Interface Engineering of MoS₂/Ni<sub>3</ Heterostructures for Highly Enhanced Electrochemical

Angewandte Chemie - International Edition 55, 6702-6707 DOI: 10.1002/anie.201602237

Citation Report

#	Article	IF	CITATIONS
1	<i>In situ</i> Electrochemical Transformation of Ni ₃ S ₂ and Ni ₃ S ₂ â€Ni from Sheets to Nanodisks: Towards Efficient Electrocatalysis for Hydrogen Evolution Reaction (HER). ChemistrySelect, 2016, 1, 6708-6712.	0.7	11
2	Fabrication of zero to three dimensional nanostructured molybdenum sulfides and their electrochemical and photocatalytic applications. Nanoscale, 2016, 8, 18250-18269.	2.8	79
3	Interlaced NiS ₂ –MoS ₂ nanoflake-nanowires as efficient hydrogen evolution electrocatalysts in basic solutions. Journal of Materials Chemistry A, 2016, 4, 13439-13443.	5.2	241
4	A review on noble-metal-free bifunctional heterogeneous catalysts for overall electrochemical water splitting. Journal of Materials Chemistry A, 2016, 4, 17587-17603.	5.2	1,037
5	Fabrication of amorphous CoMoS ₄ as a bifunctional electrocatalyst for water splitting under strong alkaline conditions. Nanoscale, 2016, 8, 18887-18892.	2.8	91
6	In situ electrochemical formation of NiSe/NiO _x core/shell nano-electrocatalysts for superior oxygen evolution activity. Catalysis Science and Technology, 2016, 6, 8268-8275.	2.1	78
7	Homologous NiO//Ni ₂ P nanoarrays grown on nickel foams: a well matched electrode pair with high stability in overall water splitting. Nanoscale, 2017, 9, 4409-4418.	2.8	127
8	Revelation of the Excellent Intrinsic Activity of MoS ₂ NiS MoO ₃ Nanowires for Hydrogen Evolution Reaction in Alkaline Medium. ACS Applied Materials & Interfaces, 2017, 9, 7084-7090.	4.0	94
9	Coupling Subâ€Nanometric Copper Clusters with Quasiâ€Amorphous Cobalt Sulfide Yields Efficient and Robust Electrocatalysts for Water Splitting Reaction. Advanced Materials, 2017, 29, 1606200.	11.1	350
10	MoS ₂ –Ni ₃ S ₂ Heteronanorods as Efficient and Stable Bifunctional Electrocatalysts for Overall Water Splitting. ACS Catalysis, 2017, 7, 2357-2366.	5.5	963
11	lonic Liquid as Reaction Medium for Synthesis of Hierarchically Structured One-Dimensional MoO ₂ for Efficient Hydrogen Evolution. ACS Applied Materials & Interfaces, 2017, 9, 7217-7223.	4.0	91
12	Three-dimensional hierarchical MoS2/CoS2 heterostructure arrays for highly efficient electrocatalytic hydrogen evolution. Green Energy and Environment, 2017, 2, 134-141.	4.7	64
13	Design and Application of Foams for Electrocatalysis. ChemCatChem, 2017, 9, 1721-1743.	1.8	245
14	A Heterostructure Coupling of Exfoliated Ni–Fe Hydroxide Nanosheet and Defective Graphene as a Bifunctional Electrocatalyst for Overall Water Splitting. Advanced Materials, 2017, 29, 1700017.	11.1	845
15	An efficient electrode based on one-dimensional CoMoO4 nanorods for oxygen evolution reaction. Chemical Physics Letters, 2017, 675, 11-14.	1.2	46
16	Morphology controlled synthesis of 2-D Ni–Ni3S2 and Ni3S2 nanostructures on Ni foam towards oxygen evolution reaction. Nano Convergence, 2017, 4, .	6.3	28
17	Electrocatalytic oxygen evolution reaction for energy conversion and storage: A comprehensive review. Nano Energy, 2017, 37, 136-157.	8.2	1,257
18	Amorphous nickel-cobalt complexes hybridized with 1T-phase molybdenum disulfide via hydrazine-induced phase transformation for water splitting. Nature Communications, 2017, 8, 15377.	5.8	284

#	Article	IF	CITATIONS
19	Nitrogen doped MoS 2 nanosheets synthesized via a low-temperature process as electrocatalysts with enhanced activity for hydrogen evolution reaction. Journal of Power Sources, 2017, 356, 133-139.	4.0	183
20	3D Au-decorated BiMoO ₆ nanosheet/TiO ₂ nanotube array heterostructure with enhanced UV and visible-light photocatalytic activity. Journal of Materials Chemistry A, 2017, 5, 16412-16421.	5.2	150
21	Selfâ€Templating Synthesis of Hollow Co ₃ O ₄ Microtube Arrays for Highly Efficient Water Electrolysis. Angewandte Chemie, 2017, 129, 1344-1348.	1.6	79
22	Selfâ€Templating Synthesis of Hollow Co ₃ O ₄ Microtube Arrays for Highly Efficient Water Electrolysis. Angewandte Chemie - International Edition, 2017, 56, 1324-1328.	7.2	648
23	Controlled synthesis of Mo-doped Ni ₃ S ₂ nano-rods: an efficient and stable electro-catalyst for water splitting. Journal of Materials Chemistry A, 2017, 5, 1595-1602.	5.2	148
24	One-Pot Synthesis of Zeolitic Imidazolate Framework 67-Derived Hollow Co ₃ S ₄ @MoS ₂ Heterostructures as Efficient Bifunctional Catalysts. Chemistry of Materials, 2017, 29, 5566-5573.	3.2	510
25	Efficient hydrogen production on MoNi4 electrocatalysts with fast water dissociation kinetics. Nature Communications, 2017, 8, 15437.	5.8	813
26	A Bifunctional Hybrid Electrocatalyst for Oxygen Reduction and Evolution: Cobalt Oxide Nanoparticles Strongly Coupled to B,Nâ€Decorated Graphene. Angewandte Chemie - International Edition, 2017, 56, 7121-7125.	7.2	395
27	A Bifunctional Hybrid Electrocatalyst for Oxygen Reduction and Evolution: Cobalt Oxide Nanoparticles Strongly Coupled to B,Nâ€Đecorated Graphene. Angewandte Chemie, 2017, 129, 7227-7231.	1.6	59
28	Topotactic reduction of layered double hydroxides for atomically thick two-dimensional non-noble-metal alloy. Nano Research, 2017, 10, 2988-2997.	5.8	38
29	Facile electrodeposition of cauliflower-like S-doped nickel microsphere films as highly active catalysts for electrochemical hydrogen evolution. Journal of Materials Chemistry A, 2017, 5, 15056-15064.	5.2	45
30	3D Nitrogenâ€Anionâ€Decorated Nickel Sulfides for Highly Efficient Overall Water Splitting. Advanced Materials, 2017, 29, 1701584.	11.1	478
31	Integrated Hierarchical Cobalt Sulfide/Nickel Selenide Hybrid Nanosheets as an Efficient Three-dimensional Electrode for Electrochemical and Photoelectrochemical Water Splitting. Nano Letters, 2017, 17, 4202-4209.	4.5	263
32	Facile Synthesis of Nickel Manganese Composite Oxide Nanomesh for Efficient Oxygen Evolution Reaction and Supercapacitors. Electrochimica Acta, 2017, 245, 32-40.	2.6	35
33	Graphdiyneâ€ S upported NiCo ₂ S ₄ Nanowires: A Highly Active and Stable 3D Bifunctional Electrode Material. Small, 2017, 13, 1700936.	5.2	194
34	Selfâ€Supported NiS Nanoparticleâ€Coupled Ni ₂ P Nanoflake Array Architecture: An Advanced Catalyst for Electrochemical Hydrogen Evolution. ChemElectroChem, 2017, 4, 1341-1348.	1.7	17
35	Electrospinning Heteroâ€Nanofibers of Fe ₃ Câ€Mo ₂ C/Nitrogenâ€Doped arbon as Efficient Electrocatalysts for Hydrogen Evolution. ChemSusChem, 2017, 10, 2597-2604.	3.6	100
36	Sulfurizing-Induced Hollowing of Co ₉ S ₈ Microplates with Nanosheet Units for Highly Efficient Water Oxidation. ACS Applied Materials & Interfaces, 2017, 9, 11634-11641.	4.0	129

#	Article	IF	CITATIONS
37	Self-supported NiMoP ₂ nanowires on carbon cloth as an efficient and durable electrocatalyst for overall water splitting. Journal of Materials Chemistry A, 2017, 5, 7191-7199.	5.2	168
38	Nâ€, Oâ€, and Sâ€Tridoped Carbonâ€Encapsulated Co ₉ S ₈ Nanomaterials: Efficient Bifunctional Electrocatalysts for Overall Water Splitting. Advanced Functional Materials, 2017, 27, 1606585.	7.8	365
39	Nitrogen-doped carbon encapsulating γ-MoC/Ni heterostructures for efficient oxygen evolution electrocatalysts. Nanoscale, 2017, 9, 5583-5588.	2.8	66
40	Self-supported ternary Co0.5Mn0.5P/carbon cloth (CC) as a high-performance hydrogen evolution electrocatalyst. Nano Research, 2017, 10, 1001-1009.	5.8	39
41	Synthesis of single-crystal-like nanoporous carbon membranes and their application in overall water splitting. Nature Communications, 2017, 8, 13592.	5.8	142
42	Engineering Co ₉ S ₈ /WS ₂ array films as bifunctional electrocatalysts for efficient water splitting. Journal of Materials Chemistry A, 2017, 5, 23361-23368.	5.2	117
43	Preparation, Structure and Functional Properties of MoS2 and WS2 Nanocomposites with Inorganic Chalcogenide Semiconductors: a Review. Theoretical and Experimental Chemistry, 2017, 53, 211-234.	0.2	3
44	Multifunctional Mo–N/C@MoS ₂ Electrocatalysts for HER, OER, ORR, and Zn–Air Batteries. Advanced Functional Materials, 2017, 27, 1702300.	7.8	658
45	Regulating p-block metals in perovskite nanodots for efficient electrocatalytic water oxidation. Nature Communications, 2017, 8, 934.	5.8	102
46	Synergistic effect of two actions sites on cobalt oxides towards electrochemical water-oxidation. Nano Energy, 2017, 42, 98-105.	8.2	101
47	Photogenerated Carriers Boost Water Splitting Activity over Transition-Metal/Semiconducting Metal Oxide Bifunctional Electrocatalysts. ACS Catalysis, 2017, 7, 6464-6470.	5.5	62
48	Identifying the electrocatalytic sites of nickel disulfide in alkaline hydrogen evolution reaction. Nano Energy, 2017, 41, 148-153.	8.2	168
49	Heterogeneous Bimetallic Phosphide/Sulfide Nanocomposite for Efficient Solar-Energy-Driven Overall Water Splitting. ACS Nano, 2017, 11, 10303-10312.	7.3	187
50	Synthesis of compositionally tunable, hollow mixed metal sulphide Co _x Ni _y S _z octahedral nanocages and their composition-dependent electrocatalytic activities for oxygen evolution reaction. Nanoscale, 2017, 9, 15397-15406.	2.8	52
51	Phosphorus and Fluorine Coâ€Doping Induced Enhancement of Oxygen Evolution Reaction in Bimetallic Nitride Nanorods Arrays: Ionic Liquidâ€Driven and Mechanism Clarification. Chemistry - A European Journal, 2017, 23, 16862-16870.	1.7	41
52	Phosphorene for energy and catalytic application—filling the gap between graphene and 2D metal chalcogenides. 2D Materials, 2017, 4, 042006.	2.0	46
53	Large-Area Synthesis of a Ni ₂ P Honeycomb Electrode for Highly Efficient Water Splitting. ACS Applied Materials & Interfaces, 2017, 9, 32812-32819.	4.0	62
54	Hierarchical Nickel Sulfide Nanosheets Directly Grown on Ni Foam: A Stable and Efficient Electrocatalyst for Water Reduction and Oxidation in Alkaline Medium. ACS Sustainable Chemistry and Engineering, 2017, 5, 7203-7210.	3.2	122

#	Article	IF	CITATIONS
55	In Situ Electrochemical Production of Ultrathin Nickel Nanosheets for Hydrogen Evolution Electrocatalysis. CheM, 2017, 3, 122-133.	5.8	214
56	Synthesis of WO _{<i>n</i>} â€WX ₂ (<i>n</i> =2.7, 2.9; X=S, Se) Heterostructures for Highly Efficient Green Quantum Dot Lightâ€Emitting Diodes. Angewandte Chemie, 2017, 129, 10622-10626.	1.6	7
57	Synthesis of WO _{<i>n</i>} â€WX ₂ (<i>n</i> =2.7, 2.9; X=S, Se) Heterostructures for Highly Efficient Green Quantum Dot Lightâ€Emitting Diodes. Angewandte Chemie - International Edition, 2017, 56, 10486-10490.	7.2	21
58	Nickel Diselenide Ultrathin Nanowires Decorated with Amorphous Nickel Oxide Nanoparticles for Enhanced Water Splitting Electrocatalysis. Small, 2017, 13, 1701487.	5.2	99
59	Integrated Ni2P nanosheet arrays on three-dimensional Ni foam for highly efficient water reduction and oxidation. Journal of Energy Chemistry, 2017, 26, 1196-1202.	7.1	100
60	Nanostructured materials on 3D nickel foam as electrocatalysts for water splitting. Nanoscale, 2017, 9, 12231-12247.	2.8	403
61	Nitrogen doped NiS ₂ nanoarrays with enhanced electrocatalytic activity for water oxidation. Journal of Materials Chemistry A, 2017, 5, 17811-17816.	5.2	69
62	Strongly Coupled Molybdenum Carbide on Carbon Sheets as a Bifunctional Electrocatalyst for Overall Water Splitting. ChemSusChem, 2017, 10, 3540-3546.	3.6	114
63	In Situ Fabrication of Ni–Mo Bimetal Sulfide Hybrid as an Efficient Electrocatalyst for Hydrogen Evolution over a Wide pH Range. ACS Catalysis, 2017, 7, 6179-6187.	5.5	287
64	Efficient coupling of a hierarchical V ₂ O ₅ @Ni ₃ S ₂ hybrid nanoarray for pseudocapacitors and hydrogen production. Journal of Materials Chemistry A, 2017, 5, 17954-17962.	5.2	88
65	An ambient temperature, CO ₂ -assisted solution processing of amorphous cobalt sulfide in a thiol/amine based quasi-ionic liquid for oxygen evolution catalysis. Chemical Communications, 2017, 53, 9418-9421.	2.2	36
66	Nanostructured Metal Chalcogenides for Energy Storage and Electrocatalysis. Advanced Functional Materials, 2017, 27, 1702317.	7.8	339
67	Bifuntional petaloid nickel manganese layered double hydroxides decorated on a freestanding carbon foam for flexible asymmetric supercapacitor and oxygen evolution. Electrochimica Acta, 2017, 252, 275-285.	2.6	30
68	Ni ₃ S ₂ Nanosheet Flowers Decorated with CdS Quantum Dots as a Highly Active Electrocatalysis Electrode for Synergistic Water Splitting. ACS Applied Materials & Interfaces, 2017, 9, 29660-29668.	4.0	82
69	Feâ€Doped Ni ₃ C Nanodots in Nâ€Doped Carbon Nanosheets for Efficient Hydrogenâ€Evolution and Oxygenâ€Evolution Electrocatalysis. Angewandte Chemie, 2017, 129, 12740-12744.	1.6	48
70	Feâ€Doped Ni ₃ C Nanodots in Nâ€Doped Carbon Nanosheets for Efficient Hydrogenâ€Evolution and Oxygenâ€Evolution Electrocatalysis. Angewandte Chemie - International Edition, 2017, 56, 12566-12570.	7.2	324
71	Porous NiFe-Oxide Nanocubes as Bifunctional Electrocatalysts for Efficient Water-Splitting. ACS Applied Materials & Interfaces, 2017, 9, 41906-41915.	4.0	229
72	Interface Engineering of Ni ₃ N@Fe ₃ N Heterostructure Supported on Carbon Fiber for Enhanced Water Oxidation. Industrial & Engineering Chemistry Research, 2017, 56, 14245-14251.	1.8	35

#	Article	IF	CITATIONS
73	Understanding the high-electrocatalytic performance of two-dimensional MoS ₂ nanosheets and their composite materials. Journal of Materials Chemistry A, 2017, 5, 24540-24563.	5.2	183
74	Integrated 3D self-supported Ni decorated MoO ₂ nanowires as highly efficient electrocatalysts for ultra-highly stable and large-current-density hydrogen evolution. Journal of Materials Chemistry A, 2017, 5, 24453-24461.	5.2	64
75	Nitrogen–doped graphitized carbon shell encapsulated NiFe nanoparticles: A highly durable oxygen evolution catalyst. Nano Energy, 2017, 39, 245-252.	8.2	143
76	Monolayer MoS2 decorated Cu7S4-Au nanocatalysts for sensitive and selective detection of mercury(II). Science China Materials, 2017, 60, 352-360.	3.5	18
77	Fullereneâ€Like Nickel Oxysulfide Hollow Nanospheres as Bifunctional Electrocatalysts for Water Splitting. Small, 2017, 13, 1602637.	5.2	39
78	Engineering NiMo3S4 Ni3S2 interface for excellent hydrogen evolution reaction in alkaline medium. Electrochimica Acta, 2017, 258, 669-676.	2.6	15
79	Engineering Pyrite-Type Bimetallic Ni-Doped CoS2 Nanoneedle Arrays over a Wide Compositional Range for Enhanced Oxygen and Hydrogen Electrocatalysis with Flexible Property. Catalysts, 2017, 7, 366.	1.6	28
80	Interface engineering: The Ni(OH) 2 /MoS 2 heterostructure for highly efficient alkaline hydrogen evolution. Nano Energy, 2017, 37, 74-80.	8.2	436
81	Aerosol-spray metal phosphide microspheres with bifunctional electrocatalytic properties for water splitting. Journal of Materials Chemistry A, 2018, 6, 4783-4792.	5.2	53
82	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
83	A Roomâ€Temperature Postsynthetic Ligand Exchange Strategy to Construct Mesoporous Feâ€Doped CoP Hollow Triangle Plate Arrays for Efficient Electrocatalytic Water Splitting. Small, 2018, 14, e1704233.	5.2	244
84	Loading Amorphous NiMoO _{4–<i>x</i>} S _{<i>x</i>} Nanosheet Cocatalyst to Improve Performance of <i>p</i> -Silicon Wafer Photocathode. ACS Applied Energy Materials, 2018, 1, 1286-1293.	2.5	9
85	Activating CoOOH Porous Nanosheet Arrays by Partial Iron Substitution for Efficient Oxygen Evolution Reaction. Angewandte Chemie, 2018, 130, 2702-2706.	1.6	50
86	CoP/WS2 nanoflake heterostructures as efficient electrocatalysts for significant improvement in hydrogen evolution activity. Applied Surface Science, 2018, 442, 352-360.	3.1	32
87	Large-scale controlled synthesis of porous two-dimensional nanosheets for the hydrogen evolution reaction through a chemical pathway. Nanoscale, 2018, 10, 6168-6176.	2.8	23
88	The study on the active origin of electrocatalytic water splitting using Ni-MoS2 as example. Electrochimica Acta, 2018, 268, 268-275.	2.6	29
89	Two-Dimensional MoS ₂ Confined Co(OH) ₂ Electrocatalysts for Hydrogen Evolution in Alkaline Electrolytes. ACS Nano, 2018, 12, 4565-4573.	7.3	302
90	Vertically Aligned Oxygenated-CoS ₂ –MoS ₂ Heteronanosheet Architecture from Polyoxometalate for Efficient and Stable Overall Water Splitting. ACS Catalysis, 2018, 8, 4612-4621.	5.5	290

#	Article	IF	CITATIONS
91	Low-temperature synthesis of NiS/MoS2/C nanowires/nanoflakes as electrocatalyst for hydrogen evolution reaction in alkaline medium via calcining/sulfurizing metal-organic frameworks. Electrochimica Acta, 2018, 274, 74-83.	2.6	40
92	A highly efficient Ni–Mo bimetallic hydrogen evolution catalyst derived from a molybdate incorporated Ni-MOF. Journal of Materials Chemistry A, 2018, 6, 9228-9235.	5.2	83
93	Defect-rich (Co–CoS ₂) _x @Co ₉ S ₈ nanosheets derived from monomolecular precursor pyrolysis with excellent catalytic activity for hydrogen evolution reaction. Journal of Materials Chemistry A, 2018, 6, 7977-7987.	5.2	46
94	Self-supported Ni3S2@MoS2 core/shell nanorod arrays via decoration with CoS as a highly active and efficient electrocatalyst for hydrogen evolution and oxygen evolution reactions. International Journal of Hydrogen Energy, 2018, 43, 8794-8804.	3.8	53
95	Efficient Hydrogen Production on a 3D Flexible Heterojunction Material. Advanced Materials, 2018, 30, e1707082.	11.1	158
96	In situ promoting water dissociation kinetic of Co based electrocatalyst for unprecedentedly enhanced hydrogen evolution reaction in alkaline media. Nano Energy, 2018, 49, 14-22.	8.2	53
97	Enhanced hydrogen evolution via interlaced Ni3S2/MoS2 heterojunction photocatalysts with efficient interfacial contact and broadband absorption. Journal of Alloys and Compounds, 2018, 749, 473-480.	2.8	46
98	Radially Aligned Hierarchical Nickel/Nickel–Iron (Oxy)hydroxide Nanotubes for Efficient Electrocatalytic Water Splitting. ACS Applied Materials & Interfaces, 2018, 10, 8585-8593.	4.0	69
99	Nanocrystalline NiS particles synthesized by mechanical alloying as a promising oxygen evolution electrocatalyst. Materials Letters, 2018, 218, 115-118.	1.3	18
100	Phosphorus-Doped Co ₃ O ₄ Nanowire Array: A Highly Efficient Bifunctional Electrocatalyst for Overall Water Splitting. ACS Catalysis, 2018, 8, 2236-2241.	5.5	517
101	Anion-Containing Noble-Metal-Free Bifunctional Electrocatalysts for Overall Water Splitting. ACS Catalysis, 2018, 8, 3688-3707.	5.5	245
102	Trimetallic NiFeMo for Overall Electrochemical Water Splitting with a Low Cell Voltage. ACS Energy Letters, 2018, 3, 546-554.	8.8	205
103	An electrocatalyst with anti-oxidized capability for overall water splitting. Nano Research, 2018, 11, 3411-3418.	5.8	16
104	A review of anion-regulated multi-anion transition metal compounds for oxygen evolution electrocatalysis. Inorganic Chemistry Frontiers, 2018, 5, 521-534.	3.0	123
105	Operando Investigation of Mn ₃ O _{4+δ} Co-catalyst on Fe ₂ O ₃ Photoanode: Manganese-Valency-Determined Enhancement at Varied Potentials. ACS Applied Energy Materials, 2018, 1, 814-821.	2.5	21
106	Bifunctional Heterostructure Assembly of NiFe LDH Nanosheets on NiCoP Nanowires for Highly Efficient and Stable Overall Water Splitting. Advanced Functional Materials, 2018, 28, 1706847.	7.8	584
107	Decoupling Hydrogen and Oxygen Production in Acidic Water Electrolysis Using a Polytriphenylamineâ€Based Battery Electrode. Angewandte Chemie - International Edition, 2018, 57, 2904-2908.	7.2	86
108	Accelerated Hydrogen Evolution Kinetics on NiFe‣ayered Double Hydroxide Electrocatalysts by Tailoring Water Dissociation Active Sites. Advanced Materials, 2018, 30, 1706279.	11.1	601

		CITATION REPORT		
#	Article	IF	CITATIONS	
109	Activating CoOOH Porous Nanosheet Arrays by Partial Iron Substitution for Efficient Oxygen Evolution Reaction. Angewandte Chemie - International Edition, 2018, 57, 2672-2676.	7.2	474	
110	Binary FeCo Oxyhydroxide Nanosheets as Highly Efficient Bifunctional Electrocatalysts for Overall Water Splitting. Chemistry - A European Journal, 2018, 24, 4724-4728.	1.7	54	
111	Synergism of Geometric Construction and Electronic Regulation: 3D Seâ€(NiCo)S <i>_x</i> /(OH) <i>_x</i> Nanosheets for Highly Efficient Overall Water Splitting. Advanced Materials, 2018, 30, e1705538.	11.1	236	
112	Mace-like hierarchical MoS 2 /NiCo 2 S 4 composites supported by carbon fiber paper: An efficient electrocatalyst for the hydrogen evolution reaction. Journal of Power Sources, 2018, 377, 142-150.	4.0	94	
113	Dominating Role of Aligned MoS ₂ /Ni ₃ S ₂ Nanoarrays Supported on Three-Dimensional Ni Foam with Hydrophilic Interface for Highly Enhanced Hydrogen Evolution Reaction. ACS Applied Materials & Interfaces, 2018, 10, 1752-1760.	4.0	175	
114	Hydrolysis Batteries: Generating Electrical Energy during Hydrogen Absorption. Angewandte Chemie - International Edition, 2018, 57, 2219-2223.	7.2	12	
115	Controlled Synthesis of a Three-Segment Heterostructure for High-Performance Overall Water Splitting. ACS Applied Materials & amp; Interfaces, 2018, 10, 1771-1780.	4.0	22	
116	Efficient Hydrogen Evolution Electrocatalysis at Alkaline pH by Interface Engineering of Ni ₂ P–CeO ₂ . Inorganic Chemistry, 2018, 57, 548-552.	1.9	78	
117	One-step synthesis of Ag2S/Ag@MoS2 nanocomposites for SERS and photocatalytic applications. Journal of Nanoparticle Research, 2018, 20, 1.	0.8	17	
118	Hydrolysis Batteries: Generating Electrical Energy during Hydrogen Absorption. Angewandte Chemie, 2018, 130, 2241-2245.	1.6	2	
119	Alkaline–Acid Zn–H ₂ O Fuel Cell for the Simultaneous Generation of Hydrogen and Electricity. Angewandte Chemie - International Edition, 2018, 57, 3910-3915.	7.2	92	
120	Biomimetic organization of a ruthenium-doped collagen-based carbon scaffold for hydrogen evolution. Journal of Materials Chemistry A, 2018, 6, 2311-2317.	5.2	36	
121	Role of non-metallic atoms in enhancing the catalytic activity of nickel-based compounds for hydrogen evolution reaction. Chemical Science, 2018, 9, 1822-1830.	3.7	46	
122	Enhanced Catalysis of Electrochemical Overall Water Splitting in Alkaline Media by Fe Doping in Ni ₃ S ₂ Nanosheet Arrays. ACS Catalysis, 2018, 8, 5431-5441.	5.5	499	
123	Colloidal Synthesis of Mo–Ni Alloy Nanoparticles as Bifunctional Electrocatalysts for Efficient Overall Water Splitting. Advanced Materials Interfaces, 2018, 5, 1800359.	1.9	42	
124	Environmental Catalysis. Nanostructure Science and Technology, 2018, , 61-99.	0.1	0	
125	Dimensional construction and morphological tuning of heterogeneous MoS ₂ /NiS electrocatalysts for efficient overall water splitting. Journal of Materials Chemistry A, 2018, 6, 9833-9838.	5.2	114	
126	Ni–Mo–O nanorod-derived composite catalysts for efficient alkaline water-to-hydrogen conversion <i>via</i> urea electrolysis. Energy and Environmental Science, 2018, 11, 1890-1897.	15.6	599	

