

# Correlating the hydrogen evolution reaction activity in hydrogen binding energy on monometallic surfaces

Energy and Environmental Science

6, 1509

DOI: [10.1039/c3ee00045a](https://doi.org/10.1039/c3ee00045a)

Citation Report

#	ARTICLE	IF	CITATIONS
9	Platinum-Coated Copper Nanowires with High Activity for Hydrogen Oxidation Reaction in Base. <i>Journal of the American Chemical Society</i> , 2013, 135, 13473-13478.	6.6	152
10	Kinetics of the Hydrogen Oxidation/Evolution Reaction on Polycrystalline Platinum in Alkaline Electrolyte Reaction Order with Respect to Hydrogen Pressure. <i>Journal of the Electrochemical Society</i> , 2014, 161, F1448-F1457.	1.3	213
11	Hydrogen Evolution Reaction on Platinum Catalyzed by Palladium and Rhodium Nanoislands. <i>Electrochimica Acta</i> , 2014, 117, 336-343.	2.6	71
12	Fabrication and evaluation of nickel cobalt alloy electrocatalysts for alkaline water splitting. <i>Applied Surface Science</i> , 2014, 307, 146-152.	3.1	57
13	Controlled Carbon Nitride Growth on Surfaces for Hydrogen Evolution Electrodes. <i>Angewandte Chemie - International Edition</i> , 2014, 53, 3654-3658.	7.2	187
15	A selective and efficient electrocatalyst for carbon dioxide reduction. <i>Nature Communications</i> , 2014, 5, 3242.	5.8	1,111
16	Non-precious metal electrocatalysts with high activity for hydrogen oxidation reaction in alkaline electrolytes. <i>Energy and Environmental Science</i> , 2014, 7, 1719-1724.	15.6	276
17	New insights into the electrochemical hydrogen oxidation and evolution reaction mechanism. <i>Energy and Environmental Science</i> , 2014, 7, 2255-2260.	15.6	1,220
18	Nickel-silver alloy electrocatalysts for hydrogen evolution and oxidation in an alkaline electrolyte. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 19250.	1.3	101
19	Nanoscale nickel oxide/nickel heterostructures for active hydrogen evolution electrocatalysis. <i>Nature Communications</i> , 2014, 5, 4695.	5.8	1,413
20	The effect of electrode material on the electrochemical formation of porous copper surfaces using hydrogen bubble templating. <i>Journal of Electroanalytical Chemistry</i> , 2014, 722-723, 95-101.	1.9	28
21	A 3D Nanoporous Ni-Mo Electrocatalyst with Negligible Overpotential for Alkaline Hydrogen Evolution. <i>ChemElectroChem</i> , 2014, 1, 1138-1144.	1.7	113
22	Platinum-Modified Gold Electrocatalysts for the Hydrogen Oxidation Reaction in Alkaline Electrolytes. <i>ChemElectroChem</i> , 2014, 1, 2058-2063.	1.7	23
23	Strong negative nanocatalysis: oxygen reduction and hydrogen evolution at very small (2 nm) gold nanoparticles. <i>Nanoscale</i> , 2014, 6, 11024-11030.	2.8	29
24	Characterization and kinetic study of a nanostructured rhodium electrode for the hydrogen oxidation reaction. <i>Journal of Power Sources</i> , 2014, 254, 218-223.	4.0	20
25	Trends in the Hydrogen Evolution Activity of Metal Carbide Catalysts. <i>ACS Catalysis</i> , 2014, 4, 1274-1278.	5.5	351
26	Electrochemical Energy Engineering: A New Frontier of Chemical Engineering Innovation. <i>Annual Review of Chemical and Biomolecular Engineering</i> , 2014, 5, 429-454.	3.3	64
27	Volcano plots in hydrogen electrocatalysis – uses and abuses. <i>Beilstein Journal of Nanotechnology</i> , 2014, 5, 846-854.	1.5	410

#	ARTICLE	IF	CITATIONS
28	Metal (Ni, Co)@Metal Oxides/Graphene Nanocomposites as Multifunctional Electrocatalysts. <i>Advanced Functional Materials</i> , 2015, 25, 5799-5808.	7.8	490
29	Co(OH) <sub>2</sub> @PANI Hybrid Nanosheets with 3D Networks as High-Performance Electrocatalysts for Hydrogen Evolution Reaction. <i>Advanced Materials</i> , 2015, 27, 7051-7057.	11.1	294
30	Nature of the Intermediate Binding Sites in Hydrogen Oxidation/Evolution over Pt in Alkaline and Acidic Media. <i>ChemElectroChem</i> , 2015, 2, 1582-1594.	1.7	10
31	Ruthenium-Alloy Electrocatalysts with Tunable Hydrogen Oxidation Kinetics in Alkaline Electrolyte. <i>Journal of Physical Chemistry C</i> , 2015, 119, 13481-13487.	1.5	104
32	Triggering the electrocatalytic hydrogen evolution activity of the inert two-dimensional MoS <sub>2</sub> surface via single-atom metal doping. <i>Energy and Environmental Science</i> , 2015, 8, 1594-1601.	15.6	1,109
33	High-activity electrodeposited NiW catalysts for hydrogen evolution in alkaline water electrolysis. <i>Applied Surface Science</i> , 2015, 349, 629-635.	3.1	85
34	CoP nanosheet assembly grown on carbon cloth: A highly efficient electrocatalyst for hydrogen generation. <i>Nano Energy</i> , 2015, 15, 634-641.	8.2	357
35	Correlating hydrogen oxidation and evolution activity on platinum at different pH with measured hydrogen binding energy. <i>Nature Communications</i> , 2015, 6, 5848.	5.8	784
36	Uniform Functionalization of High-Quality Graphene with Platinum Nanoparticles for Electrocatalytic Water Reduction. <i>ChemistryOpen</i> , 2015, 4, 268-273.	0.9	12
37	In situ Cobalt@Cobalt Oxide/N-Doped Carbon Hybrids As Superior Bifunctional Electrocatalysts for Hydrogen and Oxygen Evolution. <i>Journal of the American Chemical Society</i> , 2015, 137, 2688-2694.	6.6	1,642
38	Enhancement of hydrogen evolution in alkaline water electrolysis by using nickel-rare earth alloys. <i>International Journal of Hydrogen Energy</i> , 2015, 40, 4295-4302.	3.8	86
39	Ultrathin platinum nanowires grown on single-layered nickel hydroxide with high hydrogen evolution activity. <i>Nature Communications</i> , 2015, 6, 6430.	5.8	848
40	Achieving High Electrocatalytic Efficiency on Copper: A Low-Cost Alternative to Platinum for Hydrogen Generation in Water. <i>ACS Catalysis</i> , 2015, 5, 4115-4120.	5.5	90
41	Hydrodynamic analysis and simulation of a flow cell ammonia electrolyzer. <i>Electrochimica Acta</i> , 2015, 179, 529-537.	2.6	10
42	Biomass-derived high-performance tungsten-based electrocatalysts on graphene for hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2015, 3, 18572-18577.	5.2	43
43	A nickel nanoparticle/carbon quantum dot hybrid as an efficient electrocatalyst for hydrogen evolution under alkaline conditions. <i>Journal of Materials Chemistry A</i> , 2015, 3, 18598-18604.	5.2	87
44	Effect of the Transition Metal on Metal@Nitrogen@Carbon Catalysts for the Hydrogen Evolution Reaction. <i>Journal of the Electrochemical Society</i> , 2015, 162, H719-H726.	1.3	90
45	Correlating Hydrogen Oxidation/Evolution Reaction Activity with the Minority Weak Hydrogen-Binding Sites on Ir/C Catalysts. <i>ACS Catalysis</i> , 2015, 5, 4449-4455.	5.5	114

#	ARTICLE	IF	CITATIONS
46	Process modeling of electrodes in proton exchange membrane fuel cells. <i>Journal of Electroanalytical Chemistry</i> , 2015, 747, 112-122.	1.9	16
47	Highly porous non-precious bimetallic electrocatalysts for efficient hydrogen evolution. <i>Nature Communications</i> , 2015, 6, 6567.	5.8	440
48	Gold aerogel supported on graphitic carbon nitride: an efficient electrocatalyst for oxygen reduction reaction and hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2015, 3, 23120-23135.	5.2	57
49	Palladium Coated Copper Nanowires as a Hydrogen Oxidation Electrocatalyst in Base. <i>Journal of the Electrochemical Society</i> , 2015, 162, F849-F853.	1.3	37
50	On the Effect of Cu on the Activity of Carbon Supported Ni Nanoparticles for Hydrogen Electrode Reactions in Alkaline Medium. <i>Topics in Catalysis</i> , 2015, 58, 1181-1192.	1.3	48
51	Exchange current density of the hydrogen oxidation reaction on Pt/C in polymer solid base electrolyte. <i>Electrochemistry Communications</i> , 2015, 61, 57-60.	2.3	15
52	Metal/Oxide Interface Nanostructures Generated by Surface Segregation for Electrocatalysis. <i>Nano Letters</i> , 2015, 15, 7704-7710.	4.5	233
53	Electrocatalysis of hydrogen evolution on polycrystalline palladium by rhodium nanoislands in alkaline solution. <i>Journal of Electroanalytical Chemistry</i> , 2015, 755, 115-121.	1.9	23
54	The effect of surface modification by reduced graphene oxide on the electrocatalytic activity of nickel towards the hydrogen evolution reaction. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 26864-26874.	1.3	86
55	Synergetic effect of Cu-Pt bimetallic cocatalyst on SrTiO <sub>3</sub> for efficient photocatalytic hydrogen production from water. <i>RSC Advances</i> , 2015, 5, 102593-102598.	1.7	19
56	Cathodic Corrosion of Cu Substrates as a Route to Nanostructured Cu/M (M=Ag, Au, Pd) Surfaces. <i>ChemElectroChem</i> , 2015, 2, 106-111.	1.7	15
57	Bulk-Palladium and Palladium-on-Gold Electrocatalysts for the Oxidation of Hydrogen in Alkaline Electrolyte. <i>Journal of the Electrochemical Society</i> , 2015, 162, F178-F189.	1.3	80
58	Hydrogen Oxidation and Evolution Reaction Kinetics on Carbon Supported Pt, Ir, Rh, and Pd Electrocatalysts in Acidic Media. <i>Journal of the Electrochemical Society</i> , 2015, 162, F190-F203.	1.3	412
59	Nanostructured Metallic Electrocatalysts for Carbon Dioxide Reduction. <i>ChemCatChem</i> , 2015, 7, 38-47.	1.8	233
60	Trends in Hydrogen Evolution Activity of Metal-Modified Molybdenum Carbides in Alkaline and Acid Electrolytes. <i>ChemElectroChem</i> , 2016, 3, 1686-1693.	1.7	19
61	A Perovskite Electrocatalyst for Efficient Hydrogen Evolution Reaction. <i>Advanced Materials</i> , 2016, 28, 6442-6448.	11.1	429
62	MOF-Derived Noble Metal Free Catalysts for Electrochemical Water Splitting. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 35390-35397.	4.0	151
63	Surface Roughening of Nickel Cobalt Phosphide Nanowire Arrays/Ni Foam for Enhanced Hydrogen Evolution Activity. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 34270-34279.	4.0	116

#	ARTICLE	IF	CITATIONS
64	Process engineering in electrochemical energy devices innovation. Chinese Journal of Chemical Engineering, 2016, 24, 39-47.	1.7	11
65	Evaluation of the kinetic parameters of the hydrogen oxidation reaction on nanostructured iridium electrodes in alkaline solution. Journal of Electroanalytical Chemistry, 2016, 767, 153-159.	1.9	21
66	A surface-enhanced infrared absorption spectroscopic study of pH dependent water adsorption on Au. Surface Science, 2016, 650, 51-56.	0.8	38
67	Recent advances in palladium-based electrocatalysts for fuel cell reactions and hydrogen evolution reaction. Nano Energy, 2016, 29, 198-219.	8.2	294
68	The activity of nanocrystalline Fe-based alloys as electrode materials for the hydrogen evolution reaction. Journal of Power Sources, 2016, 304, 196-206.	4.0	30
69	Size-Dependent Hydrogen Oxidation and Evolution Activities on Supported Palladium Nanoparticles in Acid and Base. Journal of the Electrochemical Society, 2016, 163, F499-F506.	1.3	110
70	Understanding and Tuning the Hydrogen Evolution Reaction on Pt-Covered Tungsten Carbide Cathodes. Journal of the Electrochemical Society, 2016, 163, F629-F636.	1.3	15
71	Triple-layer catalytic hollow fiber membrane reactor for hydrogen production. Journal of Membrane Science, 2016, 514, 1-14.	4.1	43
72	Electrocatalysts for hydrogen oxidation and evolution reactions. Science China Materials, 2016, 59, 217-238.	3.5	142
73	Improved hydrogen oxidation reaction under alkaline conditions by ruthenium-iridium alloyed nanoparticles. Journal of Materials Chemistry A, 2016, 4, 15980-15985.	5.2	86
74	Growth of One-Dimensional RuO <sub>2</sub> Nanowires on g-Carbon Nitride: An Active and Stable Bifunctional Electrocatalyst for Hydrogen and Oxygen Evolution Reactions at All pH Values. ACS Applied Materials & Interfaces, 2016, 8, 28678-28688.	4.0	170
75	Synthesis of TiO <sub>2</sub> Nanoparticles Loaded Pd/CuO Nanoporous Catalysts and Their Catalytic Performance for Methanol, Ethanol and Formic Acid Electro-Oxidations. Journal of the Electrochemical Society, 2016, 163, E263-E271.	1.3	9
76	Electroactivity of Ni-Fe cathodes in alkaline water electrolysis and effect of corrosion. Corrosion Science, 2016, 112, 255-263.	3.0	21
77	Rational design of Pt-Ni-Co ternary alloy nanoframe crystals as highly efficient catalysts toward the alkaline hydrogen evolution reaction. Nanoscale, 2016, 8, 16379-16386.	2.8	128
78	Effects of p- and n-type Doping in Inorganic Fullerene MoS <sub>2</sub> on the Hydrogen Evolution Reaction. ChemElectroChem, 2016, 3, 1937-1943.	1.7	24
79	High Electrocatalytic Hydrogen Evolution Activity of an Anomalous Ruthenium Catalyst. Journal of the American Chemical Society, 2016, 138, 16174-16181.	6.6	852
80	Exploring the Influence of the Nickel Oxide Species on the Kinetics of Hydrogen Electrode Reactions in Alkaline Media. Topics in Catalysis, 2016, 59, 1319-1331.	1.3	79
81	Mo Doping Induced More Active Sites in Urchin-Like W <sub>18</sub> O <sub>49</sub> Nanostructure with Remarkably Enhanced Performance for Hydrogen Evolution Reaction. Advanced Functional Materials, 2016, 26, 5778-5786.	7.8	177

#	ARTICLE	IF	CITATIONS
82	A Highly Active and Robust Copper-Based Electrocatalyst toward Hydrogen Evolution Reaction with Low Overpotential in Neutral Solution. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 30205-30211.	4.0	36
83	Electrocatalysis of the hydrogen oxidation reaction on carbon-supported bimetallic NiCu particles prepared by an improved wet chemical synthesis. <i>Journal of Electroanalytical Chemistry</i> , 2016, 783, 146-151.	1.9	70
84	Universal dependence of hydrogen oxidation and evolution reaction activity of platinum-group metals on pH and hydrogen binding energy. <i>Science Advances</i> , 2016, 2, e1501602.	4.7	573
85	Enhanced CO selectivity and stability for electrocatalytic reduction of CO <sub>2</sub> on electrodeposited nanostructured porous Ag electrode. <i>Journal of CO<sub>2</sub> Utilization</i> , 2016, 15, 41-49.	3.3	43
86	Nickel supported on nitrogen-doped carbon nanotubes as hydrogen oxidation reaction catalyst in alkaline electrolyte. <i>Nature Communications</i> , 2016, 7, 10141.	5.8	368
87	Interfacial effects on the catalysis of the hydrogen evolution, oxygen evolution and CO <sub>2</sub> -reduction reactions for (co-)electrolyzer development. <i>Nano Energy</i> , 2016, 29, 4-28.	8.2	104
88	Low loadings of platinum on transition metal carbides for hydrogen oxidation and evolution reactions in alkaline electrolytes. <i>Chemical Communications</i> , 2016, 52, 3697-3700.	2.2	42
89	Increased activity in hydrogen evolution electrocatalysis for partial anionic substitution in cobalt oxysulfide nanoparticles. <i>Journal of Materials Chemistry A</i> , 2016, 4, 2842-2848.	5.2	32
90	Anion exchange membrane water electrolyzer with an ultra-low loading of Pt-decorated Ni electrocatalyst. <i>Applied Catalysis B: Environmental</i> , 2016, 180, 674-679.	10.8	47
91	Earth-abundant catalysts for electrochemical and photoelectrochemical water splitting. <i>Nature Reviews Chemistry</i> , 2017, 1, .	13.8	2,578
92	Catalytic Activity of Urchin-like Ni nanoparticles Prepared by Solvothermal Method for Hydrogen Evolution Reaction in Alkaline Solution. <i>Electrochimica Acta</i> , 2017, 227, 382-390.	2.6	29
93	Coupling Sub-nanometric Copper Clusters with Quasi-Amorphous Cobalt Sulfide Yields Efficient and Robust Electrocatalysts for Water Splitting Reaction. <i>Advanced Materials</i> , 2017, 29, 1606200.	11.1	350
94	Mass-producible 2D-MoSe <sub>2</sub> bulk modified screen-printed electrodes provide significant electrocatalytic performances towards the hydrogen evolution reaction. <i>Sustainable Energy and Fuels</i> , 2017, 1, 74-83.	2.5	39
95	Reactions of water and C <sub>1</sub> molecules on carbide and metal-modified carbide surfaces. <i>Chemical Society Reviews</i> , 2017, 46, 1807-1823.	18.7	85
96	Electrochemical reduction of CO <sub>2</sub> to synthesis gas with controlled CO/H <sub>2</sub> ratios. <i>Energy and Environmental Science</i> , 2017, 10, 1180-1185.	15.6	341
97	Ultrashort pulse laser-structured nickel surfaces as hydrogen evolution electrodes for alkaline water electrolysis. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 10826-10833.	3.8	32
98	Pt-like electrocatalytic behavior of Ru-MoO <sub>2</sub> nanocomposites for the hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 5475-5485.	5.2	213
99	Enhancing H <sub>2</sub> evolution by optimizing H adatom combination and desorption over Pd nanocatalyst. <i>Nano Energy</i> , 2017, 33, 410-417.	8.2	43

