. <i>Journal of Materials Chemistry A</i> , 2022, 10, 16825-16833.	5.2	30

#	ARTICLE	IF	CITATIONS
1759	Selective Catalytic Electro-Oxidation of Water with Cobalt Oxide in Ion Impermeable Reduced Graphene Oxide Porous Electrodes. <i>ACS Nano</i> , 2022, 16, 12488-12499.	7.3	11
1760	Facile electrochemical synthesis of Ni-Sb nanostructure supported on graphite as an affordable bifunctional electrocatalyst for hydrogen and oxygen evolution reactions. <i>Journal of Electroanalytical Chemistry</i> , 2022, 922, 116726.	1.9	4
1761	Self-supported Co, P-doped MnCO ₃ pyramid as an efficient Electrocatalyst for hydrogen evolution reaction. <i>International Journal of Energy Research</i> , 0, , .	2.2	0
1762	Synthetic Micro/Nanomotors for Drug Delivery. <i>Technologies</i> , 2022, 10, 96.	3.0	3
1763	N, O-doped carbon foam as metal-free electrocatalyst for efficient hydrogen production from seawater. <i>Nano Research</i> , 2022, 15, 8922-8927.	5.8	89
1764	Self-template synthesis of lychee like Mn-doped Co ₂ P yolk-shell spheres for enhanced hydrogen evolution reaction activity. <i>International Journal of Hydrogen Energy</i> , 2022, , .	3.8	4
1765	Recent advances in transition metal-based electrocatalysts for seawater electrolysis. <i>International Journal of Energy Research</i> , 2022, 46, 17952-17975.	2.2	11
1766	Interface engineering of NiTe@CoFe LDH for highly efficient overall water-splitting. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 32394-32404.	3.8	21
1767	Tailor-designed bimetallic Co/Ni macroporous electrocatalyst for efficient glycerol oxidation and water electrolysis. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 32145-32157.	3.8	20
1768	Recent advances and perspectives in cobalt-based heterogeneous catalysts for photocatalytic water splitting, CO ₂ reduction, and N ₂ fixation. <i>Chinese Journal of Catalysis</i> , 2022, 43, 2273-2300.	6.9	45
1769	Twin boundaries boost the hydrogen evolution reaction on the solid solution of nickel and tungsten. <i>Fuel</i> , 2022, 330, 125510.	3.4	4
1770	Synergistic effect of Mn doping and hollow structure boosting Mn-CoP/Co ₂ P nanotubes as efficient bifunctional electrocatalyst for overall water splitting. <i>Journal of Colloid and Interface Science</i> , 2022, 628, 524-533.	5.0	18
1771	Metal-Organic Framework-Based Nanomaterials for Electrocatalytic Oxygen Evolution. <i>Small Methods</i> , 2022, 6, .	4.6	53
1772	Recent insights into heterometal-doped copper oxide nanostructure-based catalysts for renewable energy conversion and generation. <i>Renewable and Sustainable Energy Reviews</i> , 2022, 168, 112887.	8.2	6
1773	Supercapacitor and oxygen evolution reaction performances based on rGO and Mn ₂ V ₂ O ₇ nanomaterials. <i>Electrochimica Acta</i> , 2022, 430, 141106.	2.6	11
1774	Role of rhodium doping into lanthanum cobalt oxide (LaCoO ₃) perovskite and the induced bifunctional activity of oxygen evolution and reduction reactions in alkaline medium. <i>Arabian Journal of Chemistry</i> , 2022, 15, 104256.	2.3	6
1775	Defect structure regulation and mass transfer improvement of cobalt-based oxides for enhanced oxygen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2022, 928, 167210.	2.8	7
1776	The <i>in situ</i> formation of defective CoOOH catalysts from semi-oxidized Co for alkaline oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2022, 10, 20011-20017.	5.2	12

#	ARTICLE	IF	CITATIONS
1777	Mn-doped Co ₃ O ₄ for acid, neutral and alkaline electrocatalytic oxygen evolution reaction. RSC Advances, 2022, 12, 26846-26858.	1.7	4
