

# CITATION REPORT

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Self-supported nanoporous cobalt phosphide nanowire arrays: an efficient 3D hydrogen-evolving cathode over the wide range of pH 0-14

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#	Paper	IF	Citations
2096	Porous Multishelled Ni <sub>2</sub> P Hollow Microspheres as an Active Electrocatalyst for Hydrogen and Oxygen Evolution.		
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2094	Hierarchically Structured Cu-Based Electrocatalysts with Nanowires Array for Water Splitting.		
2093	Synthesis of an Ultrafine CoP Nanocrystal/Graphene Sandwiched Structure for Efficient Overall Water Splitting.		
2092	Cu-Doped CoP Nanorod Arrays: Efficient and Durable Hydrogen Evolution Reaction Electrocatalysts at All pH Values.		0
2091	Extremely Active Hydrogen Evolution Catalyst Electrochemically Generated from a Ruthenium-Based Perovskite-Type Precursor.		
2090	Crystalline Multi-Metal Nanosheets Array with Enriched Oxygen Vacancies as Efficient and Stable Bifunctional Electrocatalysts for Water Splitting.		
2089	Efficient Electrochemical Water Splitting Catalyzed by Electrodeposited Nickel Diselenide Nanoparticles Based Film.		
2088	Three-Dimensional Structures of MoS <sub>2</sub> @Ni Core/Shell Nanosheets Array toward Synergetic Electrocatalytic Water Splitting.		
2087	Nanoparticle-Stacked Porous Nickel Iron Nitride Nanosheet: A Highly Efficient Bifunctional Electrocatalyst for Overall Water Splitting.		
2086	Self-Supported Cedarlike Semimetallic Cu <sub>3</sub> P Nanoarrays as a 3D High-Performance Janus Electrode for Both Oxygen and Hydrogen Evolution under Basic Conditions.		
2085	Crystalline Copper Phosphide Nanosheets as an Efficient Janus Catalyst for Overall Water Splitting.		
2084	Extraordinarily Durable Graphdiyne-Supported Electrocatalyst with High Activity for Hydrogen Production at All Values of pH.		
2083	Silver Leakage from Ag/AgCl Reference Electrodes as a Potential Cause of Interference in the Electrocatalytic Hydrogen Evolution Reaction.		
2082	Preparation of NiCoP Hollow Quasi-Polyhedra and Their Electrocatalytic Properties for Hydrogen Evolution in Alkaline Solution.		
2081	Hierarchical Porous Co <sub>9</sub> S <sub>8</sub> /Nitrogen-Doped Carbon@MoS <sub>2</sub> Polyhedrons as pH Universal Electrocatalysts for Highly Efficient Hydrogen Evolution Reaction.		
2080	Efficient Water-Splitting Electrodes Based on Laser-Induced Graphene.		

- 2079 Amorphous Co<sub>2</sub>B Grown on CoSe<sub>2</sub> Nanosheets as a Hybrid Catalyst for Efficient Overall Water Splitting in Alkaline Medium.
- 2078 Heteromorphic NiCo<sub>2</sub>S<sub>4</sub>/Ni<sub>3</sub>S<sub>2</sub>/Ni Foam as a Self-Standing Electrode for Hydrogen Evolution Reaction in Alkaline Solution.
- 2077 Designing Hybrid NiP<sub>2</sub>/NiO Nanorod Arrays for Efficient Alkaline Hydrogen Evolution.
- 2076 Toward High-Performance and Low-Cost Hydrogen Evolution Reaction Electrocatalysts: Nanostructuring Cobalt Phosphide (CoP) Particles on Carbon Fiber Paper.
- 2075 Porous Co<sub>9</sub>S<sub>8</sub>/Nitrogen, Sulfur-Doped Carbon@Mo<sub>2</sub>C Dual Catalyst for Efficient Water Splitting.
- 2074 Walnut-like Transition Metal Carbides with Three-Dimensional Networks by a Versatile Electropolymerization-Assisted Method for Efficient Hydrogen Evolution.
- 2073 Toward Bifunctional Overall Water Splitting Electrocatalyst: General Preparation of Transition Metal Phosphide Nanoparticles Decorated NDoped Porous Carbon Spheres.
- 2072 Cobalt/Molybdenum Phosphide and Oxide Heterostructures Encapsulated in NDoped Carbon Nanocomposite for Overall Water Splitting in Alkaline Media.
- 2071 Three-Dimensional Nanoporous Co<sub>9</sub>S<sub>4</sub>P<sub>4</sub> Pentlandite as a Bifunctional Electrocatalyst for Overall Neutral Water Splitting.
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- 2068 Constructing Bifunctional 3D Holey and Ultrathin CoP Nanosheets for Efficient Overall Water Splitting.
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- 2065 Reduced Graphene Oxide Supported NickelManganeseCobalt Spinel Ternary Oxide Nanocomposites and Their Chemically Converted Sulfide Nanocomposites as Efficient Electrocatalysts for Alkaline Water Splitting.
- 2064 Mn Doping of CoP Nanosheets Array: An Efficient Electrocatalyst for Hydrogen Evolution Reaction with Enhanced Activity at All pH Values.
- 2063 MoS<sub>2</sub>Ni<sub>3</sub>S<sub>2</sub> Heteronanorods as Efficient and Stable Bifunctional Electrocatalysts for Overall Water Splitting.
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- 2054 Skutterudite-Type Ternary Co<sub>1-x</sub>Ni<sub>x</sub>P<sub>3</sub> Nanoneedle Array Electrocatalysts for Enhanced Hydrogen and Oxygen Evolution.
- 2053 Molybdenum Carbide-Embedded Nitrogen-Doped Porous Carbon Nanosheets as Electrocatalysts for Water Splitting in Alkaline Media.
- 2052 Nitrogen-Doped Nanoporous Carbon Membranes with Co/CoP Janus-Type Nanocrystals as Hydrogen Evolution Electrode in Both Acidic and Alkaline Environments.
- 2051 Enhancing Oxygen Evolution Electrocatalysis via the Intimate Hydroxide/Oxide Interface.
- 2050 Carbon Nanotube-Supported MoSe<sub>2</sub> Holey Flake:Mo<sub>2</sub>C Ball Hybrids for Bifunctional pH-Universal Water Splitting.
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- 2048 Traditional NiCo<sub>2</sub>S<sub>4</sub> Phase with Porous Nanosheets Array Topology on Carbon Cloth: A Flexible, Versatile and Fabulous Electrocatalyst for Overall Water and Urea Electrolysis.
- 2047 Controllable Synthesis of Ruthenium Phosphides (RuP and RuP<sub>2</sub>) for pH-Universal Hydrogen Evolution Reaction.
- 2046 FeCo<sub>2</sub>S<sub>4</sub> Nanosheet Arrays Supported on Ni Foam: An Efficient and Durable Bifunctional Electrocatalyst for Overall Water-Splitting.
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- 2037 Surface Roughening of Nickel Cobalt Phosphide Nanowire Arrays/Ni Foam for Enhanced Hydrogen Evolution Activity.
- 2036 A Highly Active and Robust Copper-Based Electrocatalyst toward Hydrogen Evolution Reaction with Low Overpotential in Neutral Solution.
- 2035 Growth of One-Dimensional RuO<sub>2</sub> Nanowires on gCarbon Nitride: An Active and Stable Bifunctional Electrocatalyst for Hydrogen and Oxygen Evolution Reactions at All pH Values.
- 2034 Hierarchical NiCo<sub>2</sub>S<sub>4</sub>@NiFe LDH Heterostructures Supported on Nickel Foam for Enhanced Overall-Water-Splitting Activity.
- 2033 Integrated Energy Aerogel of N,S-rGO/WSe<sub>2</sub>/NiFe-LDH for Both Energy Conversion and Storage.
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1922	Robust and highly active copper-based electrocatalyst for hydrogen production at low overpotential in neutral water. <b>2015</b> , 51, 12954-7	62
1921	Growth of molybdenum carbide micro-islands on carbon cloth toward binder-free cathodes for efficient hydrogen evolution reaction. <b>2015</b> , 3, 16320-16326	80
1920	3D arrays of molybdenum sulphide nanosheets on Mo meshes: Efficient electrocatalysts for hydrogen evolution reaction. <b>2015</b> , 174, 653-659	28
1919	High catalytic activity for water oxidation based on nanostructured nickel phosphide precursors. <b>2015</b> , 51, 11626-9	151
1918	MOF derived Co <sub>3</sub> O <sub>4</sub> nanoparticles embedded in N-doped mesoporous carbon layer/MWCNT hybrids: extraordinary bi-functional electrocatalysts for OER and ORR. <b>2015</b> , 3, 17392-17402	304

1917	MoP is a novel, noble-metal-free cocatalyst for enhanced photocatalytic hydrogen production from water under visible light. <b>2015</b> , 3, 16941-16947		170
1916	NiCo <sub>2</sub> O <sub>4</sub> 3 dimensional nanosheet as effective and robust catalyst for oxygen evolution reaction. <b>2015</b> , 5, 61900-61905		32
1915	Synthesis and X-ray Characterization of Cobalt Phosphide (Co <sub>2</sub> P) Nanorods for the Oxygen Reduction Reaction. <b>2015</b> , 9, 8108-15		109
1914	Ultrastable Polymolybdate-Based Metal-Organic Frameworks as Highly Active Electrocatalysts for Hydrogen Generation from Water. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 7169-77	16.4	469
1913	Carbon nanotubes decorated with nickel phosphide nanoparticles as efficient nanohybrid electrocatalysts for the hydrogen evolution reaction. <b>2015</b> , 3, 13087-13094		178
1912	Co <sub>3</sub> ZnC core-shell nanoparticle assembled microspheres/reduced graphene oxide as an advanced electrocatalyst for hydrogen evolution reaction in an acidic solution. <b>2015</b> , 3, 11066-11073		27
1911	Interconnected Co-Entrapped, N-Doped Carbon Nanotube Film as Active Hydrogen Evolution Cathode over the Whole pH Range. <b>2015</b> , 8, 1850-5		67
1910	Nanostructured nickel phosphide supported on carbon nanospheres: Synthesis and application as an efficient electrocatalyst for hydrogen evolution. <b>2015</b> , 285, 169-177		115
1909	A general salt-templating method to fabricate vertically aligned graphitic carbon nanosheets and their metal carbide hybrids for superior lithium ion batteries and water splitting. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 5480-5	16.4	267
1908	Porous cobalt-based thin film as a bifunctional catalyst for hydrogen generation and oxygen generation. <b>2015</b> , 27, 3175-80		406
1907	Molybdenum sulfide nanosheet arrays supported on Ti plate: an efficient hydrogen-evolving cathode over the whole pH range. <b>2015</b> , 168, 256-260		21
1906	Highly active and inexpensive iron phosphide nanorods electrocatalyst towards hydrogen evolution reaction. <b>2015</b> , 40, 14272-14278		56
1905	Spectacular photocatalytic hydrogen evolution using metal-phosphide/CdS hybrid catalysts under sunlight irradiation. <b>2015</b> , 51, 8708-11		174
1904	Noble metal-free hydrogen evolution catalysts for water splitting. <b>2015</b> , 44, 5148-80		3702
1903	Facile synthesis of various highly dispersive CoP nanocrystal embedded carbon matrices as efficient electrocatalysts for the hydrogen evolution reaction. <b>2015</b> , 3, 4255-4265		134
1902	Facile synthesis of CoX (X = S, P) as an efficient electrocatalyst for hydrogen evolution reaction. <b>2015</b> , 3, 13066-13071		58
1901	Iron-Doped Molybdenum Carbide Catalyst with High Activity and Stability for the Hydrogen Evolution Reaction. <b>2015</b> , 27, 4281-4288		196
1900	Hierarchical carbon nanopapers coupled with ultrathin MoS <sub>2</sub> nanosheets: Highly efficient large-area electrodes for hydrogen evolution. <b>2015</b> , 15, 335-342		76

1899	N-doped carbon-coated cobalt nanorod arrays supported on a titanium mesh as highly active electrocatalysts for the hydrogen evolution reaction. <b>2015</b> , 3, 1915-1919	93
1898	Porous cobalt phosphide nanorod bundle arrays as hydrogen-evolving cathodes for electrochemical water splitting. <b>2015</b> , 56, 56-60	38
1897	Nanostructured Co <sub>2</sub> P Electrocatalyst for the Hydrogen Evolution Reaction and Direct Comparison with Morphologically Equivalent CoP. <b>2015</b> , 27, 3769-3774	388
1896	Synthesis of Ultrafine Pt/Pd Bimetallic Nanoparticles and Their Decoration on MWCNTs for Hydrogen Evolution. <b>2015</b> , 162, H415-H418	23
1895	Cu/(Cu(OH) <sub>2</sub> -CuO) core/shell nanorods array: in-situ growth and application as an efficient 3D oxygen evolution anode. <b>2015</b> , 163, 102-106	86
1894	Cobalt nanoparticles embedded in nitrogen-doped carbon for the hydrogen evolution reaction. <b>2015</b> , 7, 8083-7	158
1893	Alternative synthesis of cobalt monophosphide@C core-shell nanocables for electrochemical hydrogen production. <b>2015</b> , 286, 464-469	41
1892	3D macroporous MoS <sub>2</sub> thin film: in situ hydrothermal preparation and application as a highly active hydrogen evolution electrocatalyst at all pH values. <b>2015</b> , 168, 133-138	128
1891	Synthesis of supported vertical NiS <sub>2</sub> nanosheets for hydrogen evolution reaction in acidic and alkaline solution. <b>2015</b> , 5, 32976-32982	89
1890	Three-dimensional MoS <sub>2</sub> /rGO hydrogel with extremely high double-layer capacitance as active catalyst for hydrogen evolution reaction. <b>2015</b> , 182, 652-658	82
1889	An amorphous CoSe film behaves as an active and stable full water-splitting electrocatalyst under strongly alkaline conditions. <b>2015</b> , 51, 16683-6	296
1888	Hierarchical composite structure of few-layers MoS <sub>2</sub> nanosheets supported by vertical graphene on carbon cloth for high-performance hydrogen evolution reaction. <b>2015</b> , 18, 196-204	163
1887	MOF-derived nanostructured cobalt phosphide assemblies for efficient hydrogen evolution reaction. <b>2015</b> , 5, 90265-90271	53
1886	Atomic cobalt on nitrogen-doped graphene for hydrogen generation. <b>2015</b> , 6, 8668	1077
1885	Nanoparticle Superlattices as Efficient Bifunctional Electrocatalysts for Water Splitting. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 14305-12	16.4 328
1884	High-Performance Overall Water Splitting Electrocatalysts Derived from Cobalt-Based Metal-Organic Frameworks. <b>2015</b> , 27, 7636-7642	486
1883	Phosphorus-doped CoS <sub>2</sub> nanosheet arrays as ultra-efficient electrocatalysts for the hydrogen evolution reaction. <b>2015</b> , 51, 14160-3	202
1882	Urchin-like CoP Nanocrystals as Hydrogen Evolution Reaction and Oxygen Reduction Reaction Dual-Electrocatalyst with Superior Stability. <b>2015</b> , 15, 7616-20	370

1881	Surface Oxidized Cobalt-Phosphide Nanorods As an Advanced Oxygen Evolution Catalyst in Alkaline Solution. <b>2015</b> , 5, 6874-6878	362
1880	Ni <sub>3</sub> P Nanoparticles decorated on carbon nanotubes with enhanced electrocatalytic and lithium storage properties. <b>2015</b> , 7, 19241-9	52
1879	In situ growth of nickel selenide nanowire arrays on nickel foil for methanol electro-oxidation in alkaline media. <b>2015</b> , 5, 87051-87054	26
1878	A Fe-doped Ni <sub>3</sub> S <sub>2</sub> particle film as a high-efficiency robust oxygen evolution electrode with very high current density. <b>2015</b> , 3, 23207-23212	256
1877	Facile synthesis of Fe/Ni bimetallic oxide solid-solution nanoparticles with superior electrocatalytic activity for oxygen evolution reaction. <b>2015</b> , 8, 3815-3822	72
1876	Self-supported NiMo hollow nanorod array: an efficient 3D bifunctional catalytic electrode for overall water splitting. <b>2015</b> , 3, 20056-20059	189
1875	Physical vapor deposition of amorphous MoS <sub>2</sub> nanosheet arrays on carbon cloth for highly reproducible large-area electrocatalysts for the hydrogen evolution reaction. <b>2015</b> , 3, 19277-19281	73
1874	Enhanced photocatalytic H <sub>2</sub> -evolution by immobilizing CdS nanocrystals on ultrathin Co <sub>0.85</sub> Se/RGOPEI nanosheets. <b>2015</b> , 3, 18711-18717	45
1873	Three-Dimensional Crystalline/Amorphous Co/Co <sub>3</sub> O <sub>4</sub> Core/Shell Nanosheets as Efficient Electrocatalysts for the Hydrogen Evolution Reaction. <b>2015</b> , 15, 6015-21	392
1872	Ni <sub>3</sub> Se <sub>2</sub> film as a non-precious metal bifunctional electrocatalyst for efficient water splitting. <b>2015</b> , 5, 4954-4958	117
1871	Nanoflower-like metallic conductive MoO <sub>2</sub> as a high-performance non-precious metal electrocatalyst for the hydrogen evolution reaction. <b>2015</b> , 3, 20080-20085	113
1870	Metal-organic frameworks-derived synthesis of porous FeP nanocubes: an effective peroxidase mimetic. <b>2015</b> , 460, 55-60	13
1869	NiCo <sub>2</sub> S <sub>4</sub> nanowires array as an efficient bifunctional electrocatalyst for full water splitting with superior activity. <b>2015</b> , 7, 15122-6	319
1868	Designing an improved transition metal phosphide catalyst for hydrogen evolution using experimental and theoretical trends. <b>2015</b> , 8, 3022-3029	671
1867	Metallic Iron-Nickel Sulfide Ultrathin Nanosheets As a Highly Active Electrocatalyst for Hydrogen Evolution Reaction in Acidic Media. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 11900-3	16.4 519
1866	Nickel foam as a three-dimensional robust oxygen evolution electrode with high activity. <b>2015</b> , 40, 13258-13263	41
1865	Porous CoP concave polyhedron electrocatalysts synthesized from metal-organic frameworks with enhanced electrochemical properties for hydrogen evolution. <b>2015</b> , 3, 21471-21477	158
1864	Nanostructured nickel sulfides: phase evolution, characterization and electrocatalytic properties for the hydrogen evolution reaction. <b>2015</b> , 5, 104740-104749	45

1863	Phase- and morphology-controlled synthesis of cobalt sulfide nanocrystals and comparison of their catalytic activities for hydrogen evolution. <b>2015</b> , 357, 1133-1140		39
1862	In situ CO <sub>2</sub> -emission assisted synthesis of molybdenum carbonitride nanomaterial as hydrogen evolution electrocatalyst. <i>Journal of the American Chemical Society</i> , <b>2015</b> , 137, 110-3	16.4	238
1861	Phosphorus-doped graphitic carbon nitrides grown in situ on carbon-fiber paper: flexible and reversible oxygen electrodes. <b>2015</b> , 54, 4646-50		654
1860	NiS <sub>2</sub> nanosheets array grown on carbon cloth as an efficient 3D hydrogen evolution cathode. <b>2015</b> , 153, 508-514		161
1859	Engineering heterogeneous semiconductors for solar water splitting. <b>2015</b> , 3, 2485-2534		1271
1858	A robust hydrogen evolution catalyst based on crystalline nickel phosphide nanoflakes on three-dimensional graphene/nickel foam: high performance for electrocatalytic hydrogen production from pH 0-14. <b>2015</b> , 3, 1941-1946		123
1857	Enhanced electrooxidation of urea using NiMoO <sub>4</sub> ·xH <sub>2</sub> O nanosheet arrays on Ni foam as anode. <b>2015</b> , 153, 456-460		130
1856	Acidically oxidized carbon cloth: a novel metal-free oxygen evolution electrode with high catalytic activity. <b>2015</b> , 51, 1616-9		126
1855	High-Efficiency Electrochemical Hydrogen Evolution Catalyzed by Tungsten Phosphide Submicroparticles. <b>2015</b> , 5, 145-149		200
1854	Monodispersed nickel phosphide nanocrystals with different phases: synthesis, characterization and electrocatalytic properties for hydrogen evolution. <b>2015</b> , 3, 1656-1665		443
1853	Efficient and selective conversion of lactic acid into acetaldehyde using a mesoporous aluminum phosphate catalyst. <b>2015</b> , 17, 1159-1166		28
1852	Photocatalytic H <sub>2</sub> evolution on MoS <sub>2</sub> -TiO <sub>2</sub> catalysts synthesized via mechanochemistry. <b>2015</b> , 17, 933-40		131
1851	Electrocatalytic H <sub>2</sub> production from seawater over Co, N-codoped nanocarbons. <b>2015</b> , 7, 2306-16		131
1850	N-Doped graphene-supported Co@CoO core-shell nanoparticles as high-performance bifunctional electrocatalysts for overall water splitting. <b>2016</b> , 4, 12046-12053		84
1849	Cobalt phosphide nanowires: an efficient electrocatalyst for enzymeless hydrogen peroxide detection. <b>2016</b> , 27, 33LT01		24
1848	Synthesis of MoP decorated carbon cloth as a binder-free electrode for hydrogen evolution. <b>2016</b> , 6, 68568-68573		26
1847	Efficient Water Splitting Catalyzed by Cobalt Phosphide-Based Nanoneedle Arrays Supported on Carbon Cloth. <b>2016</b> , 9, 472-7		158
1846	Superhydrophilic and Superaerophobic Copper Phosphide Microsheets for Efficient Electrocatalytic Hydrogen and Oxygen Evolution. <b>2016</b> , 3, 1600236		84

1845	Cobalt-Nanocrystal-Assembled Hollow Nanoparticles for Electrocatalytic Hydrogen Generation from Neutral-pH Water. <b>2016</b> , 55, 6725-9	56
1844	Ordered Mesoporous Cobalt Phosphate with Crystallized Walls toward Highly Active Water Oxidation Electrocatalysts. <b>2016</b> , 12, 1709-15	128
1843	Bifunctional Nickel Phosphide Nanocatalysts Supported on Carbon Fiber Paper for Highly Efficient and Stable Overall Water Splitting. <b>2016</b> , 26, 4067-4077	493
1842	Engineering Cobalt Phosphide (CoP) Thin Film Catalysts for Enhanced Hydrogen Evolution Activity on Silicon Photocathodes. <b>2016</b> , 6, 1501758	115
1841	Bipolar Membrane-Assisted Solar Water Splitting in Optimal pH. <b>2016</b> , 6, 1600100	108
1840	Tunable and Specific Formation of C@NiCoP Peapods with Enhanced HER Activity and Lithium Storage Performance. <b>2016</b> , 22, 1021-9	57
1839	Significant Enhancement of Water Splitting Activity of N-Carbon Electrocatalyst by Trace Level Co Doping. <b>2016</b> , 12, 3703-11	93
1838	Bioreduction of Precious Metals by Microorganism: Efficient Gold@N-Doped Carbon Electrocatalysts for the Hydrogen Evolution Reaction. <b>2016</b> , 55, 8416-20	80
1837	Chalcogenide and Phosphide Solid-State Electrocatalysts for Hydrogen Generation. <b>2016</b> , 81, 1045-1055	53
1836	Graphene Porous Foam Loaded with Molybdenum Carbide Nanoparticulate Electrocatalyst for Effective Hydrogen Generation. <b>2016</b> , 9, 855-62	38
1835	Bioreduction of Precious Metals by Microorganism: Efficient Gold@N-Doped Carbon Electrocatalysts for the Hydrogen Evolution Reaction. <b>2016</b> , 128, 8556-8560	43
1834	High-efficiency hydrogen evolution reaction catalyzed by iron phosphide nanocrystals. <b>2016</b> , 6, 114430-114435	16
1833	Hydrotalcite-like Ni(OH) Nanosheets in Situ Grown on Nickel Foam for Overall Water Splitting. <b>2016</b> , 8, 33601-33607	151
1832	Co-axial heterostructures integrating palladium/titanium dioxide with carbon nanotubes for efficient electrocatalytic hydrogen evolution. <b>2016</b> , 7, 13549	76
1831	One-Step Synthesis of a Self-Supported Copper Phosphide Nanobush for Overall Water Splitting. <b>2016</b> , 1, 1367-1373	73
1830	Self-supported nanoporous NiCo <sub>2</sub> O <sub>4</sub> nanowires with cobalt-nickel layered oxide nanosheets for overall water splitting. <b>2016</b> , 8, 1390-400	147
1829	Surface Roughening of Nickel Cobalt Phosphide Nanowire Arrays/Ni Foam for Enhanced Hydrogen Evolution Activity. <b>2016</b> , 8, 34270-34279	87
1828	Co/CoO nanoparticles immobilized on Co-N-doped carbon as trifunctional electrocatalysts for oxygen reduction, oxygen evolution and hydrogen evolution reactions. <b>2016</b> , 52, 5946-9	190