#	ARTICLE	IF	CITATIONS
100	Nickel–Cobalt Diselenide 3D Mesoporous Nanosheet Networks Supported on Ni Foam: An All-pH Highly Efficient Integrated Electrocatalyst for Hydrogen Evolution. <i>Advanced Materials</i> , 2017, 29, 1606521.	11.1	370
101	Dominating Role of Ni <sup>0</sup> on the Interface of Ni/NiO for Enhanced Hydrogen Evolution Reaction. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 7139-7147.	4.0	206
102	Nitrogen and fluorine dual-doped porous graphene-nanosheets as efficient metal-free electrocatalysts for hydrogen-evolution in acidic media. <i>Catalysis Science and Technology</i> , 2017, 7, 2228-2235.	2.1	37
103	Facile and Scalable Synthesis of Robust Ni(OH) <sub>2</sub> Nanoplate Arrays on NiAl Foil as Hierarchical Active Scaffold for Highly Efficient Overall Water Splitting. <i>Advanced Science</i> , 2017, 4, 1700084.	5.6	85
104	Bifunctional porous non-precious metal WO <sub>2</sub> hexahedral networks as an electrocatalyst for full water splitting. <i>Journal of Materials Chemistry A</i> , 2017, 5, 9655-9660.	5.2	72
105	Ruthenium-cobalt nanoalloys encapsulated in nitrogen-doped graphene as active electrocatalysts for producing hydrogen in alkaline media. <i>Nature Communications</i> , 2017, 8, 14969.	5.8	656
106	Tuning Electronic Structures of Nonprecious Ternary Alloys Encapsulated in Graphene Layers for Optimizing Overall Water Splitting Activity. <i>ACS Catalysis</i> , 2017, 7, 469-479.	5.5	342
107	Tuning Nb–Pt Interactions To Facilitate Fuel Cell Electrocatalysis. <i>ACS Catalysis</i> , 2017, 7, 4936-4946.	5.5	49
108	Component-dependent electrocatalytic activity of PdCu bimetallic nanoparticles for hydrogen evolution reaction. <i>Electrochimica Acta</i> , 2017, 246, 572-579.	2.6	58
109	A nickel nanocatalyst within a h-BN shell for enhanced hydrogen oxidation reactions. <i>Chemical Science</i> , 2017, 8, 5728-5734.	3.7	113
110	Solvent-Mediated Shape Tuning of Well-Defined Rhodium Nanocrystals for Efficient Electrochemical Water Splitting. <i>Chemistry of Materials</i> , 2017, 29, 5009-5015.	3.2	91
111	One-pot synthesis of hollow AgPt alloyed nanocrystals with enhanced electrocatalytic activity for hydrogen evolution and oxygen reduction reactions. <i>Journal of Colloid and Interface Science</i> , 2017, 505, 307-314.	5.0	40
112	Heteroatoms dual doped porous graphene nanosheets as efficient bifunctional metal-free electrocatalysts for overall water-splitting. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7784-7790.	5.2	95
113	Gas-templating of hierarchically structured Ni–Co–P for efficient electrocatalytic hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7564-7570.	5.2	47
114	Synthesis and characterization of an IrO <sub>2</sub> –Fe <sub>2</sub> O <sub>3</sub> electrocatalyst for the hydrogen evolution reaction in acidic water electrolysis. <i>RSC Advances</i> , 2017, 7, 20252-20258.	1.7	26
115	Novel Iron/Cobalt-Containing Polypyrrole Hydrogel-Derived Trifunctional Electrocatalyst for Self-Powered Overall Water Splitting. <i>Advanced Functional Materials</i> , 2017, 27, 1606497.	7.8	320
116	Investigating the Influences of the Adsorbed Species on Catalytic Activity for Hydrogen Oxidation Reaction in Alkaline Electrolyte. <i>Journal of the American Chemical Society</i> , 2017, 139, 5156-5163.	6.6	243
117	PtPd alloy embedded in nitrogen-rich graphene nanopores: High-performance bifunctional electrocatalysts for hydrogen evolution and oxygen reduction. <i>Carbon</i> , 2017, 114, 740-748.	5.4	94

#	ARTICLE	IF	CITATIONS
118	Reduced graphene oxide assembled Pd-based nanoalloys for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 3916-3925.	3.8	59
119	Opportunities and Challenges in Utilizing Metal-Modified Transition Metal Carbides as Low-Cost Electrocatalysts. <i>Joule</i> , 2017, 1, 253-263.	11.7	94
120	Adsorbed Hydroxide Does Not Participate in the Volmer Step of Alkaline Hydrogen Electrocatalysis. <i>ACS Catalysis</i> , 2017, 7, 8314-8319.	5.5	92
121	Strain-controlled electrocatalysis on multimetallic nanomaterials. <i>Nature Reviews Materials</i> , 2017, 2, .	23.3	727
122	Precious metal-free approach to hydrogen electrocatalysis for energy conversion: From mechanism understanding to catalyst design. <i>Nano Energy</i> , 2017, 42, 69-89.	8.2	157
123	Design of Nickel Electrodes by Electrodeposition: Effect of Internal Stress on Hydrogen Evolution Reaction in Alkaline Solutions. <i>Electrochimica Acta</i> , 2017, 252, 67-75.	2.6	40
124	Understanding the structure and reactivity of NiCu nanoparticles: an atomistic model. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 26812-26820.	1.3	14
125	Superaerophobic Ultrathin Ni-Mo Alloy Nanosheet Array from In Situ Topotactic Reduction for Hydrogen Evolution Reaction. <i>Small</i> , 2017, 13, 1701648.	5.2	190
126	Cytosine assisted aqueous synthesis of AgPt hollow alloyed nanostructures as highly active electrocatalyst for ethylene glycol oxidation and hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 24767-24775.	3.8	21
127	Mechanistic investigation of propylene epoxidation with H <sub>2</sub> O <sub>2</sub> over TS-1: Active site formation, intermediate identification, and oxygen transfer pathway. <i>Molecular Catalysis</i> , 2017, 441, 150-167.	1.0	47
128	Ultrafine Pt Nanoparticle-Decorated Co(OH) <sub>2</sub> Nanosheet Arrays with Enhanced Catalytic Activity toward Hydrogen Evolution. <i>ACS Catalysis</i> , 2017, 7, 7131-7135.	5.5	195
129	Co-intercalation of multiple active units into graphene by pyrolysis of hydrogen-bonded precursors for zinc-air batteries and water splitting. <i>Journal of Materials Chemistry A</i> , 2017, 5, 20882-20891.	5.2	34
130	Nickel-Based Electrocatalysts for Energy-Related Applications: Oxygen Reduction, Oxygen Evolution, and Hydrogen Evolution Reactions. <i>ACS Catalysis</i> , 2017, 7, 7196-7225.	5.5	857
131	A Multisite Strategy for Enhancing the Hydrogen Evolution Reaction on a Nano-Pd Surface in Alkaline Media. <i>Advanced Energy Materials</i> , 2017, 7, 1701129.	10.2	108
132	Polymer-based hybrid catalyst of low Pt content for electrochemical hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 22821-22829.	3.8	33
133	Activating cobalt(II) oxide nanorods for efficient electrocatalysis by strain engineering. <i>Nature Communications</i> , 2017, 8, 1509.	5.8	361
134	Micelle-assisted electrodeposition of highly mesoporous Fe-Pt nodular films with soft magnetic and electrocatalytic properties. <i>Nanoscale</i> , 2017, 9, 18081-18093.	2.8	17
135	Theory of Hydrogen Deposition and Evolution on Cu(111) Electrodes. <i>Journal of the Electrochemical Society</i> , 2017, 164, H691-H695.	1.3	6



#	ARTICLE	IF	CITATIONS
136	Hierarchical Ni/NiTiO <sub>3</sub> derived from NiTi LDHs: a bifunctional electrocatalyst for overall water splitting. <i>Journal of Materials Chemistry A</i> , 2017, 5, 24767-24774.	5.2	44
137	Hydrogen Bubble-Assisted Electrodeposition of Metal Nanoparticles from Protic Ionic Liquids for Electrocatalysis. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 85-89.	3.2	26
138	Bifunctional Electrocatalysis on Pd@Ni Core-Shell Nanoparticles for Hydrogen Oxidation Reaction in Alkaline Medium. <i>Advanced Materials Interfaces</i> , 2018, 5, 1701666.	1.9	41
139	Trends in the Catalytic Activity of Hydrogen Evolution during CO <sub>2</sub> Electroreduction on Transition Metals. <i>ACS Catalysis</i> , 2018, 8, 3035-3040.	5.5	107
140	One-Step Facile Synthesis of Cobalt Phosphides for Hydrogen Evolution Reaction Catalysts in Acidic and Alkaline Medium. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 15673-15680.	4.0	76
141	General Synthetic Strategy for Libraries of Supported Multicomponent Metal Nanoparticles. <i>ACS Nano</i> , 2018, 12, 4594-4604.	7.3	66
142	Synergistic effect between undercoordinated platinum atoms and defective nickel hydroxide on enhanced hydrogen evolution reaction in alkaline solution. <i>Nano Energy</i> , 2018, 48, 590-599.	8.2	76
143	Spontaneous galvanic displacement of Pt nanostructures on nickel foam: Synthesis, characterization and use for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 7903-7910.	3.8	20
144	Synergistic effect of nano-Pt and Ni spine for HER in alkaline solution: hydrogen spillover from nano-Pt to Ni spine. <i>Scientific Reports</i> , 2018, 8, 2986.	1.6	56
145	Nanocatalysts for hydrogen evolution reactions. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 6777-6799.	1.3	100
146	Dynamic Hydrogen Bubble Templated NiCu Phosphide Electrodes for pH-Insensitive Hydrogen Evolution Reactions. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 2866-2871.	3.2	66
147	Nickel phosphide decorated Pt nanocatalyst with enhanced electrocatalytic properties toward common small organic molecule oxidation and hydrogen evolution reaction: A strengthened composite supporting effect. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 3203-3215.	3.8	8
148	Die Wasserstoffentwicklungsreaktion in alkalischer Lösung: Von der Theorie und Einkristallmodellen zu praktischen Elektrokatalysatoren. <i>Angewandte Chemie</i> , 2018, 130, 7690-7702.	1.6	78
149	Beyond catalysis and membranes: visualizing and solving the challenge of electrode water accumulation and flooding in AEMFCs. <i>Energy and Environmental Science</i> , 2018, 11, 551-558.	15.6	229
150	Size-Effect on Electrochemical Hydrogen Evolution Reaction by Single-Size Platinum Nanocluster Catalysts Immobilized on Strontium Titanate. <i>Topics in Catalysis</i> , 2018, 61, 126-135.	1.3	22
151	Perspective Towards Establishing Apparent Hydrogen Binding Energy as the Descriptor for Hydrogen Oxidation/Evolution Reactions. <i>Journal of the Electrochemical Society</i> , 2018, 165, H27-H29.	1.3	119
152	Nonprecious Intermetallic Al <sub>7</sub> Cu <sub>4</sub> Ni Nanocrystals Seamlessly Integrated in Freestanding Bimodal Nanoporous Copper for Efficient Hydrogen Evolution Catalysis. <i>Advanced Functional Materials</i> , 2018, 28, 1706127.	7.8	64
153	Hydrogen Evolution Reaction in Alkaline Media: Alpha- or Beta-Nickel Hydroxide on the Surface of Platinum?. <i>ACS Energy Letters</i> , 2018, 3, 237-244.	8.8	230

#	ARTICLE	IF	CITATIONS
154	Electrocatalysis of hydrogen evolution reaction on tri-metallic Rh@Pd/Pt(poly) electrode. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 2763-2771.	3.8	22
155	Role of non-metallic atoms in enhancing the catalytic activity of nickel-based compounds for hydrogen evolution reaction. <i>Chemical Science</i> , 2018, 9, 1822-1830.	3.7	46
156	Strain Effect in Bimetallic Electrocatalysts in the Hydrogen Evolution Reaction. <i>ACS Energy Letters</i> , 2018, 3, 1198-1204.	8.8	183
157	Graphene quantum dot engineered nickel-cobalt phosphide as highly efficient bifunctional catalyst for overall water splitting. <i>Nano Energy</i> , 2018, 48, 284-291.	8.2	143
158	A Monodisperse Rh <sub>2</sub> P-Based Electrocatalyst for Highly Efficient and pH-Universal Hydrogen Evolution Reaction. <i>Advanced Energy Materials</i> , 2018, 8, 1703489.	10.2	180
159	Preparation of carbon nanotube and graphene doped polyphenylene sulfide flexible film electrodes and the electrodeposition of Cu <sub>2</sub> O nanocrystals for hydrogen-generation. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 7356-7365.	3.8	8
160	Electrocatalysts and Mechanisms of Hydrogen Oxidation in Alkaline Media for Anion Exchange Membrane Fuel Cells. <i>Lecture Notes in Energy</i> , 2018, , 79-103.	0.2	5
161	Catalyst design by scanning probe block copolymer lithography. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 3764-3769.	3.3	40
162	Anion Exchange Membrane Fuel Cells. <i>Lecture Notes in Energy</i> , 2018, , .	0.2	7
163	Emerging Two-Dimensional Nanomaterials for Electrocatalysis. <i>Chemical Reviews</i> , 2018, 118, 6337-6408.	23.0	1,552
164	High-Performance Electrocatalysts for Hydrogen Evolution Reaction Using Flexible Electrodes Made up of Chemically Modified Polyester Films. <i>ChemistrySelect</i> , 2018, 3, 2738-2746.	0.7	2
165	Scalable synthesis of heterostructure molybdenum and nickel sulfides nanosheets for efficient hydrogen generation in alkaline electrolyte. <i>Catalysis Today</i> , 2018, 316, 171-176.	2.2	28
166	Self-Contained Polymer/Metal 3D Printed Electrochemical Platform for Tailored Water Splitting. <i>Advanced Functional Materials</i> , 2018, 28, 1700655.	7.8	98
167	Performance of polyethylene based radiation grafted anion exchange membrane with polystyrene-b-poly (ethylene/butylene)-b-polystyrene based ionomer using NiCo <sub>2</sub> O <sub>4</sub> catalyst for water electrolysis. <i>Journal of Power Sources</i> , 2018, 375, 387-396.	4.0	42
168	Anion exchange membrane fuel cells: Current status and remaining challenges. <i>Journal of Power Sources</i> , 2018, 375, 170-184.	4.0	706
169	In situ transformation of Cu <sub>2</sub> O@MnO <sub>2</sub> to Cu@Mn(OH) <sub>2</sub> nanosheet-on-nanowire arrays for efficient hydrogen evolution. <i>Nano Research</i> , 2018, 11, 1798-1809.	5.8	37
170	Efficient hydrogen evolution electrocatalysis in alkaline medium using Pd-modified zeolite X. <i>Electrochimica Acta</i> , 2018, 259, 882-892.	2.6	27
171	Ni@Ru and NiCo@Ru Core-Shell Hexagonal Nanosandwiches with a Compositionally Tunable Core and a Regioselectively Grown Shell. <i>Small</i> , 2018, 14, 1702353.	5.2	50

#	ARTICLE	IF	CITATIONS
172	Probing the Surface of Platinum during the Hydrogen Evolution Reaction in Alkaline Electrolyte. <i>Journal of Physical Chemistry B</i> , 2018, 122, 864-870.	1.2	50
173	Construction of a hierarchical 3D Co/N-carbon electrocatalyst for efficient oxygen reduction and overall water splitting. <i>Journal of Materials Chemistry A</i> , 2018, 6, 489-497.	5.2	111
174	The Hydrogen Evolution Reaction in Alkaline Solution: From Theory, Single Crystal Models, to Practical Electrocatalysts. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 7568-7579.	7.2	1,018
175	Amorphous Ni(OH) <sub>2</sub> encounter with crystalline CuS in hollow spheres: A mesoporous nano-shelled heterostructure for hydrogen evolution electrocatalysis. <i>Nano Energy</i> , 2018, 44, 7-14.	8.2	201
176	Electrocatalysts for Hydrogen Evolution in Alkaline Electrolytes: Mechanisms, Challenges, and Prospective Solutions. <i>Advanced Science</i> , 2018, 5, 1700464.	5.6	1,022
177	Super-strong and tough poly(vinyl alcohol)/poly(acrylic acid) hydrogels reinforced by hydrogen bonding. <i>Journal of Materials Chemistry B</i> , 2018, 6, 8105-8114.	2.9	162
178	N-Doped carbon shelled bimetallic phosphates for efficient electrochemical overall water splitting. <i>Nanoscale</i> , 2018, 10, 22787-22791.	2.8	29
179	Rhodium metal-rhodium oxide (Rh <sub>2</sub> O <sub>3</sub> ) nanostructures with Pt-like or better activity towards hydrogen evolution and oxidation reactions (HER, HOR) in acid and base: correlating its HOR/HER activity with hydrogen binding energy and oxophilicity of the catalyst. <i>Journal of Materials Chemistry A</i> , 2018, 6, 23531-23541.	5.2	107
180	Rationally tuning the atomic ratio of electrodeposited NiP for greatly enhanced hydrogen evolution in alkaline media. <i>Chemical Communications</i> , 2018, 54, 12408-12411.	2.2	24
181	Heterostructured Electrocatalysts for Hydrogen Evolution Reaction Under Alkaline Conditions. <i>Nano-Micro Letters</i> , 2018, 10, 75.	14.4	412
182	Determination of Hydrogen Oxidation Reaction Mechanism Based on Pt <sub>ad</sub> Energetics in Alkaline Electrolyte. <i>Journal of the Electrochemical Society</i> , 2018, 165, J3355-J3362.	1.3	38
183	Current understandings of the sluggish kinetics of the hydrogen evolution and oxidation reactions in base. <i>Current Opinion in Electrochemistry</i> , 2018, 12, 209-217.	2.5	64
184	The Comparability of Pt to Pt-Ru in Catalyzing the Hydrogen Oxidation Reaction for Alkaline Polymer Electrolyte Fuel Cells Operated at 80 °C. <i>Angewandte Chemie</i> , 2019, 131, 1456-1460.	1.6	22
185	Polyoxometalate-Derived Hexagonal Molybdenum Nitrides (MXenes) Supported by Boron, Nitrogen Codoped Carbon Nanotubes for Efficient Electrochemical Hydrogen Evolution from Seawater. <i>Advanced Functional Materials</i> , 2019, 29, 1805893.	7.8	69
186	Ab Initio Thermodynamics of Iridium Surface Oxidation and Oxygen Evolution Reaction. <i>Journal of Physical Chemistry C</i> , 2018, 122, 29350-29358.	1.5	28
187	Mechanistic Study of the Hydrogen Oxidation/Evolution Reaction over Bimetallic PtRu Catalysts. <i>Journal of the Electrochemical Society</i> , 2018, 165, J3378-J3383.	1.3	25
188	Mo <sub>2</sub> C@NC nanowire bundle for efficient electrocatalytic hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 19510-19520.	3.8	22
189	Fe <sub>5</sub> C <sub>2</sub> nanoparticles as low-cost HER electrocatalyst: the importance of Co substitution. <i>Science Bulletin</i> , 2018, 63, 1358-1363.	4.3	45