#	Article	IF	CITATIONS
127	Bifunctional Electrocatalysts for Overall Water Splitting from an Iron/Nickelâ€Based Bimetallic Metal–Organic Framework/Dicyandiamide Composite. Angewandte Chemie, 2018, 130, 9059-9064.	1.6	81
128	Bifunctional Electrocatalysts for Overall Water Splitting from an Iron/Nickelâ€Based Bimetallic Metal–Organic Framework/Dicyandiamide Composite. Angewandte Chemie - International Edition, 2018, 57, 8921-8926.	7.2	291
129	Unconventional noble metal-free catalysts for oxygen evolution in aqueous systems. Journal of Materials Chemistry A, 2018, 6, 8147-8158.	5.2	66
130	NiO as a Bifunctional Promoter for RuO ₂ toward Superior Overall Water Splitting. Small, 2018, 14, e1704073.	5.2	214
131	Controlled synthesis of Ni(OH) ₂ /Ni ₃ S ₂ hybrid nanosheet arrays as highly active and stable electrocatalysts for water splitting. Journal of Materials Chemistry A, 2018, 6, 6938-6946.	5.2	207
132	Heteroporous MoS ₂ /Ni ₃ S ₂ towards superior electrocatalytic overall urea splitting. Chemical Communications, 2018, 54, 5181-5184.	2.2	92
133	Regulating the Charge and Spin Ordering of Two-Dimensional Ultrathin Solids for Electrocatalytic Water Splitting. CheM, 2018, 4, 1263-1283.	5.8	219
134	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
135	Ni ₃ S ₂ nanowires grown on nickel foam as an efficient bifunctional electrocatalyst for water splitting with greatly practical prospects. Nanotechnology, 2018, 29, 245402.	1.3	35
136	Heteromorphic NiCo ₂ S ₄ /Ni ₃ S ₂ /Ni Foam as a Self-Standing Electrode for Hydrogen Evolution Reaction in Alkaline Solution. ACS Applied Materials & Interfaces, 2018, 10, 10890-10897.	4.0	147
137	One-step synthesis of cobalt-doped MoS ₂ nanosheets as bifunctional electrocatalysts for overall water splitting under both acidic and alkaline conditions. Chemical Communications, 2018, 54, 3859-3862.	2.2	196
138	Decoupling Hydrogen and Oxygen Production in Acidic Water Electrolysis Using a Polytriphenylamineâ€Based Battery Electrode. Angewandte Chemie, 2018, 130, 2954-2958.	1.6	17
139	Scalable synthesis of heterostructure molybdenum and nickel sulfides nanosheets for efficient hydrogen generation in alkaline electrolyte. Catalysis Today, 2018, 316, 171-176.	2.2	28
140	Metallic CuCo2S4 nanosheets of atomic thickness as efficient bifunctional electrocatalysts for portable, flexible Zn-air batteries. Nanoscale, 2018, 10, 6581-6588.	2.8	69
141	Efficient Hydrogen Evolution on Cu Nanodots-Decorated Ni ₃ S ₂ Nanotubes by Optimizing Atomic Hydrogen Adsorption and Desorption. Journal of the American Chemical Society, 2018, 140, 610-617.	6.6	563
142	Co(OH) ₂ hollow nanoflowers as highly efficient electrocatalysts for oxygen evolution reaction. Journal of Materials Research, 2018, 33, 568-580.	1.2	22
143	Highly efficient hydrogen evolution based on Ni3S4@MoS2 hybrids supported on N-doped reduced graphene oxide. Applied Surface Science, 2018, 428, 1046-1055.	3.1	18
144	An effective graphene confined strategy to construct active edge sites-enriched nanosheets with enhanced oxygen evolution. Carbon, 2018, 126, 437-442.	5.4	37

#	Article	IF	CITATIONS
145	Organic-inorganic hybrids-directed ternary NiFeMoS anemone-like nanorods with scaly surface supported on nickel foam for efficient overall water splitting. Chemical Engineering Journal, 2018, 334, 922-931.	6.6	216
146	Promoting Active Sites in Core–Shell Nanowire Array as Mott–Schottky Electrocatalysts for Efficient and Stable Overall Water Splitting. Advanced Functional Materials, 2018, 28, 1704447.	7.8	225
147	Phosphorusâ€Doped MoS ₂ Nanosheets Supported on Carbon Cloths as Efficient Hydrogenâ€Generation Electrocatalysts. ChemCatChem, 2018, 10, 1571-1577.	1.8	55
148	MoS ₂ –MoP heterostructured nanosheets on polymer-derived carbon as an electrocatalyst for hydrogen evolution reaction. Journal of Materials Chemistry A, 2018, 6, 616-622.	5.2	104
149	Phosphorus-driven mesoporous Co3O4 nanosheets with tunable oxygen vacancies for the enhanced oxygen evolution reaction. Electrochimica Acta, 2018, 259, 962-967.	2.6	119
150	Facile and controllable synthesis at an ionic layer level of high-performance NiFe-based nanofilm electrocatalysts for the oxygen evolution reaction in alkaline electrolyte. Electrochemistry Communications, 2018, 86, 38-42.	2.3	10
151	Alkaline–Acid Zn–H ₂ O Fuel Cell for the Simultaneous Generation of Hydrogen and Electricity. Angewandte Chemie, 2018, 130, 3974-3979.	1.6	52
152	Controllable synthesis of NiO/Ni ₃ S ₂ hybrid arrays as efficient electrocatalysts for water splitting. New Journal of Chemistry, 2018, 42, 18201-18207.	1.4	7
153	Morphology engineering of nickel molybdate hydrate nanoarray for electrocatalytic overall water splitting: from nanorod to nanosheet. RSC Advances, 2018, 8, 35131-35138.	1.7	25
154	Heterostructured Electrocatalysts for Hydrogen Evolution Reaction Under Alkaline Conditions. Nano-Micro Letters, 2018, 10, 75.	14.4	412
155	Homogeneous Metal Nitrate Hydroxide Nanoarrays Grown on Nickel Foam for Efficient Electrocatalytic Oxygen Evolution. Small, 2018, 14, e1803783.	5.2	50
156	Heterostructure-Promoted Oxygen Electrocatalysis Enables Rechargeable Zinc–Air Battery with Neutral Aqueous Electrolyte. Journal of the American Chemical Society, 2018, 140, 17624-17631.	6.6	258
157	Hierarchical MoS2/Ni3S2 core-shell nanofibers for highly efficient and stable overall-water-splitting in alkaline media. Materials Today Energy, 2018, 10, 214-221.	2.5	16
158	Constructing Successive Active Sites for Metalâ€free Electrocatalyst with Boosted Electrocatalytic Activities Toward Hydrogen Evolution and Oxygen Reduction Reactions. ChemCatChem, 2018, 10, 5194-5200.	1.8	30
159	Palladium Phosphide as a Stable and Efficient Electrocatalyst for Overall Water Splitting. Angewandte Chemie - International Edition, 2018, 57, 14862-14867.	7.2	233
160	Palladium Phosphide as a Stable and Efficient Electrocatalyst for Overall Water Splitting. Angewandte Chemie, 2018, 130, 15078-15083.	1.6	20
161	A bifunctional and stable Ni–Co–S/Ni–Co–P bistratal electrocatalyst for 10.8%-efficient overall solar water splitting. Journal of Materials Chemistry A, 2018, 6, 20297-20303.	5.2	47
162	Heterostructure CoS/NC@MoS ₂ Hollow Spheres for Highâ€Performance Hydrogen Evolution Reactions and Lithiumâ€ŀON Batteries. ChemElectroChem, 2018, 5, 3953-3960.	1.7	41

ARTICLE IF CITATIONS # Interface-Synergistically Enhanced Acidic, Neutral, and Alkaline Hydrogen Evolution Reaction over Mo<sub>2(/sub>C/MoO<sub>2(/sub> Heteronanorods. ACS Sustainable Chemistry and Engineering, 3.2 42 163 2018, 6, 14356-14364. O2 plasma and cation tuned nickel phosphide nanosheets for highly efficient overall water splitting. 164 8.2 Nan'o Energy, 2018, 54, 82-90. Homogeneous core–shell NiCo2S4 nanorods as flexible electrode for overall water splitting. 165 3.8 55 International Journal of Hydrogen Energy, 2018, 43, 20627-20635. NiCo₂O₄@NiMoO₄ Supported on Nickel Foam for 1.8 Electrocatalytic Water Splitting. ChemCatChem, 2018, 10, 5533-5540. Visible―and NIRâ€Light Responsive Blackâ€Phosphorusâ€Based Nanostructures in Solar Fuel Production and 167 11.1 61 Environmental Remediation. Advanced Materials, 2018, 30, e1804770. Ultrasmall Ru/Cuâ€doped RuO₂ Complex Embedded in Amorphous Carbon Skeleton as Highly Active Bifunctional Electrocatalysts for Overall Water Splitting. Small, 2018, 14, e1803009. 5.2 CeO_{<i>x</i>}-Decorated NiFe-Layered Double Hydroxide for Efficient Alkaline Hydrogen 169 4.0 156 Evolution by Oxygen Vacancy Engineering. ACS Applied Materials & amp; Interfaces, 2018, 10, 35145-35153. Si3N4/MoS2-PEDOT: PSS composite counter electrode for bifacial dye-sensitized solar cells. Solar 2.9 Energy, 2018, 173, 1135-1143. Well-Defined Mo₂C Nanoparticles Embedded in Porous N-Doped Carbon Matrix for Highly 171 Efficient Electrocatalytic Hydrogen Evolution. ACS Applied Materials & amp; Interfaces, 2018, 10, 4.0 67 33276-33286. Ultralong needle-like N-doped Co(OH)F on carbon fiber paper with abundant oxygen vacancies as an 3.2 efficient oxygen evolution reaction catalyst. Materials Chemistry Frontiers, 2018, 2, 2045-2053. A Facile Strategy to Construct Amorphous Spinelâ€Based Electrocatalysts with Massive Oxygen 173 10.2 156 Vacancies Using Ionic Liquid Dopant. Advanced Energy Materials, 2018, 8, 1800980. Ultrafast fabrication of nickel sulfide film on Ni foam for efficient overall water splitting. 174 2.8 Nanoscale, 2018, 10, 17347-17353. Synthesis of Mo doped Ni2S3 nanaorods arrays for overall water splitting. International Journal of 175 0.5 10 Electrochemical Science, 2018, 13, 8506-8517. FeS₂/CoS₂ Interface Nanosheets as Efficient Bifunctional Electrocatalyst for Overall Water Splitting. Small, 2018, 14, e1801070. 5.2 Cobalt Covalent Doping in MoS₂ to Induce Bifunctionality of Overall Water Splitting. 177 11.1 402 Advanced Materials, 2018, 30, e1801450. Ultrafine Pt Nanoparticleâ€Decorated Pyriteâ€Type CoS₂ Nanosheet Arrays Coated on Carbon Cloth as a Bifunctional Electrode for Overall Water Splitting. Advanced Energy Materials, 2018, 8, 286 1800935. Highly active and dual-function self-supported multiphase NiŠâ€"NiS₂–Ni₃S₂/NF electrodes for overall water splitting. 179 5.291 Journal of Materials Chemistry A, 2018, 6, 14207-14214. Synergistic effect: Hierarchical Ni3S2@Co(OH)2 heterostructure as efficient bifunctional 3.1 electrocatalyst for overall water splitting. Applied Surface Science, 2018, 457, 156-163.

#	Article	IF	CITATIONS
181	High-performance bifunctional porous non-noble metal phosphide catalyst for overall water splitting. Nature Communications, 2018, 9, 2551.	5.8	812
182	Defect-rich MoS2 nanosheets vertically grown on graphene-protected Ni foams for high efficient electrocatalytic hydrogen evolution. International Journal of Hydrogen Energy, 2018, 43, 14087-14095.	3.8	25
183	Oxide/sulfide-based hybrid arrays as robust electrocatalysts for water splitting. Dalton Transactions, 2018, 47, 10273-10280.	1.6	29
184	A metallic MoS ₂ nanosheet array on graphene-protected Ni foam as a highly efficient electrocatalytic hydrogen evolution cathode. Journal of Materials Chemistry A, 2018, 6, 16458-16464.	5.2	33
185	Well-aligned metal–organic framework array-derived CoS ₂ nanosheets toward robust electrochemical water splitting. Materials Chemistry Frontiers, 2018, 2, 1732-1738.	3.2	41
186	Controlled synthesis of Co ₃ O ₄ @NiMoO ₄ core–shell nanorod arrays for efficient water splitting. Dalton Transactions, 2018, 47, 12071-12074.	1.6	34
187	Coupling Interface Constructions of MoS ₂ /Fe ₅ Ni ₄ S ₈ Heterostructures for Efficient Electrochemical Water Splitting. Advanced Materials, 2018, 30, e1803151.	11.1	230
188	Dual-template engineering of triple-layered nanoarray electrode of metal chalcogenides sandwiched with hydrogen-substituted graphdiyne. Nature Communications, 2018, 9, 3132.	5.8	85
189	Superhydrophilic Heteroporous MoS ₂ /Ni ₃ S ₂ for Highly Efficient Electrocatalytic Overall Water Splitting. ACS Applied Energy Materials, 2018, 1, 3929-3936.	2.5	74
190	FeCo ₂ S ₄ Nanosheet Arrays Supported on Ni Foam: An Efficient and Durable Bifunctional Electrocatalyst for Overall Water-Splitting. ACS Sustainable Chemistry and Engineering, 2018, 6, 11724-11733.	3.2	83
191	Anchoring black phosphorus quantum dots on molybdenum disulfide nanosheets: a 0D/2D nanohybrid with enhanced visibleâ^'and NIR â^'light photoactivity. Applied Catalysis B: Environmental, 2018, 238, 444-453.	10.8	68
192	Promoting the water reduction reaction of transition metal dichalcogenides in a basic electrolyte by interface engineering. Journal of Materials Chemistry A, 2018, 6, 17488-17494.	5.2	13
193	Ni(OH) ₂ â€WP Hybrid Nanorod Arrays for Highly Efficient and Durable Hydrogen Evolution Reactions in Alkaline Media. ChemSusChem, 2018, 11, 3618-3624.	3.6	35
194	3D Coral-Like Ni ₃ S ₂ on Ni Foam as a Bifunctional Electrocatalyst for Overall Water Splitting. ACS Applied Materials & Interfaces, 2018, 10, 31330-31339.	4.0	80
195	Metal–Organic-Framework-Derived Hollow CoS _{<i>x</i>} @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
196	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
197	CoS2-incorporated WS2 nanosheets for efficient hydrogen production. Electrochimica Acta, 2018, 287, 1-9.	2.6	23
198	Hybrid 0D–2D black phosphorus quantum dots–graphitic carbon nitride nanosheets for efficient hydrogen evolution. Nano Energy, 2018, 50, 552-561.	8.2	148

#	Article	IF	CITATIONS
199	In Situ Grown Bimetallic MOFâ€Based Composite as Highly Efficient Bifunctional Electrocatalyst for Overall Water Splitting with Ultrastability at High Current Densities. Advanced Energy Materials, 2018, 8, 1801065.	10.2	239
200	lr ⁴⁺ -Doped NiFe LDH to expedite hydrogen evolution kinetics as a Pt-like electrocatalyst for water splitting. Chemical Communications, 2018, 54, 6400-6403.	2.2	114
201	NiPS ₃ Nanosheet–Graphene Composites as Highly Efficient Electrocatalysts for Oxygen Evolution Reaction. ACS Nano, 2018, 12, 5297-5305.	7.3	104
202	Self-Supported FeNi-P Nanosheets with Thin Amorphous Layers for Efficient Electrocatalytic Water Splitting. ACS Sustainable Chemistry and Engineering, 2018, 6, 9640-9648.	3.2	71
203	Ultrafine Co Nanoparticles Encapsulated in Carbonâ€Nanotubesâ€Grafted Graphene Sheets as Advanced Electrocatalysts for the Hydrogen Evolution Reaction. Advanced Materials, 2018, 30, e1802011.	11.1	453
204	Photoelectrocatalytic Materials for Solar Water Splitting. Advanced Energy Materials, 2018, 8, 1800210.	10.2	364
205	Interface-Assisted Synthesis of 2D Materials: Trend and Challenges. Chemical Reviews, 2018, 118, 6189-6235.	23.0	505
206	In-situ electrochemical activation designed hybrid electrocatalysts for water electrolysis. Science Bulletin, 2018, 63, 853-876.	4.3	107
207	MOF-derived formation of nickel cobalt sulfides with multi-shell hollow structure towards electrocatalytic hydrogen evolution reaction in alkaline media. Composites Part B: Engineering, 2019, 177, 107252.	5.9	46
208	Novel one-step synthesis of core@shell iron–nickel alloy nanoparticles coated by carbon layers for efficient oxygen evolution reaction electrocatalysis. Journal of Power Sources, 2019, 438, 226988.	4.0	40
209	Superaerophobic Quaternary Ni–Co–S–P Nanoparticles for Efficient Overall Water-Splitting. ACS Sustainable Chemistry and Engineering, 2019, 7, 14639-14646.	3.2	56
210	A bifunctional electrode engineered by sulfur vacancies for efficient electrocatalysis. Nanoscale, 2019, 11, 16658-16666.	2.8	22
211	HZIF-based hybrids for electrochemical energy applications. Nanoscale, 2019, 11, 15763-15769.	2.8	18
212	Phosphorization engineering ameliorated the electrocatalytic activity for overall water splitting on Ni ₃ S ₂ nanosheets. Dalton Transactions, 2019, 48, 13466-13471.	1.6	32
213	In Situ Electrochemical Oxidation of Cu ₂ S into CuO Nanowires as a Durable and Efficient Electrocatalyst for Oxygen Evolution Reaction. Chemistry of Materials, 2019, 31, 7732-7743.	3.2	131
214	Ultralow-Content Iron-Decorated Ni-MOF-74 Fabricated by a Metal–Organic Framework Surface Reaction for Efficient Electrocatalytic Water Oxidation. Inorganic Chemistry, 2019, 58, 11500-11507.	1.9	55
215	Hybrid Ni(OH) ₂ /FeOOH@NiFe Nanosheet Catalysts toward Highly Efficient Oxygen Evolution Reaction with Ultralong Stability over 1000 Hours. ACS Sustainable Chemistry and Engineering, 2019, 7, 14601-14610.	3.2	39
216	Feâ€Ðoped Ni ₃ S ₂ Nanowires with Surfaceâ€Restricted Oxidation Toward Highâ€Currentâ€Density Overall Water Splitting. ChemElectroChem, 2019, 6, 4550-4559.	1.7	48

#	Article	IF	Citations
217	A wood-derived hierarchically porous monolithic carbon matrix embedded with Co nanoparticles as an advanced electrocatalyst for water splitting. Sustainable Energy and Fuels, 2019, 3, 2753-2762.	2.5	25
218	Construction of multi-dimensional core/shell Ni/NiCoP nano-heterojunction for efficient electrocatalytic water splitting. Applied Catalysis B: Environmental, 2019, 259, 118039.	10.8	124
219	Co-doped SnS2 nanosheet array for efficient oxygen evolution reaction electrocatalyst. Journal of Materials Science, 2019, 54, 13715-13723.	1.7	39
220	Multi-functional NiS2/FeS2/N-doped carbon nanorods derived from metal-organic frameworks with fast reaction kinetics for high performance overall water splitting and lithium-ion batteries. Journal of Power Sources, 2019, 436, 226857.	4.0	36
221	Enhanced electrocatalytic HER performance of non-noble metal nickel by introduction of divanadium trioxide. Electrochimica Acta, 2019, 320, 134535.	2.6	18
222	Influence of the S:Ni ratio in raw materials on the NixSy electrocatalysts. Applied Surface Science, 2019, 491, 590-594.	3.1	18
223	A hierarchically-assembled Fe–MoS ₂ /Ni ₃ S ₂ /nickel foam electrocatalyst for efficient water splitting. Dalton Transactions, 2019, 48, 12186-12192.	1.6	40
224	P-Doped Iron–Nickel Sulfide Nanosheet Arrays for Highly Efficient Overall Water Splitting. ACS Applied Materials & Interfaces, 2019, 11, 27667-27676.	4.0	155
225	Stainless Steel as A Bi-Functional Electrocatalyst—A Top-Down Approach. Materials, 2019, 12, 2128.	1.3	21
226	Laser-direct-writing of 3D self-supported NiS2/MoS2 heterostructures as an efficient electrocatalyst for hydrogen evolution reaction in alkaline and neutral electrolytes. Chinese Journal of Catalysis, 2019, 40, 1147-1152.	6.9	31
227	Channelâ€Rich RuCu Nanosheets for pHâ€Universal Overall Water Splitting Electrocatalysis. Angewandte Chemie - International Edition, 2019, 58, 13983-13988.	7.2	274
228	CuS Nanosheets Decorated with CoS ₂ Nanoparticles as an Efficient Electrocatalyst for Enhanced Hydrogen Evolution at All pH Values. ACS Sustainable Chemistry and Engineering, 2019, 7, 14016-14022.	3.2	70
229	Two-dimensional semiconductor transition metal based chalcogenide based heterostructures for water splitting applications. Dalton Transactions, 2019, 48, 12772-12802.	1.6	76
230	Ta ₃ N ₅ nanorods encapsulated into 3D hydrangea-like MoS ₂ for enhanced photocatalytic hydrogen evolution under visible light irradiation. Dalton Transactions, 2019, 48, 13176-13183.	1.6	27
231	Synthesis of 3D flower-like nickel-molybdenum-sulfur microspheres as efficient and stable electrocatalyst for hydrogen and oxygen evolution reactions. Electrochimica Acta, 2019, 320, 134614.	2.6	25
232	Channelâ€Rich RuCu Nanosheets for pHâ€Universal Overall Water Splitting Electrocatalysis. Angewandte Chemie, 2019, 131, 14121-14126.	1.6	58
233	110th Anniversary: A Total Water Splitting Electrocatalyst Based on Borate/Fe Co-Doping of Nickel Sulfide. Industrial & Engineering Chemistry Research, 2019, 58, 13053-13063.	1.8	9
234	Regulating the electron density of dual transition metal sulfide heterostructures for highly efficient hydrogen evolution in alkaline electrolytes. Nanoscale, 2019, 11, 14016-14023.	2.8	26

#	Article	IF	CITATIONS
235	Nitrogen Atoms as Stabilizers and Promoters for Ru luster atalyzed Alkaline Water Splitting. ChemCatChem, 2019, 11, 4327-4333.	1.8	21
236	Improving catalytic activity of metal telluride by hybridization: An efficient Ni3Te2-CoTe composite electrocatalyst for oxygen evolution reaction. Applied Surface Science, 2019, 490, 516-521.	3.1	38
237	Strongly Coupled Interface Structure in CoFe/Co ₃ O ₄ Nanohybrids as Efficient Oxygen Evolution Reaction Catalysts. ChemSusChem, 2019, 12, 4442-4451.	3.6	32
238	Interface Engineering of an RGO/MoS ₂ /Pd 2D Heterostructure for Electrocatalytic Overall Water Splitting in Alkaline Medium. ACS Applied Materials & Interfaces, 2019, 11, 42094-42103.	4.0	62
239	Atomic Arrangement in Metalâ€Doped NiS ₂ Boosts the Hydrogen Evolution Reaction in Alkaline Media. Angewandte Chemie - International Edition, 2019, 58, 18676-18682.	7.2	174
240	Heterostructured Ni(OH) ₂ /Ni ₃ S ₂ Supported on Ni Foam as Highly Efficient and Durable Bifunctional Electrodes for Overall Water Electrolysis. Energy & Fuels, 2019, 33, 12052-12062.	2.5	42
241	Controlled Synthesis of CuCo ₂ S ₄ @Ni(OH) ₂ Hybrid Nanorod Arrays for Water Splitting at an Ultralow Cell Voltage of 1.47â€V. Chemistry - an Asian Journal, 2019, 14, 3386-3396.	1.7	6
242	Ultrathin nickel boride nanosheets anchored on functionalized carbon nanotubes as bifunctional electrocatalysts for overall water splitting. Journal of Materials Chemistry A, 2019, 7, 764-774.	5.2	123
243	Phosphorus and Yttrium Codoped Co(OH)F Nanoarray as Highly Efficient and Bifunctional Electrocatalysts for Overall Water Splitting. Small, 2019, 15, e1904105.	5.2	40
244	Singleâ€Atom Ru Doping Induced Phase Transition of MoS ₂ and S Vacancy for Hydrogen Evolution Reaction. Small Methods, 2019, 3, 1900653.	4.6	206
245	Enhanced hydrogen generation at designed heterojunctions of Cu2ZnSnS4-rGO-MoS2 through interface engineering. International Journal of Hydrogen Energy, 2019, 44, 30840-30849.	3.8	4
246	Experimental and Theoretical Understanding on Electrochemical Activation Processes of Nickel Selenide for Excellent Water-Splitting Performance: Comparing the Electrochemical Performances with M–NiSe (M = Co, Cu, and V). ACS Sustainable Chemistry and Engineering, 2019, 7, 19257-19267.	3.2	80
247	Carbon Layer Coated Ni ₃ S ₂ /MoS ₂ Nanohybrids as Efficient Bifunctional Electrocatalysts for Overall Water Splitting. ChemElectroChem, 2019, 6, 5603-5609.	1.7	22
248	Hierarchical Hollow Co/N-C@NiCo2O4 Microsphere as an Efficient Bi-functional Electrocatalyst for Rechargeable Zn–Air Battery. Frontiers in Materials, 2019, 6, .	1.2	14
249	Atomic Arrangement in Metalâ€Doped NiS ₂ Boosts the Hydrogen Evolution Reaction in Alkaline Media. Angewandte Chemie, 2019, 131, 18849-18855.	1.6	38
250	Synergism of Interface and Electronic Effects: Bifunctional Nâ€Doped Ni ₃ S ₂ /Nâ€Doped MoS ₂ Heteroâ€Nanowires for Efficient Electrocatalytic Overall Water Splitting. Chemistry - A European Journal, 2019, 25, 16074-16080.	1.7	35
251	Controlled Synthesis of Niâ€Doped MoS ₂ Hybrid Electrode for Synergistically Enhanced Waterâ€Splitting Process. Chemistry - A European Journal, 2020, 26, 4097-4103.	1.7	23
252	Probing the catalytic activity of pristine and doped Pd and Ni metal clusters towards H2O molecule. Computational and Theoretical Chemistry, 2019, 1170, 112624.	1.1	2