1827	Fiber-based multifunctional nickel phosphide electrodes for flexible energy conversion and storage. <b>2016</b> , 4, 9691-9699	116
1826	Efficient electrochemical water splitting catalyzed by electrodeposited NiFe nanosheets film. <b>2016</b> , 41, 8785-8792	46
1825	Controllable synthesis of three dimensional electrodeposited CoP nanosphere arrays as efficient electrocatalysts for overall water splitting. <b>2016</b> , 6, 52761-52771	42
1824	CoP2 nanoparticles on reduced graphene oxide sheets as a super-efficient bifunctional electrocatalyst for full water splitting. <b>2016</b> , 4, 4686-4690	195
1823	Template-directed approach to two-dimensional molybdenum phosphide-carbon nanocomposites with high catalytic activities in the hydrogen evolution reaction. <b>2016</b> , 40, 6015-6021	20
1822	Co nanoparticles embedded in a 3D CoO matrix for electrocatalytic hydrogen evolution. <b>2016</b> , 6, 38515-38520	15
1821	One-step electrodeposition of NiCoS nanosheets film as a bifunctional electrocatalyst for efficient water splitting. <b>2016</b> , 41, 7264-7269	88
1820	Highly Efficient and Robust Nickel Phosphides as Bifunctional Electrocatalysts for Overall Water-Splitting. <b>2016</b> , 8, 10826-34	162
1819	Ni3Se2 nanoforest/Ni foam as a hydrophilic, metallic, and self-supported bifunctional electrocatalyst for both H2 and O2 generations. <b>2016</b> , 24, 103-110	297
1818	Promoting visible light-driven hydrogen evolution over CdS nanorods using earth-abundant CoP as a cocatalyst. <b>2016</b> , 6, 33120-33125	45
1817	Cobalt phosphide-based nanoparticles as bifunctional electrocatalysts for alkaline water splitting. <b>2016</b> , 4, 7549-7554	40
1816	Vanadium nanobelts coated nickel foam 3D bifunctional electrode with excellent catalytic activity and stability for water electrolysis. <b>2016</b> , 8, 10731-8	62
1815	A three-dimensional porous MoP@C hybrid as a high-capacity, long-cycle life anode material for lithium-ion batteries. <b>2016</b> , 8, 10330-8	102
1814	A self-standing nanoporous MoP2 nanosheet array: an advanced pH-universal catalytic electrode for the hydrogen evolution reaction. <b>2016</b> , 4, 7169-7173	165
1813	Carbon-coated hollow mesoporous FeP microcubes: an efficient and stable electrocatalyst for hydrogen evolution. <b>2016</b> , 4, 8974-8977	120
1812	Highly efficient electrochemical hydrogen evolution based on nickel diselenide nanowall film. <b>2016</b> , 27, 20LT02	55
1811	General Strategy for the Synthesis of Transition Metal Phosphide Films for Electrocatalytic Hydrogen and Oxygen Evolution. <b>2016</b> , 8, 12798-803	201
1810	A highly active hydrogen evolution electrocatalyst based on a cobalt-nickel sulfide composite electrode. <b>2016</b> , 4, 9744-9749	43

1809	Hierarchical MoS <sub>2</sub> @MoP core-shell heterojunction electrocatalysts for efficient hydrogen evolution reaction over a broad pH range. <b>2016</b> , 8, 11052-9	134
1808	An efficient bifunctional electrocatalyst for water splitting based on cobalt phosphide. <b>2016</b> , 27, 23LT01	43
1807	Ditungsten carbide nanoparticles encapsulated by ultrathin graphitic layers with excellent hydrogen-evolution electrocatalytic properties. <b>2016</b> , 4, 8204-8210	51
1806	Self-assembled ultrathin NiCo <sub>2</sub> S <sub>4</sub> nanoflakes grown on Ni foam as high-performance flexible electrodes for hydrogen evolution reaction in alkaline solution. <b>2016</b> , 24, 139-147	233
1805	Co-, N-, and S-Tridoped Carbon Derived from Nitrogen- and Sulfur-Enriched Polymer and Cobalt Salt for Hydrogen Evolution Reaction. <b>2016</b> , 8, 13341-7	37
1804	Electrocatalysts for hydrogen oxidation and evolution reactions. <b>2016</b> , 59, 217-238	116
1803	Facile one-pot synthesis of CoS <sub>2</sub> -MoS <sub>2</sub> /CNTs as efficient electrocatalyst for hydrogen evolution reaction. <b>2016</b> , 384, 51-57	104
1802	Construction of a cobalt-embedded nitrogen-doped carbon material with the desired porosity derived from the confined growth of MOFs within graphene aerogels as a superior catalyst towards HER and ORR. <b>2016</b> , 4, 15536-15545	65
1801	Self-supported tungsten/tungsten dioxide nanowires array as an efficient electrocatalyst in the hydrogen evolution reaction. <b>2016</b> , 6, 89815-89820	6
1800	Bifunctional CoP and CoN porous nanocatalysts derived from ZIF-67 in situ grown on nanowire photoelectrodes for efficient photoelectrochemical water splitting and CO <sub>2</sub> reduction. <b>2016</b> , 4, 15353-15360	75
1799	Decorating mesoporous silicon with amorphous metal phosphorous-derived nanocatalysts towards enhanced photoelectrochemical water reduction. <b>2016</b> , 4, 14960-14967	15
1798	A cobalt-based hybrid electrocatalyst derived from a carbon nanotube inserted metal-organic framework for efficient water-splitting. <b>2016</b> , 4, 16057-16063	116
1797	Interfacial engineering of MoS <sub>2</sub> /TiO <sub>2</sub> hybrids for enhanced electrocatalytic hydrogen evolution reaction. <b>2016</b> , 9, 095801	23
1796	NiCo-layered double hydroxides vertically assembled on carbon fiber papers as binder-free high-active electrocatalysts for water oxidation. <b>2016</b> , 110, 1-7	137
1795	One-step, integrated fabrication of Co <sub>2</sub> P nanoparticles encapsulated N, P dual-doped CNTs for highly advanced total water splitting. <b>2016</b> , 30, 303-311	154
1794	Ternary FeCoP Nanowire Array as a Robust Hydrogen Evolution Reaction Electrocatalyst with Pt-like Activity: Experimental and Theoretical Insight. <b>2016</b> , 16, 6617-6621	531
1793	Carbide decorated carbon nanotube electrocatalyst for high-efficiency hydrogen evolution from seawater. <b>2016</b> , 6, 93267-93274	21
1792	Rational Synthesis of Metal-Organic Framework-Derived Noble Metal-Free Nickel Phosphide Nanoparticles as a Highly Efficient Cocatalyst for Photocatalytic Hydrogen Evolution. <b>2016</b> , 4, 7158-7166	105

1791	Ni <sub>2</sub> P/CoP hybrid nanosheet arrays supported on carbon cloth as an efficient flexible cathode for hydrogen evolution. <b>2016</b> , 4, 16992-16999	122
1790	One-Step Electrodeposition of Co/CoP Film on Ni Foam for Efficient Hydrogen Evolution in Alkaline Solution. <b>2016</b> , 8, 29400-29407	104
1789	Growth of One-Dimensional RuO Nanowires on g-Carbon Nitride: An Active and Stable Bifunctional Electrocatalyst for Hydrogen and Oxygen Evolution Reactions at All pH Values. <b>2016</b> , 8, 28678-28688	121
1788	Cobalt phosphide nanowall array as an efficient 3D catalyst electrode for methanol electro-oxidation. <b>2016</b> , 27, 44LT02	12
1787	Phase-controlled synthesis and comparative study of $\beta$ - and $\gamma$ -Ni <sub>2</sub> P 2 submicron particles as efficient electrocatalysts for hydrogen evolution. <b>2016</b> , 216, 304-311	15
1786	Self-supported porous Ni-Fe-P composite as an efficient electrocatalyst for hydrogen evolution reaction in both acidic and alkaline medium. <b>2016</b> , 219, 194-203	77
1785	Amorphous molybdenum sulfide quantum dots: an efficient hydrogen evolution electrocatalyst in neutral medium. <b>2016</b> , 4, 15486-15493	66
1784	Effective hydrolysis of sodium borohydride driven by self-supported cobalt oxide nanorod array for on-demand hydrogen generation. <b>2016</b> , 87, 94-97	30
1783	CoP Nanoparticles in Situ Grown in Three-Dimensional Hierarchical Nanoporous Carbons as Superior Electrocatalysts for Hydrogen Evolution. <b>2016</b> , 8, 20720-9	58
1782	Mechanistic Insights on Ternary Ni <sub>2</sub> -Co <sub>x</sub> P for Hydrogen Evolution and Their Hybrids with Graphene as Highly Efficient and Robust Catalysts for Overall Water Splitting. <b>2016</b> , 26, 6785-6796	422
1781	Metal-organic framework derived CoSe <sub>2</sub> nanoparticles anchored on carbon fibers as bifunctional electrocatalysts for efficient overall water splitting. <b>2016</b> , 9, 2234-2243	185
1780	Synthesis and catalytic activity of the metastable phase of gold phosphide. <b>2016</b> , 242, 182-192	8
1779	Synthesis, Characterization, and Properties of Metal Phosphide Catalysts for the Hydrogen-Evolution Reaction. <b>2016</b> , 28, 6017-6044	414
1778	The effect of cobalt ion on the hydrogen evolution reaction in sulfate solution. <b>2016</b> , 41, 17793-17800	11
1777	Two-Dimensional Molybdenum Carbide (MXene) as an Efficient Electrocatalyst for Hydrogen Evolution. <b>2016</b> , 1, 589-594	752
1776	Recent developments of carbon-based electrocatalysts for hydrogen evolution reaction. <b>2016</b> , 28, 29-43	473
1775	Self-supported CoP nanosheet arrays: a non-precious metal catalyst for efficient hydrogen generation from alkaline NaBH <sub>4</sub> solution. <b>2016</b> , 4, 13053-13057	139
1774	Integrating Perovskite Photovoltaics and Noble-Metal-Free Catalysts toward Efficient Solar Energy Conversion and H <sub>2</sub> S Splitting. <b>2016</b> , 6, 6198-6206	30

1773	Ultra-small nickel phosphide nanoparticles as a high-performance electrocatalyst for the hydrogen evolution reaction. <b>2016</b> , 6, 74895-74902	11
1772	Electropolymerized supermolecule derived N, P co-doped carbon nanofiber networks as a highly efficient metal-free electrocatalyst for the hydrogen evolution reaction. <b>2016</b> , 4, 13726-13730	109
1771	Anchoring CoO Domains on CoSe Nanobelts as Bifunctional Electrocatalysts for Overall Water Splitting in Neutral Media. <b>2016</b> , 3, 1500426	205
1770	Competent overall water-splitting electrocatalysts derived from ZIF-67 grown on carbon cloth. <b>2016</b> , 6, 73336-73342	46
1769	Phosphorus doped single wall carbon nanotubes loaded with nanoparticles of iron phosphide and iron carbide for efficient hydrogen evolution. <b>2016</b> , 4, 13336-13343	44
1768	Low-cost and highly efficient CoMoS <sub>4</sub> /NiMoS <sub>4</sub> -based electrocatalysts for hydrogen evolution reactions over a wide pH range. <b>2016</b> , 213, 236-243	63
1767	Ultrasmall diiron phosphide nanodots anchored on graphene sheets with enhanced electrocatalytic activity for hydrogen production via high-efficiency water splitting. <b>2016</b> , 4, 16028-16035	36
1766	3D structured porous CoP <sub>3</sub> nanoneedle arrays as an efficient bifunctional electrocatalyst for the evolution reaction of hydrogen and oxygen. <b>2016</b> , 4, 14539-14544	100
1765	Three-dimensional porous structural MoP <sub>2</sub> nanoparticles as a novel and superior catalyst for electrochemical hydrogen evolution. <b>2016</b> , 328, 551-557	73
1764	Cobalt nickel phosphide nanoparticles decorated carbon nanotubes as advanced hybrid catalysts for hydrogen evolution. <b>2016</b> , 4, 14675-14686	114
1763	3D Graphene Aerogels Decorated with Cobalt Phosphide Nanoparticles as Electrocatalysts for the Hydrogen Evolution Reaction. <b>2016</b> , 9, 3049-3053	45
1762	Self-Supported Cedarlike Semimetallic Cu <sub>3</sub> P Nanoarrays as a 3D High-Performance Janus Electrode for Both Oxygen and Hydrogen Evolution under Basic Conditions. <b>2016</b> , 8, 23037-48	124
1761	CoP for hydrogen evolution: implications from hydrogen adsorption. <b>2016</b> , 18, 23864-71	64
1760	Nanostructured metal phosphide-based materials for electrochemical energy storage. <b>2016</b> , 4, 14915-14931	191
1759	CoSe <sub>2</sub> nanoparticles embedded defective carbon nanotubes derived from MOFs as efficient electrocatalyst for hydrogen evolution reaction. <b>2016</b> , 28, 143-150	215
1758	Amorphous CoMoS ultrathin films with low-temperature sulfurization as high-performance electrocatalysts for the hydrogen evolution reaction. <b>2016</b> , 4, 13731-13735	41
1757	Understanding of the major reactions in solution synthesis of functional nanomaterials. <b>2016</b> , 59, 938-996	75
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1755	Water splitting: Taking cobalt in isolation. <b>2016</b> , 1,	11
1754	Anion and Cation Modulation in Metal Compounds for Bifunctional Overall Water Splitting. <b>2016</b> , 10, 8738-45	310
1753	Electrochemical fabrication of porous Ni-Cu alloy nanosheets with high catalytic activity for hydrogen evolution. <b>2016</b> , 215, 609-616	87
1752	From water reduction to oxidation: Janus Co-Ni-P nanowires as high-efficiency and ultrastable electrocatalysts for over 3000h water splitting. <b>2016</b> , 330, 156-166	153
1751	Stabilizing Active Edge Sites in Semicrystalline Molybdenum Sulfide by Anchorage on Nitrogen-Doped Carbon Nanotubes for Hydrogen Evolution Reaction. <b>2016</b> , 26, 6766-6776	89
1750	In Situ Fabrication of Tungsten Diphosphide Nanoparticles on Tungsten foil: A Hydrogen-Evolution Cathode for a Wide pH Range. <b>2016</b> , 4, 1030-1034	8
1749	NiCoFe Layered Triple Hydroxides with Porous Structures as High-Performance Electrocatalysts for Overall Water Splitting. <b>2016</b> , 1, 445-453	265
1748	Topotactic Conversion of Copper(I) Phosphide Nanowires for Sensitive Electrochemical Detection of H <sub>2</sub> O <sub>2</sub> Release from Living Cells. <b>2016</b> , 88, 7724-9	97
1747	Engineering water dissociation sites in MoS <sub>2</sub> nanosheets for accelerated electrocatalytic hydrogen production. <b>2016</b> , 9, 2789-2793	386
1746	Progress on Electrocatalysts of Hydrogen Evolution Reaction Based on Carbon Fiber Materials. <b>2016</b> , 44, 1447-1457	22
1745	Facile Cu <sub>3</sub> P-C hybrid supported strategy to improve Pt nanoparticle electrocatalytic performance toward methanol, ethanol, glycol and formic acid electro-oxidation. <b>2016</b> , 220, 193-204	64
1744	Synergistic-Effect-Controlled CoTe <sub>2</sub> /Carbon Nanotube Hybrid Material for Efficient Water Oxidation. <b>2016</b> , 120, 28093-28099	29
1743	A 3D Nanostructure Based on Transition-Metal Phosphide Decorated Heteroatom-Doped Mesoporous Nanospheres Interconnected with Graphene: Synthesis and Applications. <b>2016</b> , 8, 32528-32540	39
1742	Porous Co <sub>3</sub> P foam as an efficient bifunctional electrocatalyst for hydrogen and oxygen evolution reactions. <b>2016</b> , 4, 18272-18277	101
1741	Cobalt phosphide nanowall arrays supported on carbon cloth: an efficient monolithic non-noble-metal hydrogen evolution catalyst. <b>2016</b> , 27, 475702	17
1740	A highly active molybdenum polysulfide electrocatalyst for the hydrogen evolution reaction. <b>2016</b> , 6, 107158-107162	11
1739	Self-supported three-dimensional mesoporous semimetallic WP nanowire arrays on carbon cloth as a flexible cathode for efficient hydrogen evolution. <b>2016</b> , 8, 19779-19786	71
1738	Enhanced electrocatalytic hydrogen evolution in graphene via defect engineering and heteroatoms co-doping. <b>2016</b> , 219, 781-789	27

1737	Robustly photogenerating H <sub>2</sub> in water using FeP/CdS catalyst under solar irradiation. <b>2016</b> , 6, 19846	88
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1733	Elastic Carbon Aerogels Reconstructed from Electrospun Nanofibers and Graphene as Three-Dimensional Networked Matrix for Efficient Energy Storage/Conversion. <b>2016</b> , 6, 31541	32
1732	Fabrication of amorphous CoMoS as a bifunctional electrocatalyst for water splitting under strong alkaline conditions. <b>2016</b> , 8, 18887-18892	68
1731	Novel CoP Hollow Prisms as Bifunctional Electrocatalysts for Hydrogen Evolution Reaction in Acid media and Overall Water-splitting in Basic media. <b>2016</b> , 220, 98-106	50
1730	Extraordinarily Durable Graphdiyne-Supported Electrocatalyst with High Activity for Hydrogen Production at All Values of pH. <b>2016</b> , 8, 31083-31091	99
1729	Shape effects of nickel phosphide nanocrystals on hydrogen evolution reaction. <b>2016</b> , 18, 6083-6089	66
1728	Efficient and Stable Bifunctional Electrocatalysts Ni/NixMy (M = P, S) for Overall Water Splitting. <b>2016</b> , 26, 3314-3323	690
1727	Recent Progress in Cobalt-Based Heterogeneous Catalysts for Electrochemical Water Splitting. <b>2016</b> , 28, 215-30	1708
1726	Hierarchically Porous Nickel Sulfide Multifunctional Superstructures. <b>2016</b> , 6, 1502333	226
1725	Cobalt-Nanocrystal-Assembled Hollow Nanoparticles for Electrocatalytic Hydrogen Generation from Neutral-pH Water. <b>2016</b> , 128, 6837-6841	7
1724	Earth-Rich Transition Metal Phosphide for Energy Conversion and Storage. <b>2016</b> , 6, 1600087	354
1723	Interface Engineering of MoS <sub>2</sub> /Ni <sub>3</sub> S <sub>2</sub> Heterostructures for Highly Enhanced Electrochemical Overall-Water-Splitting Activity. <b>2016</b> , 55, 6702-7	896
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1721	Polymer-Embedded Fabrication of Co <sub>2</sub> P Nanoparticles Encapsulated in N,P-Doped Graphene for Hydrogen Generation. <b>2016</b> , 16, 4691-8	252
1720	A highly flexible and conductive graphene-wrapped carbon nanofiber membrane for high-performance electrocatalytic applications. <b>2016</b> , 3, 969-976	12

1719	Cobalt Selenide Nanostructures: An Efficient Bifunctional Catalyst with High Current Density at Low Coverage. <b>2016</b> , 8, 17292-302	128
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1717	Interconnected urchin-like cobalt phosphide microspheres film for highly efficient electrochemical hydrogen evolution in both acidic and basic media. <b>2016</b> , 4, 10114-10117	92
1716	Magnetic Co@g-C3N4 Core-Shells on rGO Sheets for Momentum Transfer with Catalytic Activity toward Continuous-Flow Hydrogen Generation. <b>2016</b> , 32, 6272-81	57
1715	Neuron-Inspired Interpenetrative Network Composed of Cobalt-Phosphorus-Derived Nanoparticles Embedded within Porous Carbon Nanotubes for Efficient Hydrogen Production. <b>2016</b> , 8, 17284-91	10
1714	Preparation and catalytic properties of porous CoP nanoflakes via a low-temperature phosphidation route. <b>2016</b> , 18, 5580-5587	15
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1712	An electrodeposited cobalt selenide-based film as an efficient bifunctional electrocatalyst for full water splitting. <b>2016</b> , 4, 10933-10939	103
1711	Universal Strategy to Fabricate a Two-Dimensional Layered Mesoporous Mo2C Electrocatalyst Hybridized on Graphene Sheets with High Activity and Durability for Hydrogen Generation. <b>2016</b> , 8, 18107-18	61
1710	Facile Synthesis of Graphene Sponge from Graphene Oxide for Efficient Dye-Sensitized H2 Evolution. <b>2016</b> , 8, 15187-95	81
1709	Hollow Platinum Nanospheres and Nanotubes Templated by Shear Flow-Induced Lipid Vesicles and Tubules and Their Applications on Hydrogen Evolution. <b>2016</b> , 4, 3773-3779	19
1708	Proton Reduction Using a Hydrogenase-Modified Nanoporous Black Silicon Photoelectrode. <b>2016</b> , 8, 14481-7	33
1707	Efficient and durable electrochemical hydrogen evolution using cocoon-like MoS2 with preferentially exposed edges. <b>2016</b> , 41, 9344-9354	63
1706	Enhanced oxygen evolution reaction of metallic nickel phosphide nanosheets by surface modification. <b>2016</b> , 3, 1021-1027	45
1705	Ternary NiCoP nanosheet arrays: An excellent bifunctional catalyst for alkaline overall water splitting. <b>2016</b> , 9, 2251-2259	255
1704	High-Performance Water Electrolysis System with Double Nanostructured Superaerophobic Electrodes. <b>2016</b> , 12, 2492-8	84
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1701	Self-standing Ni-WN heterostructure nanowires array: A highly efficient catalytic cathode for hydrogen evolution reaction in alkaline solution. <b>2016</b> , 210, 729-733	47
1700	An Alkaline-Stable, Metal Hydroxide Mimicking Metal-Organic Framework for Efficient Electrocatalytic Oxygen Evolution. <i>Journal of the American Chemical Society</i> , <b>2016</b> , 138, 8336-9	16.4 362
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1697	WO <sub>3-x</sub> Nanoplates Grown on Carbon Nanofibers for an Efficient Electrocatalytic Hydrogen Evolution Reaction. <b>2016</b> , 8, 18132-9	97
1696	Interface Engineering of MoS <sub>2</sub> /Ni <sub>3</sub> S <sub>2</sub> Heterostructures for Highly Enhanced Electrochemical Overall-Water-Splitting Activity. <b>2016</b> , 128, 6814-6819	315
1695	Recent advances in transition metal phosphide nanomaterials: synthesis and applications in hydrogen evolution reaction. <b>2016</b> , 45, 1529-41	2040
1694	Shape-Controlled Synthesis of Co <sub>2</sub> P Nanostructures and Their Application in Supercapacitors. <b>2016</b> , 8, 3892-900	250
1693	Ternary Platinum-Copper-Nickel Nanoparticles Anchored to Hierarchical Carbon Supports as Free-Standing Hydrogen Evolution Electrodes. <b>2016</b> , 8, 3464-72	67
1692	Self-supported nickel nitride as an efficient high-performance three-dimensional cathode for the alkaline hydrogen evolution reaction. <b>2016</b> , 191, 841-845	87
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1690	Enhanced Catalytic Activities of Surfactant-Assisted Exfoliated WS <sub>2</sub> Nanodots for Hydrogen Evolution. <b>2016</b> , 10, 2159-66	227
1689	Integrated Three-Dimensional Carbon Paper/Carbon Tubes/Cobalt-Sulfide Sheets as an Efficient Electrode for Overall Water Splitting. <b>2016</b> , 10, 2342-8	471
1688	Ultrathin cobalt phosphide nanosheets as efficient bifunctional catalysts for a water electrolysis cell and the origin for cell performance degradation. <b>2016</b> , 18, 2287-2295	84
1687	Efficient Electrochemical Water Splitting Catalyzed by Electrodeposited Nickel Diselenide Nanoparticles Based Film. <b>2016</b> , 8, 4718-23	207
1686	FeP and FeP <sub>2</sub> nanowires for efficient electrocatalytic hydrogen evolution reaction. <b>2016</b> , 52, 2819-22	208
1685	3D flexible hydrogen evolution electrodes with Se-promoted molybdenum sulfide nanosheet arrays. <b>2016</b> , 6, 11077-11080	24
1684	Binary nickel/iron nitride nanoarrays as bifunctional electrocatalysts for overall water splitting. <b>2016</b> , 3, 630-634	119



1683	From Water Oxidation to Reduction: Transformation from Ni(x)Co(3-x)O <sub>4</sub> Nanowires to NiCo/NiCoO(x) Heterostructures. <b>2016</b> , 8, 3208-14	106
1682	Active Sites Implanted Carbon Cages in Core-Shell Architecture: Highly Active and Durable Electrocatalyst for Hydrogen Evolution Reaction. <b>2016</b> , 10, 684-94	371
1681	Core-shell amorphous cobalt phosphide/cadmium sulfide semiconductor nanorods for exceptional photocatalytic hydrogen production under visible light. <b>2016</b> , 4, 1598-1602	94
1680	CoNiB nanocatalyst for efficient hydrogen evolution reaction in wide pH range. <b>2016</b> , 192, 126-133	175
1679	A facile approach to fabricate free-standing hydrogen evolution electrodes: riveting tungsten carbide nanocrystals to graphite felt fabrics by carbon nanosheets. <b>2016</b> , 4, 5817-5822	34
1678	General urea-assisted synthesis of carbon-coated metal phosphide nanoparticles for efficient hydrogen evolution electrocatalysis. <b>2016</b> , 199, 99-107	46
1677	Electrochemically activated-iron oxide nanosheet arrays on carbon fiber cloth as a three-dimensional self-supported electrode for efficient water oxidation. <b>2016</b> , 4, 6048-6055	54
1676	In Situ Electrochemically Activated CoMn-S@NiO/CC Nanosheets Array for Enhanced Hydrogen Evolution. <b>2016</b> , 6, 2797-2801	82
1675	Modelling an electrochemically roughened porous platinum electrode for water oxidation. <b>2016</b> , 52, 4068-71	9
1674	Facile electrospinning preparation of phosphorus and nitrogen dual-doped cobalt-based carbon nanofibers as bifunctional electrocatalyst. <b>2016</b> , 311, 68-80	61
1673	Novel porous molybdenum tungsten phosphide hybrid nanosheets on carbon cloth for efficient hydrogen evolution. <b>2016</b> , 9, 1468-1475	356
1672	A novel CoP/MoS <sub>2</sub> -CNTs hybrid catalyst with Pt-like activity for hydrogen evolution. <b>2016</b> , 6, 1611-1615	100
1671	Palladium Nanoparticle-Graphitic Carbon Nitride Porous Synergistic Catalyst for Hydrogen Evolution/Oxidation Reactions over a Broad Range of pH and Correlation of Its Catalytic Activity with Measured Hydrogen Binding Energy. <b>2016</b> , 6, 1929-1941	185
1670	Electroless plated NiB films as highly active electrocatalysts for hydrogen production from water over a wide pH range. <b>2016</b> , 19, 98-107	112
1669	Cobalt phosphide-based electrocatalysts: synthesis and phase catalytic activity comparison for hydrogen evolution. <b>2016</b> , 4, 4745-4754	224
1668	Electrodeposited Co-doped NiSe <sub>2</sub> nanoparticles film: a good electrocatalyst for efficient water splitting. <b>2016</b> , 8, 3911-5	299
1667	Synthesis of Cu <sub>3</sub> P nanocubes and their excellent electrocatalytic efficiency for the hydrogen evolution reaction in acidic solution. <b>2016</b> , 6, 9672-9677	40
1666	Design and Epitaxial Growth of MoSe <sub>2</sub> /NiSe Vertical Heteronanostructures with Electronic Modulation for Enhanced Hydrogen Evolution Reaction. <b>2016</b> , 28, 1838-1846	238