#	ARTICLE	IF	CITATIONS
190	Tuning Structural and Compositional Effects in Pd@Au Nanowires for Highly Selective and Active CO <sub>2</sub> Electrochemical Reduction Reaction. <i>Advanced Energy Materials</i> , 2018, 8, 1802238.	10.2	132
191	Unexpected Behavior of the Hydrogen Oxidation Reaction on Palladium in Alkaline Solution: A Feasible Kinetic Explanation. <i>Journal of the Electrochemical Society</i> , 2018, 165, J3069-J3073.	1.3	3
192	Synergistic electrocatalytic effect of Pd and Rh nanoislands co-deposited on Au(poly) on HER in alkaline solution. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 19420-19431.	3.8	13
193	Nanostructured nickel nanoparticles supported on vulcan carbon as a highly active catalyst for the hydrogen oxidation reaction in alkaline media. <i>Journal of Power Sources</i> , 2018, 402, 447-452.	4.0	70
194	Recent Advances on Electrocatalysts for PEM and AEM Fuel Cells. , 2018, , 51-89.		1
195	A Perspective on Low-Temperature Water Electrolysis – Challenges in Alkaline and Acidic Technology. <i>International Journal of Electrochemical Science</i> , 2018, 13, 1173-1226.	0.5	197
196	BCC-Phased PdCu Alloy as a Highly Active Electrocatalyst for Hydrogen Oxidation in Alkaline Electrolytes. <i>Journal of the American Chemical Society</i> , 2018, 140, 16580-16588.	6.6	149
197	Determining the Viability of Hydroxide-Mediated Bifunctional HER/HOR Mechanisms through Single-Crystal Voltammetry and Microkinetic Modeling. <i>Journal of the Electrochemical Society</i> , 2018, 165, J3209-J3221.	1.3	55
198	Interfacing nickel nitride and nickel boosts both electrocatalytic hydrogen evolution and oxidation reactions. <i>Nature Communications</i> , 2018, 9, 4531.	5.8	410
201	Highly Crystalline Pd <sub>13</sub> Cu <sub>3</sub> S <sub>7</sub> Nanoplates Prepared via Partial Cation Exchange of Cu <sub>1.81</sub> S Templates as an Efficient Electrocatalyst for the Hydrogen Evolution Reaction. <i>Chemistry of Materials</i> , 2018, 30, 6884-6892.	3.2	36
202	Peptide-Programmable Nanoparticle Superstructures with Tailored Electrocatalytic Activity. <i>ACS Nano</i> , 2018, 12, 6554-6562.	7.3	19
203	CO <sub>2</sub> electroreduction to ethylene via hydroxide-mediated copper catalysis at an abrupt interface. <i>Science</i> , 2018, 360, 783-787.	6.0	1,638
204	Tuning the electrocatalytic activity of Pt by structurally ordered PdFe/C for the hydrogen oxidation reaction in alkaline media. <i>Journal of Materials Chemistry A</i> , 2018, 6, 11346-11352.	5.2	41
205	Coupled molybdenum carbide and nitride on carbon nanosheets: An efficient and durable hydrogen evolution electrocatalyst in both acid and alkaline media. <i>Electrochimica Acta</i> , 2018, 280, 323-331.	2.6	52
206	A quadrifunctional electrocatalyst of nickel/nickel oxide embedded N-graphene for oxygen reduction, oxygen evolution, hydrogen evolution and hydrogen peroxide oxidation reactions. <i>Sustainable Energy and Fuels</i> , 2018, 2, 2081-2089.	2.5	34
207	Surface (Electro)chemistry of CO <sub>2</sub> on Pt Surface: An <i>in Situ</i> Surface-Enhanced Infrared Absorption Spectroscopy Study. <i>Journal of Physical Chemistry C</i> , 2018, 122, 12341-12349.	1.5	19
208	Understanding the influence of the electrochemical double-layer on heterogeneous electrochemical reactions. <i>Current Opinion in Chemical Engineering</i> , 2018, 20, 151-158.	3.8	72
209	Ultrafine Pt Nanoparticle-Decorated Pyrite-Type CoS <sub>2</sub> Nanosheet Arrays Coated on Carbon Cloth as a Bifunctional Electrode for Overall Water Splitting. <i>Advanced Energy Materials</i> , 2018, 8, 1800935.	10.2	286

#	ARTICLE	IF	CITATIONS
210	Recent progress in single-atom electrocatalysts: concept, synthesis, and applications in clean energy conversion. <i>Journal of Materials Chemistry A</i> , 2018, 6, 14025-14042.	5.2	224
211	Dechlorination of Excess Trichloroethene by Bimetallic and Sulfidated Nanoscale Zero-Valent Iron. <i>Environmental Science &amp; Technology</i> , 2018, 52, 8627-8637.	4.6	240
212	Metal Surface and Interface Energy Electrocatalysis: Fundamentals, Performance Engineering, and Opportunities. <i>CheM</i> , 2018, 4, 2054-2083.	5.8	225
213	Scrupulous Probing of Bifunctional Catalytic Activity of Borophene Monolayer: Mapping Reaction Coordinate with Charge Transfer. <i>ACS Applied Energy Materials</i> , 2018, 1, 3571-3576.	2.5	32
214	Cobalt nanocrystals embedded into N-doped carbon as highly active bifunctional electrocatalysts from pyrolysis of triazolebenzoate complex. <i>Electrochimica Acta</i> , 2018, 284, 733-741.	2.6	13
215	Surface-Engineered PtNi-O Nanostructure with Record-High Performance for Electrocatalytic Hydrogen Evolution Reaction. <i>Journal of the American Chemical Society</i> , 2018, 140, 9046-9050.	6.6	379
216	The oxophilic and electronic effects on anchored platinum nanoparticles on sp carbon sites: The hydrogen evolution and oxidation reactions in alkaline medium. <i>Electrochimica Acta</i> , 2018, 283, 1829-1834.	2.6	33
217	Phase-selective synthesis of self-supported RuP films for efficient hydrogen evolution electrocatalysis in alkaline media. <i>Nanoscale</i> , 2018, 10, 13930-13935.	2.8	67
218	Ultralow Overpotential of Hydrogen Evolution Reaction using Fe-Doped Defective Graphene: A Density Functional Study. <i>ChemCatChem</i> , 2018, 10, 4450-4455.	1.8	22
219	Evaluating Hydrogen Evolution and Oxidation in Alkaline Media to Establish Baselines. <i>Journal of the Electrochemical Society</i> , 2018, 165, F441-F455.	1.3	42
220	Wrinkled Rh <sub>2</sub> P Nanosheets as Superior pH-Universal Electrocatalysts for Hydrogen Evolution Catalysis. <i>Advanced Energy Materials</i> , 2018, 8, 1801891.	10.2	116
221	Carbon-Capped Zerovalent Nickel and Cobalt Nanoparticles as Multitask Hybrid Electrocatalysts. <i>ACS Applied Energy Materials</i> , 2018, 1, 4939-4949.	2.5	7
222	Ni(OH) <sub>2</sub> -WP Hybrid Nanorod Arrays for Highly Efficient and Durable Hydrogen Evolution Reactions in Alkaline Media. <i>ChemSusChem</i> , 2018, 11, 3618-3624.	3.6	35
223	Role of Surface Oxophilicity in Copper-Catalyzed Water Dissociation. <i>ACS Catalysis</i> , 2018, 8, 9327-9333.	5.5	46
224	Controlled-Potential Simulation of Elementary Electrochemical Reactions: Proton Discharge on Metal Surfaces. <i>Journal of Physical Chemistry C</i> , 2018, 122, 12771-12781.	1.5	120
225	Platinum Nanostructure/Nitrogen-Doped Carbon Hybrid: Enhancing its Base Media HER/HOR Activity through Bifunctionality of the Catalyst. <i>ChemSusChem</i> , 2018, 11, 2388-2401.	3.6	62
226	Self-Supported Hierarchical Shell@Core Ni <sub>3</sub> S <sub>2</sub> @Ni Foam Composite Electrocatalyst with High Efficiency and Long-Term Stability for Methanol Oxidation. <i>ChemElectroChem</i> , 2018, 5, 2376-2382.	1.7	12
227	Ultrathin two-dimensional metallic nanocrystals for renewable energy electrocatalysis. <i>Materials Today</i> , 2019, 23, 45-56.	8.3	64

#	ARTICLE	IF	CITATIONS
228	Nanoporous Nickel Phosphide Cathode for a High-Performance Proton Exchange Membrane Water Electrolyzer. ACS Applied Materials & Interfaces, 2019, 11, 30774-30785.	4.0	29
229	Enhanced Activity of Polycrystalline Palladium Decorated by Ru Nanoislands for Hydrogen Evolution in Alkaline Medium. International Journal of Electrochemical Science, 2019, , 5938-5949.	0.5	0
230	Atomically dispersed Fe <sup>N<sub>x</sub></sup> active sites within hierarchical mesoporous carbon as efficient electrocatalysts for the oxygen reduction reaction. Journal of Materials Chemistry A, 2019, 7, 20132-20138.	5.2	37
231	Exploiting dynamic water structure and structural sensitivity for nanoscale electrocatalyst design. Nano Energy, 2019, 64, 103963.	8.2	30
232	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
233	Copper-N-SiO <sub>2</sub> nanoparticles catalyst for hydrogen evolution reaction. International Journal of Hydrogen Energy, 2019, 44, 22926-22935.	3.8	4
234	Fe <sub>2</sub> O <sub>3</sub> and Co bimetallic decorated nitrogen doped graphene nanomaterial for effective electrochemical water split hydrogen evolution reaction. Journal of Electroanalytical Chemistry, 2019, 849, 113345.	1.9	14
235	Facile synthesis of cobalt nanoparticles embedded nitrogen-doped carbon nanotubes as electrocatalyst of hydrogen evolution reaction. Fullerenes Nanotubes and Carbon Nanostructures, 2019, 27, 808-815.	1.0	5
236	Importance of Water Structure and Catalyst-Electrolyte Interface on the Design of Water Splitting Catalysts. Chemistry of Materials, 2019, 31, 8248-8259.	3.2	54
237	Field Effect Modulation of Electrocatalytic Hydrogen Evolution at Back-Gated Two-Dimensional MoS <sub>2</sub> Electrodes. Nano Letters, 2019, 19, 6118-6123.	4.5	40
238	Catalytic Surface Specificity of Ni(OH) <sub>2</sub> Decorated Pt Nanocubes for the Hydrogen Evolution Reaction in an Alkaline Electrolyte. ChemSusChem, 2019, 12, 4021-4028.	3.6	28
239	Unconventional molybdenum carbide phases with high electrocatalytic activity for hydrogen evolution reaction. Journal of Materials Chemistry A, 2019, 7, 18030-18038.	5.2	64
240	Shaping well-defined noble-metal-based nanostructures for fabricating high-performance electrocatalysts: advances and perspectives. Inorganic Chemistry Frontiers, 2019, 6, 2582-2618.	3.0	51
241	An organic ligand promoting the electrocatalytic activity of cobalt oxide for the hydrogen evolution reaction. Sustainable Energy and Fuels, 2019, 3, 2205-2210.	2.5	7
242	Boosting Hydrogen Oxidation Activity of Ni in Alkaline Media through Oxygen-Vacancy-Rich CeO <sub>2</sub> /Ni Heterostructures. Angewandte Chemie - International Edition, 2019, 58, 14179-14183.	7.2	223
243	Boosting Hydrogen Oxidation Activity of Ni in Alkaline Media through Oxygen-Vacancy-Rich CeO <sub>2</sub> /Ni Heterostructures. Angewandte Chemie, 2019, 131, 14317-14321.	1.6	38
244	Anomalous hydrogen evolution behavior in high-pH environment induced by locally generated hydronium ions. Nature Communications, 2019, 10, 4876.	5.8	220
245	Rapid Activation of Platinum with Black Phosphorus for Efficient Hydrogen Evolution. Angewandte Chemie - International Edition, 2019, 58, 19060-19066.	7.2	79

#	ARTICLE	IF	CITATIONS
246	Hydrogen oxidation reaction on modified platinum model electrodes in alkaline media. <i>Electrochimica Acta</i> , 2019, 327, 135016.	2.6	17
247	Rapid Activation of Platinum with Black Phosphorus for Efficient Hydrogen Evolution. <i>Angewandte Chemie</i> , 2019, 131, 19236-19242.	1.6	13
248	Single-Atom Ru Doping Induced Phase Transition of MoS <sub>2</sub> and S Vacancy for Hydrogen Evolution Reaction. <i>Small Methods</i> , 2019, 3, 1900653.	4.6	206
249	Alkaline Anion-Exchange Membrane Fuel Cells: Challenges in Electrocatalysis and Interfacial Charge Transfer. <i>Chemical Reviews</i> , 2019, 119, 11945-11979.	23.0	273
250	Preparation of Pt dendrites on Poly(diallyldimethylammonium chloride)-functionalized reduced graphene oxide as an enhanced electrocatalyst for the hydrogen evolution reaction in alkaline media. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 24151-24161.	3.8	4
251	Hybrids of PtRu Nanoclusters and Black Phosphorus Nanosheets for Highly Efficient Alkaline Hydrogen Evolution Reaction. <i>ACS Catalysis</i> , 2019, 9, 10870-10875.	5.5	86
252	Effect of Morphology and Mechanical Stability of Nanometric Platinum Layer on Nickel Foam for Hydrogen Evolution Reaction. <i>Energies</i> , 2019, 12, 3116.	1.6	9
253	A Co-Mo <sub>2</sub> N composite on a nitrogen-doped carbon matrix with hydrogen evolution activity comparable to that of Pt/C in alkaline media. <i>Journal of Materials Chemistry A</i> , 2019, 7, 20579-20583.	5.2	52
254	The hydrogen evolution reaction: from material to interfacial descriptors. <i>Chemical Science</i> , 2019, 10, 9165-9181.	3.7	560
255	Theoretical Analysis of the Galvanic Corrosion Behavior of Mg-Ge Binary Alloy. <i>Journal of the Electrochemical Society</i> , 2019, 166, C421-C427.	1.3	13
256	Surface treated nickel phosphide nanosheet with oxygen as highly efficient bifunctional electrocatalysts for overall water splitting. <i>Applied Surface Science</i> , 2019, 496, 143741.	3.1	7
257	PdMo bimetallic for oxygen reduction catalysis. <i>Nature</i> , 2019, 574, 81-85.	13.7	935
258	CO <sub>2</sub> reduction on gas-diffusion electrodes and why catalytic performance must be assessed at commercially-relevant conditions. <i>Energy and Environmental Science</i> , 2019, 12, 1442-1453.	15.6	692
259	Metal-organic framework-derived indium-copper bimetallic oxide catalysts for selective aqueous electroreduction of CO <sub>2</sub> . <i>Green Chemistry</i> , 2019, 21, 503-508.	4.6	66
260	A computational study on Pt and Ru dimers supported on graphene for the hydrogen evolution reaction: new insight into the alkaline mechanism. <i>Journal of Materials Chemistry A</i> , 2019, 7, 3648-3654.	5.2	134
261	Ni Strongly Coupled with Mo <sub>2</sub> C Encapsulated in Nitrogen-Doped Carbon Nanofibers as Robust Bifunctional Catalyst for Overall Water Splitting. <i>Advanced Energy Materials</i> , 2019, 9, 1803185.	10.2	306
262	CoNi/Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3</sub> /N-doped-carbon as a highly-active bifunctional electrocatalyst for water splitting. <i>Journal of Power Sources</i> , 2019, 415, 91-98.	4.0	11
263	±-Ni(OH) <sub>2</sub> ·0.75H <sub>2</sub> O nanofilms on Ni foam from simple NiCl <sub>2</sub> solution: Fast electrodeposition, formation mechanism and application as an efficient bifunctional electrocatalyst for overall water splitting in alkaline solution. <i>Electrochimica Acta</i> , 2019, 301, 87-96.	2.6	76

#	ARTICLE	IF	CITATIONS
264	A universal synthesis strategy for P-rich noble metal diphosphide-based electrocatalysts for the hydrogen evolution reaction. <i>Energy and Environmental Science</i> , 2019, 12, 952-957.	15.6	397
265	Cu-Based Single-Atom Catalysts Boost Electroreduction of CO <sub>2</sub> to CH <sub>3</sub> OH: First-Principles Predictions. <i>Journal of Physical Chemistry C</i> , 2019, 123, 4380-4387.	1.5	68
266	Solvent-free assembly of Co/Fe-containing MOFs derived N-doped mesoporous carbon nanosheets for ORR and HER. <i>Carbon</i> , 2019, 146, 671-679.	5.4	117
267	Uniform Pd <sub>0.33</sub> Ir <sub>0.67</sub> nanoparticles supported on nitrogen-doped carbon with remarkable activity toward the alkaline hydrogen oxidation reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 3161-3169.	5.2	50
268	Does the oxophilic effect serve the same role for hydrogen evolution/oxidation reaction in alkaline media?. <i>Nano Energy</i> , 2019, 62, 601-609.	8.2	68
269	Prompt Electrodeposition of Ni Nanodots on Ni Foam to Construct a High-Performance Water-Splitting Electrode: Efficient, Scalable, and Recyclable. <i>Nano-Micro Letters</i> , 2019, 11, 41.	14.4	24
270	Promoting Subordinate, Efficient Ruthenium Sites with Interstitial Silicon for Pt-Like Electrocatalytic Activity. <i>Angewandte Chemie</i> , 2019, 131, 11531-11535.	1.6	92
271	Recent advances in metal sulfides: from controlled fabrication to electrocatalytic, photocatalytic and photoelectrochemical water splitting and beyond. <i>Chemical Society Reviews</i> , 2019, 48, 4178-4280.	18.7	810
272	Quantitative Understanding of the Sluggish Kinetics of Hydrogen Reactions in Alkaline Media Based on a Microscopic Hamiltonian Model for the Volmer Step. <i>Journal of Physical Chemistry C</i> , 2019, 123, 17325-17334.	1.5	38
273	Palladium-Ceria Catalysts with Enhanced Alkaline Hydrogen Oxidation Activity for Anion Exchange Membrane Fuel Cells. <i>ACS Applied Energy Materials</i> , 2019, 2, 4999-5008.	2.5	56
274	Recent progress made in the mechanism comprehension and design of electrocatalysts for alkaline water splitting. <i>Energy and Environmental Science</i> , 2019, 12, 2620-2645.	15.6	1,052
275	Amorphous Ni/C nanocomposites from tandem plasma reaction for hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 18115-18122.	3.8	4
276	Enhanced Electrocatalytic Hydrogen Oxidation on Ni/NiO/C Derived from a Nickel-Based Metal-Organic Framework. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 10644-10649.	7.2	172
277	Enhanced Electrocatalytic Hydrogen Oxidation on Ni/NiO/C Derived from a Nickel-Based Metal-Organic Framework. <i>Angewandte Chemie</i> , 2019, 131, 10754-10759.	1.6	39
278	Mo-Doped NiCu as an efficient and stable electrocatalyst for the hydrogen evolution reaction. <i>New Journal of Chemistry</i> , 2019, 43, 9652-9657.	1.4	22
279	pH Effects on Hydrogen Evolution and Oxidation over Pt(111): Insights from First-Principles. <i>ACS Catalysis</i> , 2019, 9, 6194-6201.	5.5	136
280	Promoting Subordinate, Efficient Ruthenium Sites with Interstitial Silicon for Pt-Like Electrocatalytic Activity. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 11409-11413.	7.2	128
281	Aqueous substitution synthesis of platinum modified amorphous nickel hydroxide on nickel foam composite electrode for efficient and stable hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 14258-14265.	3.8	19