#	Article	IF	CITATIONS
253	MOFâ€Ðerived Niâ€Ðoped CoS ₂ Grown on Carbon Fiber Paper for Efficient Oxygen Evolution Reaction. ChemElectroChem, 2019, 6, 1206-1212.	1.7	42
254	Coupling NiSe2-Ni2P heterostructure nanowrinkles for highly efficient overall water splitting. Journal of Catalysis, 2019, 377, 600-608.	3.1	222
255	Bifunctional NiFe layered double hydroxide@Ni ₃ S ₂ heterostructure as efficient electrocatalyst for overall water splitting. Nanotechnology, 2019, 30, 484001.	1.3	37
256	Antimony Chalcogenide van der Waals Nanostructures for Energy Conversion and Storage. ACS Sustainable Chemistry and Engineering, 2019, 7, 15790-15798.	3.2	24
257	MoS ₂ nanosheets grown on nickel chalcogenides: controllable synthesis and electrocatalytic origins for the hydrogen evolution reaction in alkaline solution. Journal of Materials Chemistry A, 2019, 7, 21514-21522.	5.2	32
258	First-principles study of ultrathin molybdenum sulfides nanowires: Electronic and catalytic hydrogen evolution properties. Chinese Journal of Chemical Physics, 2019, 32, 267-272.	0.6	3
259	Metal–Organic Framework-Derived Cu-Doped Co ₉ S ₈ Nanorod Array with Less Low-Valence Co Sites as Highly Efficient Bifunctional Electrodes for Overall Water Splitting. ACS Sustainable Chemistry and Engineering, 2019, 7, 16917-16926.	3.2	129
260	Template-Directed Bifunctional Dodecahedral CoP/CN@MoS ₂ Electrocatalyst for High Efficient Water Splitting. ACS Applied Materials & Interfaces, 2019, 11, 36649-36657.	4.0	70
261	Optimization of catalytic active sites in non-collinear antiferromagnetic Mn3Pt bulk single-crystal. Materials Today Physics, 2019, 10, 100137.	2.9	5
262	Interface Engineering of MoS ₂ for Electrocatalytic Performance Optimization for Hydrogen Generation via Urea Electrolysis. ACS Sustainable Chemistry and Engineering, 2019, 7, 16577-16584.	3.2	70
263	Cu–Co–M arrays on Ni foam as monolithic structured catalysts for water splitting: effects of co-doped S-P. Dalton Transactions, 2019, 48, 1322-1331.	1.6	23
264	Solution-phase phosphorus substitution for enhanced oxygen evolution reaction in Cu ₂ WS ₄ . RSC Advances, 2019, 9, 234-239.	1.7	15
265	CuS–Ni ₃ S ₂ grown <i>in situ</i> from three-dimensional porous bimetallic foam for efficient oxygen evolution. Inorganic Chemistry Frontiers, 2019, 6, 293-302.	3.0	28
266	One-step construction of core/shell nanoarrays with a holey shell and exposed interfaces for overall water splitting. Journal of Materials Chemistry A, 2019, 7, 1196-1205.	5.2	42
267	Cobalt Phosphides Nanocrystals Encapsulated by Pâ€Đoped Carbon and <i>Married</i> with Pâ€Đoped Graphene for Overall Water Splitting. Small, 2019, 15, e1804546.	5.2	110
268	Accelerated electrocatalytic hydrogen evolution on non-noble metal containing trinickel nitride by introduction of vanadium nitride. Journal of Materials Chemistry A, 2019, 7, 5513-5521.	5.2	65
269	N-doped carbon coated NiCo2S4 hollow nanotube as bifunctional electrocatalyst for overall water splitting. Carbon, 2019, 145, 521-528.	5.4	83
270	2D/2D Heterojunctions for Catalysis. Advanced Science, 2019, 6, 1801702.	5.6	224

#	Article	IF	CITATIONS
271	Hollow core–shell NiCo ₂ S ₄ @MoS ₂ dodecahedrons with enhanced performance for supercapacitors and hydrogen evolution reaction. New Journal of Chemistry, 2019, 43, 3601-3608.	1.4	70
272	Vanadium self-intercalated C/V1.11S2 nanosheets with abundant active sites for enhanced electro-catalytic hydrogen evolution. Electrochimica Acta, 2019, 300, 208-216.	2.6	19
273	CoPâ€Doped MOFâ€Based Electrocatalyst for pHâ€Universal Hydrogen Evolution Reaction. Angewandte Chemie - International Edition, 2019, 58, 4679-4684.	7.2	480
274	Engineering multiphase for activating electroactive sites for highly efficient hydrogen evolution: Experimental and theoretical investigation. International Journal of Hydrogen Energy, 2019, 44, 13323-13333.	3.8	2
275	Nickel-iron selenide polyhedral nanocrystal with optimized surface morphology as a high-performance bifunctional electrocatalyst for overall water splitting. Applied Surface Science, 2019, 488, 326-334.	3.1	47
276	Dual tuning of nickel sulfide nanoflake array electrocatalyst through nitrogen doping and carbon coating for efficient and stable water splitting. Catalysis Science and Technology, 2019, 9, 3099-3108.	2.1	32
277	Ni3S2-MoSx nanorods grown on Ni foam as high-efficient electrocatalysts for overall water splitting. International Journal of Hydrogen Energy, 2019, 44, 17900-17908.	3.8	24
278	Utilizing the Spaceâ€Charge Region of the FeNiâ€LDH/CoP pâ€n Junction to Promote Performance in Oxygen Evolution Electrocatalysis. Angewandte Chemie - International Edition, 2019, 58, 11903-11909.	7.2	329
279	Fast sulfurization of nickel foam-supported nickel-cobalt carbonate hydroxide nanowire array at room temperature for hydrogen evolution electrocatalysis. Electrochimica Acta, 2019, 318, 252-261.	2.6	25
280	Utilizing the Spaceâ€Charge Region of the FeNi‣DH/CoP pâ€n Junction to Promote Performance in Oxygen Evolution Electrocatalysis. Angewandte Chemie, 2019, 131, 12029-12035.	1.6	17
281	Heterostructural NiFe-LDH@Ni3S2 nanosheet arrays as an efficient electrocatalyst for overall water splitting. Electrochimica Acta, 2019, 318, 42-50.	2.6	84
282	Amorphous (Fe)Ni-MOF-derived hollow (bi)metal/oxide@N-graphene polyhedron as effectively bifunctional catalysts in overall alkaline water splitting. Electrochimica Acta, 2019, 318, 430-439.	2.6	55
283	Hierarchical Nanoassembly of MoS ₂ /Co ₉ S ₈ /Ni ₃ S ₂ /Ni as a Highly Efficient Electrocatalyst for Overall Water Splitting in a Wide pH Range. Journal of the American Chemical Society, 2019, 141, 10417-10430.	6.6	653
284	Vanadium doping over Ni3S2 nanosheet array for improved overall water splitting. Applied Surface Science, 2019, 489, 815-823.	3.1	50
285	NiS-MoS ₂ Hetero-nanosheet Arrays on Carbon Cloth for High-Performance Flexible Hybrid Energy Storage Devices. ACS Sustainable Chemistry and Engineering, 2019, 7, 11672-11681.	3.2	44
286	Topological Formation of a Mo–Ni-Based Hollow Structure as a Highly Efficient Electrocatalyst for the Hydrogen Evolution Reaction in Alkaline Solutions. ACS Applied Materials & Interfaces, 2019, 11, 21998-22004.	4.0	56
287	Nanosheets assembled into nickel sulfide nanospheres with enriched Ni ³⁺ active sites for efficient water-splitting and zinc–air batteries. Journal of Materials Chemistry A, 2019, 7, 23787-23793.	5.2	76
288	Interface Modulation of Two-Dimensional Superlattices for Efficient Overall Water Splitting. Nano Letters, 2019, 19, 4518-4526.	4.5	191

#	Article	IF	CITATIONS
289	NiS–MoS ₂ hetero-nanosheet array electrocatalysts for efficient overall water splitting. Sustainable Energy and Fuels, 2019, 3, 2056-2066.	2.5	61
290	High-efficiency bifunctional electrocatalyst based on 3D freestanding Cu foam in situ armored CoNi alloy nanosheet arrays for overall water splitting. Journal of Power Sources, 2019, 427, 184-193.	4.0	47
291	Advanced Multifunctional Electrocatalysts for Energy Conversion. ACS Energy Letters, 2019, 4, 1672-1680.	8.8	78
292	The oxygen evolution reaction enabled by transition metal phosphide and chalcogenide pre-catalysts with dynamic changes. Chemical Communications, 2019, 55, 8744-8763.	2.2	246
293	Template-assisted fabrication of Ni nanowire arrays for high efficient oxygen evolution reaction. Electrochimica Acta, 2019, 318, 91-99.	2.6	3
294	Rationally engineered active sites for efficient and durable hydrogen generation. Nature Communications, 2019, 10, 2281.	5.8	59
295	Heterostructure engineering of Co-doped MoS ₂ coupled with Mo ₂ CT _x MXene for enhanced hydrogen evolution in alkaline media. Nanoscale, 2019, 11, 10992-11000.	2.8	127
296	MoS2 nanosheets decorated Ni(OH)2 nanorod array for active overall water splitting. Journal of Alloys and Compounds, 2019, 796, 86-92.	2.8	49
297	MoS2 supported CoS2 on carbon cloth as a high-performance electrode for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2019, 44, 16566-16574.	3.8	57
298	Rapid Fabrication of Ni/NiO@CoFe Layered Double Hydroxide Hierarchical Nanostructures by Femtosecond Laser Ablation and Electrodeposition for Efficient Overall Water Splitting. ChemSusChem, 2019, 12, 2773-2779.	3.6	29
299	0D/3D MoS2-NiS2/N-doped graphene foam composite for efficient overall water splitting. Applied Catalysis B: Environmental, 2019, 254, 15-25.	10.8	243
300	One-step electrodeposition of cauliflower-like CozNiySx@polypyrrole electrocatalysts on carbon fiber paper for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2019, 44, 12931-12940.	3.8	12
301	MOF-templated cobalt nanoparticles embedded in nitrogen-doped porous carbon: a bifunctional electrocatalyst for overall water splitting. Nanoscale Advances, 2019, 1, 2293-2302.	2.2	26
302	Interface-coupling of CoFe-LDH on MXene as high-performance oxygen evolution catalyst. Materials Today Energy, 2019, 12, 453-462.	2.5	162
303	Featherlike NiCoP Holey Nanoarrys for Efficient and Stable Seawater Splitting. ACS Applied Energy Materials, 2019, 2, 3910-3917.	2.5	102
304	Stepwise Electrochemical Construction of FeOOH/Ni(OH) ₂ on Ni Foam for Enhanced Electrocatalytic Oxygen Evolution. ACS Applied Energy Materials, 2019, 2, 3927-3935.	2.5	87
305	Ultrathin MoS ₂ Nanosheets Decorated Hollow CoP Heterostructures for Enhanced Hydrogen Evolution Reaction. ACS Sustainable Chemistry and Engineering, 2019, 7, 10105-10111.	3.2	50
306	MoS ₂ -Coated Ni ₃ S ₂ Nanorods with Exposed {110} High-Index Facets As Excellent CO-Tolerant Cocatalysts for Pt: Ultradurable Catalytic Activity for Methanol Oxidation. ACS Sustainable Chemistry and Engineering, 2019, 7, 11101-11109.	3.2	35

ARTICLE IF CITATIONS Synergistically creating sulfur vacancies in semimetal-supported amorphous MoS2 for efficient 307 10.8 69 hydrogen evolution. Applied Catalysis B: Environmental, 2019, 254, 1-6. Co3[Fe(CN)6]2 nanocube derived architecture of Co,Fe co-doped MoS2 nanosheets for efficient water 2.6 electrolysis. Electrochimica Acta, 2019, 309, 116-124. Freestanding and Hierarchically Structured Au-Dendrites/3D-Graphene Scaffold Supports Highly 309 Active and Stable Ni₃S₂ Electrocatalyst toward Overall Water Splitting. ACS 2.5 29 Applied Energy Materials, 2019, 2, 3708-3716. Coâ€Modified MoS₂ Hybrids as Superior Bifunctional Electrocatalysts for Water Splitting Reactions: Integrating Multiple Active Components in One. Advanced Materials Interfaces, 2019, 6, 1900372 In situ fabrication of molybdenum disulfide based nanohybrids for reducing fire hazards of epoxy. 311 3.8 34 Composites Part A: Applied Science and Manufacturing, 2019, 122, 77-84. Highly conductive and metallic cobalt–nickel selenide nanorods supported on Ni foam as an efficient electrocatalyst for alkaline water splitting. Nanoscale, 2019, 11, 7959-7966. 2.8 Electronic structure of two-dimensional In and Bi metal on BN nanosheets. RSC Advances, 2019, 9, 313 1.7 4 9342-9347. Frameworkâ€Porphyrinâ€Derived Singleâ€Atom Bifunctional Oxygen Electrocatalysts and their Applications 314 11.1 256 in Zn–Air Batteries. Advanced Materials, 2019, 31, e1900592. Rational design of Co9S8/CoO heterostructures with well-defined interfaces for lithium sulfur 315 8.2 156 batteries: A study of synergistic adsorption-electrocatalysis function. Nano Energy, 2019, 60, 332-339. Tailoring 2D MoS₂ heterointerfaces for promising oxygen reduction reaction 5.2 electrocatalysis. Journal of Materials Chemistry A, 2019, 7, 8785-8789. Stringing MOF-derived nanocages: a strategy for the enhanced oxygen evolution reaction. Journal of 317 5.2 53 Materials Chemistry A, 2019, 7, 8284-8291. Graphene-Quantum-Dots-induced facile growth of porous molybdenum doped Ni3S2 nanoflakes as efficient bifunctional electrocatalyst for overall water splitting. Electrochimica Acta, 2019, 304, 2.6 36 487-494. Facile and Largeâ€Scale Fabrication of Subâ€3â€...nm PtNi Nanoparticles Supported on Porous Carbon Sheet: A Bifunctional Material for the Hydrogen Evolution Reaction and Hydrogenation. Chemistry - A 319 1.7 18 European Journal, 2019, 25, 7191-7200. Surface reorganization engineering of the N-doped MoS₂ heterostructures MoO_x@N-doped MoS_{2â[°]x} by <i>in situ</i> electrochemical oxidation 5.2 44 activation for efficient oxygen evolution reaction. Journal of Materials Chemistry A, 2019, 7, 10572-10580 Metal organic frameworks derived single atom catalysts for electrocatalytic energy conversion. 321 448 5.8 Nano Research, 2019, 12, 2067-2080. Identifying the Activation of Bimetallic Sites in NiCo₂S₄@gâ€C₃N₄â€CNT Hybrid Electrocatalysts for 11.1 Synergistic Oxygen Reduction and Evolution. Advanced Materials, 2019, 31, e1808281. Tuning orbital orientation endows molybdenum disulfide with exceptional alkaline hydrogen 323 5.8 322 evolution capability. Nature Communications, 2019, 10, 1217. High-performance electrolytic oxygen evolution with a seamless armor core–shell FeCoNi oxynitride. 324 2.8 Nanoscale, 2019, 11, 7239-7246.

#	ARTICLE	IF	CITATIONS
325	Interfacial Electronic Structure Modulation of NiTe Nanoarrays with NiS Nanodots Facilitates Electrocatalytic Oxygen Evolution. Advanced Materials, 2019, 31, e1900430.	11.1	298
326	2D Freeâ€Standing Nitrogenâ€Doped Niâ€Ni ₃ S ₂ @Carbon Nanoplates Derived from Metal–Organic Frameworks for Enhanced Oxygen Evolution Reaction. Small, 2019, 15, e1900348.	5.2	88
327	Exploration of electronic structure and energy changes of cobalt–nickel on 1T-MoS2 surface. Surface Innovations, 2019, 7, 174-183.	1.4	7
328	Catalyzing overall water splitting at an ultralow cell voltage of 1.42 V via coupled Co-doped NiO nanosheets with carbon. Applied Catalysis B: Environmental, 2019, 252, 214-221.	10.8	92
329	Hierarchical hetero-Ni ₃ Se ₄ @NiFe LDH micro/nanosheets as efficient bifunctional electrocatalysts with superior stability for overall water splitting. Nanoscale Horizons, 2019, 4, 1132-1138.	4.1	100
330	Tuning the coupling interface of ultrathin Ni ₃ S ₂ @NiV-LDH heterogeneous nanosheet electrocatalysts for improved overall water splitting. Nanoscale, 2019, 11, 8855-8863.	2.8	133
331	Defect engineering in earth-abundant electrocatalysts for CO ₂ and N ₂ reduction. Energy and Environmental Science, 2019, 12, 1730-1750.	15.6	439
332	Sizeâ€Đependent Activity of Ironâ€Nickel Oxynitride towards Electrocatalytic Oxygen Evolution. ChemNanoMat, 2019, 5, 883-887.	1.5	5
333	Robust NiCoP/CoP Heterostructures for Highly Efficient Hydrogen Evolution Electrocatalysis in Alkaline Solution. ACS Applied Materials & amp; Interfaces, 2019, 11, 15528-15536.	4.0	139
334	Three-dimensional layered double hydroxides on carbon nanofibers: The engineered mass transfer channels and active sites towards oxygen evolution reaction. Applied Surface Science, 2019, 485, 41-47.	3.1	22
335	Electrochemically Driven Coordination Tuning of FeOOH Integrated on Carbon Fiber Paper for Enhanced Oxygen Evolution. Small, 2019, 15, e1901015.	5.2	46
336	Electronic-Structure Tuning of Water-Splitting Nanocatalysts. Trends in Chemistry, 2019, 1, 259-271.	4.4	99
337	Rational Design of Nanoarray Architectures for Electrocatalytic Water Splitting. Advanced Functional Materials, 2019, 29, 1808367.	7.8	298
338	Nanoarchitectonics for Transitionâ€Metalâ€Sulfideâ€Based Electrocatalysts for Water Splitting. Advanced Materials, 2019, 31, e1807134.	11.1	998
339	CoPâ€Doped MOFâ€Based Electrocatalyst for pHâ€Universal Hydrogen Evolution Reaction. Angewandte Chemie, 2019, 131, 4727-4732.	1.6	102
340	Transition-metal-based NiCoS/C-dot nanoflower asÂa stable electrocatalyst for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2019, 44, 8214-8222.	3.8	30
341	Interface Engineering of Co(OH) ₂ /Ag/FeP Hierarchical Superstructure as Efficient and Robust Electrocatalyst for Overall Water Splitting. ACS Applied Materials & Interfaces, 2019, 11, 7936-7945.	4.0	68
342	Monolithic electrode integrated of ultrathin NiFeP on 3D strutted graphene for bifunctionally efficient overall water splitting. Nano Energy, 2019, 58, 870-876.	8.2	166

#	Article	IF	CITATIONS
343	Enhanced Hydrogen Evolution Activity of Ni/Ni ₃ S ₂ Nanosheet Grown on Ti Mesh by Cu Doped Ni. Journal of the Electrochemical Society, 2019, 166, F168-F173.	1.3	8
344	Controllable synthesis of nickel sulfide nanocatalysts and their phase-dependent performance for overall water splitting. Nanoscale, 2019, 11, 5646-5654.	2.8	148
345	A ternary cobalt–molybdenum–vanadium layered double hydroxide nanosheet array as an efficient bifunctional electrocatalyst for overall water splitting. Chemical Communications, 2019, 55, 3521-3524.	2.2	121
346	Tungsten Carbide Hollow Microspheres with Robust and Stable Electrocatalytic Activity toward Hydrogen Evolution Reaction. ACS Omega, 2019, 4, 4185-4191.	1.6	24
347	Atomically engineering activation sites onto metallic 1T-MoS2 catalysts for enhanced electrochemical hydrogen evolution. Nature Communications, 2019, 10, 982.	5.8	311
348	Hydrogen evolution reaction from bare and surface-functionalized few-layered MoS2 nanosheets in acidic and alkaline electrolytes. Materials Today Chemistry, 2019, 14, 100207.	1.7	33
349	Construction of a MnCo ₂ O ₄ @Ni _y M _x (S and P) crosslinked network for efficient electrocatalytic water splitting. CrystEngComm, 2019, 21, 7293-7302.	1.3	13
350	Boosting the electrocatalytic activity of amorphous molybdenum sulfide nanoflakes <i>via</i> nickel sulfide decoration. Nanoscale, 2019, 11, 22971-22979.	2.8	19
351	An in-plane Co ₉ S ₈ @MoS ₂ heterostructure for the hydrogen evolution reaction in alkaline media. Nanoscale, 2019, 11, 21479-21486.	2.8	42
352	S-Edge-rich Mo _x S _y arrays vertically grown on carbon aerogels as superior bifunctional HER/OER electrocatalysts. Nanoscale, 2019, 11, 20284-20294.	2.8	32
353	Synergistic engineering of architecture and composition in Ni _x Co _{1â^²x} MoO ₄ @CoMoO ₄ nanobrush arrays towards efficient overall water splitting electrocatalysis. Nanoscale, 2019, 11, 22820-22831.	2.8	37
354	Study of active sites on Se-MnS/NiS heterojunctions as highly efficient bifunctional electrocatalysts for overall water splitting. Journal of Materials Chemistry A, 2019, 7, 26975-26983.	5.2	104
355	Yolk–shell hierarchical catalyst with tremella-like molybdenum sulfide on transition metal (Co, Ni) Tj ETQqO O C) rgBT /Ov	erlock 10 Tf 5 22
356	Design of high-performance MoS ₂ edge supported single-metal atom bifunctional catalysts for overall water splitting <i>via</i> a simple equation. Nanoscale, 2019, 11, 20228-20237.	2.8	57
357	Electronic modulation of composite electrocatalysts derived from layered NiFeMn triple hydroxide nanosheets for boosted overall water splitting. Nanoscale, 2019, 11, 20797-20808.	2.8	30
358	Interface engineering: few-layer MoS ₂ coupled to a NiCo-sulfide nanosheet heterostructure as a bifunctional electrocatalyst for overall water splitting. Journal of Materials Chemistry A, 2019, 7, 27594-27602.	5.2	80
359	MXene supported Co _x A _y (A = OH, P, Se) electrocatalysts for overall water splitting: unveiling the role of anions in intrinsic activity and stability. Journal of Materials Chemistry A, 2019, 7, 27383-27393.	5.2	96
360	Water splitting catalysis beginning with FeCo2S4@Ni(OH)2: Investigation of the true catalyst with favorable stability. International Journal of Hydrogen Energy, 2019, 44, 31902-31915.	3.8	12

#	Article	IF	CITATIONS
361	Design and facile synthesis of defect-rich C-MoS ₂ /rGO nanosheets for enhanced lithium–sulfur battery performance. Beilstein Journal of Nanotechnology, 2019, 10, 2251-2260.	1.5	11
362	Electrochemical Hydrogen Evolution over Hydrothermally Synthesized Re-Doped MoS2 Flower-Like Microspheres. Molecules, 2019, 24, 4631.	1.7	24
363	Invigorating the catalytic performance of CoP through interfacial engineering by Ni ₂ P precipitation. Journal of Materials Chemistry A, 2019, 7, 26177-26186.	5.2	13
364	Reduced-graphene-oxide-loaded MoS2‡Ni3S2 nanorod arrays on Ni foam as an efficient and stable electrocatalyst for the hydrogen evolution reaction. Electrochemistry Communications, 2019, 99, 22-26.	2.3	20
365	Chimney effect of the interface in metal oxide/metal composite catalysts on the hydrogen evolution reaction. Applied Catalysis B: Environmental, 2019, 245, 122-129.	10.8	132
366	Rationally design of monometallic NiO-Ni3S2/NF heteronanosheets as bifunctional electrocatalysts for overall water splitting. Journal of Catalysis, 2019, 369, 345-351.	3.1	84
367	Facile Dynamic Synthesis of Homodispersed Ni ₃ S ₂ Nanosheets as a Highâ€Efficient Bifunctional Electrocatalyst for Water Splitting. ChemCatChem, 2019, 11, 1320-1327.	1.8	21
368	Nitrogenâ€Doped Cu ₂ S/MoS ₂ Heterojunction Nanorod Arrays on Copper Foam for Efficient Hydrogen Evolution Reaction. ChemCatChem, 2019, 11, 1354-1361.	1.8	61
369	Heterojunction engineering of MoSe2/MoS2 with electronic modulation towards synergetic hydrogen evolution reaction and supercapacitance performance. Chemical Engineering Journal, 2019, 359, 1419-1426.	6.6	160
370	Performance of Surfaceâ€Oxidized Ni ₃ B, Ni ₂ B, and NiB ₂ Electrocatalysts for Overall Water Splitting. ChemElectroChem, 2019, 6, 764-770.	1.7	29
371	Epitaxial Heterogeneous Interfaces on Nâ€NiMoO ₄ /NiS ₂ Nanowires/Nanosheets to Boost Hydrogen and Oxygen Production for Overall Water Splitting. Advanced Functional Materials, 2019, 29, 1805298.	7.8	378
372	MoS ₂ /NiS Yolk–Shell Microsphereâ€Based Electrodes for Overall Water Splitting and Asymmetric Supercapacitor. Small, 2019, 15, e1803639.	5.2	229
373	Engineering an Earthâ€Abundant Elementâ€Based Bifunctional Electrocatalyst for Highly Efficient and Durable Overall Water Splitting. Advanced Functional Materials, 2019, 29, 1807031.	7.8	146
374	Three-dimensional Core@Shell Co@CoMoO4 nanowire arrays as efficient alkaline hydrogen evolution electro-catalysts. Applied Catalysis B: Environmental, 2019, 246, 41-49.	10.8	78
375	Interface charges redistribution enhanced monolithic etched copper foam-based Cu2O layer/TiO2 nanodots heterojunction with high hydrogen evolution electrocatalytic activity. Applied Catalysis B: Environmental, 2019, 243, 365-372.	10.8	56
376	Holey Ni-Cu phosphide nanosheets as a highly efficient and stable electrocatalyst for hydrogen evolution. Applied Catalysis B: Environmental, 2019, 243, 537-545.	10.8	128
377	Heterostructures Based on 2D Materials: A Versatile Platform for Efficient Catalysis. Advanced Materials, 2019, 31, e1804828.	11.1	142
378	Efficient bifunctional vanadium-doped Ni ₃ S ₂ nanorod array for overall water splitting. Inorganic Chemistry Frontiers, 2019, 6, 443-450.	3.0	54