1778	Fast charge transfer between iodide ions and a delocalized electron system on the graphite surface for boosting hydrogen production. Journal of Materials Chemistry A, 2022, 10, 23982-23989.	5.2	3
1779	Selective CO ₂ -to-CO photoreduction over an orthophosphate semiconductor <i>via</i> the direct Z-scheme heterojunction of Ag ₃ PO ₄ quantum dots decorated on SnS ₂ nanosheets. Sustainable Energy and Fuels, 2022, 6, 4418-4428.	2.5	1
1780	High-frequency ultrasonic pyrolysis of 200 nm ultrafine Fe-doped NiO hollow spheres for efficient oxygen evolution catalysis. New Journal of Chemistry, 2022, 46, 19685-19693.	1.4	2
1781	Coupling nonstoichiometric Cu ₂ Se with stable Cu ₂ Se berzelianite for efficient synergistic electrocatalytic hydrazine-assisted water splitting. Inorganic Chemistry Frontiers, 2022, 9, 6182-6189.	3.0	14
1782	In-situ corrosion induced Zr-doped Ni/Fe (oxy)hydroxide layer on Ni-Fe foam realizing efficient electrocatalysis for oxygen evolution reaction. Applied Surface Science, 2023, 607, 155043.	3.1	4
1783	Self-construction of pea-like Cu/Cu ₂ S Mott-Schottky electrocatalyst for the oxygen evolution reaction. International Journal of Hydrogen Energy, 2022, , .	3.8	4
1784	Combined nano/micro-structure of Ni ₁₂ P ₅ -Ni ₂ P nanorod array for effective wide pH range HER and overall alkaline water-splitting. Journal of Electroanalytical Chemistry, 2022, 925, 116862.	1.9	1
1785	Cobalt-manganese sulfide hybridized Fe-doped 1T-Vanadium disulfide 3D-Hierarchical core-shell nanorods for extreme low potential overall water-splitting. Materials Today Nano, 2022, 20, 100272.	2.3	18
1786	Could one non-noble metal surface with non-noble substrate be a good hydrogen evolution catalyst: Performance of transition metal A monolayer on B substrate in theory frame. International Journal of Hydrogen Energy, 2022, 47, 36149-36162.	3.8	1
1787	Fractal-like Hierarchical CuO Nano/Microstructures for Large-Surface-to-Volume-Ratio Dip Catalysts. ACS Applied Nano Materials, 2022, 5, 14591-14601.	2.4	3
1788	Self-templating synthesis and structural regulation of nanoporous rhodium-nickel alloy nanowires efficiently catalyzing hydrogen evolution reaction in both acidic and alkaline electrolytes. Nano Research, 2023, 16, 2026-2034.	5.8	4
1789	Enhancing the Performance of Bi ₂ S ₃ in Electrocatalytic and Supercapacitor Applications by Controlling Lattice Strain. Advanced Functional Materials, 2022, 32, .	7.8	14
1790	High-valance molybdenum doped Co ₃ O ₄ nanowires: Origin of the superior activity for 5-hydroxymethyl-furfural oxidation. Chinese Chemical Letters, 2023, 34, 107810.	4.8	6
1791	Greenly Reduced CoFe-PBA/Nickel Foam: A Robust Dual Electrocatalyst for Solar-Driven Alkaline Water Electrolysis with a Low Cell Voltage. ChemistrySelect, 2022, 7, .	0.7	13
1792	Ultra-fast surface reconstruction enabled by the built-in electric field in heterostructured Co ₂ /CuS for water electrolysis. Cell Reports Physical Science, 2022, , 101059.	2.8	3
1793	Electronic Properties and Electrocatalytic Water Splitting Activity for Precious-Metal-Adsorbed Silicene with Nonmetal Doping. ACS Omega, 2022, 7, 33156-33166.	1.6	2
1794	Interface Engineering of Hollow CoO/Co ₄ S ₃ @CoO/Co ₄ S ₃ Heterojunction for Highly Stable and Efficient Electrocatalytic Overall Water Splitting. ACS Sustainable Chemistry and Engineering, 2022, 10, 13112-13124.	3.2	19

#	ARTICLE	IF	CITATIONS
1795	Tuning the Interface of Co ₂ S/Co(OH)F by Atomic Replacement Strategy toward High-Performance Electrocatalytic Oxygen Evolution. ACS Nano, 2022, 16, 15460-15470.	7.3	37
1796	Ni ₂ P-Co ₂ P Nanowire Arrays on Nickel Foam as a Robust pH-Universal Electrocatalyst for High-Efficiency Hydrogen Evolution Reaction. ACS Applied Energy Materials, 2022, 5, 12059-12066.	2.5	10