#	ARTICLE	IF	CITATIONS
282	Nanoporous Palladium-Silver Surface Alloys as Efficient and pH-Universal Catalysts for the Hydrogen Evolution Reaction. <i>ACS Energy Letters</i> , 2019, 4, 1379-1386.	8.8	72
283	Sulfidation mitigates the passivation of zero valent iron at alkaline pHs: Experimental evidences and mechanism. <i>Water Research</i> , 2019, 159, 233-241.	5.3	97
284	Towards membrane-electrode assembly systems for CO <sub>2</sub> reduction: a modeling study. <i>Energy and Environmental Science</i> , 2019, 12, 1950-1968.	15.6	273
285	Breaking the volcano-plot limits for Pt-based electrocatalysts by selective tuning adsorption of multiple intermediates. <i>Journal of Materials Chemistry A</i> , 2019, 7, 13635-13640.	5.2	24
286	MoS <sub>2</sub> supported CoS <sub>2</sub> on carbon cloth as a high-performance electrode for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 16566-16574.	3.8	57
287	CoNi based alloy/oxides@N-doped carbon core-shell dendrites as complementary water splitting electrocatalysts with significantly enhanced catalytic efficiency. <i>Applied Catalysis B: Environmental</i> , 2019, 254, 634-646.	10.8	109
288	Pt(hkl) surface charge and reactivity. <i>Current Opinion in Electrochemistry</i> , 2019, 17, 97-105.	2.5	33
289	Density functional theory calculations: A powerful tool to simulate and design high-performance energy storage and conversion materials. <i>Progress in Natural Science: Materials International</i> , 2019, 29, 247-255.	1.8	70
290	First-principles search for alloying elements that increase corrosion resistance of Mg with second-phase particles of transition metal impurities. <i>Computational Materials Science</i> , 2019, 165, 154-166.	1.4	29
291	Atomic Arrangement Engineering of Metallic Nanocrystals for Energy-Conversion Electrocatalysis. <i>Joule</i> , 2019, 3, 956-991.	11.7	197
292	Single Atoms and Clusters Based Nanomaterials for Hydrogen Evolution, Oxygen Evolution Reactions, and Full Water Splitting. <i>Advanced Energy Materials</i> , 2019, 9, 1900624.	10.2	538
293	Fe <sub>2</sub> O <sub>3</sub> nanocatalysts on N-doped carbon nanomaterial for highly efficient electrochemical hydrogen evolution in alkaline. <i>Journal of Power Sources</i> , 2019, 426, 74-83.	4.0	50
294	Highly conductive and metallic cobalt-nickel selenide nanorods supported on Ni foam as an efficient electrocatalyst for alkaline water splitting. <i>Nanoscale</i> , 2019, 11, 7959-7966.	2.8	107
295	Two-Dimensional Amorphous Cr <sub>2</sub> O <sub>3</sub> Modified Metallic Electrodes for Hydrogen Evolution Reaction. <i>Physica Status Solidi - Rapid Research Letters</i> , 2019, 13, 1900025.	1.2	21
296	Synthesis and performance optimization of ultrathin two-dimensional CoFePt alloy materials via in situ topotactic conversion for the hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 9517-9522.	5.2	17
297	Hydrogen evolution reaction on bimetallic Ir/Pt(poly) electrodes in alkaline solution. <i>Electrochimica Acta</i> , 2019, 306, 18-27.	2.6	22
299	Cobalt-Ruthenium Nanoalloys Parceled in Porous Nitrogen-Doped Graphene as Highly Efficient Difunctional Catalysts for Hydrogen Evolution Reaction and Hydrolysis of Ammonia Borane. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 7014-7023.	3.2	95
300	The Hydrogen Oxidation Reaction in Alkaline Medium: An Overview. <i>Electrochemical Energy Reviews</i> , 2019, 2, 312-331.	13.1	56

#	ARTICLE	IF	CITATIONS
301	Chitin-derived porous carbon loaded with Co, N and S with enhanced performance towards electrocatalytic oxygen reduction, oxygen evolution, and hydrogen evolution reactions. <i>Electrochimica Acta</i> , 2019, 304, 350-359.	2.6	22
302	Suppressing H <sub>2</sub> Evolution and Promoting Selective CO <sub>2</sub> Electroreduction to CO at Low Overpotentials by Alloying Au with Pd. <i>ACS Catalysis</i> , 2019, 9, 3527-3536.	5.5	79
303	Improving Oxygen Reduction Reaction and Selective Hydrodechlorination Performance Based on CoNi on Graphene Using Ionic Liquids as a Binder. <i>Journal of the Electrochemical Society</i> , 2019, 166, H157-H166.	1.3	3
304	Tailoring the Electronic Structure of Co <sub>2</sub> P by N Doping for Boosting Hydrogen Evolution Reaction at All pH Values. <i>ACS Catalysis</i> , 2019, 9, 3744-3752.	5.5	357
305	A Roadmap to Low-Cost Hydrogen with Hydroxide Exchange Membrane Electrolyzers. <i>Advanced Materials</i> , 2019, 31, e1805876.	11.1	184
306	Enhanced HOR catalytic activity of PGM-free catalysts in alkaline media: the electronic effect induced by different heteroatom doped carbon supports. <i>Journal of Materials Chemistry A</i> , 2019, 7, 10936-10941.	5.2	84
307	On the feasibility of bifunctional hydrogen oxidation on Ni and NiCu surfaces. <i>Electrochimica Acta</i> , 2019, 305, 452-458.	2.6	28
308	Approaches for measuring the surface areas of metal oxide electrocatalysts for determining their intrinsic electrocatalytic activity. <i>Chemical Society Reviews</i> , 2019, 48, 2518-2534.	18.7	483
309	Hydrogen Evolution and Oxidation: Mechanistic Studies and Material Advances. <i>Advanced Materials</i> , 2019, 31, e1808066.	11.1	418
310	Nanostructured Rhenium-Carbon Composites as Hydrogen-Evolving Catalysts Effective over the Entire pH Range. <i>ACS Applied Nano Materials</i> , 2019, 2, 2725-2733.	2.4	24
311	Synergy of Nb Doping and Surface Alloy Enhanced on Water-Alkali Electrocatalytic Hydrogen Generation Performance in Ti-Based MXene. <i>Advanced Science</i> , 2019, 6, 1900116.	5.6	97
312	Exploring the Composition-Activity Relation of Ni-Cu Binary Alloy Electrocatalysts for Hydrogen Oxidation Reaction in Alkaline Media. <i>ACS Applied Energy Materials</i> , 2019, 2, 3160-3165.	2.5	47
313	Recommended Practices and Benchmark Activity for Hydrogen and Oxygen Electrocatalysis in Water Splitting and Fuel Cells. <i>Advanced Materials</i> , 2019, 31, e1806296.	11.1	841
314	Stoichiometry and surface structure dependence of hydrogen evolution reaction activity and stability of MoxC MXenes. <i>Journal of Catalysis</i> , 2019, 371, 325-332.	3.1	51
315	Ruthenium atomically dispersed in carbon outperforms platinum toward hydrogen evolution in alkaline media. <i>Nature Communications</i> , 2019, 10, 631.	5.8	423
316	Trends and Descriptors of Metal-Modified Transition Metal Carbides for Hydrogen Evolution in Alkaline Electrolyte. <i>ACS Catalysis</i> , 2019, 9, 2415-2422.	5.5	74
317	Tailoring the geometric and electronic structure of tungsten oxide with manganese or vanadium doping toward highly efficient electrochemical and photoelectrochemical water splitting. <i>Journal of Materials Chemistry A</i> , 2019, 7, 6161-6172.	5.2	61
318	Rhodium Phosphide: A New Type of Hydrogen Oxidation Reaction Catalyst with Non-Linear Correlated Catalytic Response to pH. <i>ChemElectroChem</i> , 2019, 6, 1990-1995.	1.7	19

#	ARTICLE	IF	CITATIONS
319	Surface modification of Pt nanoparticles with other metals boosting the alkaline hydrogen oxidation reaction. <i>Chemical Communications</i> , 2019, 55, 3101-3104.	2.2	28
320	Electro- and Solar-Driven Fuel Synthesis with First Row Transition Metal Complexes. <i>Chemical Reviews</i> , 2019, 119, 2752-2875.	23.0	615
321	Ion Exchange Synthesis of Cobalt Ion Modified Titanate Nanoarray as an Electrocatalyst toward Efficient Hydrogen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2019, 2, 8946-8955.	2.5	2
322	Hierarchical nanoporous intermetallic compounds with self-grown transition-metal hydroxides as bifunctional catalysts for the alkaline hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 25925-25931.	5.2	15
324	Electrical Transport and Thermoelectric Properties of SnSe $\epsilon$ SnTe Solid Solution. <i>Materials</i> , 2019, 12, 3854.	1.3	17
325	Effect of Substitutionally Doped Graphene on the Activity of Metal Nanoparticle Catalysts for the Hydrogen Oxidation Reaction. <i>ACS Catalysis</i> , 2019, 9, 1129-1139.	5.5	34
326	Impact of pH on Aqueous-Phase Phenol Hydrogenation Catalyzed by Carbon-Supported Pt and Rh. <i>ACS Catalysis</i> , 2019, 9, 1120-1128.	5.5	55
327	Chimney effect of the interface in metal oxide/metal composite catalysts on the hydrogen evolution reaction. <i>Applied Catalysis B: Environmental</i> , 2019, 245, 122-129.	10.8	132
328	Rational Design of TiC-Supported Single-Atom Electrocatalysts for Hydrogen Evolution and Selective Oxygen Reduction Reactions. <i>ACS Energy Letters</i> , 2019, 4, 126-132.	8.8	104
329	Electrochemical Scanning Probe Microscopies in Electrocatalysis. <i>Small Methods</i> , 2019, 3, 1800387.	4.6	50
330	Co-Fe-P nanotubes electrocatalysts derived from metal-organic frameworks for efficient hydrogen evolution reaction under wide pH range. <i>Nano Energy</i> , 2019, 56, 225-233.	8.2	235
331	Atomic Layer Deposition of NiOOH/Ni(OH) <sub>2</sub> on PIM $\epsilon$ -Based N $\epsilon$ -Doped Carbon Nanofibers for Electrochemical Water Splitting in Alkaline Medium. <i>ChemSusChem</i> , 2019, 12, 1469-1477.	3.6	54
332	Photoinduced composite of Pt decorated Ni(OH) <sub>2</sub> as strongly synergetic cocatalyst to boost H <sub>2</sub> O activation for photocatalytic overall water splitting. <i>Applied Catalysis B: Environmental</i> , 2019, 243, 253-261.	10.8	110
333	The Comparability of Pt to Pt $\epsilon$ Ru in Catalyzing the Hydrogen Oxidation Reaction for Alkaline Polymer Electrolyte Fuel Cells Operated at 80 $\epsilon$ % $\epsilon$ C. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 1442-1446.	7.2	99
334	Ni(OH) <sub>2</sub> -Ni/C for hydrogen oxidation reaction in alkaline media. <i>Journal of Energy Chemistry</i> , 2019, 29, 111-115.	7.1	51
335	Improved hydrogen oxidation reaction under alkaline conditions by Au $\epsilon$ Pt alloy nanoparticles. <i>Journal of Energy Chemistry</i> , 2020, 40, 52-56.	7.1	25
336	Carbon cloth/transition metals-based hybrids with controllable architectures for electrocatalytic hydrogen evolution - A review. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 7716-7740.	3.8	101
337	Recent progress of mesoscience in design of electrocatalytic materials for hydrogen energy conversion. <i>Particuology</i> , 2020, 48, 19-33.	2.0	12

#	ARTICLE	IF	CITATIONS
338	Visible-light-induced unbalanced charge on NiCoP/TiO <sub>2</sub> sensitized system for rapid H <sub>2</sub> generation from hydrolysis of ammonia borane. <i>Applied Catalysis B: Environmental</i> , 2020, 260, 118183.	10.8	84
339	Steering elementary steps towards efficient alkaline hydrogen evolution via size-dependent Ni/NiO nanoscale heterosurfaces. <i>National Science Review</i> , 2020, 7, 27-36.	4.6	192
340	Mesoporous Ni-rich Ni-Pt thin films: Electrodeposition, characterization and performance toward hydrogen evolution reaction in acidic media. <i>Applied Catalysis B: Environmental</i> , 2020, 265, 118597.	10.8	76
341	Recent advances in ruthenium-based electrocatalysts for the hydrogen evolution reaction. <i>Nanoscale Horizons</i> , 2020, 5, 43-56.	4.1	223
342	High-performance tungsten carbide electrocatalysts for the hydrogen evolution reaction. <i>Sustainable Energy and Fuels</i> , 2020, 4, 1078-1083.	2.5	26
343	Electrocatalytic Behavior of Hydrogenated Pd-Metallic Glass Nanofilms: Butler-Volmer, Tafel, and Impedance Analyses. <i>Electrocatalysis</i> , 2020, 11, 94-109.	1.5	27
344	Engineering Local Coordination Environments of Atomically Dispersed and Heteroatom-Coordinated Single Metal Site Electrocatalysts for Clean Energy Conversion. <i>Advanced Energy Materials</i> , 2020, 10, 1902844.	10.2	245
345	Renewable electricity storage using electrolysis. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 12558-12563.	3.3	136
346	Metal hydroxide hybridized tungsten carbide nanorod arrays for enhancing hydrogen evolution in alkaline media. <i>Applied Surface Science</i> , 2020, 509, 144912.	3.1	10
347	Tweaking Nickel with Minimal Silver in a Heterogeneous Alloy of Decahedral Geometry to Deliver Platinum-like Hydrogen Evolution Activity. <i>Angewandte Chemie</i> , 2020, 132, 2903-2911.	1.6	6
348	Electrocatalytic CO <sub>2</sub> Reduction via a Permeable CNT Hollow-Fiber Electrode Incorporated with SnO <sub>2</sub> Nanoparticles. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 2117-2121.	3.2	8
349	Hydroxide Is Not a Promoter of C <sub>2+</sub> Product Formation in the Electrochemical Reduction of CO on Copper. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 4464-4469.	7.2	80
350	Hydroxide Is Not a Promoter of C <sub>2+</sub> Product Formation in the Electrochemical Reduction of CO on Copper. <i>Angewandte Chemie</i> , 2020, 132, 4494-4499.	1.6	16
351	Modulation of iridium-based catalyst by a trace of transition metals for hydrogen oxidation/evolution reaction in alkaline. <i>Electrochimica Acta</i> , 2020, 333, 135444.	2.6	22
352	Tweaking Nickel with Minimal Silver in a Heterogeneous Alloy of Decahedral Geometry to Deliver Platinum-like Hydrogen Evolution Activity. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 2881-2889.	7.2	50
353	Low-Iridium-Content IrNiTa Metallic Glass Films as Intrinsically Active Catalysts for Hydrogen Evolution Reaction. <i>Advanced Materials</i> , 2020, 32, e1906384.	11.1	79
354	Controllable Heteroatom Doping Effects of Cr <sub>x</sub> Co <sub>2-x</sub> P Nanoparticles: a Robust Electrocatalyst for Overall Water Splitting in Alkaline Solutions. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 47397-47407.	4.0	39
355	Bifunctional Behavior of Pd/Ni Nanocatalysts on MOF-Derived Carbons for Alkaline Water Splitting. <i>Electroanalysis</i> , 2020, 32, 3060-3074.	1.5	23

#	ARTICLE	IF	CITATIONS
356	Inter-regulated d-band centers of the Ni <sub>3</sub> B/Ni heterostructure for boosting hydrogen electrooxidation in alkaline media. <i>Chemical Science</i> , 2020, 11, 12118-12123.	3.7	74
357	Explainable and trustworthy artificial intelligence for correctable modeling in chemical sciences. <i>Science Advances</i> , 2020, 6, .	4.7	26
358	Cobalt-Encapsulated in Nitrogen-Doped Carbon Nanotubes Prepared by Hydrothermal Method as Catalyst for Hydrogen Evolution. <i>Integrated Ferroelectrics</i> , 2020, 209, 68-75.	0.3	3
359	Trends in Alkaline Hydrogen Evolution Activity on Cobalt Phosphide Electrocatalysts Doped with Transition Metals. <i>Cell Reports Physical Science</i> , 2020, 1, 100136.	2.8	46
360	Non-precious nickel-based catalysts for hydrogen oxidation reaction in alkaline electrolyte. <i>Electrochemistry Communications</i> , 2020, 121, 106871.	2.3	25
361	Cobalt-Based Metal-Organic Frameworks and Their Derivatives for Hydrogen Evolution Reaction. <i>Frontiers in Chemistry</i> , 2020, 8, 592915.	1.8	32
362	“Beyond Adsorption” Descriptors in Hydrogen Electrocatalysis. <i>ACS Catalysis</i> , 2020, 10, 14747-14762.	5.5	95
363	pH Dependence of Cu Surface Speciation in the Electrochemical CO Reduction Reaction. <i>ACS Catalysis</i> , 2020, 10, 13737-13747.	5.5	57
364	Electrodeposition-fabricated catalysts for polymer electrolyte water electrolysis. <i>Korean Journal of Chemical Engineering</i> , 2020, 37, 1275-1294.	1.2	6
365	Synthesis of CeO <sub>x</sub> -Decorated Pd/C Catalysts by Controlled Surface Reactions for Hydrogen Oxidation in Anion Exchange Membrane Fuel Cells. <i>Advanced Functional Materials</i> , 2020, 30, 2002087.	7.8	58
366	Enhanced multi-carbon alcohol electroproduction from CO via modulated hydrogen adsorption. <i>Nature Communications</i> , 2020, 11, 3685.	5.8	72
367	Theory-Guided Design of Anode Catalysts for Hydrogenous Liquid Fuels. <i>Journal of Physical Chemistry C</i> , 2020, 124, 17494-17502.	1.5	1
368	Reaction coordinate mapping of hydrogen evolution mechanism on Mg <sub>3</sub> N <sub>2</sub> monolayer. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 22848-22854.	3.8	7
369	Surface engineering of RhOOH nanosheets promotes hydrogen evolution in alkaline. <i>Nano Energy</i> , 2020, 78, 105224.	8.2	27
370	Oxygen induced promotion of electrochemical reduction of CO <sub>2</sub> via co-electrolysis. <i>Nature Communications</i> , 2020, 11, 3844.	5.8	102
371	Interfacial water shuffling the intermediates of hydrogen oxidation and evolution reactions in aqueous media. <i>Energy and Environmental Science</i> , 2020, 13, 3064-3074.	15.6	80
372	Well-dispersed Pt nanodots interfaced with Ni(OH) <sub>2</sub> on anodized nickel foam for efficient hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 27067-27077.	3.8	20
373	Non-precious-metal catalysts for alkaline water electrolysis: <i>operando</i> characterizations, theoretical calculations, and recent advances. <i>Chemical Society Reviews</i> , 2020, 49, 9154-9196.	18.7	448