#	Article	IF	CITATIONS
379	When MoS2 meets FeOOH: A "one-stone-two-birds'' heterostructure as a bifunctional electrocatalyst for efficient alkaline water splitting. Applied Catalysis B: Environmental, 2019, 244, 1004-1012.	10.8	144
380	Controlled synthesis of 3D porous structured cobalt-iron based nanosheets by electrodeposition as asymmetric electrodes for ultra-efficient water splitting. Applied Catalysis B: Environmental, 2019, 244, 583-593.	10.8	105
381	One-pot hydrothermal synthesis of Al-doped MoS2@graphene aerogel nanocomposite electrocatalysts for enhanced hydrogen evolution reaction. Results in Physics, 2019, 12, 250-258.	2.0	26
382	A Nanosized CoNi Hydroxide@Hydroxysulfide Core–Shell Heterostructure for Enhanced Oxygen Evolution. Advanced Materials, 2019, 31, e1805658.	11.1	203
383	Tracing the Origin of Visible Light Enhanced Oxygen Evolution Reaction. Advanced Materials Interfaces, 2019, 6, 1801543.	1.9	5
384	Heterogeneous interface engineered atomic configuration on ultrathin Ni(OH)2/Ni3S2 nanoforests for efficient water splitting. Applied Catalysis B: Environmental, 2019, 242, 60-66.	10.8	332
385	In-situ growth of graphene decorated Ni3S2 pyramids on Ni foam for high-performance overall water splitting. Applied Surface Science, 2019, 465, 772-779.	3.1	39
386	Self‣upported Transitionâ€Metalâ€Based Electrocatalysts for Hydrogen and Oxygen Evolution. Advanced Materials, 2020, 32, e1806326.	11.1	986
387	Recent progress of mesoscience in design of electrocatalytic materials for hydrogen energy conversion. Particuology, 2020, 48, 19-33.	2.0	12
388	PAF-1 as oxygen tank to in-situ synthesize edge-exposed O-MoS2 for highly efficient hydrogen evolution. Catalysis Today, 2020, 347, 56-62.	2.2	7
389	Graphene oxide decorated bimetal (MnNi) oxide nanoflakes used as an electrocatalyst for enhanced oxygen evolution reaction in alkaline media. Arabian Journal of Chemistry, 2020, 13, 4553-4563.	2.3	11
390	Borate crosslinking synthesis of structure tailored carbon-based bifunctional electrocatalysts directly from guar gum hydrogels for efficient overall water splitting. Carbon, 2020, 157, 153-163.	5.4	30
391	Multifunctional Transition Metalâ€Based Phosphides in Energyâ€Related Electrocatalysis. Advanced Energy Materials, 2020, 10, 1902104.	10.2	322
392	In-situ electrochemical pretreatment of hierarchical Ni3S2-based electrocatalyst towards promoted hydrogen evolution reaction with low overpotential. Journal of Colloid and Interface Science, 2020, 559, 282-290.	5.0	32
393	Hierarchical microsphere assembled by nanoplates embedded with MoS ₂ and (NiFe)S <i>_x</i> nanoparticles as low-cost electrocatalyst for hydrogen evolution reaction. Nanotechnology, 2020, 31, 035403.	1.3	8
394	An Engineered Superhydrophilic/Superaerophobic Electrocatalyst Composed of the Supported CoMoS _{<i>x</i>} Chalcogel for Overall Water Splitting. Angewandte Chemie, 2020, 132, 1676-1682.	1.6	12
395	Graphene layer encapsulated MoNi4-NiMoO4 for electrocatalytic water splitting. Applied Surface Science, 2020, 504, 144390.	3.1	29
396	Redox bifunctional activities with optical gain of Ni3S2 nanosheets edged with MoS2 for overall water splitting. Applied Catalysis B: Environmental, 2020, 268, 118435.	10.8	118

#	Article	IF	CITATIONS
397	Se molarity tuned composition and configuration of Ni3Se2/NiSe core-shell nanowire heterostructures for hydrogen evolution reaction. Journal of Alloys and Compounds, 2020, 819, 153056.	2.8	26
398	Hatted 1T/2Hâ€Phase MoS ₂ on Ni ₃ S ₂ Nanorods for Efficient Overall Water Splitting in Alkaline Media. Chemistry - A European Journal, 2020, 26, 2034-2040.	1.7	27
399	High-efficient electrocatalytic overall water splitting over vanadium doped hexagonal Ni0.2Mo0.8N. Applied Catalysis B: Environmental, 2020, 263, 118330.	10.8	111
400	Construction of sugar gourd-like yolk-shell Ni–Mo–Co–S nanocage arrays for high-performance alkaline battery. Energy Storage Materials, 2020, 25, 105-113.	9.5	46
401	Self-supported iron-doping NiSe2 nanowrinkles as bifunctional electrocatalysts for electrochemical water splitting. Journal of Alloys and Compounds, 2020, 818, 152833.	2.8	25
402	Sandwich-like structured NiSe2/Ni2P@FeP interface nanosheets with rich defects for efficient electrocatalytic water splitting. Journal of Power Sources, 2020, 445, 227294.	4.0	56
403	A highly active and durable electrocatalyst for large current density hydrogen evolution reaction. Science Bulletin, 2020, 65, 123-130.	4.3	58
404	An Engineered Superhydrophilic/Superaerophobic Electrocatalyst Composed of the Supported CoMoS _{<i>x</i>} Chalcogel for Overall Water Splitting. Angewandte Chemie - International Edition, 2020, 59, 1659-1665.	7.2	268
405	Recent Advances in Electrocatalytic Hydrogen Evolution Using Nanoparticles. Chemical Reviews, 2020, 120, 851-918.	23.0	1,767
406	Copper and cobalt co-doped Ni3S2 grown on nickel foam for highly efficient oxygen evolution reaction. Applied Surface Science, 2020, 502, 144172.	3.1	65
407	Generation of Ni3S2 nanorod arrays with high-density bridging S22â^' by introducing a small amount of Na3VO4·12H2O for superior hydrogen evolution reaction. Nanoscale, 2020, 12, 2063-2070.	2.8	6
408	Construction of hierarchical yolk–shell nanospheres organized by ultrafine Janus subunits for efficient overall water splitting. Nanoscale, 2020, 12, 2578-2586.	2.8	14
409	A review of non-precious metal single atom confined nanomaterials in different structural dimensions (1D–3D) as highly active oxygen redox reaction electrocatalysts. Journal of Materials Chemistry A, 2020, 8, 2222-2245.	5.2	59
410	Zeolitic imidazolate framework derived Co3S4 hybridized MoS2–Ni3S2 heterointerface for electrochemical overall water splitting reactions. Electrochimica Acta, 2020, 334, 135537.	2.6	47
411	Highly reversible water splitting cell building from hierarchical 3D nickel manganese oxyphosphide nanosheets. Nano Energy, 2020, 69, 104432.	8.2	74
412	Molybdenum Carbideâ€Oxide Heterostructures: In Situ Surface Reconfiguration toward Efficient Electrocatalytic Hydrogen Evolution. Angewandte Chemie, 2020, 132, 3572-3576.	1.6	27
413	Molybdenum Carbideâ€Oxide Heterostructures: In Situ Surface Reconfiguration toward Efficient Electrocatalytic Hydrogen Evolution. Angewandte Chemie - International Edition, 2020, 59, 3544-3548.	7.2	145
414	Dopingâ€Assisted Phase Changing Effect on MoS ₂ Towards Hydrogen Evolution Reaction in Acidic and Alkaline pH. ChemElectroChem, 2020, 7, 336-346.	1.7	34

#	Article	IF	CITATIONS
415	Porous β-Mo2C nanoparticle clusters supported on walnut shell powders derived carbon matrix for hydrogen evolution reaction. Journal of Colloid and Interface Science, 2020, 563, 104-111.	5.0	28
416	Boosted hydrogen evolution from α-MoC1-x-MoP/C heterostructures. Electrochimica Acta, 2020, 334, 135624.	2.6	34
417	Temperature and doping-tuned coordination environments around electroactive centers in Fe-doped α(β)-Ni(OH)2 for excellent water splitting. Sustainable Energy and Fuels, 2020, 4, 1522-1531.	2.5	24
418	Well-defined CoSe ₂ @MoSe ₂ hollow heterostructured nanocubes with enhanced dissociation kinetics for overall water splitting. Nanoscale, 2020, 12, 326-335.	2.8	71
419	Temperature-regulated reversible transformation of spinel-to-oxyhydroxide active species for electrocatalytic water oxidation. Journal of Materials Chemistry A, 2020, 8, 1631-1635.	5.2	33
420	Bifunctional CdS@Co ₉ S ₈ /Ni ₃ S ₂ catalyst for efficient electrocatalytic overall water splitting. Journal of Materials Chemistry A, 2020, 8, 3083-3096.	5.2	78
421	Ultrafast construction of interfacial sites by wet chemical etching to enhance electrocatalytic oxygen evolution. Nano Energy, 2020, 69, 104367.	8.2	58
422	Metal hydroxide hybridized tungsten carbide nanorod arrays for enhancing hydrogen evolution in alkaline media. Applied Surface Science, 2020, 509, 144912.	3.1	10
423	Rationally designed hierarchical hollow ZnCdS@MoS2 heterostructured cages with efficient separation of photogenerated carriers for photoelectrochemical aptasensing of lincomycin. Sensors and Actuators B: Chemical, 2020, 306, 127552.	4.0	35
424	Amorphous MoS2 coated Ni3S2 nanosheets as bifunctional electrocatalysts for high-efficiency overall water splitting. Electrochimica Acta, 2020, 332, 135454.	2.6	65
425	Advanced catalysts for hydrogen evolution reaction based on MoS2/NiCo2S4 heterostructures in Alkaline Media. International Journal of Hydrogen Energy, 2020, 45, 1759-1768.	3.8	20
426	Layered Metal Hydroxides and Their Derivatives: Controllable Synthesis, Chemical Exfoliation, and Electrocatalytic Applications. Advanced Energy Materials, 2020, 10, 1902535.	10.2	90
427	3D Carbon Foam Supported Edgeâ€Rich Nâ€Doped MoS ₂ Nanoflakes for Enhanced Electrocatalytic Hydrogen Evolution. Chemistry - A European Journal, 2020, 26, 4150-4156.	1.7	12
428	Rotation Tunable Photocatalytic Properties of ZnO/GaN Heterostructures. Physica Status Solidi (B): Basic Research, 2020, 257, 1900663.	0.7	11
429	Interlaced rosette-like MoS2/Ni3S2/NiFe-LDH grown on nickel foam: A bifunctional electrocatalyst for hydrogen production by urea-assisted electrolysis. International Journal of Hydrogen Energy, 2020, 45, 23-35.	3.8	61
430	CoP nanowires coupled with CoMoP nanosheets as a highly efficient cooperative catalyst for hydrogen evolution reaction. Nano Energy, 2020, 68, 104332.	8.2	202
431	NiS _{<i>x</i>} @MoS ₂ heterostructure prepared by atomic layer deposition as high-performance hydrogen evolution reaction electrocatalysts in alkaline media. Journal of Materials Research, 2020, 35, 822-830.	1.2	15
432	Constructing 2D MOFs from 2D LDHs: a highly efficient and durable electrocatalyst for water oxidation. Journal of Materials Chemistry A, 2020, 8, 190-195.	5.2	93

#	Article	IF	CITATIONS
433	Vertically aligned NiS2/CoS2/MoS2 nanosheet array as an efficient and low-cost electrocatalyst for hydrogen evolution reaction in alkaline media. Science Bulletin, 2020, 65, 359-366.	4.3	45
434	Zinc oxide functionalized molybdenum disulfide heterostructures as efficient electrocatalysts for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2020, 45, 619-628.	3.8	47
435	High-density nickel phosphide nanoparticles loaded reduced graphene oxide on nickel foam for enhanced alkaline and neutral water splitting. Electrochimica Acta, 2020, 362, 137172.	2.6	18
436	Sponge Assembled by Graphene Nanocages with Double Active Sites to Accelerate Alkaline HER Kinetics. Nano Letters, 2020, 20, 8375-8383.	4.5	40
437	Ultrathin MoS2 nanosheets in situ grown on rich defective Ni0.96S as heterojunction bifunctional electrocatalysts for alkaline water electrolysis. International Journal of Hydrogen Energy, 2020, 45, 29929-29937.	3.8	50
438	Facile Synthesis of Threeâ€dimensional Hierarchical Ni ₃ S ₂ @CoAl‣DHs Nanosheet Arrays and Their Efficient Hydrogen Evolution. ChemCatChem, 2020, 12, 6401-6409.	1.8	5
439	A critical review: 1D/2D nanostructured self-supported electrodes for electrochemical water splitting. Journal of Power Sources, 2020, 474, 228621.	4.0	86
440	Fe-Doped Co–Mo–S microtube: a highly efficient bifunctional electrocatalyst for overall water splitting in alkaline solution. Dalton Transactions, 2020, 49, 15009-15022.	1.6	14
441	In-situ integration of nickel-iron Prussian blue analog heterostructure on Ni foam by chemical corrosion and partial conversion for oxygen evolution reaction. Electrochimica Acta, 2020, 363, 137211.	2.6	14
442	Research progress and surface/interfacial regulation methods for electrophotocatalytic hydrogen production from water splitting. Materials Today Energy, 2020, 18, 100524.	2.5	28
443	Interface Engineering of Binderâ€Free Earthâ€Abundant Electrocatalysts for Efficient Advanced Energy Conversion. ChemSusChem, 2020, 13, 4795-4811.	3.6	28
444	Highly improved electrocatalytic activity of NiSx: Effects of Cr-doping and phase transition. Applied Catalysis B: Environmental, 2020, 267, 118721.	10.8	68
445	Electronic structure engineering on two-dimensional (2D) electrocatalytic materials for oxygen reduction, oxygen evolution, and hydrogen evolution reactions. Nano Energy, 2020, 77, 105080.	8.2	157
446	Embedding Ultrafine Metal Oxide Nanoparticles in Monolayered Metal–Organic Framework Nanosheets Enables Efficient Electrocatalytic Oxygen Evolution. ACS Nano, 2020, 14, 1971-1981.	7.3	109
447	FeNiS _{<i>x</i>} @MoS ₂ Heterostructure: A Bioinspired Nonprecious Electrocatalyst for the Hydrogen Evolution Reaction in Acidic and Basic Media. ChemElectroChem, 2020, 7, 3324-3335.	1.7	9
448	Biodeposited Nano-CdS Drives the In Situ Growth of Highly Dispersed Sulfide Nanoparticles during Pyrolysis for Enhanced Oxygen Evolution Reaction. ACS Applied Materials & Interfaces, 2020, 12, 54553-54562.	4.0	12
449	Defect Engineering of Molybdenum-Based Materials for Electrocatalysis. Catalysts, 2020, 10, 1301.	1.6	21
450	Co-based coordination polymer-derived Co3S4 nanotube decorated with NiMoO4 nanosheets for effective oxygen evolution reaction. International Journal of Hydrogen Energy, 2020, 45, 30463-30472	3.8	17

	CITATION	i Report	
# 451	ARTICLE A heterogeneous interface on NiS@Ni ₃ S ₂ /NiMoO ₄ heterostructures for efficient urea electrolysis. Journal of Materials Chemistry A, 2020, 8,	IF 5.2	CITATIONS
452	18055-18063. Application of Biomassâ€Derived Nitrogenâ€Doped Carbon Aerogels in Electrocatalysis and Supercapacitors. ChemElectroChem, 2020, 7, 3695-3712.	1.7	52
453	Interface engineering of oxygen-vacancy-rich NiCo ₂ O ₄ /NiCoP heterostructure as an efficient bifunctional electrocatalyst for overall water splitting. Catalysis Science and Technology, 2020, 10, 5559-5565.	2.1	43
454	Metal organic framework derived trifunctional NiCoP electrode for continuous solar-driven energy-saving hydrogen generation. International Journal of Hydrogen Energy, 2020, 45, 27000-27011.	3.8	5
455	Heteroatom Ni alloyed pyrite-phase FeS2 as a pre-catalyst for enhanced oxygen evolution reaction. Electrochimica Acta, 2020, 355, 136821.	2.6	27
456	Rational design of sustainable transition metal-based bifunctional electrocatalysts for oxygen reduction and evolution reactions. Sustainable Materials and Technologies, 2020, 25, e00204.	1.7	17
457	A review on nickel cobalt sulphide and their hybrids: Earth abundant, pH stable electro-catalyst for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2020, 45, 24518-24543.	3.8	100
458	Synergistic Coupling of Ni Nanoparticles with Ni ₃ C Nanosheets for Highly Efficient Overall Water Splitting. Small, 2020, 16, e2001642.	5.2	97
459	Suppressed Jahn–Teller Distortion in MnCo ₂ O ₄ @Ni ₂ P Heterostructures to Promote the Overall Water Splitting. Small, 2020, 16, e2001856.	5.2	59
460	Covalent 0D–2D Heterostructuring of Co ₉ S ₈ –MoS ₂ for Enhanced Hydrogen Evolution in All pH Electrolytes. Advanced Functional Materials, 2020, 30, 2002536.	7.8	114
461	Piezotronic-enhanced oxygen evolution reaction enabled by a Au/MoS ₂ nanosheet catalyst. Catalysis Science and Technology, 2020, 10, 6180-6187.	2.1	22
462	Interface construction of P-Substituted MoS2 as efficient and robust electrocatalyst for alkaline hydrogen evolution reaction. Nano Energy, 2020, 78, 105253.	8.2	80
463	Computational studies on triphenyldiyne as a two-dimensional visible-light-driven photocatalyst for overall water splitting. Physical Chemistry Chemical Physics, 2020, 22, 20061-20068.	1.3	4
464	Semiconductor nanocrystals for small molecule activation <i>via</i> artificial photosynthesis. Chemical Society Reviews, 2020, 49, 9028-9056.	18.7	127
465	Non-precious-metal catalysts for alkaline water electrolysis: <i>operando</i> characterizations, theoretical calculations, and recent advances. Chemical Society Reviews, 2020, 49, 9154-9196.	18.7	448
466	Hybrid CoP2–Pt–FTO nanoarchitecture for bifunctional electrocatalysts in H2 generation by water splitting. Materials Today Sustainability, 2020, 9, 100045.	1.9	12
467	Engineering active sites on hierarchical transition bimetal oxides/sulfides heterostructure array enabling robust overall water splitting. Nature Communications, 2020, 11, 5462.	5.8	383
468	Structure design of MoS2@Mo2C on nitrogen-doped carbon for enhanced alkaline hydrogen evolution reaction. Journal of Materials Science, 2020, 55, 16197-16210.	1.7	98

#	Article	IF	CITATIONS
469	MoS ₂ Nanosheets Functionalized Multichannel Hollow Mo ₂ N/Carbon Nanofibers as a Robust Bifunctional Catalyst for Water Electrolysis. ACS Sustainable Chemistry and Engineering, 2020, 8, 14179-14189.	3.2	19
470	Strong Electronic Interaction Enhanced Electrocatalysis of Metal Sulfide Clusters Embedded Metal–Organic Framework Ultrathin Nanosheets toward Highly Efficient Overall Water Splitting. Advanced Science, 2020, 7, 2001965.	5.6	129
471	Interface Engineering of Partially Phosphidated Co@Co–P@NPCNTs for Highly Enhanced Electrochemical Overall Water Splitting. Small, 2020, 16, e2002124.	5.2	71
472	Additive manufacturing assisted van der Waals integration of 3D/3D hierarchically functional nanostructures. Communications Materials, 2020, 1, .	2.9	5
473	P-doped nickel sulfide nanosheet arrays for alkaline overall water splitting. Catalysis Science and Technology, 2020, 10, 7581-7590.	2.1	18
474	Interface engineering of Ag-Ni3S2 heterostructures toward efficient alkaline hydrogen evolution. Nanoscale, 2020, 12, 19333-19339.	2.8	19
475	Constructing NiS–VS heterostructured nanosheets for efficient overall water splitting. Inorganic Chemistry Frontiers, 2020, 7, 4924-4929.	3.0	7
476	Multiâ€Interfaceâ€Modulated CoS ₂ @MoS ₂ Nanoarrays Derived by Predesigned Germanomolybdate Polymer Showing Ultrahighly Electrocatalytic Activity for Hydrogen Evolution Reaction in Wide pH Range. Advanced Materials Interfaces, 2020, 7, 2000780.	1.9	25
477	MOF-assisted synthesis of octahedral carbon-supported PtCu nanoalloy catalysts for an efficient hydrogen evolution reaction. Journal of Materials Chemistry A, 2020, 8, 19348-19356.	5.2	58
478	Low-Dimensional Nanostructures for Electrochemical Energy Applications. Physics, 2020, 2, 481-502.	0.5	0
479	Facile one-step deposition of Co3O4-MoS2 nanocomposites using a vacuum kinetic spray process for non-enzymatic H2O2 sensing. Surfaces and Interfaces, 2020, 21, 100748.	1.5	9
480	Phosphomolybdic Acid-Bipolar Membrane: An Efficient and Reversible Coupling for Alkaline Water Electrolysis. ACS Sustainable Chemistry and Engineering, 2020, 8, 18528-18534.	3.2	8
481	Solar driven high efficiency hydrogen evolution catalyzed by surface engineered ultrathin carbon nitride. New Journal of Chemistry, 2020, 44, 19314-19322.	1.4	3
482	Preparation of Ni3Fe2@NC/CC Integrated Electrode and Its Application in Zinc-Air Battery. Frontiers in Chemistry, 2020, 8, 575288.	1.8	4
483	W–N/C@Co9S8@WS2-hollow carbon nanocage as multifunctional electrocatalysts for DSSCS,ORR and OER. Electrochimica Acta, 2020, 351, 136249.	2.6	29
484	"Lewis Base-Hungry―Amorphous–Crystalline Nickel Borate–Nickel Sulfide Heterostructures by In Situ Structural Engineering as Effective Bifunctional Electrocatalysts toward Overall Water Splitting. ACS Applied Materials & Interfaces, 2020, 12, 23896-23903.	4.0	53
485	Sulfur vacancies promoting Fe-doped Ni ₃ S ₂ nanopyramid arrays as efficient bifunctional electrocatalysts for overall water splitting. Sustainable Energy and Fuels, 2020, 4, 3326-3333.	2.5	44
486	Accelerating charge transfer at an ultrafine NiFe-LDHs/CB interface during the electrocatalyst activation process for water oxidation. Dalton Transactions, 2020, 49, 7436-7443.	1.6	6

#	Article	IF	CITATIONS
487	Trimetallic CoFeCr hydroxide electrocatalysts synthesized at a low temperature for accelerating water oxidation <i>via</i> tuning the electronic structure of active sites. Sustainable Energy and Fuels, 2020, 4, 3647-3653.	2.5	12
488	Advancement of Platinum (Pt)-Free (Non-Pt Precious Metals) and/or Metal-Free (Non-Precious-Metals) Electrocatalysts in Energy Applications: A Review and Perspectives. Energy & Fuels, 2020, 34, 6634-6695.	2.5	100
489	Recent Progress in Graphene-Based Nanostructured Electrocatalysts for Overall Water Splitting. Electrochemical Energy Reviews, 2020, 3, 370-394.	13.1	90
490	Activation strategies of water-splitting electrocatalysts. Journal of Materials Chemistry A, 2020, 8, 10096-10129.	5.2	67
491	Multifunctional Active enterâ€Transferable Platinum/Lithium Cobalt Oxide Heterostructured Electrocatalysts towards Superior Water Splitting. Angewandte Chemie, 2020, 132, 14641-14648.	1.6	17
492	Multifunctional Activeâ€Centerâ€Transferable Platinum/Lithium Cobalt Oxide Heterostructured Electrocatalysts towards Superior Water Splitting. Angewandte Chemie - International Edition, 2020, 59, 14533-14540.	7.2	152
493	Surface and interface engineering of noble-metal-free electrocatalysts for efficient overall water splitting. Coordination Chemistry Reviews, 2020, 418, 213374.	9.5	200
494	Amorphous NiWO4 nanoparticles boosting the alkaline hydrogen evolution performance of Ni3S2 electrocatalysts. Applied Catalysis B: Environmental, 2020, 274, 119120.	10.8	99
495	Surface modification engineering on three-dimensional self-supported NiCoP to construct NiCoOx/NiCoP for highly efficient alkaline hydrogen evolution reaction. Journal of Alloys and Compounds, 2020, 835, 155364.	2.8	16
496	ldentifying Dense NiSe ₂ /CoSe ₂ Heterointerfaces Coupled with Surface Highâ€Valence Bimetallic Sites for Synergistically Enhanced Oxygen Electrocatalysis. Advanced Materials, 2020, 32, e2000607.	11.1	251
497	N-doped Ni-Mo based sulfides for high-efficiency and stable hydrogen evolution reaction. Applied Catalysis B: Environmental, 2020, 276, 119137.	10.8	150
498	Thermodynamic driven phase engineering in VMo2S4 nanosheets for superior water splitting. Applied Surface Science, 2020, 527, 146755.	3.1	0
499	Coupling interface structure in NixS/Cu5FeS4 hybrid with enhanced electrocatalytic activity for alkaline hydrogen evolution reaction. Journal of Colloid and Interface Science, 2020, 578, 668-676.	5.0	18
500	Scalable solid-state synthesis of MoS ₂ –NiS ₂ /graphene nanohybrids as bifunctional electrocatalysts for enhanced overall water splitting. Materials Advances, 2020, 1, 794-803.	2.6	21
501	Anion-modulated nickel-based nanoheterostructures as high performance electrocatalysts for hydrogen evolution reaction. Journal of Materials Chemistry A, 2020, 8, 12013-12027.	5.2	10
502	Fe ₃ O ₄ /FeS ₂ heterostructures enable efficient oxygen evolution reaction. Journal of Materials Chemistry A, 2020, 8, 14145-14151.	5.2	36
503	Heterostructure nanohybrids of Ni-doped MoSe2 coupled with Ti2NTx toward efficient overall water splitting. Electrochimica Acta, 2020, 353, 136598.	2.6	50
504	From tanghulu-like to cattail-like SiC nanowire architectures: interfacial design of nanocellulose composites toward high thermal conductivity. Journal of Materials Chemistry A, 2020, 8, 14506-14518.	5.2	33