1665	Highly-active oxygen evolution electrocatalyzed by a Fe-doped NiSe nanoflake array electrode. <b>2016</b> , 52, 4529-32	105
1664	Controlled electrodeposition of CoMoS <sub>x</sub> on carbon cloth: A 3D cathode for highly-efficient electrocatalytic hydrogen evolution. <b>2016</b> , 41, 3811-3819	36
1663	Wide Range pH-Tolerable Silicon@Pyrite Cobalt Dichalcogenide Microwire Array Photoelectrodes for Solar Hydrogen Evolution. <b>2016</b> , 8, 5400-7	22
1662	Carbon coated porous nickel phosphides nanoplates for highly efficient oxygen evolution reaction. <b>2016</b> , 9, 1246-1250	706
1661	Amorphous Ni-B alloy nanoparticle film on Ni foam: rapid alternately dipping deposition for efficient overall water splitting. <b>2016</b> , 27, 12LT01	73
1660	Nanostructured molybdenum phosphide/N,P dual-doped carbon nanotube composite as electrocatalysts for hydrogen evolution. <b>2016</b> , 6, 7370-7377	27
1659	Zn <sub>0.76</sub> Co <sub>0.24</sub> S/CoS <sub>2</sub> nanowires array for efficient electrochemical splitting of water. <b>2016</b> , 190, 360-364	83
1658	Metallic Co <sub>9</sub> S <sub>8</sub> nanosheets grown on carbon cloth as efficient binder-free electrocatalysts for the hydrogen evolution reaction in neutral media. <b>2016</b> , 4, 6860-6867	214
1657	Hierarchically Porous Urchin-Like Ni <sub>2</sub> P Superstructures Supported on Nickel Foam as Efficient Bifunctional Electrocatalysts for Overall Water Splitting. <b>2016</b> , 6, 714-721	604
1656	Increased activity in hydrogen evolution electrocatalysis for partial anionic substitution in cobalt oxysulfide nanoparticles. <b>2016</b> , 4, 2842-2848	24
1655	Cobalt Phosphide Hollow Polyhedron as Efficient Bifunctional Electrocatalysts for the Evolution Reaction of Hydrogen and Oxygen. <b>2016</b> , 8, 2158-65	401
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1653	The hierarchical nanowires array of iron phosphide integrated on a carbon fiber paper as an effective electrocatalyst for hydrogen generation. <b>2016</b> , 4, 1454-1460	103
1652	P doped molybdenum dioxide on Mo foil with high electrocatalytic activity for the hydrogen evolution reaction. <b>2016</b> , 4, 1647-1652	51
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1650	Rational composition and structural design of in situ grown nickel-based electrocatalysts for efficient water electrolysis. <b>2016</b> , 4, 167-172	120
1649	Analysis of cobalt phosphide (CoP) nanorods designed for non-enzyme glucose detection. <b>2016</b> , 141, 256-60	65
1648	Nickel cobalt phosphides quasi-hollow nanocubes as an efficient electrocatalyst for hydrogen evolution in alkaline solution. <b>2016</b> , 52, 1633-6	215

1647	Nickel sulfide microsphere film on Ni foam as an efficient bifunctional electrocatalyst for overall water splitting. <b>2016</b> , 52, 1486-9	402
1646	Hierarchical nickel oxide nanosheet@nanowire arrays on nickel foam: an efficient 3D electrode for methanol electro-oxidation. <b>2016</b> , 6, 1157-1161	60
1645	Nickel promoted cobalt disulfide nanowire array supported on carbon cloth: An efficient and stable bifunctional electrocatalyst for full water splitting. <b>2016</b> , 63, 60-64	125
1644	Hydrogen evolution catalyzed by cobalt-promoted molybdenum phosphide nanoparticles. <b>2016</b> , 6, 1952-1956	61
1643	Templated-preparation of a three-dimensional molybdenum phosphide sponge as a high performance electrode for hydrogen evolution. <b>2016</b> , 4, 59-66	85
1642	Flexible cobalt phosphide network electrocatalyst for hydrogen evolution at all pH values. <b>2017</b> , 10, 1010-1020	63
1641	A general approach to cobalt-based homobimetallic phosphide ultrathin nanosheets for highly efficient oxygen evolution in alkaline media. <b>2017</b> , 10, 893-899	342
1640	Replacing Oxygen Evolution with Hydrazine Oxidation at the Anode for Energy-Saving Electrolytic Hydrogen Production. <b>2017</b> , 4, 481-484	49
1639	Fe-Doped NiP Nanosheet Array for High-Efficiency Electrochemical Water Oxidation. <b>2017</b> , 56, 1041-1044	164
1638	Synthesis and application of transition metal phosphides as electrocatalyst for water splitting. <b>2017</b> , 62, 633-644	114
1637	Active Edge Sites Engineering in Nickel Cobalt Selenide Solid Solutions for Highly Efficient Hydrogen Evolution. <b>2017</b> , 7, 1602089	145
1636	Integrated Ni-P-S nanosheets array as superior electrocatalysts for hydrogen generation. <b>2017</b> , 2, 112-118	30
1635	Facile synthesis of pyrite-type binary nickel iron diselenides as efficient electrocatalyst for oxygen evolution reaction. <b>2017</b> , 401, 17-24	49
1634	Reduced graphene oxide and MoP composite as highly efficient and durable electrocatalyst for hydrogen evolution in both acidic and alkaline media. <b>2017</b> , 7, 668-676	62
1633	Homologous NiO//NiP nanoarrays grown on nickel foams: a well matched electrode pair with high stability in overall water splitting. <b>2017</b> , 9, 4409-4418	100
1632	Facile preparation of carbon sphere supported molybdenum compounds (P, C and S) as hydrogen evolution electrocatalysts in acid and alkaline electrolytes. <b>2017</b> , 32, 511-519	119
1631	Topotactic Conversion of $\beta$ -FeO Nanowires into FeP as a Superior Fluorosensor for Nucleic Acid Detection: Insights from Experiment and Theory. <b>2017</b> , 89, 2191-2195	34
1630	Development of large scale unified system for hydrogen energy carrier production and utilization: Experimental analysis and systems modeling. <b>2017</b> , 42, 13444-13453	14

1629	Preparation of NiCoP Hollow Quasi-Polyhedra and Their Electrocatalytic Properties for Hydrogen Evolution in Alkaline Solution. <b>2017</b> , 9, 5982-5991	162
1628	Template synthesis of CoSe <sub>2</sub> /Co <sub>3</sub> Se <sub>4</sub> nanotubes: tuning of their crystal structures for photovoltaics and hydrogen evolution in alkaline medium. <b>2017</b> , 5, 4513-4526	125
1627	NiCoP Nanoarray: A Superior Pseudocapacitor Electrode with High Areal Capacitance. <b>2017</b> , 23, 4435-4441	101
1626	Vapor-solid synthesis of monolithic single-crystalline CoP nanowire electrodes for efficient and robust water electrolysis. <b>2017</b> , 8, 2952-2958	134
1625	CoP nanoarray: a robust non-noble-metal hydrogen-generating catalyst toward effective hydrolysis of ammonia borane. <b>2017</b> , 4, 659-662	75
1624	Combining theory and experiment in electrocatalysis: Insights into materials design. <b>2017</b> , 355,	5239
1623	Recent Progress in Energy-Driven Water Splitting. <b>2017</b> , 4, 1600337	419
1622	Emerging nanostructured electrode materials for water electrolysis and rechargeable beyond Li-ion batteries. <b>2017</b> , 2, 211-253	22
1621	RhAgBi ternary composites: highly active hydrogen evolution electrocatalysts over PtAgBi. <b>2017</b> , 5, 1623-1628	24
1620	Sub-1.1 nm ultrathin porous CoP nanosheets with dominant reactive {200} facets: a high mass activity and efficient electrocatalyst for the hydrogen evolution reaction. <b>2017</b> , 8, 2769-2775	199
1619	High-performance urea electrolysis towards less energy-intensive electrochemical hydrogen production using a bifunctional catalyst electrode. <b>2017</b> , 5, 3208-3213	211
1618	In Situ Construction of Nickel Phosphosulfide (Ni <sub>5</sub> P <sub>4</sub>  S) Active Species on 3D Ni Foam through Chemical Vapor Deposition for Electrochemical Hydrogen Evolution. <b>2017</b> , 4, 1108-1116	17
1617	Ionic Liquids-Based Iron Phosphide/Carbon Nanotubes Composites: High Active Electrocatalysts towards Hydrogen Evolution Reaction. <b>2017</b> , 2, 1019-1024	7
1616	In Situ Investigations on the Structural and Morphological Changes of Metal Phosphides as Anode Materials in Lithium-Ion Batteries. <b>2017</b> , 4, 1601047	30
1615	Supramolecular gel-assisted synthesis Co <sub>2</sub> P particles anchored in multielement co-doped graphene as efficient bifunctional electrocatalysts for oxygen reduction and evolution. <b>2017</b> , 231, 344-353	46
1614	Non-Noble Metal-based Carbon Composites in Hydrogen Evolution Reaction: Fundamentals to Applications. <b>2017</b> , 29, 1605838	900
1613	In situ electrochemical surface derivation of cobalt phosphate from a Co(CO)(OH) <sub>2</sub> ·11H <sub>2</sub> O nanoarray for efficient water oxidation in neutral aqueous solution. <b>2017</b> , 9, 3752-3756	75
1612	Phytic acid-derivative transition metal phosphides encapsulated in N,P-codoped carbon: an efficient and durable hydrogen evolution electrocatalyst in a wide pH range. <b>2017</b> , 9, 3555-3560	158

1611	Coupling polymorphic nanostructured carbon nitrides into an isotype heterojunction with boosted photocatalytic H evolution. <b>2017</b> , 53, 2978-2981	64
1610	An efficient ternary CoPSe nanowire array for overall water splitting. <b>2017</b> , 9, 3995-4001	63
1609	Facile electrochemical preparation of self-supported porous NiMo alloy microspheres as efficient bifunctional electrocatalysts for water splitting. <b>2017</b> , 5, 5797-5805	91
1608	NiS <sub>2</sub> nanosheet array: A high-active bifunctional electrocatalyst for hydrazine oxidation and water reduction toward energy-efficient hydrogen production. <b>2017</b> , 3, 9-14	47
1607	Theoretical designing and experimental fabricating unique quadruple multimetallic phosphides with remarkable hydrogen evolution performance. <b>2017</b> , 34, 421-427	25
1606	Porous CoS <sub>2</sub> nanostructures based on ZIF-9 supported on reduced graphene oxide: Favourable electrocatalysis for hydrogen evolution reaction. <b>2017</b> , 42, 6665-6673	37
1605	Iron-tuned super nickel phosphide microstructures with high activity for electrochemical overall water splitting. <b>2017</b> , 34, 472-480	190
1604	Al-Doped CoP nanoarray: a durable water-splitting electrocatalyst with superhigh activity. <b>2017</b> , 9, 4793-4800	200
1603	Pt/Fe-NF electrode with high double-layer capacitance for efficient hydrogen evolution reaction in alkaline media. <b>2017</b> , 42, 9458-9466	25
1602	A stepwise-designed Rh-Au-Si nanocomposite that surpasses Pt/C hydrogen evolution activity at high overpotentials. <b>2017</b> , 10, 1749-1755	31
1601	Nanostructure polyoxometalates containing Co, Ni, and Cu as powerful and stable catalysts for hydrogen evolution reaction in acidic and alkaline solutions. <b>2017</b> , 42, 5026-5034	31
1600	Copper-Nitride Nanowires Array: An Efficient Dual-Functional Catalyst Electrode for Sensitive and Selective Non-Enzymatic Glucose and Hydrogen Peroxide Sensing. <b>2017</b> , 23, 4986-4989	114
1599	Co-Mo-B Nanoparticles as a non-precious and efficient Bifunctional Electrocatalyst for Hydrogen and Oxygen Evolution. <b>2017</b> , 232, 64-71	79
1598	Efficient Electrocatalytic Hydrogen Evolution from MoS-Functionalized MoN Nanostructures. <b>2017</b> , 9, 19455-19461	68
1597	A nickel-borate nanoarray: a highly active 3D oxygen-evolving catalyst electrode operating in near-neutral water. <b>2017</b> , 53, 3070-3073	69
1596	Efficient Catalysis of Hydrogen Evolution Reaction from WS <sub>2</sub> Nanoribbons. <b>2017</b> , 13, 1603706	50
1595	Strengthened Synergistic Effect of Metallic M P (M = Co, Ni, and Cu) and Carbon Layer via Peapod-Like Architecture for Both Hydrogen and Oxygen Evolution Reactions. <b>2017</b> , 13, 1603718	43
1594	Design and Application of Foams for Electrocatalysis. <b>2017</b> , 9, 1721-1743	202

1593	Magnetically Induced Electrodeposition of Ni-Mo Alloy for Hydrogen Evolution Reaction. <b>2017</b> , 8, 179-188	12
1592	Nanoporous FeP nanorods grown on Ti plate as an enhanced binder-free hydrogen evolution cathode. <b>2017</b> , 28, 105705	15
1591	Supercritical CO <sub>2</sub> Assisted Preparation of Supported Molybdenum Phosphide for Hydrotreating Catalysis. <b>2017</b> , 9, 2352-2357	7
1590	Highly efficient and stable MoP-RGO nanoparticles as electrocatalysts for hydrogen evolution. <b>2017</b> , 232, 254-261	61
1589	Nickel-Cobalt Diselenide 3D Mesoporous Nanosheet Networks Supported on Ni Foam: An All-pH Highly Efficient Integrated Electrocatalyst for Hydrogen Evolution. <b>2017</b> , 29, 1606521	301
1588	One-pot synthesis of nickel sulfide with sulfur powder as sulfur source in solution and their electrochemical properties for hydrogen evolution reaction. <b>2017</b> , 79, 1-4	12
1587	High-Efficiency and Durable Water Oxidation under Mild pH Conditions: An Iron Phosphate-Borate Nanosheet Array as a Non-Noble-Metal Catalyst Electrode. <b>2017</b> , 56, 3131-3135	42
1586	Interconnected Network of Core-Shell CoP@CoBiPi for Efficient Water Oxidation Electrocatalysis under Near Neutral Conditions. <b>2017</b> , 10, 1370-1374	55
1585	Self-supported rectangular CoP nanosheet arrays grown on a carbon cloth as an efficient electrocatalyst for the hydrogen evolution reaction over a variety of pH values. <b>2017</b> , 41, 2436-2442	20
1584	Cobalt phosphide nanowire array as an effective electrocatalyst for non-enzymatic glucose sensing. <b>2017</b> , 5, 1901-1904	83
1583	Noble-Metal-Free Metallic Glass as a Highly Active and Stable Bifunctional Electrocatalyst for Water Splitting. <b>2017</b> , 4, 1601086	48
1582	Graphene Decorated with Uniform Ultrathin (CoP) -(FeP) Nanorods: A Robust Non-Noble-Metal Catalyst for Hydrogen Evolution. <b>2017</b> , 13, 1700092	30
1581	In situ formation of a 3D core/shell structured Ni <sub>3</sub> N@NiBi nanosheet array: an efficient non-noble-metal bifunctional electrocatalyst toward full water splitting under near-neutral conditions. <b>2017</b> , 5, 7806-7810	172
1580	In Situ Preparation of Pt Nanoparticles Supported on N-Doped Carbon as Highly Efficient Electrocatalysts for Hydrogen Production. <b>2017</b> , 121, 8923-8930	24
1579	Electrosynthesis of NiP nanospheres for electrocatalytic hydrogen evolution from a neutral aqueous solution. <b>2017</b> , 53, 5507-5510	65
1578	Core-Shell NiFe-LDH@NiFe-B Nanoarray: In Situ Electrochemical Surface Derivation Preparation toward Efficient Water Oxidation Electrocatalysis in near-Neutral Media. <b>2017</b> , 9, 19502-19506	44
1577	Ultrathin Nitrogen-Doped Carbon Coated with CoP for Efficient Hydrogen Evolution. <b>2017</b> , 7, 3824-3831	323
1576	Large-Scale Synthesis of Carbon-Shell-Coated FeP Nanoparticles for Robust Hydrogen Evolution Reaction Electrocatalyst. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 6669-6674	16.4 369

1575	Iron-Doped Cobalt Monophosphide Nanosheet/Carbon Nanotube Hybrids as Active and Stable Electrocatalysts for Water Splitting. <b>2017</b> , 27, 1606635	175
1574	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. <b>2017</b> , 4, 1700084	68
1573	CoNiSe as an efficient bifunctional electrocatalyst for overall water splitting. <b>2017</b> , 53, 5412-5415	68
1572	In-situ activation of self-supported 3D hierarchically porous Ni <sub>3</sub> S <sub>2</sub> films grown on nanoporous copper as excellent pH-universal electrocatalysts for hydrogen evolution reaction. <b>2017</b> , 36, 85-94	159
1571	Cobalt-Borate Nanoarray: An Efficient and Durable Electrocatalyst for Water Oxidation under Benign Conditions. <b>2017</b> , 9, 15383-15387	26
1570	Tuning Unique Peapod-Like Co(S <sub>x</sub> Se <sub>1-x</sub> ) <sub>2</sub> Nanoparticles for Efficient Overall Water Splitting. <b>2017</b> , 27, 1701008	148
1569	High efficiency and stable tungsten phosphide cocatalysts for photocatalytic hydrogen production. <b>2017</b> , 5, 12513-12519	65
1568	Recent Methods for the Synthesis of Noble-Metal-Free Hydrogen-Evolution Electrocatalysts: From Nanoscale to Sub-nanoscale. <b>2017</b> , 1, 1700118	76
1567	A 3D-composite structure of FeP nanorods supported by vertically aligned graphene for the high-performance hydrogen evolution reaction. <b>2017</b> , 5, 11301-11308	73
1566	Cobalt phosphide nanowire arrays grown on carbon cloth as novel electrode material for supercapacitors. <b>2017</b> , 66, 140-143	12
1565	CoP nanotubes formed by Kirkendall effect as efficient hydrogen evolution reaction electrocatalysts. <b>2017</b> , 202, 146-149	19
1564	Materials Chemistry of Iron Phosphosulfide Nanoparticles: Synthesis, Solid State Chemistry, Surface Structure, and Electrocatalysis for the Hydrogen Evolution Reaction. <b>2017</b> , 7, 4026-4032	73
1563	Nickel-cobalt-layered double hydroxide nanosheet arrays on Ni foam as a bifunctional electrocatalyst for overall water splitting. <b>2017</b> , 46, 8372-8376	90
1562	Mechanistic insight into oxygen evolution electrocatalysis of surface phosphate modified cobalt phosphide nanorod bundles and their superior performance for overall water splitting. <b>2017</b> , 242, 355-363	96
1561	Nickel-Cobalt phosphide nanowires supported on Ni foam as a highly efficient catalyst for electrochemical hydrogen evolution reaction. <b>2017</b> , 42, 14124-14132	44
1560	Anodically Grown Binder-Free Nickel Hexacyanoferrate Film: Toward Efficient Water Reduction and Hexacyanoferrate Film Based Full Device for Overall Water Splitting. <b>2017</b> , 9, 18015-18021	43
1559	Hierarchical NiFeP microflowers directly grown on Ni foam for efficient electrocatalytic oxygen evolution. <b>2017</b> , 5, 11229-11235	120
1558	Preparation of Nitrogen and FeP Doped Carbon Nanotubes for Selective and Simultaneous Electrochemical Detection of Dihydroxybenzoic Acid Isomers. <b>2017</b> , 242, 107-116	5

1557	Nest-like NiCoP for Highly Efficient Overall Water Splitting. <b>2017</b> , 7, 4131-4137	346
1556	Hydrazine-assisted electrolytic hydrogen production: CoS <sub>2</sub> nanoarray as a superior bifunctional electrocatalyst. <b>2017</b> , 41, 4754-4757	55
1555	General Strategy for the Synthesis of Transition-Metal Phosphide/N-Doped Carbon Frameworks for Hydrogen and Oxygen Evolution. <b>2017</b> , 9, 16187-16193	135
1554	Recent advances in metal–nitrogen–carbon catalysts for electrochemical water splitting. <b>2017</b> , 1, 2155-2173	92
1553	Three-Dimensional Cobalt Phosphide Nanowire Arrays as Negative Electrode Material for Flexible Solid-State Asymmetric Supercapacitors. <b>2017</b> , 9, 16986-16994	90
1552	Facile synthesis of ultrafine Ru nanocrystal supported N-doped graphene as an exceptional hydrogen evolution electrocatalyst in both alkaline and acidic media. <b>2017</b> , 1, 1028-1033	39
1551	Formation of Uniform FeP Hollow Microspheres Assembled by Nanosheets for Efficient Hydrogen Evolution Reaction. <b>2017</b> , 4, 2052-2058	24
1550	Partial-sacrificial-template Synthesis of Fe/Ni Phosphides on Ni Foam: a Strongly Stabilized and Efficient Catalyst for Electrochemical Water Splitting. <b>2017</b> , 242, 260-267	49
1549	Self-Standing CoP Nanosheets Array: A Three-Dimensional Bifunctional Catalyst Electrode for Overall Water Splitting in both Neutral and Alkaline Media. <b>2017</b> , 4, 1840-1845	322
1548	Cobalt Phosphide Double-Shelled Nanocages: Broadband Light-Harvesting Nanostructures for Efficient Photothermal Therapy and Self-Powered Photoelectrochemical Biosensing. <b>2017</b> , 13, 1700798	51
1547	Interlayer expanded lamellar CoSe <sub>2</sub> on carbon paper as highly efficient and stable overall water splitting electrodes. <b>2017</b> , 241, 106-115	40
1546	MoP/MoC@C: A New Combination of Electrocatalysts for Highly Efficient Hydrogen Evolution over the Entire pH Range. <b>2017</b> , 9, 16270-16279	150
1545	Enhanced Electrocatalysis for Energy-Efficient Hydrogen Production over CoP Catalyst with Nonelectroactive Zn as a Promoter. <b>2017</b> , 7, 1700020	428
1544	CuCo <sub>2</sub> O <sub>4</sub> nanowire arrays supported on carbon cloth as an efficient 3D binder-free electrode for non-enzymatic glucose sensing. <b>2017</b> , 7, 23093-23101	42
1543	Electrochemical Hydrazine Oxidation Catalyzed by Iron Phosphide Nanosheets Array toward Energy-Efficient Electrolytic Hydrogen Production from Water. <b>2017</b> , 2, 3401-3407	21
1542	Ultrathin CoS <sub>2</sub> shells anchored on Co <sub>3</sub> O <sub>4</sub> nanoneedles for efficient hydrogen evolution electrocatalysis. <b>2017</b> , 356, 89-96	41
1541	Constructing carbon-coated high-index (222) faceted tantalum carbide nanocrystals as a robust hydrogen evolution catalyst. <b>2017</b> , 36, 374-380	47
1540	CoOx–carbon nanotubes hybrids integrated on carbon cloth as a new generation of 3D porous hydrogen evolution promoters. <b>2017</b> , 5, 10510-10516	40