#	ARTICLE	IF	CITATIONS
374	Nanostructured copper molybdates as promising bifunctional electrocatalysts for overall water splitting and CO <sub>2</sub> reduction. RSC Advances, 2020, 10, 39037-39048.	1.7	20
375	A Review of Carbon-Supported Nonprecious Metals as Energy-Related Electrocatalysts. Small Methods, 2020, 4, 2000621.	4.6	76
376	Low Temperature Hydrothermal Method for Synthesis of Crystalline Fe <sub>2</sub> O <sub>3</sub> and their Oxygen Evolution Performance. Electroanalysis, 2020, 32, 2528-2534.	1.5	12
377	Bimetallic nickel-molybdenum/tungsten nanoalloys for high-efficiency hydrogen oxidation catalysis in alkaline electrolytes. Nature Communications, 2020, 11, 4789.	5.8	192
378	Non-Metal Single-Phosphorus Atom Catalysis of Hydrogen Evolution. Angewandte Chemie, 2020, 132, 23999-24007.	1.6	16
379	Phosphorus-Induced Activation of Ruthenium for Boosting Hydrogen Oxidation and Evolution Electrocatalysis. ACS Catalysis, 2020, 10, 11751-11757.	5.5	124
380	Bifunctional mechanism of hydrogen oxidation reaction on atomic level tailored-Ru@Pt core-shell nanoparticles with tunable Pt layers. Journal of Electroanalytical Chemistry, 2020, 872, 114348.	1.9	18
381	Electrocatalytic Hydrogenation of Biomass-Derived Organics: A Review. Chemical Reviews, 2020, 120, 11370-11419.	23.0	185
382	Stabilized Pt Cluster-Based Catalysts Used as Low-Loading Cathode in Proton-Exchange Membrane Fuel Cells. ACS Energy Letters, 2020, 5, 3021-3028.	8.8	39
383	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
384	Non-Metal Single-Phosphorus Atom Catalysis of Hydrogen Evolution. Angewandte Chemie - International Edition, 2020, 59, 23791-23799.	7.2	69
385	Random alloy and intermetallic nanocatalysts in fuel cell reactions. Nanoscale, 2020, 12, 19557-19581.	2.8	27
386	Modeling Hydrogen Evolution Reaction Kinetics through Explicit Water-Metal Interfaces. Journal of Physical Chemistry C, 2020, 124, 28083-28092.	1.5	58
387	Self-Optimized Ligand Effect in L <sub>1</sub> -PtPdFe Intermetallic for Efficient and Stable Alkaline Hydrogen Oxidation Reaction. ACS Catalysis, 2020, 10, 15207-15216.	5.5	64
388	Numerical Deconvolution of Surface Interrogation Scanning Electrochemical Microscopy Experiments on Platinum During Hydrogen Evolution. ChemElectroChem, 2020, 7, 4863-4872.	1.7	5
389	Potential and pH Dependence of the Buried Interface of Membrane-Coated Electrocatalysts. ACS Applied Materials & Interfaces, 2020, 12, 52125-52135.	4.0	2
390	A highly-active, stable and low-cost platinum-free anode catalyst based on RuNi for hydroxide exchange membrane fuel cells. Nature Communications, 2020, 11, 5651.	5.8	142
391	Electronic structure and oxophilicity optimization of mono-layer Pt for efficient electrocatalysis. Nano Energy, 2020, 74, 104877.	8.2	39

#	ARTICLE	IF	CITATIONS
392	NiO@Ni/CNT as an Efficient Hydrogen Electrode Catalyst for a Unitized Regenerative Alkaline Microfluidic Cell. <i>ACS Applied Energy Materials</i> , 2020, 3, 4746-4755.	2.5	18
393	Pt <sub>0.25</sub> Ru <sub>0.75</sub> /Ni as Highly Active and Durable Electrocatalysts toward Alkaline Hydrogen Oxidation Reaction. <i>Advanced Materials Interfaces</i> , 2020, 7, 2000310.	1.9	24
394	Alkaline water-splitting reactions over Pd/Co-MOF-derived carbon obtained via microwave-assisted synthesis. <i>RSC Advances</i> , 2020, 10, 17359-17368.	1.7	30
395	Identifying the Transfer Kinetics of Adsorbed Hydroxyl as a Descriptor of Alkaline Hydrogen Evolution Reaction. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 15232-15237.	7.2	112
396	Ultrafine phosphorus-doped rhodium for enhanced hydrogen electrocatalysis in alkaline electrolytes. <i>Journal of Materials Chemistry A</i> , 2020, 8, 11923-11927.	5.2	34
397	Tailorable Electrocatalytic 5-Hydroxymethylfurfural Oxidation and H <sub>2</sub> Production: Architecture-Performance Relationship in Bifunctional Multilayer Electrodes. <i>ACS Nano</i> , 2020, 14, 6812-6822.	7.3	81
398	Identifying the Transfer Kinetics of Adsorbed Hydroxyl as a Descriptor of Alkaline Hydrogen Evolution Reaction. <i>Angewandte Chemie</i> , 2020, 132, 15344-15349.	1.6	24
399	A scalable Al-Ni alloy powder catalyst prepared by metallurgical microstructure control. <i>Journal of Materials Chemistry A</i> , 2020, 8, 11133-11140.	5.2	6
400	The role of an interface in stabilizing reaction intermediates for hydrogen evolution in aprotic electrolytes. <i>Chemical Science</i> , 2020, 11, 3914-3922.	3.7	23
401	Castoff derived Biomass carbon supported MoS <sub>2</sub> nanosheets for hydrogen evolution reaction. <i>Materials Chemistry and Physics</i> , 2020, 252, 123244.	2.0	24
402	Recent Advances in the Understanding of Nickel-Based Catalysts for the Oxidation of Hydrogen-Containing Fuels in Alkaline Media. <i>ACS Catalysis</i> , 2020, 10, 7043-7068.	5.5	125
403	Favorable role of heterojunction in trimetallic Fe-Co-Cu phosphides on nitrogen-doped carbon materials for hydrogen evolution. <i>Materials Today Energy</i> , 2020, 17, 100464.	2.5	5
404	Cobalt-based heterogeneous catalysts in an electrolyzer system for sustainable energy storage. <i>Dalton Transactions</i> , 2020, 49, 11430-11450.	1.6	12
405	Atomic Thickness Catalysts: Synthesis and Applications. <i>Small Methods</i> , 2020, 4, 2000248.	4.6	32
406	Transition-metal-based electrocatalysts for hydrazine-assisted hydrogen production. <i>Materials Today Advances</i> , 2020, 7, 100083.	2.5	29
407	IrMo Nanocatalysts for Efficient Alkaline Hydrogen Electrocatalysis. <i>ACS Catalysis</i> , 2020, 10, 7322-7327.	5.5	87
408	Atomically dispersed catalysts for hydrogen/oxygen evolution reactions and overall water splitting. <i>Journal of Power Sources</i> , 2020, 471, 228446.	4.0	74
409	Why the activity of the hydrogen oxidation reaction on platinum decreases as pH increases. <i>Electrochimica Acta</i> , 2020, 354, 136620.	2.6	28

#	ARTICLE	IF	CITATIONS
410	Discrepant roles of adsorbed OH* species on IrWO for boosting alkaline hydrogen electrocatalysis. <i>Science Bulletin</i> , 2020, 65, 1735-1742.	4.3	37
411	Impact of Alkali Metal Cations and Iron Impurities on the Evolution of Hydrogen on Cu Electrodes in Alkaline Electrolytes. <i>Journal of the Electrochemical Society</i> , 2020, 167, 106505.	1.3	16
412	Spontaneously separated intermetallic Co <sub>3</sub> Mo from nanoporous copper as versatile electrocatalysts for highly efficient water splitting. <i>Nature Communications</i> , 2020, 11, 2940.	5.8	146
413	In situ construction of tandem nitrogen-doped MoP nanocrystals for high-efficient electrocatalytic hydrogen evolution. <i>Electrochimica Acta</i> , 2020, 342, 136059.	2.6	11
414	Nickel nanoflakes on 4-Amino-4H-1,2,4-triazole/graphene for sustainable hydrogen evolution in acid and alkaline media. <i>Applied Surface Science</i> , 2020, 515, 145999.	3.1	21
415	Parallelized Screening of Characterized and DFT-Modeled Bimetallic Colloidal Cocatalysts for Photocatalytic Hydrogen Evolution. <i>ACS Catalysis</i> , 2020, 10, 4244-4252.	5.5	41
416	Highly efficient electrocatalytic hydrogen evolution promoted by Oâ€“Moâ€“C interfaces of ultrafine Î²-Mo<sub>2</sub>C nanostructures. <i>Chemical Science</i> , 2020, 11, 3523-3530.	3.7	54
417	Influence of the NaOH Concentration on the Hydrogen Electrode Reaction Kinetics of Ni and NiCu Electrodes. <i>ChemElectroChem</i> , 2020, 7, 1438-1447.	1.7	11
418	Nature-inspired electrocatalysts and devices for energy conversion. <i>Chemical Society Reviews</i> , 2020, 49, 3107-3141.	18.7	84
419	Engineering the hydrogen evolution reaction of transition metals: effect of Li ions. <i>Journal of Materials Chemistry A</i> , 2020, 8, 15795-15808.	5.2	14
420	Nanosponge-like Solid Solution of NiMo with a High Hydrogen Evolution Reaction Performance over a Wide Range of Current Densities. <i>ACS Sustainable Chemistry and Engineering</i> , 0, , .	3.2	7
421	Platinumâ€“Nickel Nanowires with Improved Hydrogen Evolution Performance in Anion Exchange Membrane-Based Electrolysis. <i>ACS Catalysis</i> , 2020, 10, 9953-9966.	5.5	19
422	Addressing the OER/HER imbalance by a redox transition-induced two-way electron injection in a bifunctional nâ€“pâ€“n electrode for excellent water splitting. <i>Journal of Materials Chemistry A</i> , 2020, 8, 13218-13230.	5.2	17
423	Effect of Atomic Ordering Transformation of PtNi Nanoparticles on Alkaline Hydrogen Evolution: Unexpected Superior Activity of the Disordered Phase. <i>Journal of Physical Chemistry C</i> , 2020, 124, 5036-5045.	1.5	32
424	NiAg<sub>0.4</sub> 3D porous nanoclusters with epitaxial interfaces exhibiting Pt like activity towards hydrogen evolution in alkaline medium. <i>Nanoscale</i> , 2020, 12, 8432-8442.	2.8	14
425	Highly efficient and stable Si photocathode with hierarchical MoS <sub>2</sub> /Ni <sub>3</sub> S <sub>2</sub> catalyst for solar hydrogen production in alkaline media. <i>Nano Energy</i> , 2020, 71, 104631.	8.2	51
426	Li<sub>x</sub>NiO/Ni Heterostructure with Strong Basic Lattice Oxygen Enables Electrocatalytic Hydrogen Evolution with Pt-like Activity. <i>Journal of the American Chemical Society</i> , 2020, 142, 12613-12619.	6.6	103
427	Phosphorous-doped carbon coordinated iridium diphosphide bifunctional catalyst with ultralow iridium amount for efficient all-pH-value hydrogen evolution and oxygen reduction reactions. <i>Journal of Catalysis</i> , 2020, 383, 244-253.	3.1	30



#	ARTICLE	IF	CITATIONS
428	Enhancing Hydrogen Evolution Activity of Au(111) in Alkaline Media through Molecular Engineering of a 2D Polymer. <i>Angewandte Chemie</i> , 2020, 132, 8489-8493.	1.6	1
429	Pt nanoparticles/Fe-doped $\text{Ni}(\text{OH})_2$ nanosheets array with low Pt loading as a high-performance electrocatalyst for alkaline hydrogen evolution reaction. <i>Journal of Alloys and Compounds</i> , 2020, 823, 153790.	2.8	17
430	Platinum-rhodium alloyed dendritic nanoassemblies: An all-pH efficient and stable electrocatalyst for hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 6110-6119.	3.8	87
431	Strategies for design of electrocatalysts for hydrogen evolution under alkaline conditions. <i>Materials Today</i> , 2020, 36, 125-138.	8.3	308
432	van der Waals Heterojunction between a Bottom-Up Grown Doped Graphene Quantum Dot and Graphene for Photoelectrochemical Water Splitting. <i>ACS Nano</i> , 2020, 14, 1185-1195.	7.3	100
433	N, Ru Codoped Pellet Drum Bundle-Like $\text{Sb}_2\text{S}_3$ : An Efficient Hydrogen Evolution Reaction and Hydrogen Oxidation Reaction Electrocatalyst in Alkaline Medium. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 7057-7070.	4.0	28
434	Achieving Efficient Alkaline Hydrogen Evolution Reaction over a $\text{Ni}_5\text{P}_4$ Catalyst Incorporating Single-Atomic Ru Sites. <i>Advanced Materials</i> , 2020, 32, e1906972.	11.1	281
435	Nickel nanograins anchored on a carbon framework for an efficient hydrogen evolution electrocatalyst and a flexible electrode. <i>Journal of Materials Chemistry A</i> , 2020, 8, 3499-3508.	5.2	18
436	Removal of Surface Poisoning Improves Hydrogen Oxidation Performance of Pt Catalysts under Basic Conditions. <i>ACS Applied Energy Materials</i> , 2020, 3, 1854-1859.	2.5	8
437	Enhancing Hydrogen Evolution Activity of Au(111) in Alkaline Media through Molecular Engineering of a 2D Polymer. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 8411-8415.	7.2	15
438	Self-Templating Strategies for Transition Metal Sulfide Nanoboxes as Robust Bifunctional Electrocatalysts. <i>Chemistry of Materials</i> , 2020, 32, 1371-1383.	3.2	50
439	Understanding Surface Modulation to Improve the Photo/Electrocatalysts for Water Oxidation/Reduction. <i>Molecules</i> , 2020, 25, 1965.	1.7	8
440	Biomass-derived self-supported porous carbon membrane embedded with Co nanoparticles as an advanced electrocatalyst for efficient and robust hydrogen evolution reaction. <i>Renewable Energy</i> , 2020, 155, 447-455.	4.3	26
441	Surface Composition Dependent Ligand Effect in Tuning the Activity of Nickel-Copper Bimetallic Electrocatalysts toward Hydrogen Evolution in Alkaline. <i>Journal of the American Chemical Society</i> , 2020, 142, 7765-7775.	6.6	234
442	Synthesis of high-entropy alloy nanoparticles on supports by the fast moving bed pyrolysis. <i>Nature Communications</i> , 2020, 11, 2016.	5.8	195
443	Recent trends in alkaline hydrogen evolution using nonprecious multi-metallic electrocatalysts. <i>Current Opinion in Green and Sustainable Chemistry</i> , 2020, 25, 100342.	3.2	7
444	Into the "secret" double layer: Alkali cation mediates the hydrogen evolution reaction in basic medium. <i>Journal of Energy Chemistry</i> , 2020, 51, 101-104.	7.1	7
445	Isolated Ni Atoms Dispersed on Ru Nanosheets: High-Performance Electrocatalysts toward Hydrogen Oxidation Reaction. <i>Nano Letters</i> , 2020, 20, 3442-3448.	4.5	172

#	ARTICLE	IF	CITATIONS
446	Metallic nanostructures with low dimensionality for electrochemical water splitting. <i>Chemical Society Reviews</i> , 2020, 49, 3072-3106.	18.7	609
447	Insight into the hydrogen oxidation electrocatalytic performance enhancement on Ni via oxophilic regulation of MoO <sub>2</sub> . <i>Journal of Energy Chemistry</i> , 2021, 54, 202-207.	7.1	44
448	The Heterostructure of Ru <sub>2</sub> P/WO <sub>3</sub> /NPC Synergistically Promotes H <sub>2</sub> O Dissociation for Improved Hydrogen Evolution. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 4110-4116.	7.2	141
449	Noble-Metal Nanocrystals with Controlled Shapes for Catalytic and Electrocatalytic Applications. <i>Chemical Reviews</i> , 2021, 121, 649-735.	23.0	388
450	Electrodeposition: Synthesis of advanced transition metal-based catalyst for hydrogen production via electrolysis of water. <i>Journal of Energy Chemistry</i> , 2021, 57, 547-566.	7.1	116
451	Development Trends on Nickel-Based Electrocatalysts for Direct Hydrazine Fuel Cells. <i>ChemCatChem</i> , 2021, 13, 81-110.	1.8	38
452	Anion-mediated transition metal electrocatalysts for efficient water electrolysis: Recent advances and future perspectives. <i>Coordination Chemistry Reviews</i> , 2021, 427, 213552.	9.5	66
453	The Heterostructure of Ru <sub>2</sub> P/WO <sub>3</sub> /NPC Synergistically Promotes H <sub>2</sub> O Dissociation for Improved Hydrogen Evolution. <i>Angewandte Chemie</i> , 2021, 133, 4156-4162.	1.6	33
454	WO <sub>x</sub> Surface Decorated PtNi@Pt Dendritic Nanowires as Efficient pH-Universal Hydrogen Evolution Electrocatalysts. <i>Advanced Energy Materials</i> , 2021, 11, 2003192.	10.2	82
455	Transition-Metal Carbides as Hydrogen Evolution Reduction Electrocatalysts: Synthetic Methods and Optimization Strategies. <i>Chemistry - A European Journal</i> , 2021, 27, 5074-5090.	1.7	41
456	Graphene materials for the electrocatalysts used for fuel cells and electrolyzers. , 2021, , 389-415.		1
457	Nanoporous Surface High-Entropy Alloys as Highly Efficient Multisite Electrocatalysts for Nonacidic Hydrogen Evolution Reaction. <i>Advanced Functional Materials</i> , 2021, 31, 2009613.	7.8	145
458	Recent Advances in the Controlled Synthesis and Catalytic Applications of Two-Dimensional Rhodium Nanomaterials. , 2021, 3, 121-133.		28
459	Further insights into bifunctional mechanism in alkaline hydrogen evolution for hybridized nanocatalysts and general route toward mechanism-oriented synthesis. <i>Nano Energy</i> , 2021, 81, 105645.	8.2	23
460	Alloying Nickel with Molybdenum Significantly Accelerates Alkaline Hydrogen Electrocatalysis. <i>Angewandte Chemie</i> , 2021, 133, 5835-5841.	1.6	37
461	Understanding the Hydrogen Evolution Reaction Kinetics of Electrodeposited Nickel-Molybdenum in Acidic, Near-Neutral, and Alkaline Conditions. <i>ChemElectroChem</i> , 2021, 8, 195-208.	1.7	100
462	Coaxial nanofibers of nickel/gadolinium oxide/nickel oxide as highly effective electrocatalysts for hydrogen evolution reaction. <i>Journal of Colloid and Interface Science</i> , 2021, 587, 457-466.	5.0	47
463	Electrochemically fabricated MoO <sub>3</sub> MoO <sub>2</sub> @NiMo heterostructure catalyst with Pt-like activity for the pH-universal hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2021, 9, 3677-3684.	5.2	27

#	ARTICLE	IF	CITATIONS
464	Alloying Nickel with Molybdenum Significantly Accelerates Alkaline Hydrogen Electrocatalysis. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 5771-5777.	7.2	182
465	Direct electrodeposition of $\text{Ni-Co}$ on carbon paper as an efficient cathode for anion exchange membrane water electrolyzers. <i>International Journal of Energy Research</i> , 2021, 45, 1918-1931.	2.2	27
466	Atomic heterointerface engineering overcomes the activity limitation of electrocatalysts and promises highly-efficient alkaline water splitting. <i>Energy and Environmental Science</i> , 2021, 14, 5228-5259.	15.6	198
467	Alkaline Anion Exchange Membrane (AEM) Water Electrolysers – Current/Future Perspectives in Electrolysers for Hydrogen. , 2022, , 473-504.		2
468	Harnessing Photoelectrochemistry for Wastewater Nitrate Treatment Coupled with Resource Recovery. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 3688-3701.	3.2	15
469	Integration of redox cocatalysts for artificial photosynthesis. <i>Energy and Environmental Science</i> , 2021, 14, 5260-5288.	15.6	105
470	Understanding the enhanced catalytic activity of high entropy alloys: from theory to experiment. <i>Journal of Materials Chemistry A</i> , 2021, 9, 19410-19438.	5.2	43
471	Ultra-low amount Pt-doped $\text{Co}_2\text{P}/\text{Ni}_2\text{P}$ on nickel foam as an efficient electrocatalyst for the hydrogen evolution reaction in an alkaline electrolyte. <i>Sustainable Energy and Fuels</i> , 2021, 5, 1059-1066.	2.5	21
472	Ultrathin metal-organic framework nanosheet arrays and derived self-supported electrodes for overall water splitting. <i>Journal of Materials Chemistry A</i> , 2021, 9, 22597-22602.	5.2	41
473	An Integrated Methodology for Screening Hydrogen Evolution Reaction Catalysts: Pt/Mo <sub>2</sub> C as an Example. <i>Springer Series in Materials Science</i> , 2021, , 719-731.	0.4	0
474	Engineering the Near-Surface of PtRu <sub>3</sub> Nanoparticles to Improve Hydrogen Oxidation Activity in Alkaline Electrolyte. <i>Small</i> , 2021, 17, e2006698.	5.2	41
475	Self-supported hierarchical nanoporous Cu/Mo@MoO <sub>x</sub> hybrid electrodes as robust nonprecious electrocatalysts for high-efficiency hydrogen evolution. <i>Current Nanoscience</i> , 2021, 16, .	0.7	0
476	Insights of enhanced oxygen evolution reaction of nanostructured cobalt ferrite surface. <i>Journal of Materials Science</i> , 2021, 56, 8383-8395.	1.7	16
477	Strategies and Perspectives to Catch the Missing Pieces in Energy-Efficient Hydrogen Evolution Reaction in Alkaline Media. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 18981-19006.	7.2	239
478	Hydrogen production from water electrolysis: role of catalysts. <i>Nano Convergence</i> , 2021, 8, 4.	6.3	540
479	Hexagonal RuSe <sub>2</sub> Nanosheets for Highly Efficient Hydrogen Evolution Electrocatalysis. <i>Angewandte Chemie</i> , 2021, 133, 7089-7093.	1.6	20
480	TiO <sub>2</sub> Photocatalysis for the Transformation of Aromatic Water Pollutants into Fuels. <i>Catalysts</i> , 2021, 11, 317.	1.6	34
481	Ambient Condition Alcohol Reforming to Hydrogen with Electricity Output. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 3104-3111.	3.2	2