#	Article	IF	CITATIONS
505	Cobalt-based heterogeneous catalysts in an electrolyzer system for sustainable energy storage. Dalton Transactions, 2020, 49, 11430-11450.	1.6	12
506	Well-connection of micro-platinum and cobalt oxide flower array with optimized water dissociation and hydrogen recombination for efficient overall water splitting. Chemical Engineering Journal, 2020, 398, 125669.	6.6	38
507	Novel 3-D urchin-like Ni– Co–W porous nanostructure as efficient bifunctional superhydrophilic electrocatalyst for both hydrogen and oxygen evolution reactions. International Journal of Hydrogen Energy, 2020, 45, 17504-17516.	3.8	11
508	Transition-metal-based electrocatalysts for hydrazine-assisted hydrogen production. Materials Today Advances, 2020, 7, 100083.	2.5	29
509	Strategies of engineering 2D nanomaterial-based electrocatalysts toward hydrogen evolution reaction. Materials for Renewable and Sustainable Energy, 2020, 9, 1.	1.5	14
510	CoFeOx(OH)y/CoOx(OH)y core/shell structure with amorphous interface as an advanced catalyst for electrocatalytic water splitting. Electrochimica Acta, 2020, 341, 136038.	2.6	11
511	Heterostructured CoP/MoO ₂ on Mo foil as high-efficiency electrocatalysts for the hydrogen evolution reaction in both acidic and alkaline media. Journal of Materials Chemistry A, 2020, 8, 6732-6739.	5.2	58
512	Strategies for Engineering Highâ€Performance PGMâ€Free Catalysts toward Oxygen Reduction and Evolution Reactions. Small Methods, 2020, 4, 2000016.	4.6	70
513	Graphdiyne: A Rising Star of Electrocatalyst Support for Energy Conversion. Advanced Energy Materials, 2020, 10, 2000177.	10.2	100
514	Ruthenium Nanoparticles on Cobaltâ€Doped 1T′ Phase MoS ₂ Nanosheets for Overall Water Splitting. Small, 2020, 16, e2000081.	5.2	82
515	Recent advances of two–dimensional molybdenum disulfide based materials: Synthesis, modification and applications in energy conversion and storage. Sustainable Materials and Technologies, 2020, 24, e00161.	1.7	12
516	Superhydrophilic MoS2–Ni3S2 nanoflake heterostructures grown on 3D Ni foam as an efficient electrocatalyst for overall water splitting. Journal of Materials Science: Materials in Electronics, 2020, 31, 6607-6617.	1.1	16
517	Covalently Connected Nb ₄ N _{5–<i>x</i>} O _{<i>x</i>} –MoS ₂ Heterocatalysts with Desired Electron Density to Boost Hydrogen Evolution. ACS Nano, 2020, 14, 4925-4937.	7.3	50
518	Distance Synergy of MoS ₂ onfined Rhodium Atoms for Highly Efficient Hydrogen Evolution. Angewandte Chemie - International Edition, 2020, 59, 10502-10507.	7.2	122
519	N- & S-co-doped carbon nanofiber network embedded with ultrafine NiCo nanoalloy for efficient oxygen electrocatalysis and Zn–air batteries. Nanoscale, 2020, 12, 9581-9589.	2.8	35
520	Distance Synergy of MoS ₂ onfined Rhodium Atoms for Highly Efficient Hydrogen Evolution. Angewandte Chemie, 2020, 132, 10588-10593.	1.6	37
521	Interface Engineering of Hierarchical Branched Moâ€Đoped Ni ₃ S ₂ /Ni <i>_x</i> P <i>_y</i> Hollow Heterostructure Nanorods for Efficient Overall Water Splitting. Advanced Energy Materials, 2020, 10, 1903891.	10.2	443
522	Heterostructured CoSe ₂ /FeSe ₂ Nanoparticles with Abundant Vacancies and Strong Electronic Coupling Supported on Carbon Nanorods for Oxygen Evolution Electrocatalysis. ACS Sustainable Chemistry and Engineering, 2020, 8, 4658-4666.	3.2	56

#	Article	IF	CITATIONS
523	Highly Robust Nonâ€Noble Alkaline Hydrogenâ€Evolving Electrocatalyst from Seâ€Doped Molybdenum Disulfide Particles on Interwoven CoSe ₂ Nanowire Arrays. Small, 2020, 16, e1906629.	5.2	70
524	One step in-situ synthesis of Ni3S2/Fe2O3/N-doped carbon composites on Ni foam as an efficient electrocatalyst for overall water splitting. Applied Surface Science, 2020, 527, 146918.	3.1	24
525	Flower-like CoNi2S4/Ni3S2 nanosheet clusters on nickel foam as bifunctional electrocatalyst for overall water splitting. Journal of Alloys and Compounds, 2020, 844, 156252.	2.8	65
526	Addressing the OER/HER imbalance by a redox transition-induced two-way electron injection in a bifunctional n–p–n electrode for excellent water splitting. Journal of Materials Chemistry A, 2020, 8, 13218-13230.	5.2	17
527	Facile synthesis of NiS2–MoS2 heterostructured nanoflowers for enhanced overall water splitting performance. Journal of Materials Science, 2020, 55, 13892-13904.	1.7	28
528	Hetero-structured CoS2-MoS2 hollow microspheres with robust catalytic activity for alkaline hydrogen evolution. Applied Surface Science, 2020, 527, 146847.	3.1	17
529	Deconvolution of phase–size–strain effects in metal carbide nanocrystals for enhanced hydrogen evolution. Nanoscale, 2020, 12, 15414-15425.	2.8	11
530	A hybrid of MIL-53(Fe) and conductive sulfide as a synergistic electrocatalyst for the oxygen evolution reaction. Journal of Materials Chemistry A, 2020, 8, 14574-14582.	5.2	41
531	Bidirectional Catalysts for Liquid–Solid Redox Conversion in Lithium–Sulfur Batteries. Advanced Materials, 2020, 32, e2000315.	11.1	274
532	Hierarchical Nanorods of MoS ₂ /MoP Heterojunction for Efficient Electrocatalytic Hydrogen Evolution Reaction. Small, 2020, 16, e2002482.	5.2	85
533	In Situ Synthesis of Copper Sulfideâ€Nickel Sulfide Arrays on Threeâ€Dimensional Nickel Foam for Overall Water Splitting. ChemistrySelect, 2020, 5, 2455-2464.	0.7	37
534	Non-noble metal single-atom catalysts prepared by wet chemical method and their applications in electrochemical water splitting. Journal of Energy Chemistry, 2020, 47, 333-345.	7.1	104
535	A flower-like CoS ₂ /MoS ₂ heteronanosheet array as an active and stable electrocatalyst toward the hydrogen evolution reaction in alkaline media. RSC Advances, 2020, 10, 8973-8981.	1.7	19
536	Engineering interfacial structures to accelerate hydrogen evolution efficiency of MoS ₂ over a wide pH range. Nanoscale, 2020, 12, 6810-6820.	2.8	30
537	Recent trends in hydrogen and oxygen electrocatalysis for anion exchange membrane technologies. Current Opinion in Electrochemistry, 2020, 21, 146-159.	2.5	9
538	3D Grapheneâ€Based H ₂ â€Production Photocatalyst and Electrocatalyst. Advanced Energy Materials, 2020, 10, 1903802.	10.2	199
539	Fabrication of hierarchical SrTiO ₃ @MoS ₂ heterostructure nanofibers as efficient and low-cost electrocatalysts for hydrogen-evolution reactions. Nanotechnology, 2020, 31, 205604.	1.3	47
540	Highly efficient and stable Si photocathode with hierarchical MoS2/Ni3S2 catalyst for solar hydrogen production in alkaline media. Nano Energy, 2020, 71, 104631.	8.2	51

#	Article	IF	CITATIONS
541	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. Journal of Materials Chemistry A, 2020, 8, 5595-5600.	5.2	30
542	Three-dimensional (3D) hierarchical coral-like Mn-doped Ni2P–Ni5P4/NF catalyst for efficient oxygen evolution. Journal of Alloys and Compounds, 2020, 826, 154210.	2.8	44
543	Reactant friendly hydrogen evolution interface based on di-anionic MoS2 surface. Nature Communications, 2020, 11, 1116.	5.8	108
544	Rational Construction of a WS ₂ /CoS ₂ Heterostructure Electrocatalyst for Efficient Hydrogen Evolution at All pH Values. ACS Sustainable Chemistry and Engineering, 2020, 8, 4474-4480.	3.2	63
545	Crystal phase tuning and valence engineering in non-noble catalysts for outstanding overall water splitting. Journal of Materials Chemistry A, 2020, 8, 4524-4532.	5.2	13
546	Surface and interface engineering in transition metal–based catalysts for electrochemical water oxidation. Materials Today Chemistry, 2020, 16, 100239.	1.7	23
547	Probing into the effect of heterojunctions between Cu/Mo2C/Mo2N on HER performance. Catalysis Science and Technology, 2020, 10, 2213-2220.	2.1	17
548	Constructing MoS2/g-C3N4 heterojunction with enhanced oxygen evolution reaction activity: A theoretical insight. Applied Surface Science, 2020, 510, 145489.	3.1	76
549	Activating the hydrogen evolution and overall water splitting performance of NiFe LDH by cation doping and plasma reduction. Applied Catalysis B: Environmental, 2020, 266, 118627.	10.8	255
550	3D Ni and Co redox-active metal–organic frameworks based on ferrocenyl diphosphinate and 4,4′-bipyridine ligands as efficient electrocatalysts for the hydrogen evolution reaction. Dalton Transactions, 2020, 49, 2794-2802.	1.6	58
551	Construction of an iron and oxygen co-doped nickel phosphide based on MOF derivatives for highly efficient and long-enduring water splitting. Journal of Materials Chemistry A, 2020, 8, 4570-4578.	5.2	86
552	Nonâ€3d Metal Modulation of a 2D Ni–Co Heterostructure Array as Multifunctional Electrocatalyst for Portable Overall Water Splitting. Small, 2020, 16, e1906775.	5.2	119
553	Self-assembly of homointerface engineered IrCo0.14 bracelet-like nanorings as efficient and stable bifunctional catalysts for electrochemical water splitting in acidic media. Electrochimica Acta, 2020, 337, 135738.	2.6	16
554	Hybrid Ni ₃ S ₂ –MoS ₂ nanowire arrays as a pH-universal catalyst for accelerating the hydrogen evolution reaction. Chemical Communications, 2020, 56, 2471-2474.	2.2	29
555	Ultrathin Ni(0)â€Embedded Ni(OH) ₂ Heterostructured Nanosheets with Enhanced Electrochemical Overall Water Splitting. Advanced Materials, 2020, 32, e1906915.	11.1	259
556	Cation-exchange-assisted formation of NiS/SnS ₂ porous nanowalls with ultrahigh energy density for battery–supercapacitor hybrid devices. Journal of Materials Chemistry A, 2020, 8, 3300-3310.	5.2	63
557	Nickel nanograins anchored on a carbon framework for an efficient hydrogen evolution electrocatalyst and a flexible electrode. Journal of Materials Chemistry A, 2020, 8, 3499-3508.	5.2	18
558	Single-Atom Catalysts for Electrochemical Hydrogen Evolution Reaction: Recent Advances and Future Perspectives. Nano-Micro Letters, 2020, 12, 21.	14.4	159

#	Article	IF	CITATIONS
559	Two-dimensional (2D)/2D Interface Engineering of a MoS ₂ /C ₃ N ₄ Heterostructure for Promoted Electrocatalytic Nitrogen Fixation. ACS Applied Materials & Interfaces, 2020, 12, 7081-7090.	4.0	255
560	Applications of metal–organic framework-derived materials in fuel cells and metal-air batteries. Coordination Chemistry Reviews, 2020, 409, 213214.	9.5	182
561	Recent advancements in heterostructured interface engineering for hydrogen evolution reaction electrocatalysis. Journal of Materials Chemistry A, 2020, 8, 6926-6956.	5.2	158
562	Achieving Rich and Active Alkaline Hydrogen Evolution Heterostructures via Interface Engineering on 2D 1Tâ€MoS ₂ Quantum Sheets. Advanced Functional Materials, 2020, 30, 2000551.	7.8	83

Effect of cation substitution on the water splitting performance of spinel cobaltite MCo2S4 (M = Ni,) Tj ETQq0 0 0 ggBT /Overlock 10 Tf $\frac{363}{38}$

564	Biomass-derived self-supported porous carbon membrane embedded with Co nanoparticles as an advanced electrocatalyst for efficient and robust hydrogen evolution reaction. Renewable Energy, 2020, 155, 447-455.	4.3	26
565	A review and perspective on molybdenum-based electrocatalysts for hydrogen evolution reaction. Rare Metals, 2020, 39, 335-351.	3.6	196
566	A core-shell structured CoMoO4â <nh2o@co1-xfexooh 136125.<="" 2020,="" 345,="" acta,="" electrochemical="" electrochimica="" evolution="" for="" nanocatalyst="" of="" oxygen.="" td=""><td>2.6</td><td>9</td></nh2o@co1-xfexooh>	2.6	9
567	Ultrathin-layered MoS2 hollow nanospheres decorating Ni3S2 nanowires as high effective self-supporting electrode for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2020, 45, 13149-13162.	3.8	31
568	Multi-shelled CoS2–MoS2 hollow spheres as efficient bifunctional electrocatalysts for overall water splitting. International Journal of Hydrogen Energy, 2020, 45, 13290-13299.	3.8	54
569	Bismuth activated succulent-like binary metal sulfide heterostructure as a binder-free electrocatalyst for enhanced oxygen evolution reaction. Journal of Colloid and Interface Science, 2020, 573, 150-157.	5.0	33
570	Directly ball milling red phosphorus and expended graphite for oxygen evolution reaction. Journal of Power Sources, 2020, 456, 228003.	4.0	36
571	An <i>in situ</i> grown lanthanum sulfide/molybdenum sulfide hybrid catalyst for electrochemical hydrogen evolution. Catalysis Science and Technology, 2020, 10, 3247-3254.	2.1	19
572	Recent advances of nonprecious and bifunctional electrocatalysts for overall water splitting. Sustainable Energy and Fuels, 2020, 4, 3211-3228.	2.5	63
573	Highly efficient CoMoS heterostructure derived from vertically anchored Co5Mo10 polyoxometalate for electrocatalytic overall water splitting. Chemical Engineering Journal, 2020, 394, 124849.	6.6	67
574	Decoration of NiCoP nanowires with interlayer-expanded few-layer MoSe2 nanosheets: A novel electrode material for asymmetric supercapacitors. Chemical Engineering Journal, 2020, 395, 125058.	6.6	78
575	NiFe-LDH/MWCNTs/NF nanohybrids as a high-performance bifunctional electrocatalyst for overall urea electrolysis. International Journal of Hydrogen Energy, 2020, 45, 14660-14668.	3.8	45
576	Sulfur and selenium doped nickel chalcogenides as efficient and stable electrocatalysts for hydrogen evolution reaction: The importance of the dopant atoms in and beneath the surface. Nano Energy, 2020, 74, 104787.	8.2	52

#	Article	IF	Citations
577	Computational Design of Transition Metal Single-Atom Electrocatalysts on PtS ₂ for Efficient Nitrogen Reduction. ACS Applied Materials & Interfaces, 2020, 12, 20448-20455.	4.0	58
578	Enhancement of HER kinetics with RhNiFe for high-rate water electrolysis. Catalysis Science and Technology, 2020, 10, 3681-3693.	2.1	20
579	Bi-functional S-Doped Ni Catalysts on Copper Foams with Enhanced Electrocatalytic Performance and Excellent Stability for Electrocatalytic Water Splitting. International Journal of Electrochemical Science, 2020, 15, 2806-2821.	0.5	5
580	Catalytic activity and underlying atomic rearrangement in monolayer CoOOH towards HER and OER. International Journal of Hydrogen Energy, 2020, 45, 23900-23907.	3.8	30
581	Ultrafine Co nanodots embedded in N-doped carbon nanotubes grafted on hexagonal VN for highly efficient overall water splitting. Nano Energy, 2020, 73, 104788.	8.2	71
582	High value-added fluorescence upconversion agents-assisted nano-semiconductors for efficient wide spectral response photocatalysis: Exerting energy transfer effect and applications. Journal of Rare Earths, 2021, 39, 243-260.	2.5	10
583	Surface/interface engineering of high-efficiency noble metal-free electrocatalysts for energy-related electrochemical reactions. Journal of Energy Chemistry, 2021, 54, 89-104.	7.1	65
584	Bonding interface boosts the intrinsic activity and durability of NiSe@Fe2O3 heterogeneous electrocatalyst for water oxidation. Science Bulletin, 2021, 66, 52-61.	4.3	44
585	2D Transition Metal Dichalcogenides: Design, Modulation, and Challenges in Electrocatalysis. Advanced Materials, 2021, 33, e1907818.	11.1	284
586	Interface engineering in transition metal-based heterostructures for oxygen electrocatalysis. Materials Chemistry Frontiers, 2021, 5, 1033-1059.	3.2	64
587	An account of the strategies to enhance the water splitting efficiency of noble-metal-free electrocatalysts. Journal of Energy Chemistry, 2021, 59, 160-190.	7.1	48
588	The Heterostructure of Ru ₂ P/WO ₃ /NPC Synergistically Promotes H ₂ O Dissociation for Improved Hydrogen Evolution. Angewandte Chemie - International Edition, 2021, 60, 4110-4116.	7.2	141
589	Fullerenes as Key Components for Lowâ€Dimensional (Photo)electrocatalytic Nanohybrid Materials. Angewandte Chemie - International Edition, 2021, 60, 122-141.	7.2	64
590	Synthesis of hollow CoSe2/MoSe2 nanospheres for efficient hydrazine-assisted hydrogen evolution. Chemical Engineering Journal, 2021, 404, 126529.	6.6	49
591	A 3D multi-interface structure of coral-like Fe-Mo-S/Ni3S2@NF using for high-efficiency and stable overall water splitting. Chemical Engineering Journal, 2021, 404, 126483.	6.6	82
592	Facilitating active species by decorating CeO2 on Ni3S2 nanosheets for efficient water oxidation electrocatalysis. Chinese Journal of Catalysis, 2021, 42, 482-489.	6.9	61
593	Rational hetero-interface design of Fe3N@Ni2Co-LDHs as high efficient electrocatalyst for oxygen evolution reaction. Journal of Alloys and Compounds, 2021, 853, 157353.	2.8	25
594	Phosphorus-doped Fe7S8@C nanowires for efficient electrochemical hydrogen and oxygen evolutions: Controlled synthesis and electronic modulation on active sites. Journal of Materials Science and Technology, 2021, 74, 168-175.	5.6	18

ARTICLE IF CITATIONS Abundant heterointerfaces in MOF-derived hollow CoS2â€"MoS2 nanosheet array electrocatalysts for 595 7.1 84 overall water splitting. Journal of Energy Chemistry, 2021, 57, 99-108. Phaseâ€Junction Electrocatalysts towards Enhanced Hydrogen Evolution Reaction in Alkaline Media. 1.6 24 Angewandte Chemie, 2021, 133, 263-271. Design of grain boundary enriched bimetallic borides for enhanced hydrogen evolution reaction. 597 6.6 56 Chemical Engineering Journal, 2021, 405, 126977. Accordion-like composite of carbon-coated Fe3O4 nanoparticle decorated Ti3C2 MXene with enhanced electrochemical performance. Journal of Materials Science, 2021, 56, 2486-2496. Epitaxial growth of prussian blue analogue derived NiFeP thin film for efficient electrocatalytic 599 1.4 14 hydrogen evolution reaction. Journal of Solid State Chemistry, 2021, 293, 121779. Hollow C@SnS2/SnS nanocomposites: High efficient oxygen evolution reaction catalysts. Journal of Colloid and Interface Science, 2021, 583, 149-156. 5.0 Electronic modulation and interface engineering of electrospun nanomaterialsâ€based electrocatalysts toward water splitting. , 2021, 3, 101-128. 601 134 The Heterostructure of Ru₂P/WO₃/NPC Synergistically Promotes H₂O Dissociation for Improved Hydrogen Evolution. Angewandte Chemie, 2021, 133, 1.6 4156-4162. A vast exploration of improvising synthetic strategies for enhancing the OER kinetics of LDH 603 5.2 206 structures: a review. Journal of Materials Chemistry A, 2021, 9, 1314-1352. Hierarchical NiMoP2-Ni2P with amorphous interface as superior bifunctional electrocatalysts for 604 5.6 overall water splitting. Journal of Materials Science and Technology, 2021, 77, 108-116. Amorphous nickel sulfoselenide for efficient electrochemical urea-assisted hydrogen production in 605 108 8.2 alkaline media. Nano Energy, 2021, 81, 105605. Synergistic electronic and morphological modulation on ternary Co1â[^]xVxP nanoneedle arrays for 606 hýdrogen evolution reaction with large current density. Sciencé China Materials, 2021, 64, 880-891. Nanosized Co3O4–MoS2 heterostructure electrodes for improving the oxygen evolution reaction in 607 2.8 33 an alkaline medium. Journal of Alloys and Compounds, 2021, 853, 156946. Interface engineering of transitional metal sulfide–MoS₂ heterostructure composites as 608 5.2 effective electrocatalysts for water-splitting. Journal of Materials Chemistry A, 2021, 9, 2070-2092. Modification strategies on transition metal-based electrocatalysts for efficient water splitting. 609 7.1 88 Journal of Energy Chemistry, 2021, 58, 446-462. Anion Vacancy Engineering in Electrocatalytic Water Splitting. ChemNanoMat, 2021, 7, 102-109. Reduced titania nanorods and Ni–Mo–S catalysts for photoelectrocatalytic water treatment and 611 10.8 23 hydrogen production coupled with desalination. Applied Catalysis B: Environmental, 2021, 284, 119745. Enabling the full exposure of Fe2P@NixP heterostructures in tree-branch-like nanoarrays for 6.6 promoted urea electrolysis at high current densities. Chemical Engineering Journal, 2021, 417, 128067.

#	Article	IF	Citations
613	Interface-modulated uniform outer nanolayer: A category of electrodes of nanolayer-encapsulated core-shell configuration for supercapacitors. Nano Energy, 2021, 81, 105667.	8.2	48
614	The controlled synthesis of V-doped MoS ₂ -Ni _x S _y hollow nanospheres and their electrocatalytic performance in hydrogen evolution reaction. Sustainable Energy and Fuels, 2021, 5, 698-703.	2.5	6
615	[Mo ₃ S ₁₃] ^{2â~`} as a Model System for Hydrogen Evolution Catalysis by MoS _x : Probing Protonation Sites in the Gas Phase by Infrared Multiple Photon Dissociation Spectroscopy. Angewandte Chemie - International Edition, 2021, 60, 5074-5077.	7.2	18
616	Colloidal Ni ₂ P Nanocrystals Encapsulated in Heteroatom-Doped Graphene Nanosheets: A Synergy of 0D@2D Heterostructure Toward Overall Water Splitting. Chemistry of Materials, 2021, 33, 234-245.	3.2	57
617	Topological Insulatorâ€Assisted MoSe ₂ /Bi ₂ Se ₃ Heterostructure: Achieving Fast Reaction Kinetics Toward High Rate Sodiumâ€lon Batteries. ChemElectroChem, 2021, 8, 697-704.	1.7	32
618	MOFs derived NiFeP porous nanoflowers for boosted electrocatalytic water splitting. Microporous and Mesoporous Materials, 2021, 312, 110760.	2.2	16
619	One-step synthesis of interwoven MoS2-CoNi2S4 heterostructures as high-activity water oxidation electrocatalysts. Catalysis Today, 2021, 364, 132-139.	2.2	11
620	Metal-organic framework derived Co3O4@Mo-Co3S4-Ni3S2 heterostructure supported on Ni foam for overall water splitting. Chemical Engineering Journal, 2021, 413, 127482.	6.6	64
621	Vanadium doped cobalt phosphide nanorods array as a bifunctional electrode catalyst for efficient and stable overall water splitting. International Journal of Hydrogen Energy, 2021, 46, 599-608.	3.8	25
622	Interface Engineering of CoS/CoO@N-Doped Graphene Nanocomposite for High-Performance Rechargeable Zn–Air Batteries. Nano-Micro Letters, 2021, 13, 3.	14.4	95
623	Fullerenes as Key Components for Lowâ€Dimensional (Photo)electrocatalytic Nanohybrid Materials. Angewandte Chemie, 2021, 133, 124-143.	1.6	11
624	Phaseâ€Junction Electrocatalysts towards Enhanced Hydrogen Evolution Reaction in Alkaline Media. Angewandte Chemie - International Edition, 2021, 60, 259-267.	7.2	91
625	Synthesis of Au/Co9S8 composite aerogels by one-step sol–gel method as hydrogen evolution reaction electrocatalysts. Journal of Porous Materials, 2021, 28, 99-108.	1.3	6
626	Constructing NiSe ₂ @MoS ₂ nano-heterostructures on a carbon fiber paper for electrocatalytic oxygen evolution. RSC Advances, 2021, 11, 26928-26936.	1.7	9
627	Hierarchical MnCo ₂ O ₄ nanowire@NiFe layered double hydroxide nanosheet heterostructures on Ni foam for overall water splitting. CrystEngComm, 2021, 23, 7141-7150.	1.3	8
628	Atomic heterointerface engineering overcomes the activity limitation of electrocatalysts and promises highly-efficient alkaline water splitting. Energy and Environmental Science, 2021, 14, 5228-5259.	15.6	198
629	Biomimetic 2D-Ni(Co,Fe)P/1D-WO _x nanocoral reef electrocatalysts for efficient water splitting. Journal of Materials Chemistry A, 2021, 9, 10909-10920.	5.2	28
630	Atomic layer deposition-triggered hierarchical core/shell stable bifunctional electrocatalysts for overall water splitting. Journal of Materials Chemistry A, 2021, 9, 21132-21141.	5.2	10

#	Article	IF	CITATIONS
631	Lithium-Assisted Exfoliation of Palladium Thiophosphate Nanosheets for Photoelectrocatalytic Water Splitting. ACS Applied Nano Materials, 2021, 4, 441-448.	2.4	8
632	A NiN ₃ -embedded MoS ₂ monolayer as a promising electrocatalyst with high activity for the oxygen evolution reaction: a computational study. Sustainable Energy and Fuels, 2021, 5, 3330-3339.	2.5	7
633	Surface reconstruction induced <i>in situ</i> phosphorus doping in nickel oxides for an enhanced oxygen evolution reaction. Journal of Materials Chemistry A, 2021, 9, 6432-6441.	5.2	38
634	Sulfur defect rich Mo-Ni ₃ S ₂ QDs assisted by O–Cî€O chemical bonding for an efficient electrocatalytic overall water splitting. Nanoscale, 2021, 13, 6644-6653.	2.8	21
635	Development of a bi-compound heterogeneous cocatalyst modified p-Si photocathode for boosting the photoelectrochemical water splitting performance. Journal of Materials Chemistry A, 2021, 9, 9157-9164.	5.2	14
636	Electrocatalytically inactive copper improves the water adsorption/dissociation on Ni ₃ S ₂ for accelerated alkaline and neutral hydrogen evolution. Nanoscale, 2021, 13, 2456-2464.	2.8	25
637	A bifunctional hexa-filamentous microfibril multimetallic foam: an unconventional high-performance electrode for total water splitting under industrial operation conditions. Journal of Materials Chemistry A, 2021, 9, 4971-4983.	5.2	20
638	Highly Efficient Electrocatalytic Water Splitting. , 2021, , 1335-1367.		1
639	High-performance overall water splitting based on amorphous iron doped cobalt tungstate <i>via</i> facile co-precipitation. Journal of Materials Chemistry A, 2021, 9, 9753-9760.	5.2	34
640	Tuning the interfacial electronic structure <i>via</i> Au clusters for boosting photocatalytic H ₂ evolution. Journal of Materials Chemistry A, 2021, 9, 1759-1769.	5.2	33
641	A highly stable CoMo ₂ S ₄ /Ni ₃ S ₂ heterojunction electrocatalyst for efficient hydrogen evolution. Chemical Communications, 2021, 57, 785-788.	2.2	20
642	Cobalt and nitrogen co-doped Ni3S2 nanoflowers on nickel foam as high-efficiency electrocatalysts for overall water splitting in alkaline media. Dalton Transactions, 2021, 50, 8955-8962.	1.6	12
643	Investigation on nanostructured Cu-based electrocatalysts for improvising water splitting: a review. Inorganic Chemistry Frontiers, 2021, 8, 234-272.	3.0	103
644	Solid-state synthesis of single-phase nickel monophosphosulfide for the oxygen evolution reaction. Dalton Transactions, 2021, 50, 12870-12878.	1.6	4
645	Perfecting electrocatalysts <i>via</i> imperfections: towards the large-scale deployment of water electrolysis technology. Energy and Environmental Science, 2021, 14, 1722-1770.	15.6	213
646	[Mo 3 S 13] 2â~'als Modellsystem für die katalytische Wasserstoffentwicklung durch MoS x : Untersuchung der Protonierungsstellen in der Gasphase durch Infrarotâ€Mehrphotonendissoziationsspektroskopie. Angewandte Chemie, 2021, 133, 5133-5137.	1.6	1
647	Recent advances in transition-metal-sulfide-based bifunctional electrocatalysts for overall water splitting. Journal of Materials Chemistry A, 2021, 9, 5320-5363.	5.2	322
648	Self-supported hierarchical nanoporous Cu/Mo@MoOx hybrid electrodes as robust nonprecious electrocatalysts for high-efficiency hydrogen evolution. Current Nanoscience, 2021, 16, .	0.7	О