1539	Integrating natural biomass electro-oxidation and hydrogen evolution: using a porous Fe-doped CoP nanosheet array as a bifunctional catalyst. <b>2017</b> , 53, 5710-5713	121
1538	Controlled synthesis of Mo-doped Ni <sub>3</sub> S <sub>2</sub> nano-rods: an efficient and stable electro-catalyst for water splitting. <b>2017</b> , 5, 1595-1602	108
1537	Hydrogen evolution kinetics on Ni cathodes modified by spontaneous deposition of Ag or Cu. <b>2017</b> , 26, 466-475	22
1536	A General Strategy To Fabricate Ni <sub>3</sub> P as Highly Efficient Cocatalyst via Photoreduction Deposition for Hydrogen Evolution. <b>2017</b> , 5, 6845-6853	64
1535	Self-Supported Biocarbon-Fiber Electrode Decorated with Molybdenum Carbide Nanoparticles for Highly Active Hydrogen-Evolution Reaction. <b>2017</b> , 9, 22604-22611	28
1534	NiCo S Materials for Supercapacitor Applications. <b>2017</b> , 12, 1969-1984	90
1533	Outstanding hydrogen evolution reaction catalyzed by porous nickel diselenide electrocatalysts. <b>2017</b> , 10, 1487-1492	138
1532	Silica/Polypyrrole Hybrids as High-Performance Metal-Free Electrocatalysts for the Hydrogen Evolution Reaction in Neutral Media. <b>2017</b> , 129, 8232-8236	22
1531	Silica-Polypyrrole Hybrids as High-Performance Metal-Free Electrocatalysts for the Hydrogen Evolution Reaction in Neutral Media. <b>2017</b> , 56, 8120-8124	175
1530	Water splitting in near-neutral media: using an Mn/Co-based nanowire array as a complementary electrocatalyst. <b>2017</b> , 5, 12091-12095	29
1529	A Cost-Efficient Bifunctional Ultrathin Nanosheets Array for Electrochemical Overall Water Splitting. <b>2017</b> , 13, 1700355	59
1528	Cobalt based nanostructured alloys: Versatile high performance robust hydrogen evolution reaction electro-catalysts for electrolytic and photo-electrochemical water splitting. <b>2017</b> , 42, 17049-17062	23
1527	Hierarchical NiCoP nanocone arrays supported on Ni foam as an efficient and stable bifunctional electrocatalyst for overall water splitting. <b>2017</b> , 5, 14828-14837	187
1526	Facile electrodeposition of cauliflower-like S-doped nickel microsphere films as highly active catalysts for electrochemical hydrogen evolution. <b>2017</b> , 5, 15056-15064	33
1525	Ternary Ni <sub>3</sub> Co <sub>3</sub> NS <sub>4</sub> with a Fine Hollow Nanostructure as a Robust Electrocatalyst for Hydrogen Evolution. <b>2017</b> , 9, 4169-4174	17
1524	Highly Stable Three-Dimensional Porous Nickel-Iron Nitride Nanosheets for Full Water Splitting at High Current Densities. <b>2017</b> , 23, 10187-10194	46
1523	Amorphous Nickel-Cobalt-Borate Nanosheet Arrays for Efficient and Durable Water Oxidation Electrocatalysis under Near-Neutral Conditions. <b>2017</b> , 23, 9741-9745	27
1522	A Plasma-Assisted Route to the Rapid Preparation of Transition-Metal Phosphides for Energy Conversion and Storage. <b>2017</b> , 1, 1700111	27

1521	Integrated 3D MoSe <sub>2</sub> @Ni <sub>0.85</sub> Se Nanowire Network with Synergistic Cooperation as Highly Efficient Electrocatalysts for Hydrogen Evolution Reaction in Alkaline Medium. <b>2017</b> , 246, 712-719	52
1520	Electrochemical deposition of Pt on carbon fiber cloth utilizing Pt mesh counter electrode during hydrogen evolution reaction for electrocatalytic hydrogenation reduction of p-nitrophenol. <b>2017</b> , 41, 7012-7019	8
1519	Highly stable three-dimensional nickel-iron oxyhydroxide catalysts for oxygen evolution reaction at high current densities. <b>2017</b> , 245, 770-779	28
1518	Solvent-Mediated Shape Tuning of Well-Defined Rhodium Nanocrystals for Efficient Electrochemical Water Splitting. <b>2017</b> , 29, 5009-5015	68
1517	Co-based nanowire films as complementary hydrogen- and oxygen-evolving electrocatalysts in neutral electrolyte. <b>2017</b> , 7, 2689-2694	34
1516	Novel porous tungsten carbide hybrid nanowires on carbon cloth for high-performance hydrogen evolution. <b>2017</b> , 5, 13196-13203	57
1515	In-situ potentiostatic activation to optimize electrodeposited cobalt-phosphide electrocatalyst for highly efficient hydrogen evolution in alkaline media. <b>2017</b> , 681, 90-94	19
1514	A NiCoO@Ni-Co-Ci core-shell nanowire array as an efficient electrocatalyst for water oxidation at near-neutral pH. <b>2017</b> , 53, 7812-7815	40
1513	Dealloying assisted high-yield growth of surfactant-free highly active Cu-doped CeO nanowires for low-temperature CO oxidation. <b>2017</b> , 9, 8007-8014	29
1512	One-pot synthesis of hollow AgPt alloyed nanocrystals with enhanced electrocatalytic activity for hydrogen evolution and oxygen reduction reactions. <b>2017</b> , 505, 307-314	35
1511	Efficient H <sub>2</sub> Evolution Coupled with Oxidative Refining of Alcohols via A Hierarchically Porous Nickel Bifunctional Electrocatalyst. <b>2017</b> , 7, 4564-4570	167
1510	Modulating electronic structure of CoP electrocatalysts towards enhanced hydrogen evolution by Ce chemical doping in both acidic and basic media. <b>2017</b> , 38, 290-296	142
1509	Ni/Fe Ratio Dependence of Catalytic Activity in Monodisperse Ternary Nickel Iron Phosphide for Efficient Water Oxidation. <b>2017</b> , 4, 2150-2157	34
1508	Template-Directed Growth of Well-Aligned MOF Arrays and Derived Self-Supporting Electrodes for Water Splitting. <b>2017</b> , 2, 791-802	319
1507	Porous CoMo phosphide nanotubes: an efficient electrocatalyst for hydrogen evolution. <b>2017</b> , 52, 10406-10417	29
1506	In-situ synthesis of CoP co-catalyst decorated Zn <sub>0.5</sub> Cd <sub>0.5</sub> S photocatalysts with enhanced photocatalytic hydrogen production activity under visible light irradiation. <b>2017</b> , 217, 429-436	153
1505	Photochemical synthesis of CoxP as cocatalyst for boosting photocatalytic H <sub>2</sub> production via spatial charge separation. <b>2017</b> , 211, 245-251	81
1504	Hierarchically scaffolded CoP/CoP nanoparticles: controllable synthesis and their application as a well-matched bifunctional electrocatalyst for overall water splitting. <b>2017</b> , 9, 5677-5685	101

1503	Three-Dimensional Nickel-Borate Nanosheets Array for Efficient Oxygen Evolution at Near-Neutral pH. <b>2017</b> , 23, 6959-6963	38
1502	Exploring highly porous Co <sub>2</sub> P nanowire arrays for electrochemical energy storage. <b>2017</b> , 342, 964-969	33
1501	Core-Shell-Structured NiS <sub>2</sub> @Ni-Bi Nanoarray for Efficient Water Oxidation at Near-Neutral pH. <b>2017</b> , 9, 3138-3143	31
1500	Self-Supported NiS Nanoparticle-Coupled Ni <sub>2</sub> P Nanoflake Array Architecture: An Advanced Catalyst for Electrochemical Hydrogen Evolution. <b>2017</b> , 4, 1341-1348	16
1499	Enhanced electrocatalytic activity of Co@N-doped carbon nanotubes by ultrasmall defect-rich TiO <sub>2</sub> nanoparticles for hydrogen evolution reaction. <b>2017</b> , 10, 2599-2609	60
1498	Hierarchical NiCoS@NiFe LDH Heterostructures Supported on Nickel Foam for Enhanced Overall-Water-Splitting Activity. <b>2017</b> , 9, 15364-15372	319
1497	In situ surface derivation of an Fe <sub>3</sub> O <sub>4</sub> @Bi layer on an Fe-doped Co <sub>3</sub> O <sub>4</sub> nanoarray for efficient water oxidation electrocatalysis under near-neutral conditions. <b>2017</b> , 5, 6388-6392	65
1496	Gas-templating of hierarchically structured Ni <sub>3</sub> CoB for efficient electrocatalytic hydrogen evolution. <b>2017</b> , 5, 7564-7570	41
1495	Phase-controlled synthesis of polymorphic tungsten diphosphide with hybridization of monoclinic and orthorhombic phases as a novel electrocatalyst for efficient hydrogen evolution. <b>2017</b> , 349, 138-143	24
1494	Fe(III) doped NiS <sub>2</sub> nanosheet: a highly efficient and low-cost hydrogen evolution catalyst. <b>2017</b> , 5, 10173-10181	100
1493	A highly stable non-noble metal Ni <sub>2</sub> P co-catalyst for increased H <sub>2</sub> generation by g-C <sub>3</sub> N <sub>4</sub> under visible light irradiation. <b>2017</b> , 5, 8493-8498	162
1492	Investigation of V-doped TiO <sub>2</sub> as an anodic catalyst support for SPE water electrolysis. <b>2017</b> , 42, 9384-9395	20
1491	Cobalt carbonate hydroxide hydrate nanowires array: a three-dimensional catalyst electrode for effective water oxidation. <b>2017</b> , 12, 264-266	10
1490	A nickel borate phosphate nanoarray for efficient and durable water oxidation under benign conditions. <b>2017</b> , 4, 840-844	38
1489	CoP nanorods decorated biomass derived N, P co-doped carbon flakes as an efficient hybrid catalyst for electrochemical hydrogen evolution. <b>2017</b> , 232, 561-569	56
1488	In Situ Synthesis Strategy for Hierarchically Porous NiP Polyhedrons from MOFs Templates with Enhanced Electrochemical Properties for Hydrogen Evolution. <b>2017</b> , 9, 11642-11650	118
1487	Sulfur and Nitrogen Dual-Doped Molybdenum Phosphide Nanocrystallites as an Active and Stable Hydrogen Evolution Reaction Electrocatalyst in Acidic and Alkaline Media. <b>2017</b> , 7, 3030-3038	156
1486	Nickel Phosphide Nanorod Arrays Vertically Grown on Ni Foam as High-Efficiency Electrocatalyst for the Hydrogen Evolution Reaction. <b>2017</b> , 35, 405-409	9

1485	Cobalt borate nanowire array as a high-performance catalyst for oxygen evolution reaction in near-neutral media. <b>2017</b> , 5, 7291-7294	101
1484	Co <sub>9</sub> S <sub>8</sub> nanoparticles embedded in a N, S co-doped graphene-unzipped carbon nanotube composite as a high performance electrocatalyst for the hydrogen evolution reaction. <b>2017</b> , 5, 1014-1021	86
1483	Cu(OH) <sub>2</sub> @CoCO(OH) Core-Shell Heterostructure Nanowire Array: An Efficient 3D Anodic Catalyst for Oxygen Evolution and Methanol Electrooxidation. <b>2017</b> , 13, 1602755	110
1482	Targeted Synthesis of Unique Nickel Sulfide (NiS, Ni <sub>3</sub> S <sub>2</sub> ) Microarchitectures and the Applications for the Enhanced Water Splitting System. <b>2017</b> , 9, 2500-2508	237
1481	Self-supported Cu(OH) <sub>2</sub> @CoCO(OH) core-shell nanowire array as a robust catalyst for ammonia-borane hydrolysis. <b>2017</b> , 28, 045606	11
1480	Three-dimensional tetrapod-like Co(OH) <sub>2</sub> nanorods on a macroporous electrically conductive network as an efficient electroactive framework for the hydrogen evolution reaction. <b>2017</b> , 5, 2629-2639	28
1479	One-pot synthesis of holey MoS <sub>2</sub> nanostructures as efficient electrocatalysts for hydrogen evolution. <b>2017</b> , 396, 1719-1725	15
1478	One-Dimensional Earth-Abundant Nanomaterials for Water-Splitting Electrocatalysts. <b>2017</b> , 4, 1600380	195
1477	Crystalline Copper Phosphide Nanosheets as an Efficient Janus Catalyst for Overall Water Splitting. <b>2017</b> , 9, 2240-2248	175
1476	Ternary NiCo P Nanowires as pH-Universal Electrocatalysts for Highly Efficient Hydrogen Evolution Reaction. <b>2017</b> , 29, 1605502	419
1475	Monolithically integrated copper phosphide nanowire: An efficient electrocatalyst for sensitive and selective nonenzymatic glucose detection. <b>2017</b> , 244, 11-16	62
1474	A facile approach to prepare crumpled CoTMPyP/electrochemically reduced graphene oxide nanohybrid as an efficient electrocatalyst for hydrogen evolution reaction. <b>2017</b> , 399, 535-541	19
1473	CoP nanoparticles combined with WS <sub>2</sub> nanosheets as efficient electrocatalytic hydrogen evolution reaction catalyst. <b>2017</b> , 42, 3947-3954	37
1472	Synthesis of Cobalt Phosphide Nanoparticles Supported on Pristine Graphene by Dynamically Self-Assembled Graphene Quantum Dots for Hydrogen Evolution. <b>2017</b> , 10, 1014-1021	38
1471	Direct conversion of coordination compounds into Ni <sub>2</sub> P nanoparticles entrapped in 3D mesoporous graphene for an efficient hydrogen evolution reaction. <b>2017</b> , 1, 973-978	33
1470	N-Carbon coated P-W <sub>2</sub> C composite as efficient electrocatalyst for hydrogen evolution reactions over the whole pH range. <b>2017</b> , 5, 765-772	145
1469	Quaternary pyrite-structured nickel/cobalt phosphosulfide nanowires on carbon cloth as efficient and robust electrodes for water electrolysis. <b>2017</b> , 10, 814-825	57
1468	Self-supported ternary Co <sub>0.5</sub> Mn <sub>0.5</sub> P/carbon cloth (CC) as a high-performance hydrogen evolution electrocatalyst. <b>2017</b> , 10, 1001-1009	32

1467	Interface Engineered WxC@WS2 Nanostructure for Enhanced Hydrogen Evolution Catalysis. <b>2017</b> , 27, 1605802	100
1466	Three-dimensional metal-organic framework derived porous CoP concave polyhedrons as superior bifunctional electrocatalysts for the evolution of hydrogen and oxygen. <b>2017</b> , 19, 2104-2110	98
1465	Graphitic C N Decorated with CoP Co-catalyst: Enhanced and Stable Photocatalytic H Evolution Activity from Water under Visible-light Irradiation. <b>2017</b> , 12, 361-365	74
1464	Scalable Two-Step Synthesis of Nickel/Iron Phosphide Electrodes for Stable and Efficient Electrocatalytic Hydrogen Evolution. <b>2017</b> , 121, 284-292	21
1463	Unique P/Co/N Surface Bonding States Constructed on g-C3N4 Nanosheets for Drastically Enhanced Photocatalytic Activity of H2 Evolution. <b>2017</b> , 27, 1604328	266
1462	Energy-Saving Electrolytic Hydrogen Generation: Ni P Nanoarray as a High-Performance Non-Noble-Metal Electrocatalyst. <b>2017</b> , 56, 842-846	428
1461	Energy-Saving Electrolytic Hydrogen Generation: Ni2P Nanoarray as a High-Performance Non-Noble-Metal Electrocatalyst. <b>2017</b> , 129, 860-864	116
1460	High-Performance Electrolytic Oxygen Evolution in Neutral Media Catalyzed by a Cobalt Phosphate Nanoarray. <b>2017</b> , 129, 1084-1088	63
1459	High-Performance Electrolytic Oxygen Evolution in Neutral Media Catalyzed by a Cobalt Phosphate Nanoarray. <b>2017</b> , 56, 1064-1068	305
1458	Electropolymerization Fabrication of Co Phosphate Nanoparticles Encapsulated in N,P-Codoped Mesoporous Carbon Networks as a 3D Integrated Electrode for Full Water Splitting. <b>2017</b> , 5, 571-579	29
1457	Highly active electrocatalysis of hydrogen evolution reaction in alkaline medium by NiP alloy: A capacitance-activity relationship. <b>2017</b> , 26, 1245-1251	23
1456	A newly synthesized single crystal zinc complex as molecular electrocatalyst for efficient hydrogen generation from neutral aqueous solutions. <b>2017</b> , 42, 25980-25995	7
1455	High-Performance Non-Enzyme Hydrogen Peroxide Detection in Neutral Solution: Using a Nickel Borate Nanoarray as a 3D Electrochemical Sensor. <b>2017</b> , 23, 16179-16183	48
1454	Replacing oxygen evolution with sodium sulfide electro-oxidation toward energy-efficient electrochemical hydrogen production: Using cobalt phosphide nanoarray as a bifunctional catalyst. <b>2017</b> , 42, 26289-26295	8
1453	Fabrication of Nanoporous Nickel-Iron Hydroxylphosphate Composite as Bifunctional and Reversible Catalyst for Highly Efficient Intermittent Water Splitting. <b>2017</b> , 9, 35837-35846	60
1452	Two-dimensional ultrathin arrays of CoP: Electronic modulation toward high performance overall water splitting. <b>2017</b> , 41, 583-590	156
1451	Metallic Ni P/Ni Co-Catalyst To Enhance Photocatalytic Hydrogen Evolution. <b>2017</b> , 23, 16734-16737	12
1450	Engineering Co9S8/WS2 array films as bifunctional electrocatalysts for efficient water splitting. <b>2017</b> , 5, 23361-23368	88

1449	Facile synthesis and excellent electrochemical performance of CoP nanowire on carbon cloth as bifunctional electrode for hydrogen evolution reaction and supercapacitor. <b>2017</b> , 60, 1179-1186	34
1448	A Ni(OH)-CoS hybrid nanowire array: a superior non-noble-metal catalyst toward the hydrogen evolution reaction in alkaline media. <b>2017</b> , 9, 16632-16637	82
1447	Active Sites Intercalated Ultrathin Carbon Sheath on Nanowire Arrays as Integrated Core-Shell Architecture: Highly Efficient and Durable Electrocatalysts for Overall Water Splitting. <b>2017</b> , 13, 1702018	66
1446	Amorphous Phosphorus-Incorporated Cobalt Molybdenum Sulfide on Carbon Cloth: An Efficient and Stable Electrocatalyst for Enhanced Overall Water Splitting over Entire pH Values. <b>2017</b> , 9, 37739-37749	88
1445	Iron-assisted engineering of molybdenum phosphide nanowires on carbon cloth for efficient hydrogen evolution in a wide pH range. <b>2017</b> , 5, 22790-22796	27
1444	Engineering a nanotubular mesoporous cobalt phosphide electrocatalyst by the Kirkendall effect towards highly efficient hydrogen evolution reactions. <b>2017</b> , 9, 16313-16320	39
1443	Cuboid Ni P as a Bifunctional Catalyst for Efficient Hydrogen Generation from Hydrolysis of Ammonia Borane and Electrocatalytic Hydrogen Evolution. <b>2017</b> , 12, 2967-2972	20
1442	Synthesis of Self-Supported Amorphous CoMoO <sub>4</sub> Nanowire Array for Highly Efficient Hydrogen Evolution Reaction. <b>2017</b> , 5, 10093-10098	78
1441	Mixed-Metal-Organic Framework Self-Template Synthesis of Porous Hybrid Oxyphosphides for Efficient Oxygen Evolution Reaction. <b>2017</b> , 9, 38621-38628	32
1440	A CuP-CoP hybrid nanowire array: a superior electrocatalyst for acidic hydrogen evolution reactions. <b>2017</b> , 53, 12012-12015	86
1439	Lattice Matched Carbide/Phosphide Composites with Superior Electrocatalytic Activity and Stability. <b>2017</b> , 29, 9369-9377	19
1438	Recent advances in cobalt phosphide based materials for energy-related applications. <b>2017</b> , 5, 22913-22932	88
1437	Self-Supported Ferric Phosphide Spherical Clusters as Efficient Electrocatalysts for Hydrogen Evolution Reaction. <b>2017</b> , 2, 9472-9478	6
1436	Transition Metal Ion-Induced High Electrocatalytic Performance of Conducting Polymer for Oxygen and Hydrogen Evolution Reactions. <b>2017</b> , 218, 1700359	25
1435	Highly Efficient and Stable Water-Oxidation Electrocatalysis with a Very Low Overpotential using FeNiP Substitutional-Solid-Solution Nanoplate Arrays. <b>2017</b> , 29, 1704075	130
1434	Precious metal-free approach to hydrogen electrocatalysis for energy conversion: From mechanism understanding to catalyst design. <b>2017</b> , 42, 69-89	109
1433	Porous CoP nanosheet arrays grown on nickel foam as an excellent and stable catalyst for hydrogen evolution reaction. <b>2017</b> , 42, 26995-27003	20
1432	Benzoate Anion-Intercalated Layered Cobalt Hydroxide Nanoarray: An Efficient Electrocatalyst for the Oxygen Evolution Reaction. <b>2017</b> , 10, 4004-4008	42

1431	Hollow CoP nanoflowers assembled from nanorods for ultralong cycle-life supercapacitors. <b>2017</b> , 9, 14162-14170	
1430	Hydrothermal synthesis of 3D hierarchical MoSe <sub>2</sub> /NiSe <sub>2</sub> composite nanowires on carbon fiber paper and their enhanced electrocatalytic activity for the hydrogen evolution reaction. <b>2017</b> , 5, 19752-19759	100
1429	Controlled Electrodeposition Synthesis of Co-Ni-P Film as a Flexible and Inexpensive Electrode for Efficient Overall Water Splitting. <b>2017</b> , 9, 31887-31896	72
1428	Plasma-Assisted Synthesis of Self-Supporting Porous CoNPs@C Nanosheet as Efficient and Stable Bifunctional Electrocatalysts for Overall Water Splitting. <b>2017</b> , 9, 31913-31921	27
1427	Recent developed different structural nanomaterials and their performance for supercapacitor application. <b>2017</b> , 9, 300-313	49
1426	Chalcogenide and pnictide nanocrystals from the silylative deoxygenation of metal oxides. <b>2017</b> , 5, 20351-20358	
1425	Synthesis of bifunctional non-noble monolithic catalyst Co-W-P/carbon cloth for sodium borohydride hydrolysis and reduction of 4-nitrophenol. <b>2017</b> , 42, 25860-25868	22
1424	Porous Multishelled Ni <sub>2</sub> P Hollow Microspheres as an Active Electrocatalyst for Hydrogen and Oxygen Evolution. <b>2017</b> , 29, 8539-8547	195
1423	Co O Nanowire Arrays toward Superior Water Oxidation Electrocatalysis in Alkaline Media by Surface Amorphization. <b>2017</b> , 23, 15601-15606	26
1422	Vapour-phase hydrothermal synthesis of Ni <sub>2</sub> P nanocrystallines on carbon fiber cloth for high-efficiency H <sub>2</sub> production and simultaneous urea decomposition. <b>2017</b> , 254, 44-49	43
1421	Pulsed laser deposition-assisted synthesis of porous WP 2 nanosheet arrays integrated on graphite paper as a 3D flexible cathode for efficient hydrogen evolution. <b>2017</b> , 364, 253-257	17
1420	Self-supported CuS nanowire array: an efficient hydrogen-evolving electrode in neutral media. <b>2017</b> , 252, 516-522	24
1419	NiMoS <sub>3</sub> Nanorods as pH-Tolerant Electrocatalyst for Efficient Hydrogen Evolution. <b>2017</b> , 5, 9006-9013	38
1418	Visible-Light-Driven Photocatalytic H <sub>2</sub> O <sub>2</sub> Production on g-C <sub>3</sub> N <sub>4</sub> Loaded with CoP as a Noble Metal Free Cocatalyst. <b>2017</b> , 2017, 4797-4802	58
1417	3D self-assembly of ultrafine molybdenum carbide confined in N-doped carbon nanosheets for efficient hydrogen production. <b>2017</b> , 9, 15895-15900	30
1416	Ultrafine Pt Nanoparticle-Decorated Co(OH) <sub>2</sub> Nanosheet Arrays with Enhanced Catalytic Activity toward Hydrogen Evolution. <b>2017</b> , 7, 7131-7135	145
1415	Mesoporous Semimetallic Conductors: Structural and Electronic Properties of Cobalt Phosphide Systems. <b>2017</b> , 56, 13508-13512	30
1414	Mesoporous Semimetallic Conductors: Structural and Electronic Properties of Cobalt Phosphide Systems. <b>2017</b> , 129, 13693-13697	10