#	ARTICLE	IF	CITATIONS
482	Dual Photolytic Pathways in an Alloyed Plasmonic Near-Perfect Absorber: Implications for Photoelectrocatalysis. <i>ACS Applied Nano Materials</i> , 2021, 4, 2702-2712.	2.4	5
483	Thermal Puffing Promoting the Synthesis of N-Doped Hierarchical Porous Carbon-CoO Composites for Alkaline Water Reduction. <i>ACS Omega</i> , 2021, 6, 6474-6481.	1.6	3
484	Defect-Rich FeN <sub>0.023</sub> /Mo <sub>2</sub> C Heterostructure as a Highly Efficient Bifunctional Catalyst for Overall Water-Splitting. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 8306-8314.	4.0	38
485	Hexagonal RuSe <sub>2</sub> Nanosheets for Highly Efficient Hydrogen Evolution Electrocatalysis. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 7013-7017.	7.2	88
486	Strategies and Perspectives to Catch the Missing Pieces in Energy-Efficient Hydrogen Evolution Reaction in Alkaline Media. <i>Angewandte Chemie</i> , 2021, 133, 19129-19154.	1.6	13
487	A Complementary Co-Ni Phosphide/Bimetallic Alloy-Interspersed N-Doped Graphene Electrocatalyst for Overall Alkaline Water Splitting. <i>ChemSusChem</i> , 2021, 14, 1921-1935.	3.6	42
488	Efficient Water Splitting System Enabled by Multifunctional Platinum-Free Electrocatalysts. <i>Advanced Functional Materials</i> , 2021, 31, 2009853.	7.8	41
489	Designing Synergistic Electrocatalysts for H <sub>2</sub> Oxidation and Evolution Reactions in Alkaline Media. <i>Journal of Physical Chemistry C</i> , 2021, 125, 7188-7203.	1.5	9
490	Effect of Cobalt Speciation and the Graphitization of the Carbon Matrix on the CO <sub>2</sub> Electroreduction Activity of Co/N-Doped Carbon Materials. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 15122-15131.	4.0	13
491	Ni nanoparticles on active (001) facet-exposed rutile TiO <sub>2</sub> nanopyramid arrays for efficient hydrogen evolution. <i>Applied Catalysis B: Environmental</i> , 2021, 282, 119548.	10.8	40
492	Evoking ordered vacancies in metallic nanostructures toward a vacated Barlow packing for high-performance hydrogen evolution. <i>Science Advances</i> , 2021, 7, .	4.7	64
493	FeN <sub>x</sub> (C)-Coated Microscale Zero-Valent Iron for Fast and Stable Trichloroethylene Dechlorination in both Acidic and Basic pH Conditions. <i>Environmental Science &amp; Technology</i> , 2021, 55, 5393-5402.	4.6	49
495	Rare-Earth Incorporated Alloy Catalysts: Synthesis, Properties, and Applications. <i>Advanced Materials</i> , 2021, 33, e2005988.	11.1	84
496	Noble metal-free electrocatalytic materials for water splitting in alkaline electrolyte. <i>EnergyChem</i> , 2021, 3, 100053.	10.1	68
497	The influence of zinc electrode substrate, electrolyte flow rate and current density on zinc-nickel flow cell performance. <i>Electrochimica Acta</i> , 2021, 373, 137890.	2.6	7
498	Earth-Abundant Electrocatalysts for Water Splitting: Current and Future Directions. <i>Catalysts</i> , 2021, 11, 429.	1.6	25
499	Ni(OH) <sub>2</sub> -free NiCu as a hydrogen evolution and oxidation electrocatalyst. <i>Electrochemistry Communications</i> , 2021, 125, 106999.	2.3	9
500	Mo-Co-Ni Hybrid Nanosheets Oriented on Hierarchical Nanoporous Cu as Versatile Electrocatalysts for Efficient Water Splitting. <i>Advanced Functional Materials</i> , 2021, 31, 2102285.	7.8	41

#	ARTICLE	IF	CITATIONS
501	Selective phosphidation and reduction strategy to construct heterostructured porous nanorod of CoP coated on Mn <sub>3</sub> O <sub>4</sub> as a bifunctional electrocatalyst for overall water splitting. <i>Applied Surface Science</i> , 2021, 544, 148860.	3.1	14
502	Constructing Ultrathin W-Doped NiFe Nanosheets via Facile Electrosynthesis as Bifunctional Electrocatalysts for Efficient Water Splitting. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 20070-20080.	4.0	54
503	Interface- and Surface-Engineered Pd <sub>2</sub> Ru <sub>2</sub> Hetero-Nanostructures with High Activity for Hydrogen Evolution/Oxidation Reactions. <i>ChemSusChem</i> , 2021, 14, 2112-2125.	3.6	23
504	Electrochemical deposition of nickel targets from aqueous electrolytes for medical radioisotope production in accelerators: a review. <i>Journal of Solid State Electrochemistry</i> , 2021, 25, 1699-1725.	1.2	5
505	Construction of Ni-Mo-P heterostructures with efficient hydrogen evolution performance under acidic condition. <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 14966-14975.	1.1	4
506	Origin of Electrocatalytic Activity in Amorphous Nickel-Metalloid Electrodeposits. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 23689-23701.	4.0	8
507	Enhanced catalytic activity of Ru through N modification toward alkaline hydrogen electrocatalysis. <i>Chinese Chemical Letters</i> , 2022, 33, 1065-1069.	4.8	31
508	Strategic design for promoting water behavior via ensemble of thermo-responsive polymer functionalized catalysts and reservoir carbon in anion exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2021, 494, 229738.	4.0	9
509	Ni/NiO hybrid nanostructure supported on biomass carbon for visible-light photocatalytic hydrogen evolution. <i>Journal of Materials Science</i> , 2021, 56, 12775-12788.	1.7	10
510	Atomic-Level Modulation of the Interface Chemistry of Platinum-Nickel Oxide toward Enhanced Hydrogen Electrocatalysis Kinetics. <i>Nano Letters</i> , 2021, 21, 4845-4852.	4.5	31
511	Compressive Strain Reduces the Hydrogen Evolution and Oxidation Reaction Activity of Platinum in Alkaline Solution. <i>ACS Catalysis</i> , 2021, 11, 8165-8173.	5.5	37
512	Highly Surface-Distorted Pt Superstructures for Multifunctional Electrocatalysis. <i>Nano Letters</i> , 2021, 21, 5075-5082.	4.5	31
513	Heteroatom-doped graphene-based materials for sustainable energy applications: A review. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 143, 110849.	8.2	192
514	Photocatalytic overall water splitting by graphitic carbon nitride. <i>Informa-Materially</i> , 2021, 3, 931-961.	8.5	74
515	Recent advances in nanostructured electrocatalysts for hydrogen evolution reaction. <i>Rare Metals</i> , 2021, 40, 3375-3405.	3.6	112
516	Interfacial Electronic Coupling of NC@WO <sub>3</sub> @W <sub>2</sub> C Decorated Ru Clusters as a Reversible Catalyst toward Electrocatalytic Hydrogen Oxidation and Evolution Reactions. <i>ChemSusChem</i> , 2021, 14, 2992-3000.	3.6	25
517	Doping Platinum with Germanium: An Effective Way to Mitigate the CO Poisoning. <i>ChemPhysChem</i> , 2021, 22, 1603-1610.	1.0	5
518	Self-supported Co/CoO anchored on N-doped carbon composite as bifunctional electrocatalyst for efficient overall water splitting. <i>Chemical Engineering Journal</i> , 2021, 414, 128804.	6.6	122

#	ARTICLE	IF	CITATIONS
519	Electrokinetic and in situ spectroscopic investigations of CO electrochemical reduction on copper. Nature Communications, 2021, 12, 3264.	5.8	80
520	Advanced Research Progress on High-Efficient Utilization of Pt Electrocatalysts in Fuel Cells. Energy Technology, 2021, 9, 2100227.	1.8	8
521	Carbon nanoparticle coated by silicon dioxide supported platinum nanoparticles towards oxygen reduction reaction. Materials Research Bulletin, 2021, 139, 111268.	2.7	7
523	Improvement of Hydrogen Oxidation Reaction in Anion Exchange Membrane Fuel Cells with Ruthenium-based Nanoparticle Catalysts. Journal of the Japan Petroleum Institute, 2021, 64, 166-171.	0.4	2
524	Bridging NiCo layered double hydroxides and Ni <sub>3</sub> S <sub>2</sub> for bifunctional electrocatalysts: The role of vertical graphene. Chemical Engineering Journal, 2021, 415, 129048.	6.6	39
525	Emerging Cocatalysts on g-C <sub>3</sub> N <sub>4</sub> for Photocatalytic Hydrogen Evolution. Small, 2021, 17, e2101070.	5.2	223
526	Pushing Cu uphill of the volcano curve: Impact of a WC support on the catalytic activity of copper toward the hydrogen evolution reaction. International Journal of Hydrogen Energy, 2021, 46, 25092-25102.	3.8	7
527	Boosting neutral hydrogen evolution reaction on iridium by support effect of W <sub>18</sub> O <sub>49</sub> . Applied Catalysis A: General, 2021, 623, 118293.	2.2	8
528	Functionalized Embedded Monometallic Nickel Catalysts for Enhanced Hydrogen Evolution: Performance and Stability. Journal of the Electrochemical Society, 2021, 168, 084501.	1.3	9
529	As a single atom Pd outperforms Pt as the most active co-catalyst for photocatalytic H <sub>2</sub> evolution. IScience, 2021, 24, 102938.	1.9	33
530	The strain and transition metal doping effects on monolayer Cr <sub>2</sub> O <sub>3</sub> for hydrogen evolution reaction: The first principle calculations. International Journal of Hydrogen Energy, 2022, 47, 37429-37437.	3.8	8
531	Insights into the Interfacial Lewis Acid-Base Pairs in CeO <sub>2</sub> -Loaded CoS <sub>2</sub> Electrocatalysts for Alkaline Hydrogen Evolution. Small, 2021, 17, e2103018.	5.2	41
532	The role of ruthenium in improving the kinetics of hydrogen oxidation and evolution reactions of platinum. Nature Catalysis, 2021, 4, 711-718.	16.1	182
533	Multi-Sites Electrocatalysis in High-Entropy Alloys. Advanced Functional Materials, 2021, 31, 2106715.	7.8	128
534	Ru <sub>2</sub> P nanofibers for high-performance anion exchange membrane water electrolyzer. Chemical Engineering Journal, 2021, 420, 130491.	6.6	19
535	<sc>RuNi</sc> Alloy Nanoparticles Encapsulated in <sc>Oxygen-Doped</sc> Carbon as Bifunctional Catalyst towards Hydrogen Electrocatalysis. Chinese Journal of Chemistry, 2021, 39, 3455-3461.	2.6	19
536	Two-Dimensional Graphdiyne-Confined Platinum Catalyst for Hydrogen Evolution and Oxygen Reduction Reactions. ACS Applied Materials & Interfaces, 2021, 13, 47541-47548.	4.0	15
537	Oxyhydroxide Species Enhances CO <sub>2</sub> Electroreduction to CO on Ag via Coelectrolysis with O <sub>2</sub> . ACS Catalysis, 2021, 11, 12029-12037.	5.5	36

#	ARTICLE	IF	CITATIONS
538	Can hydrogen anion be a possible intermediate of the hydrogen electrode reaction?. Journal of Electroanalytical Chemistry, 2021, 896, 115150.	1.9	3
539	Innovative strategies toward challenges in PV-powered electrochemical CO <sub>2</sub> reduction. Journal of Energy Chemistry, 2021, 60, 410-416.	7.1	23
540	Inside solid-liquid interfaces: Understanding the influence of the electrical double layer on alkaline hydrogen evolution reaction. Applied Catalysis B: Environmental, 2021, 293, 120220.	10.8	38
541	Promotion of alkaline hydrogen production via Ni doping of atomically precise Ag nanoclusters. Bulletin of the Korean Chemical Society, 2021, 42, 1672-1677.	1.0	10
542	Multicomponent nonprecious hydrogen evolution catalysts for high performance and durable proton exchange membrane water electrolyzer. Journal of Power Sources, 2021, 506, 230200.	4.0	17
543	Boosting alkaline hydrogen electrooxidation on an unconventional fcc-Ru polycrystal. Journal of Energy Chemistry, 2021, 61, 15-22.	7.1	36
544	Hydrogen evolution reaction in an alkaline environment through nanoscale Ni, Pt, NiO, Fe/Ni and Pt/Ni surfaces: Reactive molecular dynamics simulation. Materials Chemistry and Physics, 2021, 271, 124886.	2.0	10
545	Multifunctional electrocatalysts of nickel boride nanoparticles for superior hydrogen oxidation and water splitting. Materials Today Energy, 2021, 22, 100846.	2.5	24
546	Electrocatalysts development for hydrogen oxidation reaction in alkaline media: From mechanism understanding to materials design. Chinese Journal of Catalysis, 2021, 42, 2094-2104.	6.9	15
547	Bimetallic copper nickel sulfide electrocatalyst by one step chemical bath deposition for efficient and stable overall water splitting applications. Journal of Colloid and Interface Science, 2022, 606, 101-112.	5.0	56
548	Tuning the electronic structures of cobalt-molybdenum bimetallic carbides to boost the hydrogen oxidation reaction in alkaline medium. Chemical Engineering Journal, 2022, 428, 131206.	6.6	30
549	First electrochemical synthesis of mesoporous RhNi alloy films for an alkali-mediated hydrogen evolution reaction. Journal of Materials Chemistry A, 2021, 9, 2754-2763.	5.2	25
550	Strong electrostatic adsorption-engaged fabrication of sub-3.0 nm PtRu alloy nanoparticles as synergistic electrocatalysts toward hydrogen evolution. Nanoscale, 2021, 13, 10044-10050.	2.8	18
551	Boosting the water dissociation kinetics via charge redistribution of ruthenium decorated on S, N-codoped carbon. Journal of Materials Chemistry A, 2021, 9, 16967-16973.	5.2	19
552	Recent advances in the metal-organic framework-based electrocatalysts for the hydrogen evolution reaction in water splitting: a review. RSC Advances, 2021, 11, 21904-21925.	1.7	58
553	Metal nanoparticles in photocatalysis: Advances and challenges. , 2021, , 119-143.		4
554	Metal oxide-based electrocatalysts for low-temperature electrochemical production and oxidation of hydrogen (HER and HOR). , 2021, , 9-35.		0
555	Operando X-ray absorption spectroscopy of a Pd <sup>3+</sup> -NiOOH 2 nm cubes hydrogen oxidation catalyst in an alkaline membrane fuel cell. Catalysis Science and Technology, 2021, 11, 1337-1344.	2.1	4

#	ARTICLE	IF	CITATIONS
556	Boosting Both Electrocatalytic Activity and Durability of Metal Aerogels via Intrinsic Hierarchical Porosity and Continuous Conductive Network Backbone Preservation. <i>Advanced Energy Materials</i> , 2021, 11, 2002276.	10.2	24
557	Rh <sub>2</sub> S <sub>3</sub> /N-Doped Carbon Hybrids as pH-Universal Bifunctional Electrocatalysts for Energy-Saving Hydrogen Evolution. <i>Small Methods</i> , 2020, 4, 2000208.	4.6	45
558	Common Pitfalls of Reporting Electrocatalysts for Water Splitting. <i>Chemical Research in Chinese Universities</i> , 2020, 36, 360-365.	1.3	12
559	Active nickel derived from coordination complex with weak inter/intra-molecular interactions for efficient hydrogen evolution via a tandem mechanism. <i>Journal of Catalysis</i> , 2020, 389, 29-37.	3.1	7
560	Comparison of electrochemical active surface area methods for various nickel nanostructures. <i>Journal of Electroanalytical Chemistry</i> , 2020, 870, 114246.	1.9	108
561	Using graphdiyne (GDY) as a catalyst support for enhanced performance in organic pollutant degradation and hydrogen production: A review. <i>Journal of Hazardous Materials</i> , 2020, 398, 122957.	6.5	45
562	Review—A Review on Electrodes Used in Electroorganic Synthesis and the Significance of Coupled Electrocatalytic Reactions. <i>Journal of the Electrochemical Society</i> , 2020, 167, 125503.	1.3	12
563	Atomically dispersed Pd catalysts promote the oxygen evolution reaction in acidic media. <i>Chemical Communications</i> , 2021, 57, 11561-11564.	2.2	10
564	Design principles of noble metal-free electrocatalysts for hydrogen production in alkaline media: combining theory and experiment. <i>Nanoscale Advances</i> , 2021, 3, 6797-6826.	2.2	23
565	Synergistic Electrocatalysts for Alkaline Hydrogen Oxidation and Evolution Reactions. <i>Advanced Functional Materials</i> , 2022, 32, 2107479.	7.8	66
566	Assessing Silver Palladium Alloys for Electrochemical CO <sub>2</sub> Reduction in Membrane Electrode Assemblies. <i>ChemElectroChem</i> , 2021, 8, 4515-4521.	1.7	4
567	Design and synthesis of noble metal-based electrocatalysts using metal-organic frameworks and derivatives. <i>Materials Today Nano</i> , 2022, 17, 100144.	2.3	17
568	Electrochemical stability and degradation of commercial Rh/C catalyst in acidic media. <i>Electrochimica Acta</i> , 2021, 400, 139435.	2.6	5
569	Advances in Theoretical Studies on Solid Catalysts for Renewable Energy Production. <i>Advances in Chemical and Materials Engineering Book Series</i> , 2018, , 1-32.	0.2	0
570	Chapter 5. Evaluating Electrocatalysts for Solar Water-splitting Reactions. <i>RSC Energy and Environment Series</i> , 2018, , 154-181.	0.2	0
571	Advanced hydrogen evolution electrocatalysts promising sustainable hydrogen and chlor-alkali co-production. <i>Energy and Environmental Science</i> , 2021, 14, 6191-6210.	15.6	53
572	Fundamentals of water electrolysis. , 2022, , 37-62.		3
573	Interfacial engineering of Ni(OH) <sub>2</sub> on W <sub>2</sub> C for remarkable alkaline hydrogen production. <i>Applied Catalysis B: Environmental</i> , 2022, 301, 120818.	10.8	51