#	Article	IF	CITATIONS
649	Ni/Mo Bimetallicâ€Oxideâ€Derived Heterointerfaceâ€Rich Sulfide Nanosheets with Coâ€Doping for Efficient Alkaline Hydrogen Evolution by Boosting Volmer Reaction. Small, 2021, 17, e2006730.	5.2	95
650	Underappreciated Role of Low-Energy Facets in Nitrogen Electroreduction. , 2021, 3, 327-330.		13
651	Carbon Cloth Supported Nitrogen Doped Porous Carbon Wrapped Co Nanoparticles for Effective Overall Water Splitting. ChemCatChem, 2021, 13, 2158-2166.	1.8	9
652	Facile Construction of Metal Phosphides (MP, M = Co, Ni, Fe, and Cu) Wrapped in Three-Dimensional N,P-Codoped Carbon Skeleton toward Highly Efficient Hydrogen Evolution Catalysis and Lithium-Ion Storage. ACS Applied Materials & Interfaces, 2021, 13, 9820-9829.	4.0	27
653	Nanostructural Co–MoS2/NiCoS supported on reduced Graphene oxide as a high activity electrocatalyst for hydrogen evolution in alkaline media. International Journal of Hydrogen Energy, 2021, 46, 8567-8577.	3.8	11
654	Transition metal-based electrocatalysts for overall water splitting. Chinese Chemical Letters, 2021, 32, 2597-2616.	4.8	94
655	Interface Engineering of Needleâ€Like Pâ€Doped MoS ₂ /CoP Arrays as Highly Active and Durable Bifunctional Electrocatalyst for Overall Water Splitting. ChemSusChem, 2021, 14, 1565-1573.	3.6	43
656	Co ₉ S ₈ Nanosheet Coupled Cu ₂ S Nanorod Heterostructure as Efficient Catalyst for Overall Water Splitting. ACS Applied Materials & Interfaces, 2021, 13, 9865-9874.	4.0	101
657	Tunable Electrocatalytic Behavior of Sodiated MoS ₂ Active Sites toward Efficient Sulfur Redox Reactions in Room‶emperature Na–S Batteries. Advanced Materials, 2021, 33, e2100229.	11.1	66
658	Hexacyanoferrate-Complex-Derived NiFe ₂ O ₄ /CoFe ₂ O ₄ Heterostructure–MWCNTs for an Efficient Oxygen Evolution Reaction. Energy & Fuels, 2021, 35, 5372-5382.	2.5	36
659	Multiâ€Phase Heterostructure of CoNiP/Co <i>_x</i> P for Enhanced Hydrogen Evolution Under Alkaline and Seawater Conditions by Promoting H ₂ O Dissociation. Small, 2021, 17, e2007557.	5.2	83
660	Pd ^{Î'+} -Mediated Surface Engineering of AgMnO ₄ Nanorods as Advanced Bifunctional Electrocatalysts for Highly Efficient Water Electrolysis. ACS Catalysis, 2021, 11, 3687-3703.	5.5	29
661	Hierarchical CuCo ₂ S ₄ Nanoflake Arrays Grown on Carbon Cloth: A Remarkable Bifunctional Electrocatalyst for Overall Water Splitting. ChemElectroChem, 2021, 8, 1134-1140.	1.7	19
662	Three-Dimensional Flower-like Fe, C-Doped-MoS2/Ni3S2 Heterostructures Spheres for Accelerating Electrocatalytic Oxygen and Hydrogen Evolution. Crystals, 2021, 11, 340.	1.0	12
663	Interfacial engineering of heterogeneous catalysts for electrocatalysis. Materials Today, 2021, 48, 115-134.	8.3	96
664	Ni nanoparticles on active (001) facet-exposed rutile TiO2 nanopyramid arrays for efficient hydrogen evolution. Applied Catalysis B: Environmental, 2021, 282, 119548.	10.8	40
665	Universal Strategy of Bimetal Heterostructures as Superior Bifunctional Catalysts for Electrochemical Water Splitting. ACS Sustainable Chemistry and Engineering, 2021, 9, 4206-4212.	3.2	61
667	In Situ Cation Intercalation in the Interlayer of Tungsten Sulfide with Overlaying Layered Double Hydroxide in a 2D Heterostructure for Facile Electrochemical Redox Activity. Inorganic Chemistry, 2021, 60, 6911-6921.	1.9	17

#	Article	IF	CITATIONS
668	Defect-Rich Heterogeneous MoS2/rGO/NiS Nanocomposite for Efficient pH-Universal Hydrogen Evolution. Nanomaterials, 2021, 11, 662.	1.9	18
669	Rational Surface and Interfacial Engineering of IrO ₂ /TiO ₂ Nanosheet Arrays toward Highâ€Performance Chlorine Evolution Electrocatalysis and Practical Environmental Remediation. Small, 2021, 17, e2006587.	5.2	27
670	Efficient MOF- derived V–Ni3S2 nanosheet arrays for electrocatalytic overall water splitting in alkali. International Journal of Hydrogen Energy, 2021, 46, 10773-10782.	3.8	36
671	Bimetallic sulfide interfaces: Promoting destabilization of water molecules for overall water splitting. Journal of Power Sources, 2021, 487, 229408.	4.0	42
672	Noble metal-free electrocatalytic materials for water splitting in alkaline electrolyte. EnergyChem, 2021, 3, 100053.	10.1	68
673	Heterostructured MoO2@MoS2@Co9S8 nanorods as high efficiency bifunctional electrocatalyst for overall water splitting. Applied Surface Science, 2021, 543, 148804.	3.1	53
674	Oxygen evolution reaction (OER) mechanism under alkaline and acidic conditions. JPhys Energy, 2021, 3, 026001.	2.3	121
675	Atomically dispersed cobalt-based species anchored on polythiophene as an efficient electrocatalyst for oxygen evolution reaction. Applied Surface Science, 2021, 545, 148943.	3.1	19
676	A highly efficient Fe-doped Ni3S2 electrocatalyst for overall water splitting. Nano Research, 2021, 14, 4740-4747.	5.8	52
677	Sodium Molybdate-Assisted Synthesis of a Cobalt Phosphide Hybrid Counter Electrode for Highly Efficient Dye-Sensitized Solar Cells. ACS Applied Energy Materials, 2021, 4, 3851-3860.	2.5	20
678	Twoâ€Dimensional Metal–Organic Frameworks and Covalent–Organic Frameworks for Electrocatalysis: Distinct Merits by the Reduced Dimension. Advanced Energy Materials, 2022, 12, 2003990.	10.2	78
679	Multi-interface collaboration of graphene cross-linked NiS-NiS2-Ni3S4 polymorph foam towards robust hydrogen evolution in alkaline electrolyte. Nano Research, 2021, 14, 4857-4864.	5.8	61
680	Electrodeposited nanostructured flakes of cobalt, manganese and nickel-based sulfide (CoMnNiS) for electrocatalytic alkaline oxygen evolution reaction (OER). Journal of Materials Science: Materials in Electronics, 2021, 32, 12292-12307.	1.1	16
681	Anchoring single Pt atoms and black phosphorene dual co-catalysts on CdS nanospheres to boost visible-light photocatalytic H2 evolution. Nano Today, 2021, 37, 101080.	6.2	105
682	Hierarchical Ni3N/Ni0.2Mo0.8N heterostructure nanorods arrays as efficient electrocatalysts for overall water and urea electrolysis. Chemical Engineering Journal, 2021, 409, 128240.	6.6	94
683	A novel synthesis of Ni3S2/NiO nanocomposites as sensing material: Design, generation mechanism and synergistic effect. Journal of Solid State Chemistry, 2021, 296, 121984.	1.4	6
684	Iron, manganese co-doped Ni3S2 nanoflowers in situ assembled by ultrathin nanosheets as a robust electrocatalyst for oxygen evolution reaction. Journal of Colloid and Interface Science, 2021, 588, 248-256.	5.0	94
685	A biomass-derived biochar-supported NiS/C anode material for lithium-ion batteries. Ceramics International, 2021, 47, 20948-20955.	2.3	26

#	Article	IF	CITATIONS
686	N-, P-, and O-doped porous carbon: A trifunctional metal-free electrocatalyst. Applied Surface Science, 2021, 544, 148912.	3.1	44
687	Synthesis of 3D CoO nanowires supported NiFe layered double hydroxide using an atmospheric pressure microplasma for high-performance oxygen evolution reaction. Chemical Engineering Journal, 2021, 410, 128366.	6.6	39
688	Two-dimensional transition metal dichalcogenides for electrocatalytic nitrogen fixation to ammonia: Advances, challenges and perspectives. A mini review. Electrochemistry Communications, 2021, 125, 107002.	2.3	14
689	Stable, Efficient, Copper Coordination Polymer-Derived Heterostructured Catalyst for Oxygen Evolution under pH-Universal Conditions. ACS Applied Materials & Interfaces, 2021, 13, 25461-25471.	4.0	7
690	Cobalt Phosphorous Trisulfide as a High-Performance Electrocatalyst for the Oxygen Evolution Reaction. ACS Applied Materials & amp; Interfaces, 2021, 13, 23638-23646.	4.0	31
691	Interface engineering and heterometal doping Mo-NiS/Ni(OH)2 for overall water splitting. Nano Research, 2021, 14, 3466-3473.	5.8	87
692	Regulating Intrinsic Electronic Structures of Transition-Metal-Based Catalysts and the Potential Applications for Electrocatalytic Water Splitting. , 2021, 3, 752-780.		62
693	Interface engineering for enhancing electrocatalytic oxygen evolution reaction of CoS/CeO2 heterostructures. Frontiers of Chemical Science and Engineering, 2022, 16, 376-383.	2.3	6
694	Layered Niâ^'Coâ^'P Electrode Synthesized by CV Electrodeposition for Hydrogen Evolution at Large Currents. ChemCatChem, 2021, 13, 3619-3627.	1.8	6
695	Enhanced electrocatalytic nitrogen reduction reaction performance by interfacial engineering of MOF-based sulfides FeNi2S4/NiS hetero-interface. Applied Catalysis B: Environmental, 2021, 287, 119956.	10.8	75
696	Integrating well-controlled core-shell structures into "superaerophobic―electrodes for water oxidation at large current densities. Applied Catalysis B: Environmental, 2021, 286, 119920.	10.8	59
697	Advances in CoP electrocatalysts for water splitting. Materials Today Energy, 2021, 20, 100698.	2.5	48
698	NiCoP/NF 1D/2D Biomimetic Architecture for Markedly Enhanced Overall Water Splitting. ChemElectroChem, 2021, 8, 3064-3072.	1.7	26
699	Heterogeneous Bimetallic Moâ€NiP <i>_x</i> /NiS <i>_y</i> as a Highly Efficient Electrocatalyst for Robust Overall Water Splitting. Advanced Functional Materials, 2021, 31, 2101532.	7.8	119
700	Enhancement in the catalytic activity of two-dimensional $\hat{I}\pm$ -CN by B, Si and P doping for hydrogen evolution and oxygen evolution reactions. International Journal of Hydrogen Energy, 2021, 46, 22478-22498.	3.8	23
701	Clean and Affordable Hydrogen Fuel from Alkaline Water Splitting: Past, Recent Progress, and Future Prospects. Advanced Materials, 2021, 33, e2007100.	11.1	781
702	Highâ€Performance Bifunctional Niâ^'Feâ^'S Catalyst in situ Synthesized within Graphite Intergranular Nanopores for Overall Water Splitting. ChemSusChem, 2021, 14, 3131-3138.	3.6	8
703	Interface engineered NiFe2O4â^'x/NiMoO4 nanowire arrays for electrochemical oxygen evolution. Applied Catalysis B: Environmental, 2021, 286, 119857.	10.8	138

#	Article	IF	CITATIONS
704	Construction of sheet-on-sheet hierarchical MoS2/NiS2 heterostructures as efficient bifunctional electrocatalysts for overall water splitting. Electrochimica Acta, 2021, 385, 138438.	2.6	30
705	1T-MoS2 Coordinated Bimetal Atoms as Active Centers to Facilitate Hydrogen Generation. Materials, 2021, 14, 4073.	1.3	7
706	Electronic Coupling of Single Atom and FePS ₃ Boosts Water Electrolysis. Energy and Environmental Materials, 2022, 5, 899-905.	7.3	16
707	Coaxial Ni3S2@CoMoS4/NiFeOOH nanorods for energy-saving water splitting and urea electrolysis. International Journal of Hydrogen Energy, 2021, 46, 24078-24093.	3.8	33
708	Introducing a self-improving catalyst for hydrogen evolution and efficient catalyst for oxygen evolution reaction. Journal of Molecular Liquids, 2021, 334, 116511.	2.3	6
709	Fabrication of heterogeneous interface and phosphorus doping in MoS2 for efficient hydrogen evolution in both acid and alkaline electrolytes. Electrochimica Acta, 2021, 385, 138429.	2.6	6
710	Ni ₃ S ₂ /Ni Heterostructure Nanobelt Arrays as Bifunctional Catalysts for Urea-Rich Wastewater Degradation. ACS Applied Materials & Interfaces, 2021, 13, 35709-35718.	4.0	74
711	Heterojunction catalyst in electrocatalytic water splitting. Coordination Chemistry Reviews, 2021, 439, 213953.	9.5	195
712	A Highlyâ€Efficient Oxygen Evolution Electrocatalyst Derived from a Metalâ€Organic Framework and Ketjenblack Carbon Material. ChemPlusChem, 2021, 86, 1106-1115.	1.3	10
713	Fabrication of Polyoxometalate Anchored Zinc Cobalt Sulfide Nanowires as a Remarkable Bifunctional Electrocatalyst for Overall Water Splitting. Advanced Functional Materials, 2021, 31, 2106147.	7.8	92
714	Ion Irradiation Inducing Oxygen Vacancyâ€Rich NiO/NiFe ₂ O ₄ Heterostructure for Enhanced Electrocatalytic Water Splitting. Small, 2021, 17, e2103501.	5.2	76
715	Amorphous Manganese–Cobalt Nanosheets as Efficient Catalysts for Hydrogen Evolution Reaction (HER). Catalysis Surveys From Asia, 2021, 25, 437-444.	1.0	10
716	Constructing the Au–CoNi2S4 core–shell heterostructure to promote the catalytic performance for oxygen evolution. Journal Physics D: Applied Physics, 2021, 54, 425501.	1.3	1
717	Solar-Driven Photoelectrochemical Performance of Novel ZnO/Ag2WO4/AgBr Nanorods-Based Photoelectrodes. Nanoscale Research Letters, 2021, 16, 133.	3.1	3
718	Chrysanthemum-like FeS/Ni3S2 heterostructure nanoarray as a robust bifunctional electrocatalyst for overall water splitting. Journal of Colloid and Interface Science, 2022, 608, 536-548.	5.0	39
719	Computational Studies on Carbon Dots Electrocatalysis: A Review. Advanced Functional Materials, 2021, 31, 2107196.	7.8	46
720	Synthesis of Ni3S4/NiS2/FeS2 nanoparticles for hydrogen and oxygen evolution reaction. Applied Surface Science, 2021, 560, 149985.	3.1	42
721	Bimetal Organic Framework Derived Atomically Dispersed Mn and N Codoped Porous Carbon for Efficient Oxygen Reduction. European Journal of Inorganic Chemistry, 2021, 2021, 4452-4457.	1.0	4

#	Article	IF	CITATIONS
722	Denitrification on PdCu-AC with hydrogen from electrocatalytic water splitting. Research on Chemical Intermediates, 2021, 47, 4745-4762.	1.3	1
723	Iron and chromium co-doped cobalt phosphide porous nanosheets as robust bifunctional electrocatalyst for efficient water splitting. Nanotechnology, 2022, 33, 075204.	1.3	9
724	Iron-doped NiS2 microcrystals with exposed {0 0 1} facets for electrocatalytic water oxidation. Journal of Colloid and Interface Science, 2022, 608, 599-604.	5.0	15
725	Sandwich structured Ni3S2-MoS2-Ni3S2@Ni foam electrode as a stable bifunctional electrocatalyst for highly sustained overall seawater splitting. Electrochimica Acta, 2021, 390, 138833.	2.6	41
726	Oxidized single nickel atoms embedded in Ru matrix for highly efficient hydrogen evolution reaction. Journal of Alloys and Compounds, 2021, 874, 159909.	2.8	8
727	Robust wrinkled MoS ₂ /N-C bifunctional electrocatalysts interfaced with single Fe atoms for wearable zinc-air batteries. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	122
728	Three-dimensional Ni3Se4 flowers integrated with ultrathin carbon layer with strong electronic interactions for boosting oxygen reduction/evolution reactions. Chemical Engineering Journal, 2022, 430, 132720.	6.6	25
729	Material libraries for electrocatalytic overall water splitting. Coordination Chemistry Reviews, 2021, 444, 214049.	9.5	123
730	Heterogeneous Ni3S2@FeNi2S4@NF nanosheet arrays directly used as high efficiency bifunctional electrocatalyst for water decomposition. Journal of Colloid and Interface Science, 2021, 599, 300-312.	5.0	58
731	Self-supporting transition metal chalcogenides on metal substrates for catalytic water splitting. Chemical Engineering Journal, 2021, 421, 129645.	6.6	62
732	Nanowire-structured FeP-CoP arrays as highly active and stable bifunctional electrocatalyst synergistically promoting high-current overall water splitting. Journal of Colloid and Interface Science, 2021, 600, 811-819.	5.0	36
733	Bi/BiVO4/NiFe-LDH heterostructures with enhanced photoelectrochemical performance for streptomycin detection. Journal of Environmental Sciences, 2021, 109, 114-122.	3.2	14
734	Chlorine-assisted synthesis of CuCo2S4@(Cu,Co)2Cl(OH)3 heterostructures with an efficient nanointerface for electrocatalytic oxygen evolution. Journal of Colloid and Interface Science, 2021, 601, 437-445.	5.0	5
735	Facile synthesis of hierarchical NiCoP nanosheets/NiCoP nanocubes homojunction electrocatalyst for highly efficient and stable hydrogen evolution reaction. Applied Surface Science, 2021, 565, 150537.	3.1	33
736	Defect-enriched multistage skeleton morphology Ni-Fe-P-Ni3S2 heterogeneous catalyst on Ni foam for efficient overall water splitting. Chemical Engineering Journal, 2021, 424, 130390.	6.6	40
737	Bimetallic NiSe0.1MoS6.4 sulfoselenide nanosheets supported on nickel foam for efficient hydrogen evolution. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 628, 127228.	2.3	1
738	Strategies on improving the electrocatalytic hydrogen evolution performances of metal phosphides. Chinese Journal of Catalysis, 2021, 42, 1876-1902.	6.9	58
739	Multi-interfacial engineering of hierarchical CoNi2S4/WS2/Co9S8 hybrid frameworks for robust all-pH electrocatalytic hydrogen evolution. Applied Catalysis B: Environmental, 2021, 297, 120455.	10.8	50

#	Article	IF	CITATIONS
740	Regulating the electronic structure of Ni3S2 nanorods by heteroatom vanadium doping for high electrocatalytic performance. Electrochimica Acta, 2021, 395, 139180.	2.6	13
741	Engineering interfacial coupling between Mo2C nanosheets and Co@NC polyhedron for boosting electrocatalytic water splitting and zinc-air batteries. Applied Catalysis B: Environmental, 2021, 296, 120360.	10.8	79
742	Controlled synthesis of Co9S8@NiCo2O4 nanorod arrays as binder-free electrodes for water splitting with impressive performance. Journal of Alloys and Compounds, 2021, 885, 160972.	2.8	98
743	MoS2/CuS nanosheets coated on brass mesh with switchable superwettability for efficient immiscible organic solvent/water separation. Applied Surface Science, 2021, 570, 151128.	3.1	16
744	Interfacial heteroâ€phase construction in nickel/molybdenum selenide hybrids to promote the water splitting performance. Applied Materials Today, 2021, 25, 101175.	2.3	12
745	Synergistic electrocatalysis of Cu2S@Co3S4 core-shell heterostructures toward H2O2 reduction and their application for sensitive immunosensing of alpha fetoprotein. Sensors and Actuators B: Chemical, 2021, 348, 130703.	4.0	10
746	Advanced opportunities and insights on the influence of nitrogen incorporation on the physico-/electro-chemical properties of robust electrocatalysts for electrocatalytic energy conversion. Coordination Chemistry Reviews, 2021, 449, 214209.	9.5	28
747	Strawberry-like Co3O4-Ag bifunctional catalyst for overall water splitting. Applied Catalysis B: Environmental, 2021, 299, 120658.	10.8	38
748	Remarkable synergistic effect in cobalt-iron nitride/alloy nanosheets for robust electrochemical water splitting. Journal of Energy Chemistry, 2022, 65, 405-414.	7.1	81
749	Tailoring the interfacial active center of MnSxO2â^'x/MnCo2S4 heterostructure to boost the performance for oxygen evolution reaction and Zn-Air batteries in neutral electrolyte. Chemical Engineering Journal, 2022, 427, 131966.	6.6	13
750	CoO/MnO heterostructure on three-dimensional nickel foam as efficient electrocatalyst for oxygen evolution reaction. Journal of Physics and Chemistry of Solids, 2022, 160, 110373.	1.9	9
751	In situ surface reconstruction on LaCoO3â^'δ leads to enhanced hydrogen evolution reaction. Journal of Alloys and Compounds, 2022, 891, 161754.	2.8	11
752	In situ coupled MoO3 with CoP/rGO to construct three-dimensional self-supported catalyst for highly efficient alkaline hydrogen evolution reaction. Journal of Materials Science and Technology, 2022, 104, 194-201.	5.6	15
753	One-pot synthesis of Mn2P-Mn2O3 heterogeneous nanoparticles in a P, N -doped three-dimensional porous carbon framework as a highly efficient bifunctional electrocatalyst for overall water splitting. Chemical Engineering Journal, 2022, 428, 131190.	6.6	26
754	In-situ synthesis of microflower composed of N-doped carbon films and Mo2C coupled with Ni or FeNi alloy for water splitting. Chemical Engineering Journal, 2022, 427, 131712.	6.6	18
755	Interface engineering heterostructured MoS2/WS2-reduced graphene Oxide for enhanced hydrogen Evolution electrocatalysts. Separation and Purification Technology, 2021, 278, 119569.	3.9	10
756	Fe and Co dual-doped Ni3S4 nanosheet with enriched high-valence Ni sites for efficient oxygen evolution reaction. Chemical Engineering Journal, 2022, 427, 130742.	6.6	59
757	Phosphorus doping and phosphates coating for nickel molybdate/nickel molybdate hydrate enabling efficient overall water splitting. Journal of Colloid and Interface Science, 2022, 606, 384-392.	5.0	30

#	Article	IF	CITATIONS
758	Coupling Co ₂ P/CoSe ₂ heterostructure nanoarrays for boosting overall water splitting. Dalton Transactions, 2021, 50, 6650-6658.	1.6	8
759	A nitrogen-doped NiCo2S4/CoO hollow multi-layered heterostructure microsphere for efficient oxygen evolution in Zn–air batteries. Nanoscale, 2021, 13, 810-818.	2.8	38
760	Ni _{1â^'2<i>x</i>} Mo _{<i>x</i>} Se nanowires@ammonium nickel phosphate–MoO _{<i>x</i>} heterostructures as a high performance electrocatalyst for water splitting. Sustainable Energy and Fuels, 2021, 5, 5581-5593.	2.5	5
761	Hydrothermal combined with electrodeposition construction of a stable Co ₉ S ₈ /Ni ₃ S ₂ @NiFe-LDH heterostructure electrocatalyst for overall water splitting. Sustainable Energy and Fuels, 2021, 5, 1429-1438.	2.5	21
762	Synergistic enhancement of the oxygen evolution reaction by MoS _x and sulphate on amorphous polymetallic oxide nanosheets. Journal of Materials Chemistry A, 2021, 9, 9858-9863.	5.2	19
763	Hierarchically porous FeNi ₃ @FeNi layered double hydroxide nanostructures: one-step fast electrodeposition and highly efficient electrocatalytic performances for overall water splitting. Dalton Transactions, 2021, 50, 6306-6314.	1.6	29
764	Review on Synthesis and Catalytic Coupling Mechanism of Highly Active Electrocatalysts for Water Splitting. Energy Technology, 2021, 9, 2000855.	1.8	11
765	Atomic-level engineering of two-dimensional electrocatalysts for CO ₂ reduction. Nanoscale, 2021, 13, 7081-7095.	2.8	24
766	Supercapattery driven electrolyzer both empowered by the same superb electrocatalyst. Journal of Materials Chemistry A, 2021, 9, 21750-21759.	5.2	13
767	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
768	Recent Advances in Nonâ€Precious Metalâ€Based Electrodes for Alkaline Water Electrolysis. ChemNanoMat, 2020, 6, 336-355.	1.5	92
769	Iron doped Ni3S2 nanorods directly grown on FeNi3 foam as an efficient bifunctional catalyst for overall water splitting. Chemical Engineering Journal, 2020, 396, 125315.	6.6	97
770	The electrochemical overall water splitting promoted by MoS2 in coupled nickel–iron (oxy)hydride/molybdenum sulfide/graphene composite. Chemical Engineering Journal, 2020, 397, 125454.	6.6	32
771	Multiple-interface relay catalysis: Enhancing alkaline hydrogen evolution through a combination of Volmer promoter and electrical-behavior regulation. Chemical Engineering Journal, 2020, 397, 125457.	6.6	32
772	Valence-engineered MoNi4/MoOx@NF as a Bi-functional electrocatalyst compelling for urea-assisted water splitting reaction. Electrochimica Acta, 2020, 350, 136382.	2.6	20
773	Amorphous MoS2 nanosheets on MoO2 films/Mo foil as free-standing electrode for synergetic electrocatalytic hydrogen evolution reaction. International Journal of Hydrogen Energy, 2020, 45, 17422-17433.	3.8	23
774	Self-assembled 3D hierarchical MnCO3/NiFe layered double hydroxides as a superior electrocatalysts for the oxygen evolution reactions. Journal of Colloid and Interface Science, 2020, 566, 224-233.	5.0	32
775	MoS2 quantum dots decorated ultrathin NiO nanosheets for overall water splitting. Journal of Colloid and Interface Science, 2020, 566, 411-418.	5.0	38