1797	Facile Synthesis of Transition-Metal-Doped (Fe, Co, and Ni) CuS/CuO/CS Nanorod Arrays for Superior Electrocatalytic Oxygen Evolution Reaction. ACS Applied Energy Materials, 2022, 5, 12039-12048.	2.5	6
1798	Novel peripheral and non-peripheral oxobenzo[d]thiazol substituted cobalt phthalocyanines: Synthesis, electrochemistry, spectroelectrochemistry, electrocatalytic hydrogen production in alkaline medium. Journal of Electroanalytical Chemistry, 2022, 924, 116864.	1.9	2
1799	Cobalt-based co-ordination complex-derived nanostructure for efficient oxygen evolution reaction in acidic and alkaline medium. Heliyon, 2022, 8, e10939.	1.4	0
1800	Coordination Effect-Promoted Durable Ni(OH) ₂ for Energy-Saving Hydrogen Evolution from Water/Methanol Co-Electrocatalysis. Nano-Micro Letters, 2022, 14, .	14.4	35
1801	Trends and progress in application of cobalt-based materials in catalytic, electrocatalytic, photocatalytic, and photoelectrocatalytic water splitting. Photosynthesis Research, 2022, 154, 329-352.	1.6	3
1802	Heterostructure Induced S Band Center Shift for Activating 1T-MoS ₂ Basal Plane towards Hydrogen Evolution Reaction. ChemNanoMat, 2022, 8, .	1.5	2
1803	Water oxidation on CrMnFeCoNi high entropy alloy: Improvement through rejuvenation and spin polarization. Journal of Alloys and Compounds, 2022, 929, 167344.	2.8	10
1804	Enhancing the catalytic OER performance of MoS ₂ via Fe and Co doping. Nanoscale, 2022, 14, 16148-16155.	2.8	24
1805	Molecular Dynamics Study of CO ₂ /H ₂ and CH ₄ /H ₂ Gas Separation by Nanoporous Graphene. IOP Conference Series: Materials Science and Engineering, 2022, 1257, 012006.	0.3	1
1806	Advances in nonprecious metal catalysts for efficient water oxidation in alkaline media. Ionics, 2023, 29, 9-32.	1.2	3
1807	Advanced Two-Dimensional Materials for Green Hydrogen Generation: Strategies toward Corrosion Resistance Seawater Electrolysis—Review and Future Perspectives. Energy & Fuels, 2022, 36, 13417-13450.	2.5	18
1808	Electrocatalytic Behavior of an Amide Functionalized Mn(II) Coordination Polymer on ORR, OER and HER. Molecules, 2022, 27, 7323.	1.7	2
1809	Tuning d Orbital of Ni Single Atom by Encapsulating Ni Nanoparticle in Carbon Nanotube for Efficient Oxygen Evolution Reaction. Energy & Fuels, 2022, 36, 13159-13167.	2.5	2
1810	Engineering Gas-Solid-Liquid Triple-Phase Interfaces for Electrochemical Energy Conversion Reactions. Electrochemical Energy Reviews, 2022, 5, .	13.1	20
1811	Optimizing band structure of CoP nanoparticles via rich defect carbon shell toward bifunctional electrocatalysts for overall water splitting. , 2023, 5, .		21
1812	Promoting electrocatalytic alcohols oxidation coupled with H ₂ production via ligand intercalation strategy. Nano Research, 2023, 16, 4596-4602.	5.8	8

#	ARTICLE	IF	CITATIONS
1813	Ni ₃ C MXene nanosheets as an efficient binder-less electrocatalyst for oxygen evolution reaction. FlatChem, 2022, 36, 100439.	2.8	2
1814	Advanced electrochemical energy storage and conversion on graphdiyne interface. , 2022, 1, e9120036.		24
1815	Nickel-decorated RuO ₂ nanocrystals with rich oxygen vacancies for high efficiency overall water splitting. Journal of Colloid and Interface Science, 2023, 630, 940-950.	5.0	20
1816	Single-atom electrocatalysts designed for boosting hydrogen evolution reaction. , 2024, , 328-343.		0
1817	Designing dual-dimensional Co ₄ N/Co nanoheterostructures by molybdenum incorporation for boosted alkaline hydrogen evolution catalysis. Journal of Alloys and Compounds, 2023, 935, 167989.	2.8	6