1413	Glucose-derived carbon sphere supported CoP as efficient and stable electrocatalysts for hydrogen evolution reaction. <b>2017</b> , 26, 1147-1152	24
1412	Hydrogen evolution reaction activity of nickel phosphide is highly sensitive to electrolyte pH. <b>2017</b> , 5, 20390-20397	71
1411	Highly dispersed NiCoP nanoparticles on carbon nanotubes modified nickel foam for efficient electrocatalytic hydrogen production. <b>2017</b> , 252, 101-108	37
1410	Nickel-Based Electrocatalysts for Energy-Related Applications: Oxygen Reduction, Oxygen Evolution, and Hydrogen Evolution Reactions. <b>2017</b> , 7, 7196-7225	568
1409	Porous Structured Ni-Fe-P Nanocubes Derived from a Prussian Blue Analogue as an Electrocatalyst for Efficient Overall Water Splitting. <b>2017</b> , 9, 26134-26142	162
1408	Nonprecious metal phosphides as catalysts for hydrogen evolution, oxygen reduction and evolution reactions. <b>2017</b> , 7, 3676-3691	54
1407	Bifunctional metal phosphide FeMnP films from single source metal organic chemical vapor deposition for efficient overall water splitting. <b>2017</b> , 39, 444-453	89
1406	Ternary Porous Cobalt Phosphoselenide Nanosheets: An Efficient Electrocatalyst for Electrocatalytic and Photoelectrochemical Water Splitting. <b>2017</b> , 29, 1701589	192
1405	Hierarchical Nanostructures: Design for Sustainable Water Splitting. <b>2017</b> , 7, 1700559	192
1404	Ternary NiCoP nanoparticles as noble-metal-free catalysts to boost the hydrolytic dehydrogenation of ammonia-borane. <b>2017</b> , 10, 1770-1776	155
1403	Trimetallic NiFeCo selenides nanoparticles supported on carbon fiber cloth as efficient electrocatalyst for oxygen evolution reaction. <b>2017</b> , 42, 20599-20607	113
1402	Hierarchical Nickel Sulfide Nanosheets Directly Grown on Ni Foam: A Stable and Efficient Electrocatalyst for Water Reduction and Oxidation in Alkaline Medium. <b>2017</b> , 5, 7203-7210	98
1401	Facile and one-step synthesis of a free-standing 3D MoS <sub>2</sub> /rGO/Mo binder-free electrode for efficient hydrogen evolution reaction. <b>2017</b> , 5, 18081-18087	29
1400	Homologous Catalysts Based on Fe-Doped CoP Nanoarrays for High-Performance Full Water Splitting under Benign Conditions. <b>2017</b> , 10, 3188-3192	49
1399	Surface-oxidized cobalt phosphide used as high efficient electrocatalyst in activated carbon air-cathode microbial fuel cell. <b>2017</b> , 363, 87-94	23
1398	Nanostructured materials on 3D nickel foam as electrocatalysts for water splitting. <b>2017</b> , 9, 12231-12247	276
1397	Cobalt-based nanosheet arrays as efficient electrocatalysts for overall water splitting. <b>2017</b> , 5, 17640-17646	33
1396	A self-supported NiMoS <sub>4</sub> nanoarray as an efficient 3D cathode for the alkaline hydrogen evolution reaction. <b>2017</b> , 5, 16585-16589	94



1395	Ball-milling synthesis of Co <sub>2</sub> P nanoparticles encapsulated in nitrogen doped hollow carbon rods as efficient electrocatalysts. <b>2017</b> , 5, 17563-17569	43
1394	NiWO <sub>3</sub> Nanoparticles Grown on Graphitic Carbon Nitride (g-C <sub>3</sub> N <sub>4</sub> ) Supported Toray Carbon as an Efficient Bifunctional Electrocatalyst for Oxygen and Hydrogen Evolution Reactions. <b>2017</b> , 34, 1700043	10
1393	Bromine and nitrogen co-doped tungsten nanoarrays to enable hydrogen evolution at all pH values. <b>2017</b> , 5, 17856-17861	8
1392	Room-Temperature Wet Chemical Synthesis of Au NPs/TiH/Nanocarved Ti Self-Supported Electrocatalysts for Highly Efficient H Generation. <b>2017</b> , 9, 30115-30126	4
1391	Dual-Functional Electrocatalyst Derived from Iron-Porphyrin-Encapsulated Metal-Organic Frameworks. <b>2017</b> , 9, 28758-28765	39
1390	Self-Templating Construction of Hollow Amorphous CoMoS Nanotube Array towards Efficient Hydrogen Evolution Electrocatalysis at Neutral pH. <b>2017</b> , 23, 12718-12723	40
1389	3D Self-Supported Fe-Doped Ni <sub>2</sub> P Nanosheet Arrays as Bifunctional Catalysts for Overall Water Splitting. <b>2017</b> , 27, 1702513	349
1388	Porous Cobalt Phosphide Polyhedrons with Iron Doping as an Efficient Bifunctional Electrocatalyst. <b>2017</b> , 13, 1701167	59
1387	A self-supported porous WN nanowire array: an efficient 3D electrocatalyst for the hydrogen evolution reaction. <b>2017</b> , 5, 19072-19078	66
1386	CoN Nanowires: Noble-Metal-Free Peroxidase Mimetic with Excellent Salt- and Temperature-Resistant Abilities. <b>2017</b> , 9, 29881-29888	63
1385	Transformation of homobimetallic MOFs into nickel-cobalt phosphide/nitrogen-doped carbon polyhedral nanocages for efficient oxygen evolution electrocatalysis. <b>2017</b> , 5, 18839-18844	67
1384	Combining Heterojunction Engineering with Surface Cocatalyst Modification To Synergistically Enhance the Photocatalytic Hydrogen Evolution Performance of Cadmium Sulfide Nanorods. <b>2017</b> , 5, 7670-7677	107
1383	Template-synthesis and electrochemical properties of urchin-like NiCoP electrocatalyst for hydrogen evolution reaction. <b>2017</b> , 249, 301-307	22
1382	Hierarchical Porous CoS/Nitrogen-Doped Carbon@MoS Polyhedrons as pH Universal Electrocatalysts for Highly Efficient Hydrogen Evolution Reaction. <b>2017</b> , 9, 28394-28405	135
1381	Anion-exchange synthesis of a nanoporous crystalline CoBO nanowire array for high-performance water oxidation electrocatalysis in borate solution. <b>2017</b> , 9, 12343-12347	17
1380	Porous CoP nanowires as high efficient bifunctional catalysts for 4-nitrophenol reduction and sodium borohydride hydrolysis. <b>2017</b> , 507, 429-436	32
1379	Influence of Phosphidation on CoSe <sub>2</sub> Catalyst for Hydrogen Evolution Reaction. <b>2017</b> , 2, 10661-10667	7
1378	Activating cobalt(II) oxide nanorods for efficient electrocatalysis by strain engineering. <b>2017</b> , 8, 1509	276

1377	Amorphous CoFeP nanospheres for efficient water oxidation. <b>2017</b> , 5, 25378-25384	78
1376	Porous NiFe-Oxide Nanocubes as Bifunctional Electrocatalysts for Efficient Water-Splitting. <b>2017</b> , 9, 41906-41915	170
1375	Diethylenetriamine-mediated self-assembly of three-dimensional hierarchical nanoporous CoP nanoflowers/pristine graphene interconnected networks as efficient electrocatalysts toward hydrogen evolution. <b>2017</b> , 1, 2172-2180	29
1374	Advanced Nanomaterials in Biomedical, Sensor and Energy Applications. <b>2017</b> ,	4
1373	Engineering transition metal phosphide nanomaterials as highly active electrocatalysts for water splitting. <b>2017</b> , 46, 16770-16773	20
1372	Anion-Regulated Selective Generation of Cobalt Sites in Carbon: Toward Superior Bifunctional Electrocatalysis. <b>2017</b> , 29, 1703436	52
1371	Highly Performance Core-Shell TiO(B)/anatase Homo Junction Nanobelts with Active Cobalt phosphide Cocatalyst for Hydrogen Production. <b>2017</b> , 7, 14594	19
1370	Metal Phosphides as Co-Catalysts for Photocatalytic and Photoelectrocatalytic Water Splitting. <b>2017</b> , 10, 4306-4323	111
1369	Unique Hierarchical MoC/C Nanosheet Hybrids as Active Electrocatalyst for Hydrogen Evolution Reaction. <b>2017</b> , 9, 41314-41322	76
1368	Heterostructured Arrays of NiP/S/Se Nanosheets on CoP/S/Se Nanowires for Efficient Hydrogen Evolution. <b>2017</b> , 9, 41347-41353	41
1367	Binary metal Fe <sub>0.5</sub> Co <sub>0.5</sub> Se <sub>2</sub> spheres supported on carbon fiber cloth for efficient oxygen evolution reaction. <b>2017</b> , 42, 15189-15195	23
1366	Sugar Blowing-Induced Porous Cobalt Phosphide/Nitrogen-Doped Carbon Nanostructures with Enhanced Electrochemical Oxidation Performance toward Water and Other Small Molecules. <b>2017</b> , 13, 1700796	49
1365	In Situ Derived Co <sub>2</sub> B Nanoarray: A High-Efficiency and Durable 3D Bifunctional Electrocatalyst for Overall Alkaline Water Splitting. <b>2017</b> , 13, 1700805	257
1364	Electrodeposited cobalt phosphide superstructures for solar-driven thermoelectrocatalytic overall water splitting. <b>2017</b> , 5, 16580-16584	37
1363	Metal-organic framework derived hollow CoS nanotube arrays: an efficient bifunctional electrocatalyst for overall water splitting. <b>2017</b> , 2, 342-348	189
1362	Strategies for developing transition metal phosphides as heterogeneous electrocatalysts for water splitting. <b>2017</b> , 15, 26-55	367
1361	Synthesis of lawn-like NiS <sub>2</sub> nanowires on carbon fiber paper as bifunctional electrode for water splitting. <b>2017</b> , 42, 17038-17048	52
1360	Porphyritic Metal-Organic Framework-Templated Fe-Ni-P/Reduced Graphene Oxide for Efficient Electrocatalytic Oxygen Evolution. <b>2017</b> , 9, 23852-23858	85

1359	Graphene Dots Embedded Phosphide Nanosheet-Assembled Tubular Arrays for Efficient and Stable Overall Water Splitting. <b>2017</b> , 9, 24600-24607	40
1358	Sulfur-doped cobalt phosphide nanotube arrays for highly stable hybrid supercapacitor. <b>2017</b> , 39, 162-171	202
1357	Fe-Doped CoP Nanoarray: A Monolithic Multifunctional Catalyst for Highly Efficient Hydrogen Generation. <b>2017</b> , 29, 1602441	690
1356	Excellent photocatalytic hydrogen production over CdS nanorods via using noble metal-free copper molybdenum sulfide (Cu <sub>2</sub> MoS <sub>4</sub> ) nanosheets as co-catalysts. <b>2017</b> , 396, 421-429	81
1355	Facile Synthesis of Heterostructured Nickel/Nickel Oxide Wrapped Carbon Fiber: Flexible Bifunctional Gas-Evolving Electrode for Highly Efficient Overall Water Splitting. <b>2017</b> , 5, 529-536	51
1354	Transition metal phosphorus-based materials for electrocatalytic energy conversion reactions. <b>2017</b> , 7, 330-347	100
1353	Electrodeposition of Ni/Ni(OH) <sub>2</sub> Catalytic Films for the Hydrogen Evolution Reaction Produced by using Cyclic Voltammetry. <b>2017</b> , 4, 241-245	12
1352	Novel Co <sub>3</sub> S <sub>2</sub> /WS <sub>2</sub> nanosheets supported on carbon cloth as efficient electrocatalyst for hydrogen evolution reaction. <b>2017</b> , 42, 4165-4173	63
1351	Metallic Ni <sub>3</sub> P <sub>3</sub> @NiOOH Core-Shell Heterostructures as Highly Efficient and Stable Electrocatalyst for the Oxygen Evolution Reaction. <b>2017</b> , 7, 229-237	168
1350	Carboxyl-assisted synthesis of Co nanorods with high energy facet on graphene oxide sheets for efficient photocatalytic hydrogen evolution. <b>2017</b> , 203, 789-797	53
1349	Bimetallic Cobalt-Based Phosphide Zeolitic Imidazolate Framework: Co <sub>x</sub> P <sub>x</sub> Phase-Dependent Electrical Conductivity and Hydrogen Atom Adsorption Energy for Efficient Overall Water Splitting. <b>2017</b> , 7, 1601555	271
1348	Three-dimensional N-doped, plasma-etched graphene: Highly active metal-free catalyst for hydrogen evolution reaction. <b>2017</b> , 529, 127-133	55
1347	Strongly Coupled 3D Nanohybrids with Ni <sub>2</sub> P/Carbon Nanosheets as pH-Universal Hydrogen Evolution Reaction Electrocatalysts. <b>2017</b> , 4, 340-344	34
1346	Decorating CoP and Pt Nanoparticles on Graphitic Carbon Nitride Nanosheets to Promote Overall Water Splitting by Conjugated Polymers. <b>2017</b> , 10, 87-90	229
1345	Noble-metal-free cobalt phosphide modified carbon nitride: An efficient photocatalyst for hydrogen generation. <b>2017</b> , 200, 477-483	301
1344	Superb Alkaline Hydrogen Evolution and Simultaneous Electricity Generation by Pt-Decorated Ni <sub>3</sub> N Nanosheets. <b>2017</b> , 7, 1601390	176
1343	Advances in Transition-Metal Phosphide Applications in Electrochemical Energy Storage and Catalysis. <b>2017</b> , 4, 20-34	127
1342	Electrocatalysts for the generation of hydrogen, oxygen and synthesis gas. <b>2017</b> , 58, 1-35	311

1341	CoBeSe ultrathin nanosheet-fabricated microspheres for efficient electrocatalysis of hydrogen evolution. <b>2017</b> , 47, 361-367	12
1340	Multifunctional 0D/1D Ni <sub>2</sub> P Nanocrystals/Black Phosphorus Heterostructure. <b>2017</b> , 7, 1601285	114
1339	A one-dimensional porous carbon-supported Ni/MoC dual catalyst for efficient water splitting. <b>2017</b> , 8, 968-973	301
1338	Mn Doping of CoP Nanosheets Array: An Efficient Electrocatalyst for Hydrogen Evolution Reaction with Enhanced Activity at All pH Values. <b>2017</b> , 7, 98-102	362
1337	Wire-on-flake heterostructured ternary Co <sub>0.5</sub> Ni <sub>0.5</sub> P/CC: an efficient hydrogen evolution electrocatalyst. <b>2017</b> , 5, 982-987	41
1336	Electrocatalytic hydrogen evolution reaction on nano-nickel decorated graphene electrode. <b>2017</b> , 119, 872-878	35
1335	Surface-Charge-Mediated Formation of H-TiO <sub>2</sub> @Ni(OH) <sub>2</sub> Heterostructures for High-Performance Supercapacitors. <b>2017</b> , 29, 1604164	169
1334	Carbon fiber cloth supported interwoven WS <sub>2</sub> nanosheets with highly enhanced performances for supercapacitors. <b>2017</b> , 392, 708-714	57
1333	Self-supported Co-Ni-P ternary nanowire electrodes for highly efficient and stable electrocatalytic hydrogen evolution in acidic solution. <b>2017</b> , 287, 122-129	82
1332	Fabrication of bridge like Pt@MWCNTs/CoS <sub>2</sub> electrocatalyst on conductive polymer matrix for electrochemical hydrogen evolution. <b>2017</b> , 308, 275-288	36
1331	Exploration of Zr-Metal-Organic Framework as Efficient Photocatalyst for Hydrogen Production. <b>2017</b> , 12, 539	63
1330	A MnCo <sub>2</sub> S <sub>4</sub> nanowire array as an earth-abundant electrocatalyst for an efficient oxygen evolution reaction under alkaline conditions. <b>2017</b> , 5, 17211-17215	112
1329	Probing Transition-Metal Silicides as PGM-Free Catalysts for Hydrogen Oxidation and Evolution in Acidic Medium. <b>2017</b> , 10,	10
1328	Enhanced Electrocatalytic Activity for Water Splitting on NiO/Ni/Carbon Fiber Paper. <b>2016</b> , 10,	19
1327	Engineering Pyrite-Type Bimetallic Ni-Doped CoS <sub>2</sub> Nanoneedle Arrays over a Wide Compositional Range for Enhanced Oxygen and Hydrogen Electrocatalysis with Flexible Property. <b>2017</b> , 7, 366	23
1326	Metal-Organic Framework (MOF)-Derived Metal Oxides for Supercapacitors. <b>2017</b> , 165-192	5
1325	Recent advances in unveiling active sites in molybdenum sulfide-based electrocatalysts for the hydrogen evolution reaction. <b>2017</b> , 4, 19	38
1324	Defective Carbon-CoP Nanoparticles Hybrids with Interfacial Charges Polarization for Efficient Bifunctional Oxygen Electrocatalysis. <b>2018</b> , 8, 1703623	164

1323	In situ electrodeposition of CoP nanoparticles on carbon nanomaterial doped polyphenylene sulfide flexible electrode for electrochemical hydrogen evolution. <b>2018</b> , 442, 1-11	14
1322	Surface engineering of hierarchical Ni(OH) <sub>2</sub> nanosheet@nanowire configuration toward superior urea electrolysis. <b>2018</b> , 268, 211-217	50
1321	Al-Doped NiP nanosheet array: a superior and durable electrocatalyst for alkaline hydrogen evolution. <b>2018</b> , 54, 2894-2897	84
1320	Aerosol-spray metal phosphide microspheres with bifunctional electrocatalytic properties for water splitting. <b>2018</b> , 6, 4783-4792	48
1319	Electrodeposited amorphous Co <sub>2</sub> P ternary catalyst for hydrogen evolution reaction. <b>2018</b> , 6, 6282-6288	60
1318	Traditional NiCo <sub>2</sub> S <sub>4</sub> Phase with Porous Nanosheets Array Topology on Carbon Cloth: A Flexible, Versatile and Fabulous Electrocatalyst for Overall Water and Urea Electrolysis. <b>2018</b> , 6, 5011-5020	114
1317	Ultrathin NiCo <sub>2</sub> P <sub>x</sub> nanosheets strongly coupled with CNTs as efficient and robust electrocatalysts for overall water splitting. <b>2018</b> , 6, 7420-7427	241
1316	Ultras-small RuP nanoparticles on graphene: a highly efficient hydrogen evolution reaction electrocatalyst in both acidic and alkaline media. <b>2018</b> , 54, 3343-3346	77
1315	A Room-Temperature Postsynthetic Ligand Exchange Strategy to Construct Mesoporous Fe-Doped CoP Hollow Triangle Plate Arrays for Efficient Electrocatalytic Water Splitting. <b>2018</b> , 14, e1704233	178
1314	Controlled Synthesis of Eutectic NiSe/Ni <sub>3</sub> Se <sub>2</sub> Self-Supported on Ni Foam: An Excellent Bifunctional Electrocatalyst for Overall Water Splitting. <b>2018</b> , 5, 1701507	49
1313	Self-Templated Synthesis of Co <sub>1-x</sub> S Porous Hexagonal Microplates for Efficient Electrocatalytic Oxygen Evolution. <b>2018</b> , 5, 1167-1172	10
1312	Polydopamine-Derived, In Situ N-Doped 3D Mesoporous Carbons for Highly Efficient Oxygen Reduction. <b>2018</b> , 4, 417-422	15
1311	Porous superstructures constructed from ultrafine FeP nanoparticles for highly active and exceptionally stable hydrogen evolution reaction. <b>2018</b> , 6, 6387-6392	65
1310	Folded nanosheet-like Co <sub>0.85</sub> Se array for overall water splitting. <b>2018</b> , 22, 1785-1794	16
1309	Insight into the Crucial Factors for Photochemical Deposition of Cobalt Cocatalysts on g-CN Photocatalysts. <b>2018</b> , 10, 9522-9531	61
1308	Bimetallic Co <sub>2</sub> Mo <sub>3</sub> O <sub>8</sub> suboxides coupled with conductive cobalt nanowires for efficient and durable hydrogen evolution in alkaline electrolyte. <b>2018</b> , 6, 5217-5228	39
1307	Tailoring the d-Band Centers Enables Co N Nanosheets To Be Highly Active for Hydrogen Evolution Catalysis. <b>2018</b> , 57, 5076-5080	449
1306	Tailoring the d-Band Centers Enables Co <sub>4</sub> N Nanosheets To Be Highly Active for Hydrogen Evolution Catalysis. <b>2018</b> , 130, 5170-5174	102

1305	P-Doped Ag Nanoparticles Embedded in N-Doped Carbon Nanoflake: An Efficient Electrocatalyst for the Hydrogen Evolution Reaction. <b>2018</b> , 6, 4499-4503	172
1304	CoP/WS <sub>2</sub> nanoflake heterostructures as efficient electrocatalysts for significant improvement in hydrogen evolution activity. <b>2018</b> , 442, 352-360	25
1303	Pyrolytic carbon supported alloying metal dichalcogenides as free-standing electrodes for efficient hydrogen evolution. <b>2018</b> , 132, 512-519	15
1302	Ethanol/water exchange nanobubbles templated hierarchical hollow $\text{NiMo}_2\text{C}$ /N-doped carbon composite nanospheres as an efficient hydrogen evolution electrocatalyst. <b>2018</b> , 6, 6054-6064	30
1301	Nanoporous Carbon-Coated Bimetallic Phosphides for Efficient Electrochemical Water Splitting. <b>2018</b> , 18, 3404-3410	14
1300	One-Step Facile Synthesis of Cobalt Phosphides for Hydrogen Evolution Reaction Catalysts in Acidic and Alkaline Medium. <b>2018</b> , 10, 15673-15680	51
1299	Metal-organic framework-derived integrated nanoarrays for overall water splitting. <b>2018</b> , 6, 9009-9018	54
1298	Co <sub>3</sub> Se <sub>4</sub> nanosheets embedded on N-CNT as an efficient electroactive material for hydrogen evolution and supercapacitor applications. <b>2018</b> , 65, 62-71	27
1297	Nickel-copper bimetal organic framework nanosheets as a highly efficient catalyst for oxygen evolution reaction in alkaline media. <b>2018</b> , 42, 8346-8350	26
1296	CoP Embedded in Hierarchical N-Doped Carbon Nanotube Frameworks as Efficient Catalysts for the Hydrogen Evolution Reaction. <b>2018</b> , 5, 1644-1651	34
1295	Vertically Aligned Oxygenated-CoS <sub>2</sub> /MoS <sub>2</sub> Heteronanosheet Architecture from Polyoxometalate for Efficient and Stable Overall Water Splitting. <b>2018</b> , 8, 4612-4621	182
1294	Ni nanotube array-based electrodes by electrochemical alloying and de-alloying for efficient water splitting. <b>2018</b> , 10, 9276-9285	26
1293	Controllable Synthesis of Ruthenium Phosphides (RuP and RuP <sub>2</sub> ) for pH-Universal Hydrogen Evolution Reaction. <b>2018</b> , 6, 6388-6394	52
1292	An Integrated Free-Standing Flexible Electrode with Holey-Structured 2D Bimetallic Phosphide Nanosheets for Sodium-Ion Batteries. <b>2018</b> , 28, 1801016	47
1291	3D Porous Cobalt-Iron-Phosphorus Bifunctional Electrocatalyst for the Oxygen and Hydrogen Evolution Reactions. <b>2018</b> , 6, 6305-6311	40
1290	Novel insight into the epitaxial growth mechanism of six-fold symmetrical $\text{NiCo}(\text{OH})_2/\text{Co}(\text{OH})\text{F}$ hierarchical hexagrams and their water oxidation activity. <b>2018</b> , 271, 526-536	29
1289	Synthesis of single crystalline two-dimensional transition-metal phosphides via a salt-templating method. <b>2018</b> , 10, 6844-6849	43
1288	Vanadium-Doped WS Nanosheets Grown on Carbon Cloth as a Highly Efficient Electrocatalyst for the Hydrogen Evolution Reaction. <b>2018</b> , 13, 1438-1446	28

1287	Controllable Synthesis of Ni Se (0.5 $\mu\text{m}$ ) Nanocrystals for Efficient Rechargeable Zinc-Air Batteries and Water Splitting. <b>2018</b> , 10, 13675-13684	80
1286	Phase transformation of iron phosphide nanoparticles for hydrogen evolution reaction electrocatalysis. <b>2018</b> , 43, 11326-11334	31
1285	Amorphous film of ternary NiCoP alloy on Ni foam for efficient hydrogen evolution by electroless deposition. <b>2018</b> , 43, 7872-7880	43
1284	Tuning the morphology and Fe/Ni ratio of a bimetallic Fe-Ni-S film supported on nickel foam for optimized electrolytic water splitting. <b>2018</b> , 523, 121-132	30
1283	Solid-phase hot-pressing synthesis of POMOFs on carbon cloth and derived phosphides for all pH value hydrogen evolution. <b>2018</b> , 6, 21969-21977	34
1282	Phase-control synthesis and catalytic property of magnetic Ni@Ni <sub>3</sub> Py core-shell microstructures. <b>2018</b> , 101, 215-222	6
1281	Fabrication of hierarchical CoP nanosheet@microwire arrays via space-confined phosphidation toward high-efficiency water oxidation electrocatalysis under alkaline conditions. <b>2018</b> , 10, 7941-7945	178
1280	Prereduction of Metal Oxides via Carbon Plasma Treatment for Efficient and Stable Electrocatalytic Hydrogen Evolution. <b>2018</b> , 14, e1800340	24
1279	Hierarchical 3D ZnNiP nanosheet arrays as an advanced electrode for high-performance all-solid-state asymmetric supercapacitors. <b>2018</b> , 6, 8669-8681	89
1278	Toward High-Performance and Low-Cost Hydrogen Evolution Reaction Electrocatalysts: Nanostructuring Cobalt Phosphide (CoP) Particles on Carbon Fiber Paper. <b>2018</b> , 10, 14777-14785	73
1277	Designed synthesis of NiCo-LDH and derived sulfide on heteroatom-doped edge-enriched 3D rivet graphene films for high-performance asymmetric supercapacitor and efficient OER. <b>2018</b> , 6, 8109-8119	79
1276	Enhancement of Oxygen Transfer by Design Nickel Foam Electrode for Zinc-Air Battery. <b>2018</b> , 165, A809-A818	30
1275	Self-supported cobalt nitride porous nanowire arrays as bifunctional electrocatalyst for overall water splitting. <b>2018</b> , 273, 229-238	69
1274	Facile synthesis of MoS <sub>2</sub> /rGO-MOF hybrid material as highly efficient catalyst for hydrogen evolution. <b>2018</b> , 216, 243-247	16
1273	Highly uniform Ru nanoparticles over N-doped carbon: pH and temperature-universal hydrogen release from water reduction. <b>2018</b> , 11, 800-806	286
1272	Highly efficient hydrogen evolution by self-standing nickel phosphide-based hybrid nanosheet arrays electrocatalyst. <b>2018</b> , 4, 1-6	52
1271	Urchin-Like Nanorods of Binary NiCoS Supported on Nickel Foam for Electrocatalytic Overall Water Splitting. <b>2018</b> , 165, H102-H108	33
1270	Co-W/CeO <sub>2</sub> composite coatings for highly active electrocatalysis of hydrogen evolution reaction. <b>2018</b> , 743, 682-690	24