#	Article	IF	CITATIONS
776	Snowflake Co3O4-CuO heteroanode arrays supported on three-dimensional framework for enhanced oxygen evolution. Journal of Electroanalytical Chemistry, 2020, 871, 114235.	1.9	8
777	Activating the MoS ₂ Basal Plane toward Enhanced Solar Hydrogen Generation via <i>in Situ</i> Photoelectrochemical Control. ACS Energy Letters, 2021, 6, 267-276.	8.8	27
778	<i>In situ</i> oxidation transformation of trimetallic selenide to amorphous FeCo-oxyhydroxide by self-sacrificing MoSe ₂ for efficient water oxidation. Journal of Materials Chemistry A, 2020, 8, 7925-7934.	5.2	40
779	Interface engineering of Co ₃ O ₄ nanowire arrays with ultrafine NiO nanowires for high-performance rechargeable alkaline batteries. Dalton Transactions, 2020, 49, 8582-8590.	1.6	55
780	Solvent-free synthesis of morphology-controllable nickel sulfides <i>via</i> one-pot plasma reactions for high-performance lithium-ion batteries. Green Chemistry, 2020, 22, 7460-7467.	4.6	7
781	Surface Physicochemical Treatment of Nickel Foam for Increasing Its Electrocatalytic Activity in Overall Water Splitting. Inorganic Materials: Applied Research, 2020, 11, 458-466.	0.1	2
782	Carbon-Decorated Fe ₃ S ₄ -Fe ₇ Se ₈ Hetero-Nanowires: Interfacial Engineering for Bifunctional Electrocatalysis Toward Hydrogen and Oxygen Evolution Reactions. Journal of the Electrochemical Society, 2020, 167, 086501.	1.3	14
783	Ni ₃ S ₂ /MWCNTs/NF Hybrid Nanostructure as Effective Bifunctional Electrocatalysts for Urea Electrolysis Assisted Hydrogen Evolution. Journal of the Electrochemical Society, 2020, 167, 126514.	1.3	8
784	Highly Efficient and Stable Hydrogen Production in All pH Range by Two-Dimensional Structured Metal-Doped Tungsten Semicarbides. Research, 2019, 2019, 4029516.	2.8	35
785	A General Method for the Synthesis of Hybrid Nanostructures Using MoSe ₂ Nanosheet-Assembled Nanospheres as Templates. Research, 2019, 2019, 6439734.	2.8	7
786	Manipulating all-pH hydrogen evolution kinetics on metal sulfides through one-pot simultaneously derived multi-interface engineering and phosphorus doping. Journal of Materials Chemistry A, 2021, 9, 25539-25546.	5.2	19
787	The local electronic structure modulation of the molybdenum selenide–nitride heterojunction for efficient hydrogen evolution reaction. Journal of Materials Chemistry A, 2021, 9, 26113-26118.	5.2	22
788	Design principles of noble metal-free electrocatalysts for hydrogen production in alkaline media: combining theory and experiment. Nanoscale Advances, 2021, 3, 6797-6826.	2.2	23
789	Interfacial electronic coupling of ultrathin transition-metal hydroxide nanosheets with layered MXenes as a new prototype for platinum-like hydrogen evolution. Energy and Environmental Science, 2021, 14, 6419-6427.	15.6	154
790	Incorporating Nb into MoSe ₂ Nanoflowers for Overall Electrocatalytic Water Splitting. Israel Journal of Chemistry, 2022, 62, .	1.0	4
791	MOF-derived Zn–Co–Ni sulfides with hollow nanosword arrays for high-efficiency overall water and urea electrolysis. Green Energy and Environment, 2023, 8, 798-811.	4.7	11
792	Sintered Ni metal as a matrix of robust self-supporting electrode for ultra-stable hydrogen evolution. Chemical Engineering Journal, 2022, 430, 133040.	6.6	14
793	Improved Interface Charge Transfer and Redistribution in CuO oOOH pâ€n Heterojunction Nanoarray Electrocatalyst for Enhanced Oxygen Evolution Reaction. Advanced Science, 2021, 8, e2103314.	5.6	100

#	Article	IF	CITATIONS
794	Building Ni ₉ S ₈ /MoS ₂ Nanosheets Decorated NiMoO ₄ Nanorods Heterostructure for Enhanced Water Splitting. Advanced Materials Interfaces, 2021, 8, 2101483.	1.9	18
795	A Facile Strategy to Create Electrocatalysts of Highly Dispersive Ni–Mo Sulfide Nanosheets on Graphene by Derivation of Polyoxometalate Coordination Polymer for Advanced H ₂ Evolution. ACS Applied Energy Materials, 2021, 4, 13191-13198.	2.5	8
796	Engineering the abundant heterointerfaces of integrated bimetallic sulfide-coupled 2D MOF-derived mesoporous CoS2 nanoarray hybrids for electrocatalytic water splitting. Materials Today Nano, 2022, 17, 100146.	2.3	76
797	Chapter 9. High Electrocatalytic Performance of Two-dimensional Layered MoS2-based Materials for the Hydrogen Evolution Reaction. RSC Smart Materials, 2019, , 283-310.	0.1	1
798	Construction of N-doped carbon frames anchored with Co single atoms and Co nanoparticles as robust electrocatalyst for hydrogen evolution in the entire pH range. Journal of Energy Chemistry, 2022, 67, 147-156.	7.1	22
799	Interface engineering of Ni0.85Se/Ni3S2 nanostructure for highly enhanced hydrogen evolution in alkaline solution. International Journal of Hydrogen Energy, 2022, 47, 305-313.	3.8	14
800	Crystal-plane-controlled restructuring and enhanced oxygen-involving performances of bifunctional catalyst. Applied Catalysis A: General, 2021, , 118417.	2.2	5
802	Nickel sulfide nanorods decorated on graphene as advanced hydrogen evolution electrocatalysts in acidic and alkaline media. Journal of Colloid and Interface Science, 2022, 608, 2633-2640.	5.0	15
803	Recent advances of anion regulated NiFe-based electrocatalysts for water oxidation. Sustainable Energy and Fuels, 2021, 5, 6298-6309.	2.5	7
804	Sacrificial templating synthesis of metal-organic framework hybrid nanosheets as efficient pre-electrocatalyst for oxygen evolution reaction in alkaline. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 632, 127745.	2.3	7
805	Defect-Engineered 3D hierarchical NiMo3S4 nanoflowers as bifunctional electrocatalyst for overall water splitting. Journal of Colloid and Interface Science, 2022, 607, 1876-1887.	5.0	40
806	Highly Efficient Electrocatalytic Water Splitting. , 2020, , 1-33.		0
807	Ni activated Mo2C nanoparticles supported on stereotaxically-constructed graphene for efficient overall water splitting. International Journal of Hydrogen Energy, 2022, 47, 761-771.	3.8	22
808	Insightful understanding of three-phase interface behaviors in 1T-2H MoS2/CFP electrode for hydrogen evolution improvement. Chinese Chemical Letters, 2022, 33, 3745-3751.	4.8	17
809	Double MOF gradually activated S bond induced S defect rich MILN-based Co(z)-NiMoS for efficient electrocatalytic overall water splitting. Nanoscale, 2021, 13, 20670-20682.	2.8	10
810	Gradient porous electrode-inducing bubble splitting for highly efficient hydrogen evolution. Applied Energy, 2022, 307, 118278.	5.1	13
811	Hierarchical sulphide - phosphide NiSP /NF catalyst prepared by gradient electrodeposition for oxygen evolution reaction. Journal of Alloys and Compounds, 2022, 895, 162675.	2.8	12
812	Activating MoS ₂ Nanoflakes via Sulfur Defect Engineering Wrapped on CNTs for Stable and Efficient Liâ€O ₂ Batteries. Advanced Functional Materials, 2022, 32, 2108153.	7.8	74

#	Article	IF	CITATIONS
813	Trace Amount of NiP ₂ Cooperative CoMoP Nanosheets Inducing Efficient Hydrogen Evolution. ACS Omega, 2021, 6, 33057-33066.	1.6	6
814	Design heterostructure of NiS–NiS2 on NiFe layered double hydroxide with Mo doping for efficient overall water splitting. Materials Today Energy, 2022, 23, 100906.	2.5	17
815	An Argyrophyllaâ€like Nanorods Co ₉ S ₈ /2Hâ€WS ₂ @NF Heterojunction with Electrons Redistribution as a Highly Efficient Bifunctional Electrocatalyst for Overall Water Splitting. ChemCatChem, 2022, 14, .	1.8	4
816	One-step mechanical exfoliation and deposition of layered materials (graphite, MoS2, and BN) by vacuum-kinetic spray process. Vacuum, 2022, 196, 110732.	1.6	7
817	Electrochemical incorporation of heteroatom into surface reconstruction induced Ni vacancy of NixO nanosheet for enhanced water oxidation. Journal of Colloid and Interface Science, 2022, 608, 3030-3039.	5.0	9
818	Investigating the active sites in molybdenum anchored nitrogen-doped carbon for alkaline oxygen evolution reaction. Journal of Colloid and Interface Science, 2022, 609, 617-626.	5.0	14
819	Interfacial electronic modulation of Ni3S2 nanosheet arrays decorated with Au nanoparticles boosts overall water splitting. Applied Catalysis B: Environmental, 2022, 304, 120935.	10.8	80
820	Three-dimensional ZnCo/MoS2–Co3S4/NF heterostructure supported on nickel foam as highly efficient catalyst for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2022, 47, 2947-2957.	3.8	17
821	Ultrafast Roomâ€Temperature Synthesis of Selfâ€Supported NiFeâ€Layered Double Hydroxide as Largeâ€Current–Density Oxygen Evolution Electrocatalyst. Small, 2022, 18, e2104354.	5.2	50
822	Boosting Alkaline Hydrogen and Oxygen Evolution Kinetic Process of Tungsten Disulfideâ€Based Heterostructures by Multiâ€Site Engineering. Small, 2022, 18, e2104624.	5.2	44
823	Stable and Efficient Oxygen Evolution from Seawater Enabled by Graphene‣upported Subâ€Nanometer Arrays of Transition Metal Phosphides. Advanced Materials Interfaces, 2022, 9, 2101720.	1.9	12
824	Binder-free Fe-doped NiCo ₂ O ₄ /Ni ₃ S ₄ hollow heterostructure nanotubes for highly efficient overall water splitting. Dalton Transactions, 2021, 50, 18155-18163.	1.6	9
825	Electrocatalysis enabled transformation of earth-abundant water, nitrogen and carbon dioxide for a sustainable future. Materials Advances, 2022, 3, 1359-1400.	2.6	17
826	Heterostructure Ni(OH)2/ZrO2 catalyst can achieve efficient oxygen reduction reaction. Chemical Engineering Science, 2022, 250, 117398.	1.9	4
827	Amorphous-crystalline heterostructure for simulated practical water splitting at high-current–density. Chemical Engineering Journal, 2022, 431, 134247.	6.6	29
828	Crystal phase engineering boosted photo-electrochemical kinetics of CoSe2 for oxygen evolution catalysis. Journal of Colloid and Interface Science, 2022, 611, 22-28.	5.0	11
829	Co-Mn-S nanosheets decorated with CeO2: A highly active electrocatalyst toward oxygen evolution reaction. Journal of Alloys and Compounds, 2022, 901, 163621.	2.8	13
830	Boosting reaction kinetics and improving long cycle life in lamellar VS ₂ /MoS ₂ heterojunctions for superior sodium storage performance. Journal of Materials Chemistry A, 2022, 10, 939-949.	5.2	44

#	ARTICLE	IF	CITATIONS
831	Interfacial Atom‣ubstitution Engineered Transitionâ€Metal Hydroxide Nanofibers with Highâ€Valence Fe for Efficient Electrochemical Water Oxidation. Angewandte Chemie, 2022, 134, .	1.6	10
832	Vertically mounting molybdenum disulfide nanosheets on dimolybdenum carbide nanomeshes enables efficient hydrogen evolution. Nano Research, 2022, 15, 3946-3951.	5.8	22
833	Recent advances in nanostructured nonoxide materials—Borides, borates, chalcogenides, phosphides, phosphides, phosphides, phosphides, phosphides, phosphides, phosphates, nitrides, carbides, alloys, and metal-organic frameworks. , 2022, , 329-368.		2
834	Polyaniline grafted mesoporous zinc sulfide nanoparticles for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2022, 47, 6067-6077.	3.8	11
835	Interfacial Engineering to Construct Antioxidative Pd ₄ S/Pd ₃ P _{0.95} Heterostructure for Robust Hydrogen Production at High Current Density. Advanced Energy Materials, 2022, 12, .	10.2	37
836	Heterostructures of NiFe LDH hierarchically assembled on MoS2 nanosheets as high-efficiency electrocatalysts for overall water splitting. Chinese Chemical Letters, 2022, 33, 4761-4765.	4.8	69
837	Superâ€Hybrid Transition Metal Sulfide Nanoarrays of Co ₃ S ₄ Nanosheet/Pâ€Doped WS ₂ Nanosheet/Co ₉ S ₈ Nanoparticle with Ptâ€Like Activities for Robust Allâ€pH Hydrogen Evolution. Advanced Functional Materials, 2022, 32, .	7.8	52
838	Fe and Cu dual-doped Ni ₃ S ₄ nanoarrays with less low-valence Ni species for boosting water oxidation reaction. Dalton Transactions, 2022, 51, 1594-1602.	1.6	8
839	Cu ₂ O/CeO ₂ Photoâ€electrochemical Water Splitting: A Nanocomposite with an Efficient Interfacial Transmission Path under the Coâ€action of a p–n Heterojunction and Microâ€mesocrystals. Chemistry - A European Journal, 2022, 28, .	1.7	7
840	Insights into Antiperovskite Ni ₃ In _{1â€x} Cu _x N Multiâ€Crystalline Nanoplates and Bulk Cubic Particles as Efficient Electrocatalysts on Hydrogen Evolution Reaction. Small, 2022, 18, e2105906.	5.2	8
841	Ultralow Ru-incorporated MoS ₂ nanosheet arrays for efficient electrocatalytic hydrogen evolution in dual-pH. New Journal of Chemistry, 2022, 46, 1912-1920.	1.4	8
842	Constructing nickel sulfide heterojunctions by W-doping-induced structural transition for enhanced oxygen evolution. Journal of Materials Chemistry A, 2022, 10, 3341-3345.	5.2	24
843	Modulating heterointerfaces of tungsten incorporated CoSe/Co ₃ O ₄ as a highly efficient electrocatalyst for overall water splitting. Journal of Materials Chemistry A, 2022, 10, 3782-3792.	5.2	35
844	CoTe ₂ –NiTe ₂ heterojunction directly grown on CoNi alloy foam for efficient oxygen evolution reaction. Inorganic Chemistry Frontiers, 2022, 9, 332-342.	3.0	14
845	Interfacial Atom‣ubstitution Engineered Transitionâ€Metal Hydroxide Nanofibers with Highâ€Valence Fe for Efficient Electrochemical Water Oxidation. Angewandte Chemie - International Edition, 2022, 61, .	7.2	64
846	Fe-atom-implantation induced regional phase reconstruction for high-entropy NixSy construction with diversified crystallographic orientations towards accelerated water splitting. Journal of Power Sources, 2022, 522, 231004.	4.0	15
847	Polycrystalline CoOâ^'Co ₉ S ₈ Heterostructure Nanoneedle Arrays as Bifunctional Catalysts for Efficient Overall Water Splitting. ChemElectroChem, 2022, 9, .	1.7	4
848	Dry and hydrated defective molybdenum Disulfide/Graphene bilayer heterojunction under strain for hydrogen evolution from water Splitting: A First-principle study. Computational Materials Science, 2022, 205, 111234.	1.4	4

#	Article	IF	CITATIONS
849	Controlled moderative sulfidation-fabricated hierarchical heterogeneous nickel sulfides-based electrocatalyst with tripartite Mo doping for efficient oxygen evolution. Journal of Energy Chemistry, 2022, 68, 780-788.	7.1	10
850	Rose-like Cu-doped Ni3S2 nanoflowers decorated with thin NiFe LDH nanosheets for high-efficiency overall water and urea electrolysis. Applied Surface Science, 2022, 584, 152622.	3.1	41
851	FeV ₃ O ₈ /MoS ₂ nanostructure heterojunctions as a highly effective electrocatalyst for hydrogen evolution. Journal of Materials Chemistry C, 2022, 10, 3489-3499.	2.7	13
852	Bridging electrocatalyst and cocatalyst studies for solar hydrogen production <i>via</i> water splitting. Chemical Science, 2022, 13, 2824-2840.	3.7	15
853	Mo-doped cobalt hydroxide nanosheets coupled with cobalt phosphide nanoarrays as bifunctional catalyst for efficient and high-stability overall water splitting. International Journal of Hydrogen Energy, 2022, 47, 9915-9924.	3.8	28
854	Graphene supported flower-like NiS2/MoS2 mixed phase nano-composites as a low cost electrode material for hydrogen evolution reaction in alkaline media. Materials Chemistry and Physics, 2022, 280, 125839.	2.0	11
855	Ni2P@MoS2/CC catalysts with heterogeneous structure are used for highly efficient electrolysis of water for hydrogen evolution. Journal of Alloys and Compounds, 2022, 905, 164157.	2.8	9
856	Smart Designs of Mo Based Electrocatalysts for Hydrogen Evolution Reaction. Catalysts, 2022, 12, 2.	1.6	8
857	Plasmonic hot-electron assisted phase transformation in 2D-MoS ₂ for the hydrogen evolution reaction: current status and future prospects. Journal of Materials Chemistry A, 2022, 10, 8626-8655.	5.2	24
858	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
859	Interface Engineering of Ultrathin Hierarchical P-Doped Mos2/Ni3s2 Heterostructure on Nickel Foam for Efficient Water Splitting. SSRN Electronic Journal, 0, , .	0.4	0
860	Nis/Mos2 Complex Grown on Carbon Paper as Bifunctional Electrocatalyst for Full Water Splitting. SSRN Electronic Journal, 0, , .	0.4	0
861	Construction of Feâ€doped NiS–NiS ₂ Heterostructured Microspheres Via Etching Prussian Blue Analogues for Efficient Waterâ€Urea Splitting. Small, 2022, 18, e2106841.	5.2	49
862	Optimizing the electronic spin state and delocalized electron of NiCo2(OH) /MXene composite by interface engineering and plasma boosting oxygen evolution reaction. Journal of Energy Chemistry, 2022, 71, 129-140.	7.1	25
863	A nano-spherical structure Ni3S2/Ni(OH)2 electrocatalyst prepared by one-step fast electrodeposition for efficient and durable water splitting. International Journal of Hydrogen Energy, 2022, 47, 14916-14929.	3.8	9
864	Nonmetallic Active Sites on Nickel Phosphide in Oxygen Evolution Reaction. Nanomaterials, 2022, 12, 1130.	1.9	3
865	Non-noble metal-based bifunctional electrocatalysts for hydrogen production. Rare Metals, 2022, 41, 2169-2183.	3.6	62
866	Controlled synthesis of NixP-Co2P hybrid materials as robust overall water splitting electrocatalyst. International Journal of Hydrogen Energy, 2022, 47, 14515-14527.	3.8	9

#	Article	IF	CITATIONS
867	Interface construction of NiCo LDH/NiCoS based on the 2D ultrathin nanosheet towards oxygen evolution reaction. Nano Research, 2022, 15, 4986-4995.	5.8	71
868	Three-Dimensional Flower-Like Bimetallic Nickel–Iron Selenide for Efficient Oxygen Evolution Reaction. Journal of Physical Chemistry C, 2022, 126, 5131-5137.	1.5	13
869	(Fe, Ni)S2@MoS2/NiS2 hollow heterostructure nanocubes for high-performance alkaline water electrolysis. International Journal of Hydrogen Energy, 2022, 47, 11143-11152.	3.8	12
870	Integrating Amorphous Molybdenum Sulfide Nanosheets with a Co ₉ S ₈ @Ni ₃ S ₂ Array as an Efficient Electrocatalyst for Overall Water Splitting. Langmuir, 2022, 38, 3469-3479.	1.6	21
871	Hierarchical flower-like CoS2-MoS2 heterostructure spheres as efficient bifunctional electrocatalyst for overall water splitting. International Journal of Hydrogen Energy, 2022, 47, 12629-12641.	3.8	25
872	Latticeâ€Matching Formed Mesoporous Transition Metal Oxide Heterostructures Advance Water Splitting by Active Fe–O–Cu Bridges. Advanced Energy Materials, 2022, 12, .	10.2	139
873	Synthesis of Magnesium Phosphorous Trichalcogenides and Applications in Photoelectrochemical Water Splitting. Small, 2022, 18, e2200355.	5.2	8
874	Tuning interface density and electronic structure of NiS/Ni3S4 by Mo, Co co-doping for efficient urea electrooxidation reaction. Journal of Electroanalytical Chemistry, 2022, 911, 116242.	1.9	8
875	Transition metal dichalcogenides as catalysts for the hydrogen evolution reaction: The emblematic case of "inert―ZrSe ₂ as catalyst for electrolyzers. Nano Select, 2022, 3, 1069-1081.	1.9	6
876	Sea urchin-like NiMoO4 nanorod arrays as highly efficient bifunctional catalysts for electrocatalytic/photovoltage-driven urea electrolysis. Chinese Journal of Catalysis, 2022, 43, 1267-1276.	6.9	25
877	Phosphorus co-doped reduced graphene oxide embedded flower-like CoS/CoS2 heterostructure as an efficient electrocatalyst for hydrogen evolution reaction in acidic media. Journal of Alloys and Compounds, 2022, 907, 164506.	2.8	18
878	Self-assembled Pt–CoFe layered double hydroxides for efficient alkaline water/seawater splitting by spontaneous redox synthesis. Journal of Power Sources, 2022, 532, 231353.	4.0	20
879	The construction of strongly coupled interface for highly efficient oxygen and hydrogen evolution reactions. Applied Surface Science, 2022, 590, 153071.	3.1	7
880	PEO-PPO-PEO induced holey NiFe-LDH nanosheets on Ni foam for efficient overall water-splitting and urea electrolysis. Journal of Colloid and Interface Science, 2022, 618, 141-148.	5.0	21
881	Heterostructured Co/Mo-sulfide catalyst enables unbiased solar water splitting by integration with perovskite solar cells. Applied Catalysis B: Environmental, 2022, 309, 121272.	10.8	37
882	Interface engineering induced electrocatalytic behavior in core-shelled CNTs@NiP2/NbP heterostructure for highly efficient overall water splitting. Chemical Engineering Journal, 2022, 442, 136120.	6.6	35
883	Electronic modulation and vacancy engineering of Ni9S8 to synergistically boost efficient water splitting: Active vacancy-metal pairs. Applied Catalysis B: Environmental, 2022, 310, 121356.	10.8	41
884	Designing Self-Supported Electrocatalysts for Electrochemical Water Splitting: Surface/Interface Engineering toward Enhanced Electrocatalytic Performance. ACS Applied Materials & Interfaces, 2021, 13, 59593-59617.	4.0	58

#	Article	IF	CITATIONS
885	One step synthesis of Co-Ni bimetallic organic frameworks as a highly active and durable electrocatalyst for efficient water oxidation. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 647, 129041.	2.3	8
886	Built-in electric field accelerated polysulfide conversion for advanced lithium-sulfur batteries. Materials Letters, 2022, , 132265.	1.3	3
887	Engineering multiphasic MoSe2/NiSe heterostructure interfaces for superior hydrogen production electrocatalysis. Applied Catalysis B: Environmental, 2022, 312, 121434.	10.8	50
888	Surface and Interface Engineering Strategies for MoS ₂ Towards Electrochemical Hydrogen Evolution. Chemistry - an Asian Journal, 2022, 17, .	1.7	6
889	NiS/MoS2 Mott-Schottky heterojunction-induced local charge redistribution for high-efficiency urea-assisted energy-saving hydrogen production. Chemical Engineering Journal, 2022, 443, 136321.	6.6	58
890	Impact of Atomic Rearrangement and Single Atom Stabilization on MoSe ₂ @NiCo ₂ Se ₄ Heterostructure Catalyst for Efficient Overall Water Splitting. Small, 2022, 18, e2200622.	5.2	42
891	Ni(OH)2 nanoparticles decorated on 1T phase MoS2 basal plane for efficient water splitting. Applied Surface Science, 2022, 593, 153408.	3.1	10
895	Heterostructuring cobalt sulfide with highly oxophilic 1T-tungsten sulfide for durable and efficient oxygen electrocatalysis. Journal of Materials Chemistry A, 2022, 10, 19811-19820.	5.2	6
896	Boosting Electrocatalytic Activity of Nise2 Nanosheets by Anion-Cation Dual-Doping for Highly Efficient Hydrogen Evolution Reaction. SSRN Electronic Journal, 0, , .	0.4	0
897	Two-dimensional transition metal-based electrocatalyst and their application in water splitting. Materials Science and Technology, 2022, 38, 535-555.	0.8	9
898	Partial Sulfidation Strategy to NiFe‣DH@FeNi ₂ S ₄ Heterostructure Enable Highâ€Performance Water/Seawater Oxidation. Advanced Functional Materials, 2022, 32, .	7.8	100
899	In Situ Electrochemically Formed Ag/NiOOH/Ni ₃ S ₂ Heterostructure Electrocatalysts with Exceptional Performance toward Oxygen Evolution Reaction. ACS Sustainable Chemistry and Engineering, 2022, 10, 5976-5985.	3.2	15
900	Biaxially Strained MoS ₂ Nanoshells with Controllable Layers Boost Alkaline Hydrogen Evolution. Advanced Materials, 2022, 34, e2202195.	11.1	43
901	Silver Nanocluster/MoS ₂ Heterostructures for Hydrogen Evolution. ACS Applied Nano Materials, 2022, 5, 7132-7141.	2.4	15
902	A Tandem Interfaced (Ni ₃ S ₂ â€MoS ₂)@TiO ₂ Composite Fabricated by Atomic Layer Deposition as Efficient HER Electrocatalyst. Small, 2022, 18, e2201896.	5.2	16
903	Constructing nickel–iron oxyhydroxides integrated with iron oxides by microorganism corrosion for oxygen evolution. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2202812119.	3.3	21
904	Hybrid structures of cobalt-molybdenum bimetallic oxide embedded in flower-like molybdenum disulfide for sensitive detection of the antibiotic drug nitrofurantoin. Journal of Hazardous Materials, 2022, 435, 129059.	6.5	19
905	Rational design of integrated electrodes for advancing high-rate alkaline electrolytic hydrogen production. Journal of Materials Chemistry A, 2022, 10, 12764-12787.	5.2	10