1819	Atom Doping Engineering of Transition Metal Phosphides for Hydrogen Evolution Reactions. Electrochemical Energy Reviews, 2022, 5, .	13.1	43
1820	Strong Electron Coupling Effect at the CoO/CeO ₂ Interface Enables Efficient Oxygen Evolution Reaction. , 2022, 4, 2572-2578.		16
1821	Unveiling a Surface Electronic Descriptor for Fe-Co Mixing Enhanced the Stability and Efficiency of Perovskite Oxygen Evolution Electrocatalysts. ACS Catalysis, 2022, 12, 14698-14707.	5.5	3
1822	Core-shell CeO ₂ @C ₆₀ hybrid serves as a dual-functional catalyst: Photocatalyst for organic pollutant degradation and electrocatalyst for oxygen evolution reaction. Ceramics International, 2023, 49, 8447-8462.	2.3	23
1823	Zeolitic imidazolate framework-derived cobalt-based catalysts for water splitting. Materials Today Chemistry, 2022, 26, 101210.	1.7	2
1824	A metal/semiconductor contact induced Mott-Schottky junction for enhancing the electrocatalytic activity of water-splitting catalysts. Sustainable Energy and Fuels, 2022, 7, 12-30.	2.5	7
1825	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
1826	A molecular strategy to Ni ₄₅ Pt ₅₅ @NC nanoparticles as efficient and robust Electrocatalyst for hydrogen evolution reaction. Journal of Organometallic Chemistry, 2023, 983, 122558.	0.8	0
1827	High-efficiency overall alkaline seawater splitting: using a nickel-iron sulfide nanosheet array as a bifunctional electrocatalyst. Journal of Materials Chemistry A, 2023, 11, 1116-1122.	5.2	133
1828	Electro-(Photo)catalysis for Concurrent Evolution of Hydrogen and High Value-Added Chemicals. , 0, 1, .		0
1829	Nanocomposites for Overall Water-Splitting. , 2022, , 1-31.		0
1830	A nanoelectrode-based study of water splitting electrocatalysts. Materials Horizons, 2023, 10, 52-64.	6.4	4
1831	Synthesis of quinacridone derivative supported on ZnO hexagonal as a new electrocatalyst for hydrogen evolution reaction. Journal of Electroanalytical Chemistry, 2023, 928, 117029.	1.9	3

#	ARTICLE	IF	CITATIONS
1832	Redox mediators promote electrochemical oxidation of nitric oxide toward ambient nitrate synthesis. <i>Journal of Materials Chemistry A</i> , 2023, 11, 1098-1107.	5.2	14
1833	Ni-based ultrathin nanostructures for overall electrochemical water splitting. <i>Materials Chemistry Frontiers</i> , 2023, 7, 194-215.	3.2	10
1834	Efficient cathode for the hydrogen evolution reaction in alkaline membrane water electrolysis based on NiCoP embedded in carbon fibres. <i>Journal of Power Sources</i> , 2023, 556, 232506.	4.0	7
1835	Synchronized redox pairs in metal oxide/hydroxide chemical analogues for an efficient oxygen evolution reaction. <i>Chemical Communications</i> , 2022, 58, 13747-13750.	2.2	0
1836	Recent Advances and Future Perspectives of Metal-Based Electrocatalysts for Overall Electrochemical Water Splitting. <i>Chemical Record</i> , 2023, 23, .	2.9	16
1837	Demonstrating the Electron-Proton-Transfer Mechanism of Aqueous Phase 4-Nitrophenol Hydrogenation Using Unbiased Electrochemical Cells. <i>ACS Catalysis</i> , 2022, 12, 15021-15027.	5.5	15
1838	Morphology-Controlled Synthesis of V _{1.11} S ₂ for Electrocatalytic Hydrogen Evolution Reaction in Acid Media. <i>Molecules</i> , 2022, 27, 8019.	1.7	1
1839	Controlled synthesis of Mn ₃ O ₄ /Co ₉ S ₈ @Ni ₃ S ₂ on nickel foam as efficient electrocatalyst for oxygen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 7737-7746.	3.8	7
1840	Ultrafine Core-Shell Nanostructured Iron Cobalt Ferrocyanide with Excellent Electrocatalytic Activity toward Overall Water Splitting. <i>ChemistrySelect</i> , 2022, 7, .	0.7	8