1269	Preparation of mesoporous Ni <sub>2</sub> P nanobelts with high performance for electrocatalytic hydrogen evolution and supercapacitor. <b>2018</b> , 43, 3697-3704	51
1268	Ultrathin [email[protected]] Double Hydroxides Core-Shell Nanosheets Arrays for Largely Enhanced Overall Water Splitting. <b>2018</b> , 1, 623-631	58
1267	Phosphorus-Doped Co <sub>3</sub> O <sub>4</sub> Nanowire Array: A Highly Efficient Bifunctional Electrocatalyst for Overall Water Splitting. <b>2018</b> , 8, 2236-2241	367
1266	A novel strategy for preparing layered double hydroxide/exfoliated carbon nanostructures composites as superior electrochemical catalysts with respect to oxygen evolution and methanol oxidation. <b>2018</b> , 744, 347-356	9
1265	Fe(TCNQ) <sub>2</sub> Nanorod Array: A Conductive Non-Noble-Metal Electrocatalyst toward Water Oxidation in Alkaline Media. <b>2018</b> , 6, 1545-1549	21
1264	Nickel Ditungstate Nanosheet Arrays: A Highly Efficient Electrocatalyst for the Oxygen Evolution Reaction. <b>2018</b> , 5, 1153-1158	33
1263	Nanocatalysts for hydrogen evolution reactions. <b>2018</b> , 20, 6777-6799	70
1262	Dynamic Hydrogen Bubble Templated NiCu Phosphide Electrodes for pH-Insensitive Hydrogen Evolution Reactions. <b>2018</b> , 6, 2866-2871	37
1261	NiFe-Layered Double Hydroxide Nanosheet Arrays Supported on Carbon Cloth for Highly Sensitive Detection of Nitrite. <b>2018</b> , 10, 6541-6551	92
1260	Cathodic electrochemical activation of CoO nanoarrays: a smart strategy to significantly boost the hydrogen evolution activity. <b>2018</b> , 54, 2150-2153	48
1259	Wet-chemistry topotactic synthesis of bimetallic iron-nickel sulfide nanoarrays: an advanced and versatile catalyst for energy efficient overall water and urea electrolysis. <b>2018</b> , 6, 4346-4353	127
1258	Carbon skeleton doped with Co, N, S and P as efficient electrocatalyst for oxygen evolution reaction. <b>2018</b> , 61, 686-696	8
1257	Elucidating Surface Restructuring-Induced Catalytic Reactivity of Cobalt Phosphide Nanoparticles under Electrochemical Conditions. <b>2018</b> , 122, 2848-2853	55
1256	Tunable 3D hierarchical Ni <sub>3</sub> S <sub>2</sub> superstructures as efficient and stable bifunctional electrocatalysts for both H <sub>2</sub> and O <sub>2</sub> generation. <b>2018</b> , 6, 4485-4493	56
1255	A self-supported amorphous Ni-P alloy on a CuO nanowire array: an efficient 3D electrode catalyst for water splitting in alkaline media. <b>2018</b> , 54, 2393-2396	58
1254	Nanoceria-Supported Ruthenium(0) Nanoparticles: Highly Active and Stable Catalysts for Hydrogen Evolution from Water. <b>2018</b> , 10, 6299-6308	60
1253	Design of Electroactive Carbon Fibers Decorated with Metal and Metal-Phosphide Nanoparticles for Hydrogen Evolution Technology. <b>2018</b> , 6, 1310-1331	11
1252	Plasma-Assisted Synthesis and Surface Modification of Electrode Materials for Renewable Energy. <b>2018</b> , 30, e1705850	323



1251	High Activity Hydrogen Evolution Catalysis by Uniquely Designed Amorphous/Metal Interface of Core-Shell Phosphosulfide/N-Doped CNTs. <b>2018</b> , 8, 1702806	35
1250	In Situ Growth of CoP Nanoparticles Anchored on Black Phosphorus Nanosheets for Enhanced Photocatalytic Hydrogen Production. <b>2018</b> , 10, 2179-2183	47
1249	Iron-Doped NiCoP Porous Nanosheet Arrays as a Highly Efficient Electrocatalyst for Oxygen Evolution Reaction. <b>2018</b> , 1, 571-579	65
1248	Mo- and Fe-Modified Ni(OH) <sub>2</sub> /NiOOH Nanosheets as Highly Active and Stable Electrocatalysts for Oxygen Evolution Reaction. <b>2018</b> , 8, 2359-2363	195
1247	Bimetallic PtPd alloyed core-shell nanodendrites supported on reduced graphene oxide: One-pot green synthesis and efficient electrocatalytic performances for glycerol oxidation and hydrogen evolution. <b>2018</b> , 735, 2123-2132	19
1246	Forest-like NiCoP@Cu <sub>3</sub> P supported on copper foam as a bifunctional catalyst for efficient water splitting. <b>2018</b> , 6, 2100-2106	104
1245	Mutually beneficial Co <sub>3</sub> O <sub>4</sub> @MoS <sub>2</sub> heterostructures as a highly efficient bifunctional catalyst for electrochemical overall water splitting. <b>2018</b> , 6, 2067-2072	129
1244	Achieving high mass loading of Na <sub>3</sub> V <sub>2</sub> (PO <sub>4</sub> ) <sub>3</sub> @carbon on carbon cloth by constructing three-dimensional network between carbon fibers for ultralong cycle-life and ultrahigh rate sodium-ion batteries. <b>2018</b> , 45, 136-147	106
1243	Ni-Se nanostructures dependent on different solvent as efficient electrocatalysts for hydrogen evolution reaction in alkaline media. <b>2018</b> , 207, 389-395	10
1242	Ultras-small NiFe-Phosphate Nanoparticles Incorporated Fe <sub>2</sub> O <sub>3</sub> Nanoarrays Photoanode Realizing High Efficient Solar Water Splitting. <b>2018</b> , 6, 2353-2361	44
1241	The unified ordered mesoporous carbons supported Co-based electrocatalysts for full water splitting. <b>2018</b> , 261, 412-420	14
1240	Biphasic nickel phosphide nanosheets: Self-supported electrocatalyst for sensitive and selective electrochemical H <sub>2</sub> O <sub>2</sub> detection and its practical applications in blood and living cells. <b>2018</b> , 258, 789-795	10
1239	A Co P/WC Nano-Heterojunction Covered with N-Doped Carbon as Highly Efficient Electrocatalyst for Hydrogen Evolution Reaction. <b>2018</b> , 11, 1082-1091	59
1238	A Cyanide-Based Coordination Polymer for Hydrogen Evolution Electrocatalysis. <b>2018</b> , 148, 531-538	10
1237	Electronic Structure Tuning in NiFeN/r-GO Aerogel toward Bifunctional Electrocatalyst for Overall Water Splitting. <b>2018</b> , 12, 245-253	347
1236	Ultrafine PtO nanoparticles coupled with a Co(OH)F nanowire array for enhanced hydrogen evolution. <b>2018</b> , 54, 810-813	54
1235	Few-Layer Iron Selenophosphate, FePSe <sub>3</sub> : Efficient Electrocatalyst toward Water Splitting and Oxygen Reduction Reactions. <b>2018</b> , 1, 220-231	48
1234	In situ Formed Co(TCNQ) Metal-Organic Framework Array as a High-Efficiency Catalyst for Oxygen Evolution Reactions. <b>2018</b> , 24, 2075-2079	20

1233	Porous CoP nanosheets converted from layered double hydroxides with superior electrochemical activity for hydrogen evolution reactions at wide pH ranges. <b>2018</b> , 54, 1465-1468	102
1232	Nanosized Metal Phosphides Embedded in Nitrogen-Doped Porous Carbon Nanofibers for Enhanced Hydrogen Evolution at All pH Values. <b>2018</b> , 130, 1981-1985	38
1231	Alkaline-Acid Zn-H <sub>2</sub> O Fuel Cell for the Simultaneous Generation of Hydrogen and Electricity. <b>2018</b> , 57, 3910-3915	58
1230	In-situ conversion of rGO/Ni <sub>2</sub> P composite from GO/Ni-MOF precursor with enhanced electrochemical property. <b>2018</b> , 439, 413-419	40
1229	Fe-doped Co <sub>9</sub> S <sub>8</sub> nanosheets on carbon fiber cloth as pH-universal freestanding electrocatalysts for efficient hydrogen evolution. <b>2018</b> , 264, 157-165	34
1228	Biomimetic organization of a ruthenium-doped collagen-based carbon scaffold for hydrogen evolution. <b>2018</b> , 6, 2311-2317	25
1227	Oriented Growth of ZIF-67 to Derive 2D Porous CoPO Nanosheets for Electrochemical-/Photovoltage-Driven Overall Water Splitting. <b>2018</b> , 28, 1706120	127
1226	Synthesis of Cobalt Glycerate hierarchical structure and their conversion into hierarchical CoP nanospheres for the hydrogen evolution reaction. <b>2018</b> , 43, 2034-2042	33
1225	Enhancing Full Water-Splitting Performance of Transition Metal Bifunctional Electrocatalysts in Alkaline Solutions by Tailoring CeO <sub>2</sub> /Transition Metal Oxides/Ni Nanointerfaces. <b>2018</b> , 3, 290-296	101
1224	Ni(OH)-FeP hybrid nanoarray for alkaline hydrogen evolution reaction with superior activity. <b>2018</b> , 54, 1201-1204	93
1223	CoP nanoparticles anchored on N,P-dual-doped graphene-like carbon as a catalyst for water splitting in non-acidic media. <b>2018</b> , 10, 2603-2612	78
1222	CoFex-CoFe <sub>2</sub> O <sub>4</sub> /N-doped carbon nanocomposite derived from in situ pyrolysis of a single source precursor as a superior bifunctional electrocatalyst for water splitting. <b>2018</b> , 262, 18-26	21
1221	CoP Nanoparticles Combined with WSe <sub>2</sub> Nanosheets: An Efficient Hybrid Catalyst for Electrocatalytic Hydrogen Evolution Reaction. <b>2018</b> , 57, 483-489	17
1220	Bimetallic NiBe phosphide nanocomposites with a controlled architecture and composition enabling highly efficient electrochemical water oxidation. <b>2018</b> , 6, 2231-2238	76
1219	Carbon cloth-supported cobalt phosphide as an active matrix for constructing enzyme-based biosensor. <b>2018</b> , 22, 1689-1696	4
1218	Electronic modulation of transition metal phosphide doping as efficient and pH-universal electrocatalysts for hydrogen evolution reaction. <b>2018</b> , 9, 1970-1975	131
1217	Selective phosphidation: an effective strategy toward CoP/CeO <sub>2</sub> interface engineering for superior alkaline hydrogen evolution electrocatalysis. <b>2018</b> , 6, 1985-1990	151
1216	FeMoO <sub>4</sub> nanorod array: a highly active 3D anode for water oxidation under alkaline conditions. <b>2018</b> , 5, 665-668	22

1215	Electrodeposited-film electrodes derived from a precursor dinitrosyl iron complex for electrocatalytic water splitting. <b>2018</b> , 47, 7128-7134		7
1214	Mo2C and Its Composites Derived from Egg White for Hydrogen Evolution Reaction at All pH Range. <b>2018</b> , 3, 4683-4686		2
1213	Environmental Catalysis. <b>2018</b> , 61-99		
1212	Conformal and continuous deposition of bifunctional cobalt phosphide layers on p-silicon nanowire arrays for improved solar hydrogen evolution. <b>2018</b> , 11, 4823-4835		18
1211	FeOx/FeP hybrid nanorods neutral hydrogen evolution electrocatalysis: insight into interface. <b>2018</b> , 6, 9467-9472		77
1210	Few-layer tiny nanoflakes of molybdenum sulfide loaded on porous carbon as an efficient electrocatalyst for hydrogen generation. <b>2018</b> , 750, 927-934		5
1209	Coupling molybdenum carbide nanoparticles with N-doped carbon nanosheets as a high-efficiency electrocatalyst for hydrogen evolution reaction. <b>2018</b> , 43, 9326-9333		29
1208	Electrodeposition of Cobalt Phosphosulfide Nanosheets on Carbon Fiber Paper as Efficient Electrocatalyst for Oxygen Evolution. <b>2018</b> , 5, 1677-1682		9
1207	Hierarchical whisker-on-sheet NiCoP with adjustable surface structure for efficient hydrogen evolution reaction. <b>2018</b> , 10, 7619-7629		45
1206	Study of cobalt boride-derived electrocatalysts for overall water splitting. <b>2018</b> , 43, 6076-6087		56
1205	Dual Tuning of Ni-Co-A (A = P, Se, O) Nanosheets by Anion Substitution and Holey Engineering for Efficient Hydrogen Evolution. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 5241-5247	16.4	347
1204	Theoretical and Experimental Insight into the Effect of Nitrogen Doping on Hydrogen Evolution Activity of Ni3S2 in Alkaline Medium. <b>2018</b> , 8, 1703538		159
1203	Hollow Mo-doped CoP nanoarrays for efficient overall water splitting. <b>2018</b> , 48, 73-80		418
1202	Boosting hydrogen evolution via optimized hydrogen adsorption at the interface of CoP3 and Ni2P. <b>2018</b> , 6, 5560-5565		76
1201	Electrochemically active and robust cobalt doped copper phosphosulfide electro-catalysts for hydrogen evolution reaction in electrolytic and photoelectrochemical water splitting. <b>2018</b> , 43, 7855-7871		31
1200	Graphene quantum dot engineered nickel-cobalt phosphide as highly efficient bifunctional catalyst for overall water splitting. <b>2018</b> , 48, 284-291		103
1199	Ultrarapid in Situ Synthesis of Cu2S Nanosheet Arrays on Copper Foam with Room-Temperature-Active Iodine Plasma for Efficient and Cost-Effective Oxygen Evolution. <b>2018</b> , 8, 3859-3864		97
1198	Microwave-assisted synthesis of graphene-like cobalt sulfide freestanding sheets as an efficient bifunctional electrocatalyst for overall water splitting. <b>2018</b> , 6, 7592-7607		73

1197	Carbon-coated CoP 3 nanocomposites as anode materials for high-performance sodium-ion batteries. <b>2018</b> , 445, 167-174	50
1196	Ultrasmall CoP Nanoparticles as Efficient Cocatalysts for Photocatalytic Formic Acid Dehydrogenation. <b>2018</b> , 2, 549-557	79
1195	Atomically Defined Co <sub>3</sub> O <sub>4</sub> (111) Thin Films Prepared in Ultrahigh Vacuum: Stability under Electrochemical Conditions. <b>2018</b> , 122, 7236-7248	26
1194	Microwave-assisted hydrothermal synthesis of cobalt phosphide nanostructures for advanced supercapacitor electrodes. <b>2018</b> , 20, 2413-2420	20
1193	Molybdenum Carbide-Decorated Metallic Cobalt@Nitrogen-Doped Carbon Polyhedrons for Enhanced Electrocatalytic Hydrogen Evolution. <b>2018</b> , 14, e1704227	77
1192	Stacked Porous Iron-Doped Nickel Cobalt Phosphide Nanoparticle: An Efficient and Stable Water Splitting Electrocatalyst. <b>2018</b> , 6, 6146-6156	84
1191	Ternary nickel iron phosphide supported on nickel foam as a high-efficiency electrocatalyst for overall water splitting. <b>2018</b> , 43, 7299-7306	56
1190	Fabrication of (Ni,Co) <sub>0.85</sub> Se nanosheet arrays derived from layered double hydroxides toward largely enhanced overall water splitting. <b>2018</b> , 6, 7585-7591	82
1189	Uricase-free on-demand colorimetric biosensing of uric acid enabled by integrated CoP nanosheet arrays as a monolithic peroxidase mimic. <b>2018</b> , 1021, 113-120	55
1188	High-Performance Electrocatalysts for Hydrogen Evolution Reaction Using Flexible Electrodes Made up of Chemically Modified Polyester Films. <b>2018</b> , 3, 2738-2746	1
1187	Electrosynthesis of Co <sub>3</sub> O <sub>4</sub> and Co(OH) <sub>2</sub> ultrathin nanosheet arrays for efficient electrocatalytic water splitting in alkaline and neutral media. <b>2018</b> , 11, 323-333	53
1186	Electrocatalytic performance evaluation of cobalt hydroxide and cobalt oxide thin films for oxygen evolution reaction. <b>2018</b> , 427, 253-259	98
1185	Solar-to-Hydrogen Energy Conversion Based on Water Splitting. <b>2018</b> , 8, 1701620	285
1184	Efficient Hydrogen Evolution on Cu Nanodots-Decorated NiS Nanotubes by Optimizing Atomic Hydrogen Adsorption and Desorption. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 610-617	16.4 410
1183	In situ synthesis of NiSe@CoP core-shell nanowire arrays on nickel foam as a highly efficient and robust electrode for electrochemical hydrogen generation in both alkaline and acidic media. <b>2018</b> , 8, 128-133	10
1182	Advanced catalysts for sustainable hydrogen generation and storage via hydrogen evolution and carbon dioxide/nitrogen reduction reactions. <b>2018</b> , 92, 64-111	161
1181	Hydrophilic cobalt sulfide nanosheets as a bifunctional catalyst for oxygen and hydrogen evolution in electrolysis of alkaline aqueous solution. <b>2018</b> , 509, 522-528	44
1180	Encapsulating Co P@C Core-Shell Nanoparticles in a Porous Carbon Sandwich as Dual-Doped Electrocatalyst for Hydrogen Evolution. <b>2018</b> , 11, 376-388	40

1179	Lotus root-like porous carbon nanofiber anchored with CoP nanoparticles as all-pH hydrogen evolution electrocatalysts. <b>2018</b> , 11, 1274-1284	41
1178	Thermal and photocatalytic production of hydrogen with earth-abundant metal complexes. <b>2018</b> , 355, 54-73	93
1177	Cobalt nitride nanowire array as an efficient electrochemical sensor for glucose and H <sub>2</sub> O <sub>2</sub> detection. <b>2018</b> , 255, 1254-1261	225
1176	Electrodeposited carbon-supported nickel sulfide thin films with enhanced stability in acid medium as hydrogen evolution reaction electrocatalyst. <b>2018</b> , 22, 365-374	17
1175	Self-supported CoMoS <sub>4</sub> nanosheet array as an efficient catalyst for hydrogen evolution reaction at neutral pH. <b>2018</b> , 11, 2024-2033	120
1174	Hierarchical cobalt poly-phosphide hollow spheres as highly active and stable electrocatalysts for hydrogen evolution over a wide pH range. <b>2018</b> , 427, 800-806	28
1173	The enhancement of CdS photocatalytic activity for water splitting via anti-photocorrosion by coating Ni <sub>2</sub> P shell and removing nascent formed oxygen with artificial gill. <b>2018</b> , 221, 243-257	270
1172	Controllable Surface Reorganization Engineering on Cobalt Phosphide Nanowire Arrays for Efficient Alkaline Hydrogen Evolution Reaction. <b>2018</b> , 30, 1703322	177
1171	Structure-Activity Relationships for Pt-Free Metal Phosphide Hydrogen Evolution Electrocatalysts. <b>2018</b> , 24, 7298-7311	54
1170	Facile synthesis of CoP decorated porous carbon microspheres for ultrasensitive detection of 4-nitrophenol. <b>2018</b> , 179, 448-455	25
1169	Enhancing electrocatalytic hydrogen evolution of WP <sub>2</sub> three-dimensional nanowire arrays via Mo doping. <b>2018</b> , 213, 315-318	11
1168	Bimetallic Carbide as a Stable Hydrogen Evolution Catalyst in Harsh Acidic Water. <b>2018</b> , 3, 78-84	35
1167	Promoting Active Sites in Core-Shell Nanowire Array as Mott-Schottky Electrocatalysts for Efficient and Stable Overall Water Splitting. <b>2018</b> , 28, 1704447	165
1166	CoS <sub>2</sub> @TiO <sub>2</sub> hybrid nanostructures: efficient and durable bifunctional electrocatalysts for alkaline electrolyte membrane water electrolyzers. <b>2018</b> , 6, 1075-1085	30
1165	Electrodeposition of Nickel Nanoparticles for the Alkaline Hydrogen Evolution Reaction: Correlating Electrocatalytic Behavior and Chemical Composition. <b>2018</b> , 11, 948-958	15
1164	Homologous Co <sub>3</sub> O <sub>4</sub> @CoP nanowires grown on carbon cloth as a high-performance electrode pair for triclosan degradation and hydrogen evolution. <b>2018</b> , 2, 323-330	27
1163	Self-Supported Porous NiSe <sub>2</sub> Nanowrinkles as Efficient Bifunctional Electrocatalysts for Overall Water Splitting. <b>2018</b> , 6, 2231-2239	90
1162	A precious metal-free solar water splitting cell with a bifunctional cobalt phosphide electrocatalyst and doubly promoted bismuth vanadate photoanode. <b>2018</b> , 6, 1266-1274	39

1161	Interface engineering of the Ni(OH) <sub>2</sub> /Ni <sub>3</sub> N nanoarray heterostructure for the alkaline hydrogen evolution reaction. <b>2018</b> , 6, 833-836	76
1160	Nanosized Metal Phosphides Embedded in Nitrogen-Doped Porous Carbon Nanofibers for Enhanced Hydrogen Evolution at All pH Values. <b>2018</b> , 57, 1963-1967	212
1159	An enhanced electrochemical energy conversion behavior of thermally treated thin film of 1-dimensional CoTe synthesized from aqueous solution at room temperature. <b>2018</b> , 260, 365-371	19
1158	Template-free synthesis of coral-like nitrogen-doped carbon dots/Ni <sub>3</sub> S <sub>2</sub> /Ni foam composites as highly efficient electrodes for water splitting. <b>2018</b> , 129, 335-341	49
1157	High-Performance Transition Metal Phosphide Alloy Catalyst for Oxygen Evolution Reaction. <b>2018</b> , 12, 158-167	231
1156	Hierarchically Structured Ni Nanotube Array-Based Integrated Electrodes for Water Splitting. <b>2018</b> , 6, 2069-2077	24
1155	Engineering oxygen vacancy on NiO nanorod arrays for alkaline hydrogen evolution. <b>2018</b> , 43, 103-109	366
1154	Polyaniline Derived N-Doped Carbon-Coated Cobalt Phosphide Nanoparticles Deposited on N-Doped Graphene as an Efficient Electrocatalyst for Hydrogen Evolution Reaction. <b>2018</b> , 14, 1702895	99
1153	Facile formation of 2D Co <sub>2</sub> P@Co <sub>3</sub> O <sub>4</sub> microsheets through in-situ topotactic conversion and surface corrosion: Bifunctional electrocatalysts towards overall water splitting. <b>2018</b> , 374, 142-148	70
1152	Co <sub>3</sub> O <sub>4</sub> /CoP composite hollow polyhedron: A superior catalyst with dramatic efficiency and stability for the room temperature reduction of 4-nitrophenol. <b>2018</b> , 434, 967-974	12
1151	Three-dimensional well-mixed / highly-densed NiS-CoS nanorod arrays: An efficient and stable bifunctional electrocatalyst for hydrogen and oxygen evolution reactions. <b>2018</b> , 260, 82-91	90
1150	Alkaline/Acid Zn@ZnO Fuel Cell for the Simultaneous Generation of Hydrogen and Electricity. <b>2018</b> , 130, 3974-3979	38
1149	Recent Progress on Layered Double Hydroxides and Their Derivatives for Electrocatalytic Water Splitting. <b>2018</b> , 5, 1800064	329
1148	Carbon-encapsulated multi-phase nanocomposite of WC@WC as a highly active and stable electrocatalyst for hydrogen generation. <b>2018</b> , 10, 21123-21131	17
1147	A MOF-derived coral-like NiSe@NC nanohybrid: an efficient electrocatalyst for the hydrogen evolution reaction at all pH values. <b>2018</b> , 10, 22758-22765	65
1146	3D hierarchical CoO@CoS nanoarrays as anode and cathode materials for oxygen evolution reaction and hydrogen evolution reaction. <b>2018</b> , 47, 16305-16312	17
1145	Ultrafine Rh nanoparticle decorated MoSe <sub>2</sub> nanoflowers for efficient alkaline hydrogen evolution reaction. <b>2018</b> , 5, 2978-2984	13
1144	(Keynote) One-Pot Synthesis of Manganese Oxides and Cobalt Phosphides Nanohybrids with Abundant Hetero-Interfaces in Amorphous Matrix for Efficient Hydrogen Evolution in Alkaline Solution. <b>2018</b> , 88, 381-397	