#	Article	IF	CITATIONS
906	Construction of Synergistic Ni ₃ S ₂ â€MoS ₂ Nanoheterojunctions on Ni Foam as Bifunctional Electrocatalyst for Hydrogen Evolution Integrated with Biomass Valorization. Small, 2022, 18, e2201306.	5.2	46
907	Nanoflower-like cobalt-based sulfides catalyst with high electrocatalytic activity for oxygen evolution reaction. Journal of Electroanalytical Chemistry, 2022, 918, 116454.	1.9	8
908	Earthâ€Abundant Metalâ€Based Electrocatalysts Promoted Anodic Reaction in Hybrid Water Electrolysis for Efficient Hydrogen Production: Recent Progress and Perspectives. Advanced Energy Materials, 2022, 12, .	10.2	87
909	<i>In situ</i> growth of S-incorporated CoNiFe(oxy)hydroxide nanoarrays as efficient multifunctional electrocatalysts. Inorganic Chemistry Frontiers, 2022, 9, 3643-3653.	3.0	6
910	Accelerating electrochemical hydrogen evolution kinetics in alkaline media using LaNi ₅ as a hydrogen reservoir. Chemical Communications, 2022, 58, 7289-7292.	2.2	2
911	Activated MoS ₂ by Constructing Single Atomic Cation Vacancies for Accelerated Hydrogen Evolution Reaction. ACS Applied Materials & Interfaces, 2022, 14, 26846-26857.	4.0	9
912	Synergistic modulation of inverse spinel Fe3O4 by doping with chromium and nitrogen for efficient electrocatalytic water splitting. Journal of Colloid and Interface Science, 2022, 624, 433-442.	5.0	16
913	Strategies to improve electrocatalytic performance of MoS ₂ -based catalysts for hydrogen evolution reactions. RSC Advances, 2022, 12, 17959-17983.	1.7	10
914	Direct Synthesis of Catalytically Nifecomncu High Entropy Alloys for Highly Effective Overall Water-Splitting. SSRN Electronic Journal, 0, , .	0.4	0
915	Facile construction of heterostructural Ni3(NO3)2(OH)4/CeO2 bifunctional catalysts for boosted overall water splitting. International Journal of Hydrogen Energy, 2022, 47, 23221-23229.	3.8	4
916	Stainless steel supported NiS/CeS nanocomposite for significantly enhanced oxygen evolution reaction in alkaline media. Journal of Solid State Electrochemistry, 2022, 26, 2107-2118.	1.2	17
917	Enhanced Electrochemical Hydrogen Evolution of WTe2 by Introducing Te vacancies. International Journal of Electrochemical Science, 2022, 17, 220738.	0.5	0
918	2D metal–organic frameworks and their derivatives for the oxygen evolution reaction. Journal of Alloys and Compounds, 2022, 919, 165823.	2.8	18
919	Enhanced electrocatalytic hydrogen evolution by molybdenum disulfide nanodots anchored on MXene under alkaline conditions. Nanoscale Advances, 2022, 4, 3398-3406.	2.2	6
920	Graphene oxide-based materials in electrocatalysis. , 2022, , 189-238.		0
921	Kinetic Regulation Engineering and Inâ€Situ Spectroscopy Studies on Transitionâ€Metalâ€Based Electrocatalysts for Water Splitting. ChemElectroChem, 2022, 9, .	1.7	4
922	Atomicâ€Level Design of Active Site on Twoâ€Dimensional MoS ₂ toward Efficient Hydrogen Evolution: Experiment, Theory, and Artificial Intelligence Modelling. Advanced Functional Materials, 2022, 32, .	7.8	53
923	Construction of amorphous CoFeOx(OH)y/MoS2/CP electrode for superior OER performance. International Journal of Hydrogen Energy, 2022, 47, 28859-28868.	3.8	16

#	Article	IF	CITATIONS
924	In-situ surface structural reconstruction of NiMoO4 for efficient overall water splitting. Applied Surface Science, 2022, 602, 154314.	3.1	22
925	Modulation of morphology and electronic structure on MoS2-based electrocatalysts for water splitting. Nano Research, 2022, 15, 6862-6887.	5.8	42
926	Crystalline and amorphous phases: NiFeCo tri-metal phosphide as an efficient electrocatalyst to accelerate oxygen evolution reaction kinetics. Electrochimica Acta, 2022, 426, 140788.	2.6	11
927	Tailoring interfacial electron redistribution of Ni/Fe3O4 electrocatalysts for superior overall water splitting. Journal of Energy Chemistry, 2022, 73, 330-338.	7.1	37
928	Multi-interfacial engineering of IrOx clusters coupled porous zinc Phosphide-Zinc phosphate heterostructure for efficient water splitting. Applied Surface Science, 2022, 600, 154206.	3.1	8
929	ZIF-67 derived Mo2N/Mo2C heterostructure as high-efficiency electrocatalyst for hydrogen evolution reaction. Journal of Alloys and Compounds, 2022, 922, 166216.	2.8	14
930	In situ self-assembly of mesoporous Zn-Cd-Mo-S quaternary metal sulfides with double heterojunction synergistic charge transfer for boosting photocatalytic hydrogen production. Journal of Alloys and Compounds, 2022, 921, 166066.	2.8	10
931	Amine and Carbon-pretreated nickel–molybdenum disulfide as bifunctional electrocatalysts for hydrogen and oxygen gas evolution. International Journal of Hydrogen Energy, 2022, 47, 27839-27847.	3.8	4
932	Cobalt and Aluminum Co-Optimized 1T Phase MoS ₂ with Rich Edges for Robust Hydrogen Evolution Activity. ACS Sustainable Chemistry and Engineering, 2022, 10, 10203-10210.	3.2	5
933	Mechanistic insights into hydrogen evolution reaction on Ni2B(001) facet using first-principle calculations. International Journal of Hydrogen Energy, 2022, 47, 29622-29635.	3.8	6
934	Selfâ€Derivation and Surface Reconstruction of Feâ€Doped Ni ₃ S ₂ Electrode Realizing Highâ€Efficient and Stable Overall Water and Urea Electrolysis. Advanced Energy Materials, 2022, 12, .	10.2	84
935	Interfacial Water Activation by Single-Atom Co–N ₃ Sites Coupled with Encapsulated Co Nanocrystals for Accelerating Electrocatalytic Hydrogen Evolution. ACS Catalysis, 2022, 12, 10771-10780.	5.5	53
936	Aqueous OH ^{â^'} /H ⁺ Dualâ€lon Znâ€Based Batteries. ChemSusChem, 2023, 16, .	3.6	3
937	Engineering MIL-88A-Derived Self-Supported Moss-like Iron Phosphide Particles on Nickel Foam as Robust Bifunctional Electrocatalysts for Overall Water Splitting. ACS Applied Energy Materials, 2022, 5, 9392-9401.	2.5	7
938	Design principle of electrocatalysts for the electrooxidation of organics. CheM, 2022, 8, 2594-2629.	5.8	44
939	Interface Engineering-Induced 1T-MoS2/NiS Heterostructure for Efficient Hydrogen Evolution Reaction. Catalysts, 2022, 12, 947.	1.6	10
940	NiS/MoS2 complex grown on carbon paper as a bifunctional electrocatalyst for full water splitting. Journal of Alloys and Compounds, 2022, 926, 166870.	2.8	4
941	The charge transport double-channel structure facilitating Fe5Ni4S8/Ni3S2 nanoarray for efficient and stable overall water splitting. Applied Surface Science, 2022, 604, 154473.	3.1	8

#	Article	IF	CITATIONS
942	Interfacial component coupling effects towards precise heterostructure design for efficient electrocatalytic water splitting. Nano Energy, 2022, 103, 107753.	8.2	47
943	MOF-derived nanoarrays as advanced electrocatalysts for water splitting. Nanoscale, 2022, 14, 12196-12218.	2.8	23
944	3d Transition metal doping induced charge rearrangement and transfer to enhance overall water-splitting on Ni ₃ S ₂ (101) facet: a first-principles calculation study. RSC Advances, 2022, 12, 26866-26874.	1.7	4
945	Controlled Synthesis of Molybdenum Based Catalyst and Its Performance in Electrolysis of Water. Advances in Analytical Chemistry, 2022, 12, 240-253.	0.1	0
946	Facile Synthesis of Ni3s2 Nanosheets with Abundant Active Sites Induced by Fe Incorporation on Ni Foam for Enhanced Oxygen Evolution Reaction. SSRN Electronic Journal, 0, , .	0.4	0
947	MWCNT modified Ni–Fe LDH/BiVO ₄ heterojunction: boosted visible-light-driven photoelectrochemical aptasensor for ofloxacin detection. RSC Advances, 2022, 12, 24269-24277.	1.7	4
948	Superwettable Surface-Dependent Efficiently Electrocatalytic Water Splitting Based on Excellent Liquid Adsorption and Gas Desorption. SSRN Electronic Journal, 0, , .	0.4	0
949	Robust and promising hydrogen and oxygen evolution reactions by a nanostructured bifunctional FeCoPd alloy electrocatalyst. Journal of Materials Chemistry A, 2022, 10, 23731-23743.	5.2	12
950	Boosting Electrocatalytic Activity of Nise2 Nanosheets by Anion-Cation Dual-Doping for Highly Efficient Hydrogen Evolution Reaction. SSRN Electronic Journal, 0, , .	0.4	0
951	Superwettable Surface-Dependent efficiently electrocatalytic water splitting based on their excellent liquid adsorption and gas desorption. Chemical Engineering Journal, 2023, 452, 139513.	6.6	38
952	Sulphur Assisted Nitrogenâ€Rich CNF for Improving Electronic Interactions in Coâ€NiO Heterostructures Toward Accelerated Overall Water Splitting. Advanced Materials Technologies, 2023, 8, .	3.0	12
953	Inverted-design for highly-active hydrogen evolution electrocatalyst of MoS2@Ni3S2 core-shell via unlocking the potential of Mo. Particuology, 2023, 77, 56-61.	2.0	1
954	Edgeâ€oriented Nâ€Doped WS ₂ Nanoparticles on Porous Co ₃ N Nanosheets for Efficient Alkaline Hydrogen Evolution and Nitrogenous Nucleophile Electrooxidation. Small, 2022, 18,	5.2	32
956	Tuning the Interface of Co _{1–<i>x</i>} S/Co(OH)F by Atomic Replacement Strategy toward High-Performance Electrocatalytic Oxygen Evolution. ACS Nano, 2022, 16, 15460-15470.	7.3	37
957	Electronically Modified Ce ³⁺ Ion Doped 2D NiFe-LDH Nanosheets over a 1D Microfiber: A High-Performance Electrocatalyst for Overall Water Splitting. ACS Applied Energy Materials, 2022, 5, 12768-12781.	2.5	22
958	Nanoscale hetero-interfaces for electrocatalytic and photocatalytic water splitting. Science and Technology of Advanced Materials, 2022, 23, 587-616.	2.8	4
959	Accelerating the surface reconstruction of cobalt phosphide via dual-doping engineering for high-performance water electrolysis. Journal of Power Sources, 2022, 551, 232181.	4.0	7
960	Interfacial engineering of heterostructured Fe-Ni ₃ S ₂ /Ni(OH) ₂ nanosheets with tailored d-band center for enhanced oxygen evolution catalysis. Dalton Transactions, 2022, 51, 17391-17396.	1.6	3

#	Article	IF	CITATIONS
961	Integrating multifunctional catalytic sites in COF@ZIF-67 derived carbon for the HER and ORR. Chemical Communications, 2022, 58, 13214-13217.	2.2	10
962	Facile construction of well-defined hierarchical NiFe2O4/NiFe layered double hydroxides with a built-in electric field for accelerating water splitting at the high current density. International Journal of Hydrogen Energy, 2022, 47, 40826-40834.	3.8	8
963	Computational screening of nonmetal dopants to active MoS2 basal-plane for hydrogen evolution reaction via structural descriptor. Journal of Catalysis, 2022, 416, 47-57.	3.1	7
964	Facile synthesis of Ni3S2 nanosheets with abundant active sites induced by Fe incorporation on Ni foam for enhanced oxygen evolution reaction. Applied Surface Science, 2023, 610, 155537.	3.1	5
965	Hierarchical NiCo2S4@NiMoO4 nanotube arrays on nickel foam as an advanced bifunctional electrocatalyst for efficient overall water splitting. Electrochimica Acta, 2022, 436, 141393.	2.6	10
966	Boosting electrocatalytic activity of NiSe2 nanosheets by anion-cation dual-doping for highly efficient hydrogen evolution reaction. Journal of Alloys and Compounds, 2023, 933, 167793.	2.8	1
967	Ultrathin NiCo-LDH regulated by CuNiCo trimetallic spinel sulfides as highly active and stable electrocatalysts for overall water splitting. Dalton Transactions, 2022, 51, 17743-17752.	1.6	3
968	Tuning the annealing temperature to achieve heterostructured nanofibers for high performance lithium-ion batteries. New Journal of Chemistry, 2022, 47, 167-178.	1.4	3
969	Modulating Surface Electron Density of Heterointerface with Bioâ€Inspired Lightâ€Trapping Nanoâ€Structure to Boost Kinetics of Overall Water Splitting. Small, 2023, 19, .	5.2	16
970	Three-phase interface induced charge modulation on MoO2/Mo2C-carbon tube for enhanced hydrogen evolution. Nano Research, 2023, 16, 4706-4714.	5.8	9
971	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
972	Graphene-templated growth of MoS2â^'Ni3S2 heterostructures as efficient electrocatalysts for overall water splitting. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2023, 658, 130550.	2.3	5
973	Electrocatalytic oxidation of 5-hydroxymethylfurfural to 2,5-furandicarboxylic acid via metal-organic framework-structured hierarchical Co3O4 nanoplate arrays. Journal of Colloid and Interface Science, 2023, 632, 87-94.	5.0	10
974	Rationally construct of CoSx/MoS2/g-C3N4 double heterojunction with promoting the separation of carriers for enhanced photocatalysis. International Journal of Hydrogen Energy, 2023, 48, 3048-3064.	3.8	10
975	Metal Sulfides Yolk–Shell Nanoreactors with Dual Component for Enhanced Acidic Electrochemical Hydrogen Production. Small Structures, 2023, 4, .	6.9	3
976	Morphology reconstruction and electronic optimization: Nickel-iron selenide nanospheres with Mo-doping as an efficient bifunctional electrocatalyst for overall water splitting. Journal of Alloys and Compounds, 2023, 935, 168135.	2.8	7
977	Nitrogen doped FeCoNiS nanoparticles on N, S-co-doped vertical graphene as bifunctional electrocatalyst for water splitting. International Journal of Hydrogen Energy, 2023, 48, 4143-4157.	3.8	13
978	Surface conductance analysis of X-MoS2 (XÂ=ÂFe, Co, Ni) prepared on graphite felt as bifunctional catalysts for the hydrogen/oxidation evolution reactions. Electrochimica Acta, 2023, 439, 141596.	2.6	7

#	Article	IF	CITATIONS
979	Low-dimensional transition metal sulfide-based electrocatalysts for water electrolysis: overview and perspectives. Nanoscale, 2022, 14, 17841-17861.	2.8	13
980	Energy-saving hydrogen production by water splitting coupling urea decomposition and oxidation reactions. Journal of Materials Chemistry A, 2022, 11, 259-267.	5.2	12
981	Constructing sulfide/phosphide heterostructure boosts the activity of iron-manganese bimetallic electrocatalysts for oxygen evolution reaction at large current densities. Electrochimica Acta, 2023, 438, 141563.	2.6	1
982	Controlled synthesis of NiCoP@NiM LDH (M=Cu, Fe, Co) as efficient hydrogen evolution reaction electrocatalyst. Journal of Alloys and Compounds, 2023, 937, 168412.	2.8	9
983	Recent Advances and Future Perspectives of Metalâ€Based Electrocatalysts for Overall Electrochemical Water Splitting. Chemical Record, 2023, 23, .	2.9	16
984	Au@NiS _x Yolk@Shell Nanostructures as Dualâ€Functional Electrocatalysts for Concomitant Production of Valueâ€Added Tartronic Acid and Hydrogen Fuel. Advanced Functional Materials, 2023, 33, .	7.8	9
985	Biomass-derived N/P-doped molybdenum oxy-sulfides grown on Ni foam as low-cost electrocatalysts for hydrogen evolution reaction. Biomass Conversion and Biorefinery, 0, , .	2.9	1
986	Engineering Active Iron Sites on Nanoporous Bimetal Phosphide/Nitride Heterostructure Array Enabling Robust Overall Water Splitting. Advanced Functional Materials, 2023, 33, .	7.8	38
987	Nickel-iron bimetallic sulfides nanosheets anchored on bacterial cellulose based carbon nanofiber for enhanced electrocatalytic oxygen evolution reaction. Journal of Alloys and Compounds, 2023, 938, 168573.	2.8	4
988	Electrochemical In Situ Self-Healing of Porous Nanosheets Based on the Phase Reconstruction of Carbonate Hydroxide to Layered Double Hydroxides with Unsaturated Coordination Metal Sites for High-Performance Water Oxidation. ACS Sustainable Chemistry and Engineering, 2022, 10, 16417-16426.	3.2	54
989	A critical review of research progress for metal alloy materials in hydrogen evolution and oxygen evolution reaction. Environmental Science and Pollution Research, 2023, 30, 11302-11320.	2.7	21
990	Defect-Rich MoS2/CoS2 Supported on In Situ Formed Graphene Layers for Efficient Overall Water Splitting. Catalysis Letters, 2023, 153, 3805-3816.	1.4	1
991	Designing heterostructured FeP—CoP for oxygen evolution reaction: Interface engineering to enhance electrocatalytic performance. Nano Research, 2023, 16, 6601-6607.	5.8	21
992	Sulphur vacancy induced Co ₃ S ₄ @CoMo ₂ S ₄ nanocomposites as a functional electrode for high performance supercapacitors. Journal of Materials Chemistry A, 2023, 11, 3640-3652.	5.2	12
993	Modulating the electronic structure of nickel sulfide via defect engineering for efficient bifunctional overall water splitting. Applied Physics Letters, 2023, 122, .	1.5	4
994	N-doped carbon-coupled nickel nitride species/Ni2P heterostructure for enhancing electrochemical overall water splitting performance. Electrochimica Acta, 2023, 441, 141868.	2.6	3
995	Interface engineering and heterometal-doped FeOOH/Ga-Ni ₃ S ₂ nanosheet arrays for efficient electrocatalytic oxygen evolution. Inorganic Chemistry Frontiers, 2023, 10, 1348-1356.	3.0	12
996	Positive Valent Metal Sites in Electrochemical CO ₂ Reduction Reaction. ChemPhysChem, 2023, 24, .	1.0	0

#	Article	IF	Citations
997	1ÂT-MoS2/Co3S4/Ni3S2 nanoarrays with abundant interfaces and defects for overall water splitting. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2023, 661, 130930.	2.3	5
998	SnO2@MoS2 heterostructures grown on nickel foam as highly efficient bifunctional electrocatalyst for overall water splitting in alkaline media. Journal of Alloys and Compounds, 2023, 938, 168678.	2.8	8
999	Fe/Ni bi-metallic organic framework supported 1T/2H MoS2 heterostructures as efficient bifunctional electrocatalysts for hydrogen and oxygen evolution. Fuel, 2023, 339, 127395.	3.4	18
1000	Electrocatalytic performance of copper selenide as structural phase dependent for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2023, , .	3.8	1
1001	Alloyingâ€Triggered Phase Engineering of NiFe System via Laserâ€Assisted Al Incorporation for Full Water Splitting. Angewandte Chemie, 0, , .	1.6	0
1002	Alloyingâ€Triggered Phase Engineering of NiFe System via Laserâ€Assisted Al Incorporation for Full Water Splitting. Angewandte Chemie - International Edition, 2023, 62, .	7.2	14
1003	<i>In situ</i> modification of metal electrode by integrated microbial corrosion and microbial mineralization using <i>Shewanella oneidensis</i> for efficient oxygen evolution. Catalysis Science and Technology, 0, , .	2.1	1
1004	Rare-earth La-doped VS _{2â^²<i>x</i>} for electrochemical nitrate reduction to ammonia. Inorganic Chemistry Frontiers, 2023, 10, 2014-2021.	3.0	26
1005	Cd doped Ni3S2 nanosheet arrays grown on nickel foam as highly efficient and robust bifunctional electrocatalysts for alkaline overall water splitting. Journal of Alloys and Compounds, 2023, 954, 170072.	2.8	9
1006	Controlled synthesis of N–CuCo2S4@Ni3S2 nanoarrays as promising urea oxidation electrocatalyst. International Journal of Hydrogen Energy, 2023, 48, 27231-27241.	3.8	1
1007	High-Activity 2D/2D Core–Shell Structure to NiMoO ₄ -Based Electrodes for Electrochemical Energy Storage. Inorganic Chemistry, 2023, 62, 6224-6232.	1.9	3
1008	Electronically modulated d-band centers of MOF-derived carbon-supported Ru/HfO2 for oxygen reduction and aqueous/flexible zinc-air batteries. Journal of Energy Chemistry, 2023, 80, 247-255.	7.1	7
1009	Activation of basal-plane sulfur sites on MoS2 @Ni3S2 nanorods by Zr plasma ion implantation for bifunctional electrocatalysts. Journal of Alloys and Compounds, 2023, 947, 169448.	2.8	5
1010	Spectroscopically unraveling high-valence Ni-Fe catalytic synergism in NiSe2/FeSe2 heterostructure. Applied Catalysis B: Environmental, 2023, 330, 122600.	10.8	10
1011	Synergistically improved hydrogen evolution by interface engineering of monodispersed Co5.47N/CoMoOx hybrid particles on carbon cloth with rich oxygen vacancies. Chemical Engineering Journal, 2023, 462, 142281.	6.6	15
1012	Co-MOF induced "blossom branch like―MoS2@Co9S8/C nanofibers as a bifunctional catalyst for HER and OER. Applied Surface Science, 2023, 616, 156486.	3.1	9
1013	Activated FeS ₂ @NiS ₂ Core–Shell Structure Boosting Cascade Reaction for Superior Electrocatalytic Oxygen Evolution. Small, 2023, 19, .	5.2	11
1014	Nanoarchitectonics of Layered Metal Chalcogenides-Based Ternary Electrocatalyst for Water Splitting. Energies, 2023, 16, 1669.	1.6	3

#	Article	IF	CITATIONS
1015	Boosting high-current water electrolysis: Superhydrophilic/superaerophobic nanosheet arrays of NiFe LDH with oxygen vacancies in situ grown on iron foam. International Journal of Hydrogen Energy, 2023, 48, 17501-17511.	3.8	9
1016	Anchoring Fe(OH)3 nanoparticles on Ni-MOF nanosheets for efficient electrocatalytic oxygen evolution. Rare Metals, 2023, 42, 1453-1459.	3.6	3
1017	MoS2/NiSe2/rGO Multiple-Interfaced Sandwich-like Nanostructures as Efficient Electrocatalysts for Overall Water Splitting. Nanomaterials, 2023, 13, 752.	1.9	2
1018	Recent advances and future prospects on Ni3S2-Based electrocatalysts for efficient alkaline water electrolysis. Green Energy and Environment, 2024, 9, 659-683.	4.7	1
1019	Palladium Modified FeCoS ₂ Nanosheet Arrays on Ni Foam as Bifunctional Electrodes for Overall Alkaline Water Splitting. ChemistrySelect, 2023, 8, .	0.7	0
1020	Coupling interface constructions of FeOOH/NiCo2S4 by microwave-assisted method for efficient oxygen evolution reaction. Rare Metals, 2023, 42, 1847-1857.	3.6	8
1021	Heterogeneous Cu _{1.92} S@Cu ₃ P/Ni ₂ P Nanospheres on Nickel Foam for Effective Electrocatalytic Oxygen Evolution Reaction**. European Journal of Inorganic Chemistry, 2023, 26, .	1.0	1
1022	Plasma-assisted synthesis of hierarchical defect N-doped iron–cobalt sulfide@Co foam as an efficient bifunctional electrocatalyst for overall water splitting. New Journal of Chemistry, 2023, 47, 7613-7621.	1.4	2
1023	Effect of NaCu ₅ S ₃ composite Ni _{<i>x</i>} Fe-LDH structure on hydrolysis oxygen evolution performance. Wuli Xuebao/Acta Physica Sinica, 2023, 72, 108201.	0.2	0
1024	Interfacial engineering of heterostructured carbon-supported molybdenum cobalt sulfides for efficient overall water splitting. Tungsten, 2023, 5, 589-597.	2.0	26
1025	Architecting the Highâ€Entropy Oxides on 2D MXene Nanosheets by Rapid Microwaveâ€Heating Strategy with Robust Photoelectrochemical Oxygen Evolution Performance. Small, 2023, 19, .	5.2	8
1026	Co ₃ O ₄ /CoS ₂ Heterostructure: Synergistic Interfacial Coupling Induced Superior Electrochemical Performance for Hydrazine Oxidation Reaction. ACS Applied Energy Materials, 2023, 6, 3977-3985.	2.5	2
1027	Metal Oxides and Sulfides for Overall Water Splitting. , 2022, , 1-28.		0
1028	Phase transition in V-doped cobalt hydroxide for efficient oxygen evolution and urea oxidation reaction. International Journal of Hydrogen Energy, 2023, , .	3.8	0
1029	Photogenerated Carrier-Assisted Electrocatalysts for Efficient Water Splitting. Catalysts, 2023, 13, 712.	1.6	4
1030	Duplex Interpenetrating-Phase FeNiZn and FeNi3 Heterostructure with Low-Gibbs Free Energy Interface Coupling for Highly Efficient Overall Water Splitting. Nano-Micro Letters, 2023, 15, .	14.4	29
1031	Cobalt incorporation and MoS ₂ –NiS ₂ heterostructure synergistic for improving full water electrolysis efficiency. New Journal of Chemistry, 2023, 47, 9492-9500.	1.4	3
1032	Electron-transfer enhancement of urchin-like CoP–Ce ₂ (CO ₃) ₂ O/NF as an ultra-stable bifunctional catalyst for efficient overall water splitting. Materials Chemistry Frontiers, 2023, 7, 2628-2636.	3.2	9

\sim			<u> </u>	
	ΙΤΔΤ	ION	KED	O R T
<u> </u>	/		IVEL.	

#	Article	IF	CITATIONS
1033	Assembly of NiFe-PBA nanoparticles on nanoflower-like NiFe-PBA@IF as enhanced oxygen evolution electrocatalyst at room temperature. Molecular Catalysis, 2023, 544, 113126.	1.0	1
1053	Self-supported transition metal chalcogenides for oxygen evolution. Nano Research, 2023, 16, 8684-8711.	5.8	19
1056	Critical Role of Interface Design in Acceleration of Overall Water Splitting and Hybrid Electrolysis Process: State of the Art and Perspectives. Energy & Fuels, 2023, 37, 7603-7633.	2.5	5
1064	Recent progress of dual-site catalysts in emerging electrocatalysis: a review. Catalysis Science and Technology, 2023, 13, 4615-4634.	2.1	3
1111	Advances in the mechanism investigation for the oxygen evolution reaction: fundamental theory and monitoring techniques. Materials Chemistry Frontiers, 2024, 8, 603-626.	3.2	1
1118	2D layered double hydroxides and transition metal dichalcogenides for applications in the electrochemical production of renewable hydrogen. Materials Advances, 2023, 4, 6478-6497.	2.6	1
1124	Engineering interfacial architectures toward nitrate electrocatalysis and nitrogen neutral cycle. Materials Chemistry Frontiers, 2024, 8, 1015-1035.	3.2	1