1841	Interface engineering of Fe-Co ₃ N/CoP composite with N-doped C by using soybean: Fabrication of efficient electrocatalysts for oxygen evolution reaction. <i>Carbon Resources Conversion</i> , 2023, 6, 98-105.	3.2	1
1842	Electrochemical Oxidation of Primary Alcohols Using a Co ₂ NiO ₄ Catalyst: Effects of Alcohol Identity and Electrochemical Bias on Product Distribution. <i>ACS Catalysis</i> , 2023, 13, 515-529.	5.5	9
1843	Toward Sabatier Optimal for Ammonia Synthesis with Paramagnetic Phase of Ferromagnetic Transition Metal Catalysts. <i>Journal of the American Chemical Society</i> , 2022, 144, 23089-23095.	6.6	26
1844	Dopant-Induced Surface Self-Etching of Cobalt Carbonate Hydroxide Boosts Efficient Water Splitting. <i>ChemSusChem</i> , 2023, 16, .	3.6	2
1845	Water activation and splitting by single anionic iridium atoms. <i>Journal of Chemical Physics</i> , 2022, 157, 234304.	1.2	2
1846	Pillared-MOF@NiV-LDH Composite as a Remarkable Electrocatalyst for Water Oxidation. <i>Inorganic Chemistry</i> , 2022, 61, 20913-20922.	1.9	29
1847	Geometrical Engineering of Spinel Oxide Solid Solution to Enhance the Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2022, 5, 15239-15246.	2.5	4
1848	Ni ₃ S ₂ @MoS ₂ @Ni ₃ Si ₂ Seaweed-Like Hybrid Structures <i>in situ</i> Grown on Ni Foam as Efficient Bifunctional Electrocatalysts. <i>ChemCatChem</i> , 2023, 15, .	1.8	3
1849	An overview of heteroatom doped cobalt phosphide for efficient electrochemical water splitting. <i>Chemical Engineering Journal</i> , 2023, 456, 141056.	6.6	44

#	ARTICLE	IF	CITATIONS
1850	Surface Reconstruction of Iron-Cobalt-Nickel Phosphides to Achieve High-Current-Density Water Oxidation Performance. <i>ACS Applied Energy Materials</i> , 2023, 6, 692-701.	2.5	8
1851	Graphene oxide decorated nickel-cobalt nanosheet structures based on carbonized wood for electrocatalytic hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 13543-13554.	3.8	8
1852	Adsorbed <i>p</i> -Aminothiophenol Molecules on Platinum Nanoparticles Improve Electrocatalytic Hydrogen Evolution. <i>Small</i> , 2023, 19, .	5.2	6
1853	Entropy-Stabilized Multicomponent Porous Spinel Nanowires of NiFeXO ₄ (X = Fe, Ni, Al). <i>ACS Nano</i> , 2023, 17, 1485-1494.	7.3	27
1854	Interface reinforced 2D/2D heterostructure of Cu-Co oxides/FeCo hydroxides as monolithic multifunctional catalysts for rechargeable/flexible zinc-air batteries and self-powered water splitting. <i>Applied Catalysis B: Environmental</i> , 2023, 325, 122332.	10.8	17
1855	Emerging Ru-Co homogeneous-heterogeneous photocatalytic CO ₂ reduction systems. <i>Materials Research Bulletin</i> , 2023, 161, 112145.	2.7	4
1856	Facile hydrothermal synthesis of combined MoSe ₂ /PS nanostructures on nickel foam with superior electrocatalytic properties for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 10038-10050.	3.8	4
1857	Amorphous Co-P Film: an Efficient Electrocatalyst for Hydrogen Evolution Reaction in Alkaline Seawater. <i>European Journal of Inorganic Chemistry</i> , 0, , .	1.0	2
1858	Electrocatalytic hydrogen evolution by Co(II) complexes of bistriazolylpyridines. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 10891-10902.	3.8	5
1859	Effectively enhanced activity for overall water splitting through interfacially strong P-Co-O tetrahedral coupling interaction on CoO/CoP heterostructure hollow-nanoneedles. <i>Journal of Materials Chemistry A</i> , 2023, 11, 3136-3147.	5.2	13
1860	A review on electrocatalysis for alkaline oxygen evolution reaction (OER) by Fe-based catalysts. <i>Journal of Materials Science</i> , 0, , .	1.7	3