1143	Highly efficient visible-light-assisted photocatalytic hydrogen generation from water splitting catalyzed by Zn <sub>0.5</sub> Cd <sub>0.5</sub> S/Ni <sub>2</sub> P heterostructures. <b>2018</b> , 43, 22917-22928	18
1142	Cu@Cu P Core-Shell Nanowires Attached to Nickel Foam as High-Performance Electrocatalysts for the Hydrogen Evolution Reaction. <b>2019</b> , 25, 1083-1089	8
1141	Defect-rich MoS <sub>2</sub> /carbon nanofiber arrays on carbon cloth for highly efficient electrocatalytic hydrogen evolution. <b>2018</b> , 43, 23118-23125	15
1140	Accelerating water dissociation kinetics by isolating cobalt atoms into ruthenium lattice. <b>2018</b> , 9, 4958	147
1139	Modification of Carbon Nanotubes via Birch Reaction for Enhanced HER Catalyst by Constructing Pearl Necklace-Like NiCo P-CNT Composite. <b>2018</b> , 14, e1804388	12
1138	Incorporating Oxygen CoP Nanosheets: Facile Synthesis and Application for Supercapacitor Electrodes. <b>2018</b> , 10904-10910	3
1137	Structurally Engineered Hyperbranched NiCoP Arrays with Superior Electrocatalytic Activities toward Highly Efficient Overall Water Splitting. <b>2018</b> , 10, 41237-41245	70
1136	Recent developments of transition metal phosphides as catalysts in the energy conversion field. <b>2018</b> , 6, 23220-23243	135
1135	Recent developments in earth-abundant and non-noble electrocatalysts for water electrolysis. <b>2018</b> , 7, 121-138	119
1134	Recent progress in transition metal phosphides with enhanced electrocatalysis for hydrogen evolution. <b>2018</b> , 10, 21617-21624	227
1133	Modulating the Volmer Step by MOF Derivatives Assembled with Heterogeneous Ni <sub>2</sub> P-CoP Nanocrystals in Alkaline Hydrogen Evolution Reaction. <b>2018</b> , 165, F1286-F1291	11
1132	Amorphous Iron and Cobalt Based Phosphate Nanosheets Supported on Nickel Foam as Superior Catalysts for Hydrogen Evolution Reaction. <b>2018</b> , 1, 6764-6768	10
1131	Phosphorized MXene-Phase Molybdenum Carbide as an Earth-Abundant Hydrogen Evolution Electrocatalyst. <b>2018</b> , 1, 7206-7212	48
1130	Lead cathodes functionalized with magnetite particles with enhanced electrocatalytic activity for hydrogen evolution reaction in sulfuric acid solutions. <b>2018</b> , 43, 23239-23254	2
1129	Sulfur-Doped Dicobalt Phosphide Outperforming Precious Metals as a Bifunctional Electrocatalyst for Alkaline Water Electrolysis. <b>2018</b> , 30, 8861-8870	50
1128	Toward Bifunctional Overall Water Splitting Electrocatalyst: General Preparation of Transition Metal Phosphide Nanoparticles Decorated N-Doped Porous Carbon Spheres. <b>2018</b> , 10, 44201-44208	51
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1102	Recent progress in efficiency of hydrogen evolution process based photoelectrochemical cell. <b>2018</b> , 43, 21502-21523	31
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1037	Porous NiTe <sub>2</sub> nanosheet array: An effective electrochemical sensor for glucose detection. <b>2018</b> , 274, 427-432	18
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1030	Hierarchical three-dimensional manganese doped cobalt phosphide nanowire decorated nanosheet cluster arrays for high-performance electrochemical pseudocapacitor electrodes. <b>2018</b> , 54, 9234-9237	51
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1023	Efficient Electrochemical N <sub>2</sub> Reduction to NH <sub>3</sub> on MoN Nanosheets Array under Ambient Conditions. <b>2018</b> , 6, 9550-9554	164
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969	Preparation of Yolk-Shell-Structured Co Fe P with Enhanced OER Performance. <b>2019</b> , 12, 4461-4470	36
968	A unique amorphous cobalt-phosphide-boride bifunctional electrocatalyst for enhanced alkaline water-splitting. <b>2019</b> , 259, 118051	68
967	Fe <sub>2</sub> O <sub>3</sub> and Co bimetallic decorated nitrogen doped graphene nanomaterial for effective electrochemical water split hydrogen evolution reaction. <b>2019</b> , 849, 113345	6
966	Molybdenum-Doped Porous Cobalt Phosphide Nanosheets for Efficient Alkaline Hydrogen Evolution. <b>2019</b> , 2, 6302-6310	12
965	Construction of multi-dimensional core/shell Ni/NiCoP nano-heterojunction for efficient electrocatalytic water splitting. <b>2019</b> , 259, 118039	68
964	Interface engineering of NiS <sub>2</sub> /CoS <sub>2</sub> nanohybrids as bifunctional electrocatalysts for rechargeable solid state Zn-air battery. <b>2019</b> , 437, 226893	34



963	Defect engineering of cobalt microspheres by S doping and electrochemical oxidation as efficient bifunctional and durable electrocatalysts for water splitting at high current densities. <b>2019</b> , 436, 226887	22
962	In-situ synthesis of ternary metal phosphides Ni <sub>x</sub> Co <sub>1-x</sub> P decorated Zn <sub>0.5</sub> Cd <sub>0.5</sub> S nanorods with significantly enhanced photocatalytic hydrogen production activity. <b>2019</b> , 378, 122220	42
961	Synthesis and mechanism investigation of three-dimensional porous CoP <sub>3</sub> nanoplate arrays as efficient hydrogen evolution reaction electrocatalyst. <b>2019</b> , 494, 179-186	10
960	Ultrasonic-Assisted Synthesis of Amorphous Polyelemental Hollow Nanoparticles as Efficient and Stable Bifunctional Electrocatalysts for Overall Water Splitting. <b>2019</b> , 6, 1900586	8
959	Self-Templated Conversion of Metallogel into Heterostructured TMP@Carbon Quasiaerogels Boosting Bifunctional Electrocatalysis. <b>2019</b> , 29, 1903660	66
958	Terephthalic acid induced binder-free NiCoP@carbon nanocomposite for highly efficient electrocatalysis of hydrogen evolution reaction. <b>2019</b> , 9, 4651-4658	12
957	Graphene quantum dot induced tunable growth of nanostructured MnCo <sub>2</sub> O <sub>4.5</sub> composites for high-performance supercapacitors. <b>2019</b> , 3, 2499-2508	29
956	Hollow bimetallic M-Fe-P (M=Mn, Co, Cu) nanoparticles as efficient electrocatalysts for hydrogen evolution reaction. <b>2019</b> , 44, 22806-22815	10
955	Graphdiyne-engineered heterostructures for efficient overall water-splitting. <b>2019</b> , 64, 103928	30
954	An earth-abundant, amorphous cobalt-iron-borate (Co-Fe-Bi) prepared on Ni foam as highly efficient and durable electrocatalysts for oxygen evolution. <b>2019</b> , 495, 143462	9
953	Constructing Bifunctional 3D Holey and Ultrathin CoP Nanosheets for Efficient Overall Water Splitting. <b>2019</b> , 11, 29879-29887	33
952	Self-Growing NiFe-Based Hybrid Nanosheet Arrays on Ni Nanowires for Overall Water Splitting. <b>2019</b> , 2, 5465-5471	13
951	Ultrathin amorphous CoFeP nanosheets derived from CoFe LDHs by partial phosphating as excellent bifunctional catalysts for overall water splitting. <b>2019</b> , 323, 134595	31
950	Nickel-cobalt alloy doping phosphorus as advanced electrocatalyst for hydrazine oxidation. <b>2019</b> , 807, 151648	17
949	Hierarchically Porous Nanostructured Nickel Phosphide with Carbon Particles Embedded by Dielectric Barrier Discharge Plasma Deposition as a Binder-Free Electrode for Hybrid Supercapacitors. <b>2019</b> , 7, 14805-14814	14
948	One-step solid-phase boronation to fabricate self-supported porous FeNiB/FeNi foam for efficient electrocatalytic oxygen evolution and overall water splitting. <b>2019</b> , 7, 19554-19564	41
947	Bimetallic nanoparticle decorated perovskite oxide for state-of-the-art trifunctional electrocatalysis. <b>2019</b> , 7, 19453-19464	39
946	Synthesis of Tri-functional Core-shell CuO@carbon Quantum Dots@carbon Hollow Nanospheres Heterostructure for Non-enzymatic H <sub>2</sub> O <sub>2</sub> Sensing and Overall Water Splitting Applications. <b>2019</b> , 31, 2120-2129	4

945	Bipolar Electrochemistry as a Simple Synthetic Route toward Nanoscale Transition of Mo <sub>2</sub> B <sub>5</sub> and W <sub>2</sub> B <sub>5</sub> for Enhanced Hydrogen Evolution Reaction. <b>2019</b> ,	3
944	Carbon Quantum Dots Modulated NiMoP Hollow Nanopetals as Efficient Electrocatalysts for Hydrogen Evolution. <b>2019</b> , 58, 14098-14105	29
943	Hyperbranched CoP nanocrystals with 3D morphology for hydrogen generation in both alkaline and acidic media.. <b>2019</b> , 9, 20612-20617	5
942	Low-Electronegativity Vanadium Substitution in Cobalt Carbide Induced Enhanced Electron Transfer for Efficient Overall Water Splitting. <b>2019</b> , 11, 43261-43269	26
941	Interface engineering of NiP nanoparticles and a mesoporous PtRu film heterostructure on Ni foam for enhanced hydrogen evolution. <b>2019</b> , 30, 485403	1
940	Mo/Mo <sub>2</sub> C encapsulated in nitrogen-doped carbon nanofibers as efficiently integrated heterojunction electrocatalysts for hydrogen evolution reaction in wide pH range. <b>2019</b> , 496, 143672	26
939	Interface Engineering of an RGO/MoS/Pd 2D Heterostructure for Electrocatalytic Overall Water Splitting in Alkaline Medium. <b>2019</b> , 11, 42094-42103	26
938	Sulfur-Induced Interface Engineering of Hybrid NiCo <sub>2</sub> O <sub>4</sub> @NiMo <sub>2</sub> S <sub>4</sub> Structure for Overall Water Splitting and Flexible Hybrid Energy Storage. <b>2019</b> , 6, 1901308	94
937	Surface Engineering of 3D Gas Diffusion Electrodes for High-Performance H <sub>2</sub> Production with Nonprecious Metal Catalysts. <b>2019</b> , 9, 1901824	7
936	Cu <sub>2</sub> O@Cu <sub>2</sub> Se Mixed-Phase Nanoflake Arrays: pH-Universal Hydrogen Evolution Reactions with Ultralow Overpotential. <b>2019</b> , 6, 5014-5021	4
935	CdS nanorods anchored with CoS <sub>2</sub> nanoparticles for enhanced photocatalytic hydrogen production. <b>2019</b> , 588, 117281	39
934	Efficient and methanol resistant noble metal free electrocatalyst for tetraelectronic oxygen reduction reaction. <b>2019</b> , 326, 134984	7
933	Nanobundles of Iron Phosphide Fabricated by Direct Phosphorization of Metal-Organic Frameworks as an Efficient Hydrogen-Evolving Electrocatalyst. <b>2019</b> , 26, 4001	7
932	Ultrafine Co <sub>2</sub> P anchored on porous CoWO <sub>4</sub> nanofiber matrix for hydrogen evolution: Anion-induced compositional/morphological transformation and interfacial electron transfer. <b>2019</b> , 328, 135123	8
931	Ultrathin nickel boride nanosheets anchored on functionalized carbon nanotubes as bifunctional electrocatalysts for overall water splitting. <b>2019</b> , 7, 764-774	75
930	Donor-Acceptor Nanocarbon Ensembles to Boost Metal-Free All-pH Hydrogen Evolution Catalysis by Combined Surface and Dual Electronic Modulation. <b>2019</b> , 131, 16363-16368	6
929	Phosphorus and Yttrium Codoped Co(OH)F Nanoarray as Highly Efficient and Bifunctional Electrocatalysts for Overall Water Splitting. <b>2019</b> , 15, e1904105	23
928	Advanced Co <sub>3</sub> O <sub>4</sub> @CuO nano-composite based electrocatalyst for efficient hydrogen evolution reaction in alkaline media. <b>2019</b> , 44, 26148-26157	34

927	Highly purified dicobalt phosphide nanodendrites on exfoliated graphene: In situ synthesis and as robust bifunctional electrocatalysts for overall water splitting. <b>2019</b> , 14, 100336	13
926	Solid-State Conversion Synthesis of Advanced Electrocatalysts for Water Splitting. <b>2019</b> , 26, 3961	3
925	Highly dispersed Ni <sub>2</sub> MoxP nanoparticles on oxygen-defect-rich NiMoO <sub>4</sub> nanosheets as an active electrocatalyst for alkaline hydrogen evolution reaction. <b>2019</b> , 444, 227311	18
924	Process kinetics for the electrocatalytic hydrogen evolution reaction on carbon-based Ni/NiO nanocomposite in a single-chamber microbial electrolysis cell. <b>2019</b> , 44, 28841-28847	8
923	Ni Nanoparticles on Ultrathin Mo <sub>2</sub> C Interconnected Nanonet: An Efficient 3D Hydrogen-Evolving Electrocatalyst with Superior Durability. <b>2019</b> , 166, F1128-F1133	2
922	Tungsten phosphide nanosheets seamlessly grown on tungsten foils toward efficient hydrogen evolution reaction in basic and acidic media. <b>2019</b> , 44, 27483-27491	5
921	Phosphorization-Induced Void-Containing Fe <sub>3</sub> O <sub>4</sub> Nanoparticles Enabling Low Lithiation/Delithiation Potential for High-Performance Lithium-Ion Batteries. <b>2019</b> , 6, 5060-5069	10
920	Precursor-Transformation Strategy Preparation of CuP Nanodots-Decorated CoP Nanowires Hybrid Catalysts for Boosting pH-Universal Electrocatalytic Hydrogen Evolution. <b>2019</b> , 15, e1904681	19
919	Coupling NiSe <sub>2</sub> -Ni <sub>2</sub> P heterostructure nanowrinkles for highly efficient overall water splitting. <b>2019</b> , 377, 600-608	123
918	Facile electrodeposition of three-dimensional flower-like structure of nickel matrix composite electrodes for hydrogen evolution reaction. <b>2019</b> , 498, 143768	9
917	Fe doped skutterudite-type CoP <sub>3</sub> nanoneedles as efficient electrocatalysts for hydrogen and oxygen evolution in alkaline media. <b>2019</b> , 808, 151767	10
916	On-chip micro/nano devices for energy conversion and storage. <b>2019</b> , 28, 100764	13
915	Mesoporous CoP Nanowire Arrays for Hydrogen Evolution. <b>2019</b> , 2, 5922-5930	14
914	Facile Construction of IrRh Nanosheet Assemblies As Efficient and Robust Bifunctional Electrocatalysts for Overall Water Splitting. <b>2019</b> , 7, 15747-15754	19
913	C-CoP hollow microporous nanocages based on phosphating regulation: a high-performance bifunctional electrocatalyst for overall water splitting. <b>2019</b> , 11, 17084-17092	30
912	Self-supported tripod-like nickel phosphide nanowire arrays for hydrogen evolution. <b>2019</b> , 7, 22412-22419	37
911	Advanced electrospun nanomaterials for highly efficient electrocatalysis. <b>2019</b> , 6, 3012-3040	32
910	One-pot synthesis of manganese oxides and cobalt phosphides nanohybrids with abundant heterointerfaces in an amorphous matrix for efficient hydrogen evolution in alkaline solution. <b>2019</b> , 7, 22530-22538	17

909	Ni foam-supported NiCoP nanosheets as bifunctional electrocatalysts for efficient overall water splitting. <b>2019</b> , 40, 1405-1407	7
908	Template-Directed Bifunctional Dodecahedral CoP/CN@MoS Electrolyst for High Efficient Water Splitting. <b>2019</b> , 11, 36649-36657	45
907	N, P-co-doped carbon coupled with CoP as superior electrocatalysts for hydrogen evolution reaction and overall water splitting. <b>2019</b> , 44, 24342-24352	19
906	High-index faceted binary-metal selenide nanosheet arrays as efficient 3D electrodes for alkaline hydrogen evolution. <b>2019</b> , 11, 17571-17578	19
905	Nanostructured Ni Based Anode and Cathode for Alkaline Water Electrolyzers. <b>2019</b> , 12, 3669	7
904	Controlled synthesis of tubular ferrite MFe <sub>2</sub> O <sub>4</sub> (M = Fe, Co, Ni) microstructures with efficiently electrocatalytic activity for water splitting. <b>2019</b> , 324, 134883	13
903	Bifunctional Electrocatalytic Activity of Bis(iminothiolato)nickel Monolayer for Overall Water Splitting. <b>2019</b> , 123, 25651-25656	11
902	CoP/N-Doped Carbon Hollow Spheres Anchored on Electrospinning Core-Shell N-Doped Carbon Nanofibers as Efficient Electrocatalysts for Water Splitting. <b>2019</b> , 7, 17432-17442	38
901	Iron-induced 3D nanoporous iron-cobalt oxyhydroxide on carbon cloth as a highly efficient electrode for oxygen evolution reaction. <b>2019</b> , 40, 1540-1547	17
900	Facile fabrication of nanostructured NiMo cathode for high-performance proton exchange membrane water electrolyzer. <b>2019</b> , 79, 255-260	15
899	Electrochemically assisted synthesis of three-dimensional FeP nanosheets to achieve high electrocatalytic activity for hydrogen evolution reaction. <b>2019</b> , 44, 24197-24208	10
898	3D porous Ni-Co-P nanosheets on carbon fiber cloth for efficient hydrogen evolution reaction. <b>2019</b> , 300, 217-224	32
897	Graphene oxide supported cobalt phosphide nanorods designed from a molecular complex for efficient hydrogen evolution at low overpotential. <b>2019</b> , 55, 2186-2189	10
896	Cu <sub>3</sub> Ni <sub>3</sub> S <sub>2</sub> grown in situ from three-dimensional porous bimetallic foam for efficient oxygen evolution. <b>2019</b> , 6, 293-302	19
895	Direct urea fuel cells: Challenges and opportunities. <b>2019</b> , 417, 159-175	131
894	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. <b>2019</b> , 415, 91-98	8
893	Loading CoN nanoparticles as efficient cocatalysts over ZnCdS for enhanced H evolution under visible light. <b>2019</b> , 48, 2676-2682	21
892	Unique photocatalytic activities of transition metal phosphide for hydrogen evolution. <b>2019</b> , 541, 287-299	36

891	Highly active oxygen evolution reaction model electrode based on supported gas-phase NiFe clusters. <b>2019</b> , 334, 59-67	16
890	In-situ synthesis of porous Ni <sub>2</sub> P nanosheets for efficient and stable hydrogen evolution reaction. <b>2019</b> , 44, 5739-5747	40
889	CoP nanoparticles encapsulated in three-dimensional N-doped porous carbon for efficient hydrogen evolution reaction in a broad pH range. <b>2019</b> , 476, 749-756	38
888	One-dimensional CoS-MoS nano-flakes decorated MoO sub-micro-wires for synergistically enhanced hydrogen evolution. <b>2019</b> , 11, 3500-3505	23
887	Interface engineering of (Ni, Fe)S <sub>2</sub> @MoS <sub>2</sub> heterostructures for synergetic electrochemical water splitting. <b>2019</b> , 247, 107-114	239
886	One-step controllable synthesis of amorphous (Ni-Fe)S /NiFe(OH) hollow microtube/sphere films as superior bifunctional electrocatalysts for quasi-industrial water splitting at large-current-density. <b>2019</b> , 246, 337-348	103
885	Atomic Heterointerface-Induced Local Charge Distribution and Enhanced Water Adsorption Behavior in a Cobalt Phosphide Electrocatalyst for Self-Powered Highly Efficient Overall Water Splitting. <b>2019</b> , 11, 9023-9032	23
884	CoP-Doped MOF-Based Electrocatalyst for pH-Universal Hydrogen Evolution Reaction. <b>2019</b> , 58, 4679-4684	348
883	Transition-metal single atoms in nitrogen-doped graphenes as efficient active centers for water splitting: a theoretical study. <b>2019</b> , 21, 3024-3032	76
882	Ambient electrochemical N <sub>2</sub> -to-NH <sub>3</sub> fixation enabled by Nb <sub>2</sub> O <sub>5</sub> nanowire array. <b>2019</b> , 6, 423-427	33
881	Artesunate enhances adriamycin cytotoxicity by inhibiting glycolysis in adriamycin-resistant chronic myeloid leukemia K562/ADR cells.. <b>2019</b> , 9, 1004-1014	3
880	In situ nitridated porous nanosheet networked Co <sub>3</sub> O <sub>4</sub> @Co <sub>4</sub> N heteronanostructures supported on hydrophilic carbon cloth for highly efficient electrochemical hydrogen evolution. <b>2019</b> , 7, 775-782	39
879	Asymmetric electrodes with a transition metal disulfide heterostructure and amorphous bimetallic hydroxide for effective alkaline water electrolysis. <b>2019</b> , 7, 2895-2900	22
878	Boosting electrochemical water splitting via ternary NiMoCo hybrid nanowire arrays. <b>2019</b> , 7, 2156-2164	61
877	Catalysis of hydrogen evolution reaction by Ni <sub>12</sub> P <sub>5</sub> single crystalline nanoplates and spherical nanoparticles. <b>2019</b> , 21, 228-235	12
876	Electrochemically active novel amorphous carbon (a-C)/Cu <sub>3</sub> P peapod nanowires by low-temperature chemical vapor phosphorization reaction as high efficient electrocatalysts for hydrogen evolution reaction. <b>2019</b> , 318, 374-383	9
875	Self-Supported Ni/NiSP <sub>x</sub> Microdendrite Structure for Highly Efficient and Stable Overall Water Splitting in Simulated Industrial Environment. <b>2019</b> , 7, 11778-11786	12
874	Porous Organic Polymer-Driven Evolution of High-Performance Cobalt Phosphide Hybrid Nanosheets as Vanillin Hydrodeoxygenation Catalyst. <b>2019</b> , 11, 24140-24153	35

873	Neutral-pH overall water splitting catalyzed efficiently by a hollow and porous structured ternary nickel sulfoselenide electrocatalyst. <b>2019</b> , 7, 16793-16802	43
872	Synthesis of PdP Nanoparticles as Electrocatalysts for Hydrogen Evolution Reaction in an Alkaline Medium. <b>2019</b> , 14, 1950059	2
871	Integrated Nanostructural Electrodes Based on Layered Double Hydroxides. <b>2019</b> , 2, 158-171	27
870	In Situ Growth of Ni <sub>2</sub> P@Cu <sub>3</sub> P Bimetallic Phosphide with Bicontinuous Structure on Self-Supported NiCuC Substrate as an Efficient Hydrogen Evolution Reaction Electrocatalyst. <b>2019</b> , 9, 6919-6928	83
869	General Electron-Assisted Strategy for Ir, Pt, Ru, Pd, Fe, Ni Single-Atom Electrocatalysts with Bifunctional Active Sites for Highly Efficient Water Splitting. <b>2019</b> , 58, 11868-11873	120
868	General Electron-Assisted Strategy for Ir, Pt, Ru, Pd, Fe, Ni Single-Atom Electrocatalysts with Bifunctional Active Sites for Highly Efficient Water Splitting. <b>2019</b> , 131, 11994-11999	19
867	Fe-Doped Nickel Hydroxide/Nickel Oxyhydroxide Function as an Efficient Catalyst for the Oxygen Evolution Reaction. <b>2019</b> , 6, 3488-3498	27
866	Construction of alternating layered quasi-three-dimensional electrode Ag NWs/CoO for water splitting: A discussion of catalytic mechanism. <b>2019</b> , 317, 468-477	15
865	Cobalt Based Nanoparticles Embedded Reduced Graphene Oxide Aerogel for Hydrogen Evolution Electrocatalyst. <b>2019</b> , 36, 1900090	8
864	Hierarchical CoP <sub>3</sub> /NiMoO <sub>4</sub> heterostructures on Ni foam as an efficient bifunctional electrocatalyst for overall water splitting. <b>2019</b> , 45, 17128-17136	22
863	Bimetallic Ni-Co phosphide nanosheets self-supported on nickel foam as high-performance electrocatalyst for hydrogen evolution reaction. <b>2019</b> , 317, 191-198	44
862	Hierarchical cobalt phosphide hollow nanoboxes as high performance bifunctional electrocatalysts for overall water splitting. <b>2019</b> , 12, 443-452	21
861	Robust hydrogen evolution reaction catalysis by ultrasmall amorphous ruthenium phosphide nanoparticles. <b>2019</b> , 55, 7623-7626	18
860	High-efficiency bifunctional electrocatalyst based on 3D freestanding Cu foam in situ armored CoNi alloy nanosheet arrays for overall water splitting. <b>2019</b> , 427, 184-193	28
859	Promoted synergy in core-branch CoP@NiFeDH nanohybrids for efficient electrochemical-/ photovoltage-driven overall water splitting. <b>2019</b> , 63, 103821	50
858	Zn <sub>x</sub> Co <sub>1-x</sub> MoS <sub>3</sub> Microboxes from Metal-Organic Frameworks as Efficient Electrocatalysts for Hydrogen Evolution Reaction. <b>2019</b> , 7, 9800-9807	8
857	An efficient bifunctional electrocatalyst based on a nickel iron layered double hydroxide functionalized Co <sub>3</sub> O <sub>4</sub> core shell structure in alkaline media. <b>2019</b> , 9, 2879-2887	19
856	Enhanced the Hydrogen Evolution Performance by Ruthenium Nanoparticles Doped into Cobalt Phosphide Nanocages. <b>2019</b> , 7, 9737-9742	22