#	ARTICLE	IF	CITATIONS
574	Intermetallic Cu <sub>5</sub> Zr Clusters Anchored on Hierarchical Nanoporous Copper as Efficient Catalysts for Hydrogen Evolution Reaction. <i>Research</i> , 2020, 2020, 2987234.	2.8	21
575	Interfacial engineering of 3D hollow CoSe <sub>2</sub> @ultrathin MoSe <sub>2</sub> core@shell heterostructure for efficient pH-universal hydrogen evolution reaction. <i>Nano Research</i> , 2022, 15, 2895-2904.	5.8	64
576	Phase and interface engineering of nickel carbide nanobranches for efficient hydrogen oxidation catalysis. <i>Journal of Materials Chemistry A</i> , 2021, 9, 26323-26329.	5.2	12
577	Ammonium ionic liquid cation promotes electrochemical CO <sub>2</sub> reduction to ethylene over formate while inhibiting the hydrogen evolution on a copper electrode. <i>Catalysis Science and Technology</i> , 2022, 12, 519-529.	2.1	14
578	Revealing the Regulation Mechanism of Ir-MoO <sub>2</sub> Interfacial Chemical Bonding for Improving Hydrogen Oxidation Reaction. <i>ACS Catalysis</i> , 2021, 11, 14932-14940.	5.5	33
579	Ni nanodendrites prepared by a low-temperature process as electrocatalysts for hydrogen evolution reaction in alkaline solution. <i>Molecular Catalysis</i> , 2021, 516, 112006.	1.0	6
580	C-C Coupling Is Unlikely to Be the Rate-Determining Step in the Formation of C <sub>2+</sub> Products in the Copper-Catalyzed Electrochemical Reduction of CO. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	43
581	Non-precious hydrogen evolution reaction catalysts: Stepping forward to practical polymer electrolyte membrane-based zero-gap water electrolyzers. <i>Chemical Engineering Journal</i> , 2022, 433, 133681.	6.6	28
582	Approaching in-depth mechanistic understanding of electrochemical hydrogen conversion from computational simulations. <i>Chem Catalysis</i> , 2021, 1, 1160-1162.	2.9	1
583	Structural and Valence State Modification of Cobalt in CoPt Nanocatalysts in Redox Conditions. <i>ACS Nano</i> , 2021, 15, 20619-20632.	7.3	17
584	C-C Coupling Is Unlikely to Be the Rate-Determining Step in the Formation of C <sub>2+</sub> Products in the Copper-Catalyzed Electrochemical Reduction of CO. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	6
585	The determination of the HOR/HER reaction mechanism from experimental kinetic data. <i>Physical Chemistry Chemical Physics</i> , 2021, 23, 27150-27158.	1.3	53
586	Identification of active sites available for hydrogen evolution of Single-Atom Ni <sub>1</sub> /TiO <sub>2</sub> catalysts. <i>Applied Surface Science</i> , 2022, 579, 152139.	3.1	11
587	Ni-based overall water splitting electrocatalysts prepared via laser-ablation-in-liquids combined with electrophoretic deposition. <i>Materials Today Chemistry</i> , 2022, 23, 100691.	1.7	10
588	Highly dispersed active sites of Ni nanoparticles onto hierarchical reduced graphene oxide architecture towards efficient water oxidation. <i>Fuel</i> , 2022, 312, 122926.	3.4	15
589	Catalyst development for viability of electrochemical hydrogen purifier and compressor (EHPC) technology. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 19619-19632.	3.8	4
590	Insight into enhanced hydrogen evolution of single-atom Cu <sub>1</sub> /TiO <sub>2</sub> catalysts from first principles. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 4653-4661.	3.8	15
591	IrO <sub>2</sub> -Modified RuO <sub>2</sub> Nanowires/Nitrogen-Doped Carbon Composite for Effective Overall Water Splitting in All pH. <i>Energy &amp; Fuels</i> , 2022, 36, 1015-1026.	2.5	36

#	ARTICLE	IF	CITATIONS
592	Seamless separation of OH <sub>ad</sub> and H <sub>ad</sub> on a Ni <sup>+</sup> O catalyst toward exceptional alkaline hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2022, 10, 1278-1283.	5.2	9
593	Correlating Alkaline Hydrogen Electrocatalysis and Hydroxide Binding Energies on Mo-Modified Ru Catalysts. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 1616-1623.	3.2	21
594	Recent advances in non-precious group metal-based catalysts for water electrolysis and beyond. <i>Journal of Materials Chemistry A</i> , 2021, 10, 50-88.	5.2	44
595	Heteroatomic Platinum <sup>+</sup> Cobalt Synergetic Active Centers with Charge Polarization Enable Superior Hydrogen Evolution Performance in both Acid and Base Media. <i>ACS Applied Energy Materials</i> , 2022, 5, 1496-1504.	2.5	19
596	Intermetallic Cu <sub>11</sub> In <sub>9</sub> <i>in situ</i> formed on hierarchical nanoporous Cu for highly selective CO <sub>2</sub> electroreduction. <i>Journal of Materials Chemistry A</i> , 2022, 10, 4333-4343.	5.2	7
597	Examination of the Brønsted <sup>+</sup> Evans <sup>+</sup> Polanyi relationship for the hydrogen evolution reaction on transition metals based on constant electrode potential density functional theory. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 2476-2481.	1.3	6
598	C-O-Co bond-stabilized CoP on carbon cloth toward hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 9209-9219.	3.8	6
599	Boosted electrolytic hydrogen production at tailor-tuned nano-dendritic Ni-doped Co foam-like catalyst. <i>Electrochimica Acta</i> , 2022, 410, 139992.	2.6	11
600	Electrocatalysis in Alkaline Media and Alkaline Membrane-Based Energy Technologies. <i>Chemical Reviews</i> , 2022, 122, 6117-6321.	23.0	195
601	Multifunctional photo <sup>+</sup> electrocatalysts of copper sulfides prepared via pulsed laser ablation in liquid: Phase formation kinetics and photo <sup>+</sup> electrocatalytic activity. <i>International Journal of Energy Research</i> , 2022, 46, 8201-8217.	2.2	5
602	A MOF derived bifunctional electrocatalyst Ni <sub>3</sub> Zn <sub>0.7</sub> -Mo <sub>2</sub> C with enhanced performance for overall water splitting. <i>Dalton Transactions</i> , 2022, 51, 6654-6662.	1.6	9
603	Electrolyte pH-dependent hydrogen binding energies and coverages on platinum, iridium, rhodium, and ruthenium surfaces. <i>Catalysis Science and Technology</i> , 2022, 12, 3228-3233.	2.1	10
604	Electrolysis energy efficiency of highly concentrated FeCl <sub>2</sub> solutions for power-to-solid energy storage technology. <i>Journal of Solid State Electrochemistry</i> , 2022, 26, 929-938.	1.2	2
605	Single <sup>+</sup> Atom Molybdenum Engineered Platinum Nanocatalyst for Boosted Alkaline Hydrogen Oxidation. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	53
606	MXene <sup>+</sup> Supported, Atomic <sup>+</sup> Layered Iridium Catalysts Created by Nanoparticle Re <sup>+</sup> Dispersion for Efficient Alkaline Hydrogen Evolution. <i>Small</i> , 2022, 18, e2105226.	5.2	16
607	Electroreduction of CO <sub>2</sub> with Tunable Selectivity on Au <sup>+</sup> Pd Bimetallic Catalyst: A First Principle Study. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 11313-11321.	4.0	4
608	Electronic Modulation of Pt Nanoparticles on Ni <sub>3</sub> N <sup>+</sup> Mo <sub>2</sub> C by Support-Induced Strategy for Accelerating Hydrogen Oxidation and Evolution. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 2107-2116.	2.1	24
609	Design of Hierarchical Oxide <sup>+</sup> Carbon Nanostructures for Trifunctional Electrocatalytic Applications. <i>Advanced Materials Interfaces</i> , 2022, 9, .	1.9	8

#	ARTICLE	IF	CITATIONS
610	Identifying the Role of Hydroxyl Binding Energy in a Non-Monotonous Behavior of Pd <sub>4</sub> S for Hydrogen Oxidation Reaction. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	28
611	What is Next in Anion-Exchange Membrane Water Electrolyzers? Bottlenecks, Benefits, and Future. <i>ChemSusChem</i> , 2022, 15, .	3.6	77
612	The synergistic effect of Hf-O-Ru bonds and oxygen vacancies in Ru/HfO <sub>2</sub> for enhanced hydrogen evolution. <i>Nature Communications</i> , 2022, 13, 1270.	5.8	126
613	Synthesis of Co <sub>2</sub> FeAl alloys as highly efficient electrocatalysts for alkaline hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 13399-13408.	3.8	8
614	Interface-Engineered Porous Pt-PdO Nanostructures for Highly Efficient Hydrogen Evolution and Oxidation Reactions in Base and Acid. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 3704-3715.	3.2	16
615	Molybdenum-induced tuning 3d-orbital electron filling degree of CoSe <sub>2</sub> for alkaline hydrogen and oxygen evolution reactions. <i>Chinese Chemical Letters</i> , 2023, 34, 107364.	4.8	13
616	Using pH Dependence to Understand Mechanisms in Electrochemical CO Reduction. <i>ACS Catalysis</i> , 2022, 12, 4344-4357.	5.5	53
617	Sustainable Routes for Photo-Electrochemical Synthesis of Ammonia Using Various Nitrogen Precursors. <i>ACS ES&amp;T Engineering</i> , 2022, 2, 1080-1087.	3.7	9
618	An accurate and general local electronic structural descriptor for oxygen reduction on metal surface alloys: Potential of breaking scaling relationship and application to PtZn ones with superior activity. <i>Applied Surface Science</i> , 2022, 592, 153325.	3.1	4
619	Carbon supported bifunctional Rh-Ni(OH) <sub>2</sub> /C nanocomposite catalysts with high electrocatalytic efficiency for alkaline hydrogen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 13674-13682.	3.8	5
620	From fundamentals and theories to heterostructured electrocatalyst design: An in-depth understanding of alkaline hydrogen evolution reaction. <i>Nano Energy</i> , 2022, 98, 107231.	8.2	76
621	Bidirectional Hydrogen Electrocatalysis on Epitaxial Graphene. <i>ACS Omega</i> , 2022, 7, 13221-13227.	1.6	4
622	High throughput preparation of Ni-Mo alloy thin films as efficient bifunctional electrocatalysts for water splitting. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 15764-15774.	3.8	25
623	Enhancement of hydrogen evolution reaction kinetics in alkaline media by fast galvanic displacement of nickel with rhodium From smooth surfaces to electrodeposited nickel foams. <i>Electrochimica Acta</i> , 2022, 414, 140214.	2.6	10
624	Boron-induced activation of Ru nanoparticles anchored on carbon nanotubes for the enhanced pH-independent hydrogen evolution reaction. <i>Journal of Colloid and Interface Science</i> , 2022, 616, 338-346.	5.0	21
625	RuO <sub>2</sub> as promoter in Pt-RuO <sub>2</sub> nanostructures/carbon composite, a pH-universal catalyst for hydrogen evolution/oxidation reactions. <i>International Journal of Energy Research</i> , 2022, 46, 6406-6420.	2.2	7
627	Nickel as a Promising Electrocatalytic Material for Electrooxidation of Hydrogen and Borohydride: State-of-the-Art and Future Challenges. <i>Kinetics and Catalysis</i> , 2022, 63, 12-26.	0.3	2
628	Synergic Reaction Kinetics over Adjacent Ruthenium Sites for Superb Hydrogen Generation in Alkaline Media. <i>Advanced Materials</i> , 2022, 34, e2110604.	11.1	108

#	ARTICLE	IF	CITATIONS
629	Several Key Factors for Efficient Electrocatalytic Water Splitting: Active Site Coordination Environment, Morphology Changes and Intermediates Identification. Chemistry - A European Journal, 2022, 28, .	1.7	5
630	Highly Synergistic Co <sup>3+</sup> and Pyridinicâ€Rich Bifunctional Electrocatalyst for Ultraâ€Low Energyâ€Driven Effective Hydrogen Production and Urea Oxidation. Advanced Sustainable Systems, 2022, 6, .	2.7	5
631	Substrate effect on hydrogen evolution reaction in two-dimensional Mo <sub>2</sub> C monolayers. Scientific Reports, 2022, 12, 6076.	1.6	3
632	Electrocatalytic Hydrogen Oxidation in Alkaline Media: From Mechanistic Insights to Catalyst Design. ACS Nano, 2022, 16, 5153-5183.	7.3	46
633	Anion-Exchange Membrane Water Electrolyzers. Chemical Reviews, 2022, 122, 11830-11895.	23.0	177
634	IrO <sub>2</sub> modified Crystalline-PdO nanowires based bi-functional electro-catalyst for HOR/HER in acid and base. Renewable Energy, 2022, 191, 151-160.	4.3	8
635	Ethanol electro-oxidation reaction on the Pd(111) surface in alkaline media: insights from quantum and molecular mechanics. Physical Chemistry Chemical Physics, 2022, , .	1.3	2
636	P and Mo Dual Doped Ru Ultrasmall Nanoclusters Embedded in Pâ€Doped Porous Carbon toward Efficient Hydrogen Evolution Reaction. Advanced Energy Materials, 2022, 12, .	10.2	58
637	Role of Noble- and Base-Metal Speciation and Surface Segregation in Ni <sub>2</sub> â€Rh <sub>x</sub> P Nanocrystals on Electrocatalytic Water Splitting Reactions in Alkaline Media. Chemistry of Materials, 2022, 34, 4414-4427.	3.2	10
638	Controlled Doping of Electrocatalysts through Engineering Impurities. Advanced Materials, 2022, 34, e2203030.	11.1	12
639	Recent Advancement in Metalâ€Organic Framework for Water Electrolysis: A Review. ChemNanoMat, 2022, 8, .	1.5	8
640	Computational design of ternary NiO/MPt interface active sites for H <sub>2</sub> O dissociation. International Journal of Hydrogen Energy, 2022, 47, 20040-20048.	3.8	2
641	Fabrication of High Performing and Durable Nickel-Based Catalyst Coated Diaphragms for Alkaline Water Electrolyzers. Journal of the Electrochemical Society, 2022, 169, 054502.	1.3	6
642	Predicting catalytic activity in hydrogen evolution reaction. Current Opinion in Electrochemistry, 2022, 35, 101037.	2.5	8
643	Tuning metal-support interaction of NiCu/graphene cocatalysts for enhanced dye-sensitized photocatalytic H <sub>2</sub> evolution. Applied Surface Science, 2022, 593, 153459.	3.1	14
644	Screening Surface Structureâ€Electrochemical Activity Relationships of Copper Electrodes under CO <sub>2</sub> Electroreduction Conditions. ACS Catalysis, 2022, 12, 6578-6588.	5.5	32
645	Intermetallic PdCd Core Promoting CO Tolerance of Pd Shell for Electrocatalytic Formic Acid Oxidation. Chinese Journal of Chemistry, 2022, 40, 2161-2168.	2.6	5
646	Transition metal oxides with perovskite and spinel structures for electrochemical energy production applications. Environmental Research, 2022, 214, 113731.	3.7	21

#	ARTICLE	IF	CITATIONS
647	Size Effects of Electrocatalysts: More Than a Variation of Surface Area. ACS Nano, 2022, 16, 8531-8539.	7.3	42
648	Tuning the hydrogen and hydroxyl adsorption on Ru nanoparticles for hydrogen electrode reactions via size controlling. Chinese Chemical Letters, 2023, 34, 107622.	4.8	7
649	NiFe Alloy Electrocatalysts toward Efficient Alkaline Hydrogen Oxidation. European Journal of Inorganic Chemistry, 0, , .	1.0	0
650	Not a Mere Decoration: Impact of Submonolayer Coverages of Nickel on Fundamental Properties of Platinum. Journal of Physical Chemistry C, 2022, 126, 10167-10180.	1.5	3
651	Roles of heteroatoms in electrocatalysts for alkaline water splitting: A review focusing on the reaction mechanism. Chinese Journal of Catalysis, 2022, 43, 2091-2110.	6.9	36
652	Delicate surface vacancies engineering of Ru doped MOF-derived Ni-NiO@C hollow microsphere superstructure to achieve outstanding hydrogen oxidation performance. Journal of Energy Chemistry, 2022, 72, 395-404.	7.1	29
653	Full atomistic mechanism study of hydrogen evolution reaction on Pt surfaces at universal pHs: Ab initio simulations at electrochemical interfaces. Electrochimica Acta, 2022, 425, 140709.	2.6	9
654	Oriented construction Cu <sub>3</sub> P and Ni <sub>2</sub> P heterojunction to boost overall water splitting. Chemical Engineering Journal, 2022, 448, 137706.	6.6	51
655	Constructing dual active sites for synergistic electrocatalysis of hydrogen oxidation: single-metal-atoms anchored on WC <sub>2</sub> O <sub>2</sub> MXene. Materials Chemistry Frontiers, 2022, 6, 2458-2467.	3.2	3
656	High performance transition metal-based electrocatalysts for green hydrogen production. Chemical Communications, 2022, 58, 7874-7889.	2.2	14
657	Regulating D-Orbital Electronic Character and Her Free Energy of Vn Electrocatalyst by Anchoring Single Atom. SSRN Electronic Journal, 0, , .	0.4	0
658	Fabrication and Characterization of Nanostructured Rock Wool as a Novel Material for Efficient Water-Splitting Application. Nanomaterials, 2022, 12, 2169.	1.9	4
659	Theoretical Advances in Understanding and Designing the Active Sites for Hydrogen Evolution Reaction. ACS Catalysis, 2022, 12, 8404-8433.	5.5	72
660	Pt Single Atom Electrocatalysts at Graphene Edges for Efficient Alkaline Hydrogen Evolution. Advanced Functional Materials, 2022, 32, .	7.8	38
661	CO <sub>2</sub> Electroreduction on Unsupported PdPt Aerogels: Effects of Alloying and Surface Composition on Product Selectivity. ACS Applied Energy Materials, 2022, 5, 8460-8471.	2.5	16
662	Rate and Mechanism of Electrochemical Formation of Surface-Bound Hydrogen on Pt(111) Single Crystals. Journal of Physical Chemistry Letters, 2022, 13, 6383-6390.	2.1	3
663	Structural dependence of hydrogen evolution reaction on transition metal catalysts sputtered at different temperatures in alkaline media. International Journal of Hydrogen Energy, 2022, 47, 26987-26999.	3.8	4
664	Comparative study on the distinct activity for NiFe-based phosphide and sulfide pre-electrocatalysts towards hydrogen evolution reaction. Journal of Catalysis, 2022, 413, 425-433.	3.1	22