1861	Transition Metal Compounds on Functionalized Multiwall Carbon Nanotubes for the Efficient Oxygen Evolution Reaction. <i>ACS Applied Nano Materials</i> , 0, , .	2.4	1
1863	Iron Oxyhydroxide: Structure and Applications in Electrocatalytic Oxygen Evolution Reaction. <i>Advanced Functional Materials</i> , 2023, 33, .	7.8	18
1864	Pathways towards Achieving High Current Density Water Electrolysis: from Material Perspective to System Configuration. <i>ChemSusChem</i> , 2023, 16, .	3.6	6
1865	Using free-energy weakening strategy to control the d-band center over the Cu and Co based electrocatalyst for boosting hydrogen production. <i>Journal of Electroanalytical Chemistry</i> , 2023, 936, 117367.	1.9	1
1866	Development of Mn-MOF/CuO composites as platform for efficient electrocatalytic OER. <i>Fuel</i> , 2023, 341, 127638.	3.4	11
1867	Inducing electronic asymmetry on Ru clusters to boost key reaction steps in basic hydrogen evolution. <i>Applied Catalysis B: Environmental</i> , 2023, 327, 122466.	10.8	19
1868	Nitrogen-doped biochar-supported metal catalysts: High efficiency in both catalytic transfer hydrogenation of furfural and electrocatalytic oxygen reactions. <i>Catalysis Today</i> , 2023, 418, 114080.	2.2	5

#	ARTICLE	IF	CITATIONS
1869	Structure evolution and durability of Metal-Nitrogen-Carbon (M=Co, Ru, Rh, Pd, Ir) based oxygen evolution reaction electrocatalyst: A theoretical study. <i>Journal of Colloid and Interface Science</i> , 2023, 640, 170-178.	5.0	11
1870	Ir-trimer anchored on the Co-supported Pd nanocrystals Opens the Ultra-efficient Channel on oxygen reduction reaction. <i>Applied Surface Science</i> , 2023, 622, 156857.	3.1	2
1871	Cobalt nanoparticles-embedded porous carbon nanocages uniformly dispersed hollow carbon fibers as the accelerated electrocatalysts toward water splitting. <i>Journal of Alloys and Compounds</i> , 2023, 947, 169488.	2.8	2
1872	Green chemistry synthesis of Co ₃ O ₄ -CoO nanocomposite and electrochemical assessment for oxygen evolution reaction. <i>Materials Letters</i> , 2023, 341, 134196.	1.3	2
1873	Raw sugarcane juice assisted hybrid electrolysis for formic acid and hydrogen production based on reversible redox cycle of CoNi LDH. <i>Applied Catalysis B: Environmental</i> , 2023, 331, 122559.	10.8	2
1874	Ni ₃ N@Ni juncture layer enabled performance enhanced electrocatalytic water oxidation. <i>Journal of Electroanalytical Chemistry</i> , 2023, 938, 117470.	1.9	2
1875	In situ facile fabrication of ultrathin Co(OH) ₂ -CoO/graphene oxide nanosheet hybrids with superior oxygen evolution reaction performance. <i>Journal of Alloys and Compounds</i> , 2023, 948, 169780.	2.8	3
1876	Bimetallic Cu@Ni core-shell nanoparticles anchored N-doped reduced graphene oxide as a high-performance bifunctional electrocatalyst for alkaline water splitting. <i>Applied Surface Science</i> , 2023, 622, 156928.	3.1	4
1877	Development of metal-organic framework-derived NiMo-MoO ₃ ^x porous nanorod for efficient electrocatalytic hydrogen evolution reactions. <i>Applied Catalysis B: Environmental</i> , 2023, 328, 122421.	10.8	12
1878	Bifunctional Co ₃ S ₄ Nanowires for Robust Sulfion Oxidation and Hydrogen Generation with Low Power Consumption. <i>Advanced Functional Materials</i> , 2023, 33, .	7.8	25
1879	Efficient synergistic effect of trimetallic organic frameworks derived as bifunctional catalysis for the rechargeable zinc-air flow battery. <i>Carbon</i> , 2023, 205, 422-434.	5.4	19
1880	Ion exchange synthesis of Fe-doped clustered CoP nanowires as superior electrocatalyst for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 16715-16724.	3.8	7
1881	A Deeper Understanding of H ₂ Evolution Entirely from Water via Diborane Hydrolysis. , 2023, 5, 783-797.		7
1882	Role of solvation model on the stability of oxygenates on Pt(111): A comparison between microsolvation, extended bilayer, and extended metal/water interface. <i>Electrochemical Science Advances</i> , 2024, 4, .	1.2	10
1883	Atomic Scaled Depth Correlation to the Oxygen Reduction Reaction Performance of Single Atom Ni Alloy to the NiO ₂ Supported Pd Nanocrystal. <i>Advanced Science</i> , 2023, 10, .	5.6	4
1884	Copper-Doped Cobalt Oxychloride for Efficient Oxygen Evolution Reactions in an Alkaline Medium. <i>ACS Applied Energy Materials</i> , 2023, 6, 2489-2496.	2.5	1
1885	Application of Nickel Foam in Electrochemical Systems: A Review. <i>Journal of Electronic Materials</i> , 2023, 52, 2264-2291.	1.0	5
1886	Mechanistic insight into hydrothermally prepared molybdenum-based electrocatalyst for overall water splitting. <i>Electrochimica Acta</i> , 2023, 445, 142050.	2.6	8

#	ARTICLE	IF	CITATIONS
1887	Scalable Synthesis of 2D Mo ₂ C and Thickness-Dependent Hydrogen Evolution on Its Basal Plane and Edges. <i>Advanced Materials</i> , 2023, 35, .	11.1	24
1888	Tuning of magnetic, electronic and electrolytic water properties of silicene supported precious-metal by non-metal doping and vacancy defect. <i>FlatChem</i> , 2023, 38, 100486.	2.8	2
1889	Electron induced construction of heterogeneous MoS ₂ for highly efficient hydrogen evolution reaction. <i>Journal of Electroanalytical Chemistry</i> , 2023, 932, 117267.	1.9	5
1890	Electrochemical Methods and Materials for Transition Metal-Based Electrocatalysts in Alkaline and Acidic Media. <i>ACS Symposium Series</i> , 0, , 219-248.	0.5	0
1891	Enhancing the oxygen evolution reaction of cobalt hydroxide by fabricating nanocomposites with fluorine-doped graphene oxide. <i>Dalton Transactions</i> , 2023, 52, 3877-3883.	1.6	3
1892	Dopant-induced photodegradation of organic water pollutants using cobalt oxide nanostructures of low cytotoxicity. <i>Journal of Environmental Chemical Engineering</i> , 2023, 11, 109520.	3.3	1
1893	Liquid metal-assisted hydrothermal preparation of cobalt disulfide on the polymer tape surface for flexible sensor. <i>Nano Research</i> , 0, , .	5.8	1
1894	Iron-Doped Monoclinic Strontium Iridate as a Highly Efficient Oxygen Evolution Electrocatalyst in Acidic Media. <i>Nanomaterials</i> , 2023, 13, 797.	1.9	1
1895	F and rare V ⁴⁺ -doped cobalt hydroxide hybrid nanostructures: excellent OER activity with ultralow overpotential. <i>Dalton Transactions</i> , 2023, 52, 4606-4615.	1.6	3
1896	Recent progress in synergistic electrocatalysis for generation of valuable products based on water cycle. <i>Nano Research</i> , 2023, 16, 6444-6476.	5.8	6
1897	Multimodal Analysis of Light-Driven Water Oxidation in Nanoporous Block Copolymer Membranes. <i>Angewandte Chemie</i> , 0, , .	1.6	0
1898	Multimodal Analysis of Light-Driven Water Oxidation in Nanoporous Block Copolymer Membranes**. <i>Angewandte Chemie - International Edition</i> , 2023, 62, .	7.2	2
1899	Controlled synthesis of MOF-derived hollow and yolk-shell nanocages for improved water oxidation and selective ethylene glycol reformation. <i>EScience</i> , 2023, 3, 100118.	25.0	18
1900	Theoretical Screening and experimental validation of M ₃ (2,3,6,7,10,11-hexahydroxytriphenylene) ₂ for electrocatalytic CO ₂ reduction. <i>Molecular Catalysis</i> , 2023, 540, 113033.	1.0	5
1901	Interface Engineering of MOF-Derived NiMoO ₄ @NiFeP Core-Shell Nanorods for Energy-Saving Hydrogen Evolution via Urea Electrolysis. <i>Inorganic Chemistry</i> , 2023, 62, 4960-4970.	1.9	20