#	ARTICLE	IF	CITATIONS
665	Recent progress in first row transition metal Layered double hydroxide (LDH) based electrocatalysts towards water splitting: A review with insights on synthesis. <i>Coordination Chemistry Reviews</i> , 2022, 469, 214666.	9.5	125
666	Constructing double-shell structured N-C-in-Co/N-C electrocatalysts with nanorod- and rhombic dodecahedron-shaped hollow morphologies to boost electrocatalytic activity for hydrogen evolution and triiodide reduction reaction. <i>Chemical Engineering Journal</i> , 2022, 449, 137854.	6.6	40
667	Electric-Field-Treated Ni/Co <sub>3</sub> O <sub>4</sub> Film as High-Performance Bifunctional Electrocatalysts for Efficient Overall Water Splitting. <i>Nano-Micro Letters</i> , 2022, 14, .	14.4	68
668	Designing High-Performance Se-Decorated Edges of MoSe <sub>2</sub> Nanostripes for the Hydrogen Oxidation Reaction: Effect of Transition Metal Doping. <i>Journal of Physical Chemistry C</i> , 2022, 126, 13617-13628.	1.5	2
669	Enhancing Hydrogen Oxidation and Evolution Kinetics by Tuning the Interfacial Hydrogen-Bonding Environment on Functionalized Platinum Surfaces. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	1
670	Enhancing Hydrogen Oxidation and Evolution Kinetics by Tuning the Interfacial Hydrogen-Bonding Environment on Functionalized Platinum Surfaces. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	20
671	Core-shell nanocatalysts with reduced platinum content toward more cost-effective proton exchange membrane fuel cells. <i>Nano Select</i> , 2022, 3, 1459-1483.	1.9	2
672	Challenges and Opportunities in Electrocatalytic CO <sub>2</sub> Reduction to Chemicals and Fuels. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	8
673	The Role of Hydroxide Binding Energy in Alkaline Hydrogen Oxidation Reaction Kinetics on RuCr Nanosheet. <i>Chinese Journal of Chemistry</i> , 2022, 40, 2495-2501.	2.6	7
674	Molybdenum-based electrocatalysts with nanostructured supports for hydrogen evolution reaction. <i>International Journal of Applied Ceramic Technology</i> , 2023, 20, 1129-1146.	1.1	3
675	Tailor-designed bimetallic Co/Ni macroporous electrocatalyst for efficient glycerol oxidation and water electrolysis. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 32145-32157.	3.8	20
676	N-Doped Carbon as a Promoted Substrate for Ir Nanoclusters toward Hydrogen Oxidation in Alkaline Electrolytes. <i>Inorganic Chemistry</i> , 2022, 61, 14187-14194.	1.9	4
677	Challenges and Opportunities in Electrocatalytic CO <sub>2</sub> Reduction to Chemicals and Fuels. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	62
678	Prussian-blue-derived FeS <sub>2</sub> spheres with abundant pore canals for efficient hydrogen evolution reaction. <i>Chemical Engineering Science</i> , 2022, 262, 118028.	1.9	4
679	MOF-derived Co/Co <sub>3</sub> O <sub>4</sub> /C hollow structural composite as an efficient electrocatalyst for hydrogen evolution reaction. <i>Fuel</i> , 2022, 329, 125468.	3.4	16
680	Novel FeNi-FeCo-C composite nanofibers: Highly efficient electrocatalysts for oxygen evolution from water splitting. <i>Journal of Alloys and Compounds</i> , 2022, 926, 166910.	2.8	1
681	Regulating d-orbital electronic character and HER free energy of VN electrocatalyst by anchoring single atom. <i>Chemical Engineering Journal</i> , 2023, 452, 139131.	6.6	16
682	Two new Ni/Co-MOFs as electrocatalysts for the oxygen evolution reaction in alkaline electrolytes. <i>New Journal of Chemistry</i> , 2022, 46, 18996-19001.	1.4	1

#	ARTICLE	IF	CITATIONS
683	Engineering of Unique Ni-Ru Nano-Twins for Highly Active and Robust Bifunctional Hydrogen Oxidation and Hydrogen Evolution Electrocatalysis. SSRN Electronic Journal, 0, , .	0.4	0
684	Recent advances in solution assisted synthesis of transition metal chalcogenides for photo-electrocatalytic hydrogen evolution. Physical Chemistry Chemical Physics, 2022, 24, 20638-20673.	1.3	27
685	Amorphous FeNiCu-MOFs as highly efficient electrocatalysts for the oxygen evolution reaction in an alkaline medium. Dalton Transactions, 2022, 51, 14306-14316.	1.6	11
686	Suppression of H <sub>2</sub> bubble formation on an electrified Pt electrode interface in an acidic aqueous electrolyte solution. Journal of Materials Chemistry A, 0, , .	5.2	0
687	Ex situ flame vapor-doped oxophilic metals on WP/WOx nanowires for enhanced alkaline hydrogen evolution activity. Applied Surface Science, 2023, 608, 155044.	3.1	2
688	Understanding hydrogen oxidation/evolution electrochemical interfaces through in situ Raman scattering and infrared absorption spectroscopies. , 2023, , .		0
689	Interfacial Structure of Pt(110) Electrode during Hydrogen Evolution Reaction in Alkaline Solutions. Journal of Physical Chemistry Letters, 2022, 13, 8403-8408.	2.1	7
690	Molybdenum Carbide Anchored on N,S Co-Doped Carbon Composite Derived from Lignosulfonate as a High Performance Electrocatalyst for Hydrogen Evolution Reaction. Nanomaterials, 2022, 12, 3047.	1.9	1
691	Amorphous NiCu Thin Films Sputtered on TiO <sub>2</sub> Nanotube Arrays: A Noble Metal Free Photocatalyst for Hydrogen Evolution. ChemCatChem, 2022, 14, .	1.8	2
692	Realizing Favorable Synergism Toward Efficient Hydrogen Evolution Reaction with Heterojunction Engineered Cu <sub>7</sub> S <sub>4</sub> /CuS <sub>2</sub> /NiS <sub>2</sub> and Functionalized Carbon Sheet Heterostructures. Advanced Materials Interfaces, 2022, 9, .	1.9	1
693	One-pot H/D exchange and low-coordinated iron electrocatalyzed deuteration of nitriles in D <sub>2</sub> O to $\beta$ -deuterio aryl ethylamines. Nature Communications, 2022, 13, .	5.8	17
694	Improving the HER Activity and Stability of Pt Nanoparticles by Titanium Oxynitride Support. ACS Catalysis, 2022, 12, 13021-13033.	5.5	35
695	The role of alkali metal cations and platinum-surface hydroxyl in the alkaline hydrogen evolution reaction. Nature Catalysis, 2022, 5, 923-933.	16.1	79
696	Perspective of p-block single-atom catalysts for electrocatalysis. Trends in Chemistry, 2022, 4, 1135-1148.	4.4	12
697	Effect of the interfacial electric field on the HER on Pt(111) modified with iron adatoms in alkaline media. Chinese Journal of Catalysis, 2022, 43, 2826-2836.	6.9	1
698	NiFeOxHy/Ni <sub>3</sub> Fe interface design via electropassivation for superior catalysis of HER. Journal of Environmental Chemical Engineering, 2022, 10, 108736.	3.3	9
699	High-valence metal doped Co <sub>2</sub> FeAl alloy as efficient noble-metal-free electrocatalyst for alkaline hydrogen evolution reaction. Journal of Alloys and Compounds, 2023, 933, 167613.	2.8	8
700	Engineering of unique Ni-Ru nano-twins for highly active and robust bifunctional hydrogen oxidation and hydrogen evolution electrocatalysis. Chemical Engineering Journal, 2023, 454, 139959.	6.6	10

#	ARTICLE	IF	CITATIONS
701	Anion-exchange membrane water electrolyzers and fuel cells. <i>Chemical Society Reviews</i> , 2022, 51, 9620-9693.	18.7	93
702	Hydrogen Production Technology Promotes the Analysis and Prospect of the Hydrogen Fuel Cell Vehicles Development under the Background of Carbon Peak and Carbon Neutrality in China. <i>ACS Omega</i> , 2022, 7, 40625-40637.	1.6	1
703	Platinumâ€“Water Interaction Induced Interfacial Water Orientation That Governs the pH-Dependent Hydrogen Oxidation Reaction. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 10550-10557.	2.1	17
704	Synthesis of nickel powder with good hydrogen evolution performance from spent Fluid Catalytic Cracking catalysts. <i>Journal of Cleaner Production</i> , 2023, 383, 135540.	4.6	6
705	A critical review on transition metal phosphide based catalyst for electrochemical hydrogen evolution reaction: Gibbs free energy, composition, stability, and true identity of active site. <i>Coordination Chemistry Reviews</i> , 2023, 478, 214956.	9.5	40
706	Pulsed laser 3D-micro/nanostructuring of materials for electrochemical energy storage and conversion. <i>Progress in Materials Science</i> , 2023, 133, 101052.	16.0	13
707	Ambiguities and best practices in the determination of active sites and real surface area of monometallic electrocatalytic interfaces. <i>Journal of Colloid and Interface Science</i> , 2023, 634, 169-175.	5.0	7
708	Hydrogen Evolution Volcano(es)â€“From Acidic to Neutral and Alkaline Solutions. <i>Catalysts</i> , 2022, 12, 1541.	1.6	3
709	A new breakthrough in photocatalytic hydrogen evolution by amorphous and chalcogenide enriched cocatalysts. <i>Chemical Engineering Journal</i> , 2023, 455, 140601.	6.6	66
710	Bimetallic NiM/C (M = Cu and Mo) Catalysts for the Hydrogen Oxidation Reaction: Deciphering the Role of Unintentional Surface Oxides in the Activity Enhancement. <i>ACS Catalysis</i> , 2022, 12, 15341-15351.	5.5	6
711	Ni optimizes Ir reaction pathway through IrNi alloy synergistic effect to improve overall water splitting efficiency. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 8440-8449.	3.8	7
712	Metastable Metalâ€“Alloy Interface in RuNi Nanoplates Boosts Highly Efficient Hydrogen Electrocatalysis. <i>ACS Applied Nano Materials</i> , 2022, 5, 17496-17502.	2.4	7
713	Understanding the Atomic and Defective Interface Effect on Ruthenium Clusters for the Hydrogen Evolution Reaction. <i>ACS Catalysis</i> , 2023, 13, 49-59.	5.5	47
714	A critical review of research progress for metal alloy materials in hydrogen evolution and oxygen evolution reaction. <i>Environmental Science and Pollution Research</i> , 2023, 30, 11302-11320.	2.7	21
715	Encapsulating Ni Nanoparticles into Interlayers of Nitrogenâ€“Doped Nb <sub>2</sub> CT <sub>x</sub> MXene to Boost Hydrogen Evolution Reaction in Acid. <i>Small</i> , 2023, 19, .	5.2	6
716	Ampere-level current density ammonia electrochemical synthesis using CuCo nanosheets simulating nitrite reductase bifunctional nature. <i>Nature Communications</i> , 2022, 13, .	5.8	119
717	In search of lost descriptors: Correlations and their risks. <i>Current Opinion in Electrochemistry</i> , 2023, 37, 101194.	2.5	4
718	Understanding Cation Effects on the Hydrogen Evolution Reaction. <i>ACS Energy Letters</i> , 2023, 8, 657-665.	8.8	31



#	ARTICLE	IF	CITATIONS
719	Synthesis of metal cation doped nanoparticles for single atom alloy catalysts using spontaneous cation exchange. <i>Journal of Materials Chemistry A</i> , 0, , .	5.2	1
720	Improving the Catalytic Performance of the Hydrogen Evolution Reaction of $\text{MoB}_{2}$ via Rational Doping by Transition Metal Elements. <i>ChemPhysChem</i> , 2023, 24, .	1.0	1
721	Lattice Strain Engineering for Heterogenous Electrocatalytic Oxygen Evolution Reaction. <i>Advanced Materials</i> , 2023, 35, .	11.1	34
722	Redrawing HER Volcano with Interfacial Processes: The Role of Hydrogen Spillover in Boosting H <sub>2</sub> Evolution in Alkaline Media. <i>Catalysts</i> , 2023, 13, 89.	1.6	3
723	Product Distribution Control Guided by a Microkinetic Analysis for CO Reduction at High-Flux Electrocatalysis Using Gas-Diffusion Cu Electrodes. <i>ACS Catalysis</i> , 2023, 13, 1791-1803.	5.5	8
724	Galvanic displacement of Co with Rh boosts hydrogen and oxygen evolution reactions in alkaline media. <i>Journal of Solid State Electrochemistry</i> , 2023, 27, 1877-1887.	1.2	0
725	Loops at carbon edges: Boron-assisted passivation and tunable surface properties of carbon nanofibers. <i>Carbon</i> , 2023, 204, 587-593.	5.4	1
726	Alkaline hydrogen oxidation reaction on Ni-based electrocatalysts: From mechanistic study to material development. <i>Coordination Chemistry Reviews</i> , 2023, 478, 214980.	9.5	10
727	Self-assembly synthesis of Ru nanoparticles anchored on B, N co-doping carbon support for hydrogen evolution: Electronic state induced by the strong metal-support interactions. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 9682-9689.	3.8	5
728	N-Doped Carbon Shells Encapsulated Ru-Ni Nanoalloys for Efficient Hydrogen Evolution Reaction. <i>ChemSusChem</i> , 2023, 16, .	3.6	8
729	Uniform PtRu <sub>0.6</sub> Nanoparticles Supported on Nitrogen-Doped Carbon Obtained from ZIF-8/GO Hybrid with Remarkable Alkaline Hydrogen Oxidation Activity. <i>Journal of Electronic Materials</i> , 2023, 52, 2388-2395.	1.0	1
730	Phosphorus-modified cobalt single-atom catalysts loaded on crosslinked carbon nanosheets for efficient alkaline hydrogen evolution reaction. <i>Nanoscale</i> , 2023, 15, 3550-3559.	2.8	51
731	Electronic Modulation and Mechanistic Study of Ru-Decorated Porous Cu-Rich Cuprous Oxide for Robust Alkaline Hydrogen Oxidation and Evolution Reactions. <i>ChemSusChem</i> , 2023, 16, .	3.6	8
732	Amorphous MoO <sub>x</sub> with High Oxophilicity Interfaced with PtMo Alloy Nanoparticles Boosts Anti-CO Hydrogen Electrocatalysis. <i>Advanced Materials</i> , 2023, 35, .	11.1	44
733	Synergetic effect of Au nanoparticles and transition metal phosphides for enhanced hydrogen evolution from ammonia-borane. <i>Journal of Colloid and Interface Science</i> , 2023, 638, 14-25.	5.0	17
734	Progress in electrocatalytic hydrogen evolution of transition metal alloys: synthesis, structure, and mechanism analysis. <i>Nanoscale</i> , 2023, 15, 7202-7226.	2.8	8
735	Pt loading to promote hydrogen evolution from ammonia-borane hydrolysis of Ni <sub>2</sub> P under visible light. <i>Applied Surface Science</i> , 2023, 620, 156787.	3.1	11
736	A Ni-MoO <sub>x</sub> composite catalyst for the hydrogen oxidation reaction in anion exchange membrane fuel cell. <i>Applied Catalysis B: Environmental</i> , 2023, 332, 122740.	10.8	5

#	ARTICLE	IF	CITATIONS
737	Unveiling the in-situ hydrogen intercalation in Mo <sub>2</sub> CO <sub>x</sub> for promoting the alkaline hydrogen evolution reaction. <i>Applied Catalysis B: Environmental</i> , 2023, 332, 122739.	10.8	9
738	Industrial femtosecond laser induced construction of micro/nano wettability electrodes with outstanding hydrogen evolution performance. <i>Applied Surface Science</i> , 2023, 626, 157179.	3.1	8
739	Alkaline Hydrogen Oxidation Reaction Catalysts: Insight into Catalytic Mechanisms, Classification, Activity Regulation and Challenges. <i>Small Structures</i> , 2023, 4, .	6.9	21
741	Rhenium-Based Electrocatalysts for Water Splitting. <i>ACS Materials Au</i> , 2023, 3, 177-200.	2.6	11
742	Preparation of Cu/Sn-Organic Nano-Composite Catalysts for Potential Use in Hydrogen Evolution Reaction and Electrochemical Characterization. <i>Nanomaterials</i> , 2023, 13, 911.	1.9	2
743	Electronic and Lattice Engineering of Ruthenium Oxide towards Highly Active and Stable Water Splitting. <i>Advanced Energy Materials</i> , 2023, 13, .	10.2	32
744	Extending MoS <sub>2</sub> -based materials into the catalysis of non-acidic hydrogen evolution: challenges, progress, and perspectives. <i>Materials Futures</i> , 2023, 2, 022103.	3.1	12
745	Diversity of platinum-sites at platinum/fullerene interface accelerates alkaline hydrogen evolution. <i>Nature Communications</i> , 2023, 14, .	5.8	30
746	TiO <sub>2</sub> nanotubes modified with cobalt oxyphosphide spheres for efficient electrocatalytic hydrogen evolution reaction in alkaline medium. <i>Electrochimica Acta</i> , 2023, 456, 142436.	2.6	3
747	RuO <sub>2</sub> -PdO nanowire networks with rich interfaces and defects supported on carbon toward the efficient alkaline hydrogen oxidation reaction. <i>Journal of Energy Chemistry</i> , 2023, 83, 255-263.	7.1	8
750	Recent advances in interface engineering of Fe/Co/Ni-based heterostructure electrocatalysts for water splitting. <i>Materials Horizons</i> , 2023, 10, 2312-2342.	6.4	13
753	Synthesis of Magnetic Ferrite and TiO <sub>2</sub> -Based Nanomaterials for Photocatalytic Water Splitting Applications. <i>Composites Science and Technology</i> , 2023, , 293-329.	0.4	0
772	Ag <sub>x</sub> Zn <sub>y</sub> Protective Coatings with Selective Zn <sup>2+</sup> /H <sup>+</sup> Binding Enable Reversible Zn Anodes. <i>Nano Letters</i> , 2023, 23, 6156-6163.	4.5	18
774	Toward Molecular Level Understandings of Hydrogen Evolution Reaction on Platinum Surface. <i>Journal of Physical Chemistry C</i> , 2023, 127, 12841-12848.	1.5	3
776	Trace-Level Cobalt Dopants Enhance CO <sub>2</sub> Electroreduction and Ethylene Formation on Copper. <i>ACS Energy Letters</i> , 2023, 8, 3356-3364.	8.8	9
779	Non-precious metal-based heterostructure catalysts for hydrogen evolution reaction: mechanisms, design principles, and future prospects. <i>Nanoscale</i> , 2023, 15, 13515-13531.	2.8	1
789	Antimony oxides-protected ultrathin Ir-Sb nanowires as bifunctional hydrogen electrocatalysts. <i>Nano Research</i> , 2024, 17, 1042-1049.	5.8	2
790	Progress and prospect of Pt-based catalysts for electrocatalytic hydrogen oxidation reactions. <i>Nano Research</i> , 2024, 17, 960-981.	5.8	1

#	ARTICLE	IF	CITATIONS
794	Anion Exchange Membrane Water Electrolysis. , 2023, , 99-146.		0
814	Recent advances towards increasing the Pt utilization efficiency for hydrogen evolution reaction: a review. Inorganic Chemistry Frontiers, 2023, 10, 6812-6848.	3.0	2
844	Two-dimensional materials as catalysts, interfaces, and electrodes for an efficient hydrogen evolution reaction. Nanoscale, 2024, 16, 3936-3950.	2.8	0
849	Single atom catalysts for electrocatalytic hydrogen evolution reaction. , 2024, , 147-173.		0