1902	Magnetic State of Layered Cobalt Chalcogenides Co ₇ Se ₈ and Co ₇ Te ₈ . <i>JETP Letters</i> , 2023, 117, 54-60.	0.4	1
1903	Heterogeneous Cu _{1.92} S@Cu ₃ P/Ni ₂ P Nanospheres on Nickel Foam for Effective Electrocatalytic Oxygen Evolution Reaction**. <i>European Journal of Inorganic Chemistry</i> , 2023, 26, .	1.0	1
1904	Multi-layer Architecture of Novel Sea Urchin-like Co ₂ Hopeite to Boosting Overall Alkaline Water Splitting. <i>Advanced Materials Interfaces</i> , 2023, 10, .	1.9	2

#	ARTICLE	IF	CITATIONS
1906	Combining Highly Dispersed Amorphous MoS ₃ with Pt Nanodendrites as Robust Electrocatalysts for Hydrogen Evolution Reaction. <i>Small</i> , 2023, 19, .	5.2	4
1907	Atomic design of carbon-based dual-metal site catalysts for energy applications. <i>Nano Research</i> , 2023, 16, 6477-6506.	5.8	25
1908	Fe-doped Co ₃ O ₄ nanostructures prepared via hard-template method and used for the oxygen evolution reaction in alkaline media. <i>Journal of Industrial and Engineering Chemistry</i> , 2023, 123, 436-446.	2.9	2
1909	Modulating interfacial charge redistribution of Ni ₂ P/CuCo ₂ S ₄ p-n nano-heterojunctions for efficient electrocatalytic overall water splitting. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 25300-25314.	3.8	5
1910	Ultrafine Fe ₂ C Iron Carbide Nanoclusters Trapped in Topological Carbon Defects for Efficient Electroreduction of Carbon Dioxide. <i>Advanced Energy Materials</i> , 2023, 13, .	10.2	4
1911	Recent Advances in Nanocarbon-Based Nonprecious Metal Catalysts for Oxygen/Hydrogen Reduction/Evolution Reactions and Zn-Air Battery. <i>Bulletin of the Chemical Society of Japan</i> , 2023, 96, 429-443.	2.0	3
1912	Heterostructure and phase engineering synergistically activated highly efficient alkaline hydrogen evolution in Mo ₂ C/MoS ₂ -rGO hybrids. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 27557-27567.	3.8	2
1913	Nickel sulfide-based electrocatalysts for overall water splitting. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 27992-28017.	3.8	8
1914	MOF-Derived Co ₃ S ₄ Nanoparticles Embedded in Nitrogen-Doped Carbon for Electrochemical Oxygen Production. <i>ACS Applied Nano Materials</i> , 2023, 6, 7686-7693.	2.4	2
1919	Recent advances in interface engineering of Fe/Co/Ni-based heterostructure electrocatalysts for water splitting. <i>Materials Horizons</i> , 2023, 10, 2312-2342.	6.4	13
1927	Operando Electrochemical Raman Spectroscopy. <i>Springer Handbooks</i> , 2023, , 189-211.	0.3	1
1933	Recent advances of two-dimensional metal-organic frameworks in alkaline electrolysis water for hydrogen production. <i>Science China Chemistry</i> , 2023, 66, 1924-1939.	4.2	4
1960	Chevrel phases: synthesis, structure, and electrocatalytic applications. <i>Materials Chemistry Frontiers</i> , 2023, 7, 5500-5518.	3.2	1
1981	Recent advances in single-atom catalysts for electrochemical water splitting. , 2023, , 199-231.		0
1989	Co-doped Ni ₃ S ₂ nanosheet array: A high-efficiency electrocatalyst for alkaline seawater oxidation. <i>Nano Research</i> , 2024, 17, 1050-1055.	5.8	12
2024	Exploring the potential of cobalt hydroxide and its derivatives as a cost-effective and abundant alternative to noble metal electrocatalysts in oxygen evolution reactions: a review. <i>Sustainable Energy and Fuels</i> , 2024, 8, 422-459.	2.5	0
2042	Local reaction environment in electrocatalysis. <i>Chemical Society Reviews</i> , 2024, 53, 2022-2055.	18.7	2
2047	Three-dimensional porous NiCoP foam enabled high-performance overall seawater splitting at high current density. <i>Journal of Materials Chemistry A</i> , 2024, 12, 2680-2684.	5.2	1

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