855	MoS <sub>2</sub> supported CoS <sub>2</sub> on carbon cloth as a high-performance electrode for hydrogen evolution reaction. <b>2019</b> , 44, 16566-16574	36
854	Awakening Solar Hydrogen Evolution of MoS in Alkalescent Electrolyte through Doping with Co. <b>2019</b> , 12, 3336-3342	16
853	Activity of MWCNT sheets and effects of carbonaceous impurities toward the alkaline-based hydrogen evolution reaction. <b>2019</b> , 25, 4285-4294	2
852	Carbon-incorporated NiO/CoO concave surface microcubes derived from a MOF precursor for overall water splitting. <b>2019</b> , 55, 6515-6518	66
851	Impact of morphology on the oxygen evolution reaction of 3D hollow Cobalt-Molybdenum Nitride. <b>2019</b> , 255, 117744	64
850	In-situ electrochemical self-tuning of amorphous nickel molybdenum phosphate to crystal Ni-rich compound for enhanced overall water splitting. <b>2019</b> , 430, 218-227	21
849	Chestnut-like copper cobalt phosphide catalyst for all-pH hydrogen evolution reaction and alkaline water electrolysis. <b>2019</b> , 7, 14271-14279	46
848	Vertical CoP Nanoarray Wrapped by N,P-Doped Carbon for Hydrogen Evolution Reaction in Both Acidic and Alkaline Conditions. <b>2019</b> , 9, 1803970	179
847	Effective Electron-Hole Separation Over Controllable Construction of CdS/Co-Ni-P Core/Shell Nanophotocatalyst for Improved Photocatalytic Hydrogen Evolution Under Visible-Light-Driven. <b>2019</b> , 23, 219-230	16
846	Hierarchically porous nickel-cobalt phosphide nanoneedle arrays loaded micro-carbon spheres as an advanced electrocatalyst for overall water splitting application. <b>2019</b> , 253, 235-245	61
845	Co-P decorated nanoporous copper framework for high performance flexible non-enzymatic glucose sensors. <b>2019</b> , 841, 119-128	8
844	Advances in alkaline water electrolyzers: A review. <b>2019</b> , 23, 392-403	144
843	Nickel doped cobalt - hollow nanoparticles as an efficient electrocatalyst for hydrogen evolution from neutral water. <b>2019</b> , 44, 14869-14876	7
842	Cobalt phosphide nanowires for fluorometric detection and in-situ imaging of telomerase activity via hybridization chain reactions. <b>2019</b> , 186, 309	10
841	Phase controllable synthesis of Ni <sup>2+</sup> post-modified CoP nanowire for enhanced oxygen evolution. <b>2019</b> , 62, 136-143	49
840	Atomically Dispersed Cobalt- and Nitrogen-Codoped Graphene toward Bifunctional Catalysis of Oxygen Reduction and Hydrogen Evolution Reactions. <b>2019</b> , 7, 9249-9256	39
839	Decorating WSe <sub>2</sub> nanosheets with ultrafine Ru nanoparticles for boosting electrocatalytic hydrogen evolution in alkaline electrolytes. <b>2019</b> , 6, 1382-1387	15
838	Synergistically creating sulfur vacancies in semimetal-supported amorphous MoS <sub>2</sub> for efficient hydrogen evolution. <b>2019</b> , 254, 1-6	42

837	Single platinum atoms embedded in nanoporous cobalt selenide as electrocatalyst for accelerating hydrogen evolution reaction. <b>2019</b> , 10, 1743	260
836	Nitrogen-doped CoP as robust electrocatalyst for high-efficiency pH-universal hydrogen evolution reaction. <b>2019</b> , 253, 21-27	92
835	Hydrogen evolution reaction activity related to the facet-dependent electrocatalytic performance of NiCoP from first principles.. <b>2019</b> , 9, 11755-11761	13
834	3D self-standing grass-like cobalt phosphide vesicles-decorated nanocones grown on Ni-foam as an efficient electrocatalyst for hydrogen evolution reaction. <b>2019</b> , 44, 13490-13501	7
833	Nitrogen-Doped Cobalt Phosphide for Enhanced Hydrogen Evolution Activity. <b>2019</b> , 11, 17359-17367	22
832	CoP <sub>3</sub> /CoMoP Heterogeneous Nanosheet Arrays as Robust Electrocatalyst for pH-Universal Hydrogen Evolution Reaction. <b>2019</b> , 7, 9309-9317	63
831	Co-Modified MoS <sub>2</sub> Hybrids as Superior Bifunctional Electrocatalysts for Water Splitting Reactions: Integrating Multiple Active Components in One. <b>2019</b> , 6, 1900372	11
830	Co O @Cu-Based Conductive Metal-Organic Framework Core-Shell Nanowire Electrocatalysts Enable Efficient Low-Overall-Potential Water Splitting. <b>2019</b> , 25, 6575-6583	50
829	Nickel Nanocrystal Assemblies as Efficient Electrocatalysts for Hydrogen Evolution from pH-Neutral Aqueous Solution. <b>2019</b> , 6, 2100-2106	11
828	A Combined experimental and theoretical study of the accelerated hydrogen evolution kinetics over wide pH range on porous transition metal doped tungsten phosphide electrocatalysts. <b>2019</b> , 251, 162-167	39
827	Nanostructured metallic transition metal carbides, nitrides, phosphides, and borides for energy storage and conversion. <b>2019</b> , 25, 99-121	173
826	Tailoring three-dimensional porous cobalt phosphides templated from bimetallic metal-organic frameworks as precious metal-free catalysts towards the dehydrogenation of ammonia-borane. <b>2019</b> , 7, 8277-8283	18
825	Rational Design of Manganese Cobalt Phosphide with Yolk-Shell Structure for Overall Water Splitting. <b>2019</b> , 7, 1900066	6
824	Cobalt based metal-organic frameworks and their derivatives for electrochemical energy conversion and storage. <b>2019</b> , 370, 37-59	63
823	High hydrogen evolution performance of Al doped CoP <sub>3</sub> nanowires arrays with high stability in acid solution superior to Pt/C. <b>2019</b> , 44, 8062-8069	18
822	Active Site Identification and Evaluation Criteria of In Situ Grown CoTe and NiTe Nanoarrays for Hydrogen Evolution and Oxygen Evolution Reactions. <b>2019</b> , 3, 1900113	41
821	Iron-substituted Co-Ni phosphides immobilized on Ni foam as efficient self-supported 3D hierarchical electrocatalysts for oxygen evolution reaction. <b>2019</b> , 44, 8156-8165	40
820	Rational design of three-phase interfaces for electrocatalysis. <b>2019</b> , 12, 2055-2066	86



819	Intercalated Graphite between Ni Foam and Ni <sub>3</sub> S <sub>2</sub> Nanocrystals for the Activity Promotion in Overall Water Splitting. <b>2019</b> , 7, 1900063	6
818	Graphene-Quantum-Dots-induced facile growth of porous molybdenum doped Ni <sub>3</sub> S <sub>2</sub> nanoflakes as efficient bifunctional electrocatalyst for overall water splitting. <b>2019</b> , 304, 487-494	26
817	A Highly Active and Robust CoP/CoS <sub>2</sub> -Based Electrocatalyst Toward Overall Water Splitting. <b>2019</b> , 10, 253-261	11
816	Photocatalytic hydrogen evolution on P-type tetragonal zircon BiVO <sub>4</sub> . <b>2019</b> , 251, 94-101	52
815	Co <sub>2</sub> Ni alloy/N-doped CNTs composite as efficient hydrogen evolution reaction catalyst in alkaline medium. <b>2019</b> , 791, 779-785	25
814	Hybrid implanted hybrid hollow nanocube electrocatalyst facilitates efficient hydrogen evolution activity. <b>2019</b> , 7, 11150-11159	36
813	Insight into the Superior Electrocatalytic Performance of a Ternary Nickel Iron Poly-Phosphide Nanosheet Array: An X-ray Absorption Study. <b>2019</b> , 11, 14059-14065	13
812	Hydrogenase Enzyme like Nanocatalysts FeS <sub>2</sub> and FeSe <sub>2</sub> for Molecular Hydrogen Evolution Reaction. <b>2019</b> , 248, 39-42	19
811	Self-adaptive amorphous Co <sub>2</sub> P@Co <sub>2</sub> P/Co-polyoxometalate/nickel foam as an effective electrode for electrocatalytic water splitting in alkaline electrolyte. <b>2019</b> , 44, 9203-9209	20
810	Engineering Ternary Pyrite-Type CoPS Nanosheets with an Ultrathin Porous Structure for Efficient Electrocatalytic Water Splitting. <b>2019</b> , 6, 2852-2859	9
809	Zn <sub>0.5</sub> O <sub>0.5</sub> Colloidal Nanocrystal Clusters as Efficient and Durable Bifunctional Electrocatalysts For Full Water Splitting. <b>2019</b> , 5, 761-765	11
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807	Tailoring the Electronic Structure of Co <sub>2</sub> P by N Doping for Boosting Hydrogen Evolution Reaction at All pH Values. <b>2019</b> , 9, 3744-3752	231
806	Transition metal dichalcogenide-based composites for hydrogen production. <b>2019</b> , 1, 012001	8
805	A Roadmap to Low-Cost Hydrogen with Hydroxide Exchange Membrane Electrolyzers. <b>2019</b> , 31, e1805876	85
804	Bimetallic Metal-Organic-Framework/Reduced Graphene Oxide Composites as Bifunctional Electrocatalysts for Rechargeable Zn-Air Batteries. <b>2019</b> , 11, 15662-15669	71
803	IrW nanobranches as an advanced electrocatalyst for pH-universal overall water splitting. <b>2019</b> , 11, 8898-8905	44
802	Artificial Photosynthesis with Polymeric Carbon Nitride: When Meeting Metal Nanoparticles, Single Atoms, and Molecular Complexes. <b>2019</b> , 15, e1900772	59

801	Sisyphus effects in hydrogen electrochemistry on metal silicides enabled by silicene subunit edge. <b>2019</b> , 64, 617-624	24
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799	Facile electrodeposition of ternary Ni-Fe-Co alloy nanostructure as a binder free, cost-effective and durable electrocatalyst for high-performance overall water splitting. <b>2019</b> , 547, 407-420	59
798	Engineering inner-porous cobalt phosphide nanowire based on controllable phosphating for efficient hydrogen evolution in both acidic and alkaline conditions. <b>2019</b> , 481, 1524-1531	7
797	CoP nanosheets in-situ grown on N-doped graphene as an efficient and stable bifunctional electrocatalyst for hydrogen and oxygen evolution reactions. <b>2019</b> , 307, 543-552	79
796	Tailoring electrochemical efficiency of hydrogen evolution by fine tuning of TiOx/RuOx composite cathode architecture. <b>2019</b> , 44, 10593-10603	4
795	Ultra-stable Electrochemical Sensor for Detection of Caffeic Acid Based on Platinum and Nickel Jagged-Like Nanowires. <b>2019</b> , 14, 11	6
794	An electrodeposition approach to metal/metal oxide heterostructures for active hydrogen evolution catalysts in near-neutral electrolytes. <b>2019</b> , 12, 1431-1435	23
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790	Vertically standing MoP nanosheet arrays on Mo substrate: An integrated binder-free electrode for highly efficient and stable hydrogen evolution. <b>2019</b> , 792, 732-741	13
789	Principle of proximity: Plasmonic hot electrons motivate donator-adjacent semiconductor defects with enhanced electrocatalytic hydrogen evolution. <b>2019</b> , 60, 689-700	22
788	Enhancing electrocatalysis for hydrogen production over CoP catalyst by strain: a density functional theory study. <b>2019</b> , 21, 9137-9140	8
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786	Rational Design of Nanoarray Architectures for Electrocatalytic Water Splitting. <b>2019</b> , 29, 1808367	186
785	CoP-Doped MOF-Based Electrocatalyst for pH-Universal Hydrogen Evolution Reaction. <b>2019</b> , 131, 4727-4732	56
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779	Recent Advances in the Development of Water Oxidation Electrocatalysts at Mild pH. <b>2019</b> , 15, e1805103	153
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776	Nanomaterials With Different Dimensions for Electrocatalysis. <b>2019</b> , 435-464	5
775	Electrodeposition of Ni Mo Cu coatings from roasted nickel matte in deep eutectic solvent for hydrogen evolution reaction. <b>2019</b> , 44, 5704-5716	21
774	Design of basal plane active MoS <sub>2</sub> through one-step nitrogen and phosphorus co-doping as an efficient pH-universal electrocatalyst for hydrogen evolution. <b>2019</b> , 58, 862-869	53
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768	Nickel Phosphide Nanosheets Supported on Reduced Graphene Oxide for Enhanced Aluminum-Ion Batteries. <b>2019</b> , 7, 6004-6012	40
767	Recent advances in precious metal-free bifunctional catalysts for electrochemical conversion systems. <b>2019</b> , 7, 8006-8029	139
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761	Predictive fabrication of Ni phosphide embedded in carbon nanofibers as active and stable electrocatalysts. <b>2019</b> , 7, 7451-7458	17
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742	Hydrogen evolution reaction catalyzed by nickel/nickel phosphide nanospheres synthesized through electrochemical methods. <b>2019</b> , 298, 229-236	12
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733	Nickel cobalt phosphide with three-dimensional nanostructure as a highly efficient electrocatalyst for hydrogen evolution reaction in both acidic and alkaline electrolytes. <b>2019</b> , 12, 375-380	103
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731	Recent advances in one-dimensional nanostructures for energy electrocatalysis. <b>2019</b> , 40, 4-22	31
730	Electronic structure and d-band center control engineering over M-doped CoP (M = Ni, Mn, Fe) hollow polyhedron frames for boosting hydrogen production. <b>2019</b> , 56, 411-419	252

729	Direct Electrodeposition of Phosphorus-Doped Nickel Superstructures from Choline Chloride/Ethylene Glycol Deep Eutectic Solvent for Enhanced Hydrogen Evolution Catalysis. <b>2019</b> , 7, 1529-1537	19
728	Metal-Organic Precursor-Derived Mesoporous Carbon Spheres with Homogeneously Distributed Molybdenum Carbide/Nitride Nanoparticles for Efficient Hydrogen Evolution in Alkaline Media. <b>2019</b> , 29, 1807419	68
727	Direct synthesis of parallel doped N-MoP/N-CNT as highly active hydrogen evolution reaction catalyst. <b>2019</b> , 62, 690-698	13
726	A novel Lindqvist intercalation compound: Synthesis, crystal structure and hydrogen evolution reaction performance. <b>2019</b> , 99, 64-69	5
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719	Reaction Packaging CoSe Nanoparticles in N-Doped Carbon Polyhedra with Bifunctionality for Overall Water Splitting. <b>2019</b> , 11, 3372-3381	49
718	Three-Dimensional Nanoporous CoSP Pentlandite as a Bifunctional Electrocatalyst for Overall Neutral Water Splitting. <b>2019</b> , 11, 3880-3888	47
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710	Modes of Fe Incorporation in Co-Fe (Oxy)hydroxide Oxygen Evolution Electrocatalysts. <b>2019</b> , 12, 2015-2021	29
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682	Electron density modulation of Fe <sub>1-x</sub> Co <sub>x</sub> P nanosheet arrays by iron incorporation for highly efficient water splitting. <b>2020</b> , 67, 104174	43
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674	Highly Selective Electrochemical Reduction of CO to Alcohols on an FeP Nanoarray. <b>2020</b> , 59, 758-762	73
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669	Topochemical Synthesis of Two-Dimensional Transition-Metal Phosphides Using Phosphorene Templates. <b>2020</b> , 132, 473-478	5
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642	Laser-Ablation-Produced Cobalt Nickel Phosphate with High-Valence Nickel Ions as an Active Catalyst for the Oxygen Evolution Reaction. <b>2020</b> , 26, 2793-2797	12
641	Hierarchical hetero-architectures of in-situ g-C <sub>3</sub> N <sub>4</sub> -coupled Fe-doped ZnO micro-flowers with enhanced visible-light photocatalytic activities. <b>2020</b> , 506, 145017	22
640	Hydrogen Evolution by Ni <sub>2</sub> P Catalysts Derived from Phosphine MOFs. <b>2020</b> , 3, 176-183	18

639	Porous coordination polymer-derived ultrasmall CoP encapsulated in nitrogen-doped carbon for efficient hydrogen evolution in both acidic and basic media. <b>2020</b> , 45, 1729-1737	12
638	Advanced catalysts for hydrogen evolution reaction based on MoS <sub>2</sub> /NiCo <sub>2</sub> S <sub>4</sub> heterostructures in Alkaline Media. <b>2020</b> , 45, 1759-1768	12
637	Atomically Dispersed Mo Supported on Metallic Co <sub>9</sub> S <sub>8</sub> Nanoflakes as an Advanced Noble-Metal-Free Bifunctional Water Splitting Catalyst Working in Universal pH Conditions. <b>2020</b> , 10, 1903137	97
636	Construction of Fe <sub>2</sub> O <sub>3</sub> @CuO Heterojunction Nanotubes for Enhanced Oxygen Evolution Reaction. <b>2020</b> , 3, 666-674	27
635	Photoelectrochemical Cells for Artificial Photosynthesis: Alternatives to Water Oxidation. <b>2020</b> , 6, 185-203	22
634	Efficient and stable NiCoFeP nanosheet arrays on Ni foam for alkaline and neutral hydrogen evolution. <b>2020</b> , 45, 2504-2512	13
633	A Morphologically Engineered Robust Bifunctional CuCo <sub>2</sub> O <sub>4</sub> Nanosheet Catalyst for Highly Efficient Overall Water Splitting. <b>2020</b> , 7, 1901515	22
632	Synergistic effect of ultrafine nano-Ru decorated cobalt carbonate hydroxides nanowires for accelerated alkaline hydrogen evolution reaction. <b>2020</b> , 331, 135367	27
631	CoP Nanoframes as Bifunctional Electrocatalysts for Efficient Overall Water Splitting. <b>2020</b> , 10, 412-419	188
630	Carbon-coated Co-Mo-P nanosheets supported on carbon cloth as efficient electrocatalyst for Hydrogen Evolution Reaction. <b>2020</b> , 45, 544-552	12
629	Nanocrystalline NiWO <sub>4</sub> -WO <sub>3</sub> -WO <sub>2.9</sub> Composite Strings: Fabrication, Characterization and their Electrocatalytic Performance for Hydrogen Evolution Reaction. <b>2020</b> , 51, 1264-1274	6
628	N-induced lattice contraction generally boosts the hydrogen evolution catalysis of P-rich metal phosphides. <b>2020</b> , 6, eaaw8113	116
627	Co-FeS/CoS Heterostructured Nanomaterials for pH Sensing. <b>2020</b> , 20,	
626	Phosphorus-doping and addition of V <sub>2</sub> O <sub>5</sub> into Pt/graphene resulting in highly-enhanced electro-photo synergistic catalysis for oxygen reduction and hydrogen evolution reactions. <b>2020</b> , 45, 30647-30658	6
625	Facile synthesis of difunctional NiV LDH@ZIF-67 p-n junction: Serve as prominent photocatalyst for hydrogen evolution and supercapacitor electrode as well. <b>2020</b> , 162, 535-549	30
624	Recent Advances in Transition Metal Carbide Electrocatalysts for Oxygen Evolution Reaction. <b>2020</b> , 10, 1164	23
623	Ion-exchange controlled surface engineering of cobalt phosphide nanowires for enhanced hydrogen evolution. <b>2020</b> , 78, 105347	10
622	Controllable Heteroatom Doping Effects of CrCoP Nanoparticles: a Robust Electrocatalyst for Overall Water Splitting in Alkaline Solutions. <b>2020</b> , 12, 47397-47407	18

621	Iron nanoparticles loaded on nickel sulfide nanosheets: an efficient amorphous catalyst for water oxidation. <b>2020</b> , 4, 5498-5502	1
620	Iron-regulated NiPS for enhanced oxygen evolution efficiency. <b>2020</b> , 8, 23580-23589	8
619	A critical review: 1D/2D nanostructured self-supported electrodes for electrochemical water splitting. <b>2020</b> , 474, 228621	38
618	Accelerating hydrogen evolution in Ru-doped FeCoP nanoarrays with lattice distortion toward highly efficient overall water splitting. <b>2020</b> , 10, 8314-8324	7
617	Trimetal-based N-doped carbon nanotubes arrays on Ni foams as self-supported electrodes for hydrogen/oxygen evolution reactions and water splitting. <b>2020</b> , 480, 228866	22
616	Fe-Doped Co-Mo-S microtube: a highly efficient bifunctional electrocatalyst for overall water splitting in alkaline solution. <b>2020</b> , 49, 15009-15022	7
615	Dynamic evolution of isolated Ru@FeP atomic interface sites for promoting the electrochemical hydrogen evolution reaction. <b>2020</b> , 8, 22607-22612	16
614	Conductive Ni supported NiCoO <sub>2</sub> @NiCoP nanosheets as highly active electrocatalyst toward hydrogen evolution reaction in alkaline media. <b>2020</b> , 848, 156603	3
613	Research progress and surface/interfacial regulation methods for electrophotocatalytic hydrogen production from water splitting. <b>2020</b> , 18, 100524	12
612	Recent advances in nanostructured transition metal phosphides: synthesis and energy-related applications. <b>2020</b> , 13, 4564-4582	116
611	Coralline-like CoP <sub>3</sub> @Cu as an efficient electrocatalyst for the hydrogen evolution reaction in acidic and alkaline solutions. <b>2020</b> , 44, 18601-18607	3
610	Rational design of Co-S-P nanosheet arrays as bifunctional electrocatalysts for both ethanol oxidation reaction and hydrogen evolution reaction. <b>2020</b> , 7, 4498-4506	7
609	Design of 3D Hollow Porous Heterogeneous Nickel-Cobalt Phosphides for Synergistically Enhancing Catalytic Performance for Electrooxidation of Methanol. <b>2020</b> , 12, 34971-34979	20
608	Hydrogen evolution on non-metal oxide catalysts. <b>2020</b> , 2, 042002	9
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605	A review of the electrocatalysts on hydrogen evolution reaction with an emphasis on Fe, Co and Ni-based phosphides. <b>2020</b> , 55, 14081-14104	36
604	Formation of Amorphous Co-Al-P Layer on CoAl Layered Double Hydroxide Nanoarray as Neutral Electrocatalysts for Hydrogen Evolution Reaction. <b>2020</b> , 8, 552795	0

603	In Situ-Grown Cobalt-Iron Phosphide-Based Integrated Electrode for Long-Term Water Splitting under a Large Current Density at the Industrial Electrolysis Temperature. <b>2020</b> , 8, 17828-17838	26
602	CoP and NiP implanted in a hollow porous N-doped carbon polyhedron for pH universal hydrogen evolution reaction and alkaline overall water splitting. <b>2020</b> , 12, 23851-23858	16
601	Surface oxidation of transition metal sulfide and phosphide nanomaterials. <b>2020</b> , 14, 2264	5
600	Graphene Oxide Decorated with Rh Nanospheres for Electrocatalytic Water Splitting. <b>2020</b> , 3, 12288-12296	8
599	RuP4 decorated CoP acacia-like array: An efficiently electrocatalyst for hydrogen evolution reaction at acidic and alkaline condition. <b>2020</b> , 534, 147626	10
598	Hybridization of Bimetallic Molybdenum-Tungsten Carbide with Nitrogen-Doped Carbon: A Rational Design of Super Active Porous Composite Nanowires with Tailored Electronic Structure for Boosting Hydrogen Evolution Catalysis. <b>2020</b> , 30, 2003198	21
597	NiCoP nanoparticles encapsulated in cross-linked graphene aerogel to efficient hydrogen evolution reaction. <b>2020</b> , 31, 13521-13530	1
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595	Electrocatalytic hydrogen evolution under neutral pH conditions: current understandings, recent advances, and future prospects. <b>2020</b> , 13, 3185-3206	85
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591	Self-supported N-doped CNT arrays for flexible Zn-air batteries. <b>2020</b> , 8, 18162-18172	37
590	Synergistic Coupling of Ni Nanoparticles with Ni C Nanosheets for Highly Efficient Overall Water Splitting. <b>2020</b> , 16, e2001642	55
589	Electrocatalytic N2 reduction to NH3 with high Faradaic efficiency enabled by vanadium phosphide nanoparticle on V foil. <b>2020</b> , 13, 2967-2972	32
588	Core-shell [email-protected] as Highly Efficient and Durable Bifunctional Electrodes for Electrochemical Water Splitting. <b>2020</b> , 34, 10276-10281	10
587	Enabling efficient hydrogen-evolution reaction over perovskite oxide electrocatalysts through phosphorus promotion. <b>2020</b> , 45, 24859-24869	10
586	Insights into the synergistic effect of multi-walled carbon nanotube decorated Mo-doped CoP2 hybrid electrocatalysts toward efficient and durable overall water splitting. <b>2020</b> , 8, 17621-17633	26

585	Superb Hydrogen Evolution by a Pt Nanoparticle-Decorated NiS Microrod Array. <b>2020</b> , 12, 39163-39169	23
584	Enabling electrochemical conversion of N <sub>2</sub> to NH <sub>3</sub> under ambient conditions by a CoP <sub>3</sub> nanoneedle array. <b>2020</b> , 8, 17956-17959	35
583	Targeted Assembly of Ultrathin NiO/MoS Electrodes for Electrocatalytic Hydrogen Evolution in Alkaline Electrolyte. <b>2020</b> , 10,	1
582	Tensile-strained ruthenium phosphide by anion substitution for highly active and durable hydrogen evolution. <b>2020</b> , 77, 105212	14
581	Boosting hydrogen and oxygen evolution reactions on electrodeposited nickel electrodes via simultaneous mesoporosity, magnetohydrodynamics and high gradient magnetic force. <b>2020</b> , 8, 24782-24799	3
580	A dendritic Sb <sub>2</sub> Se <sub>3</sub> /In <sub>2</sub> S <sub>3</sub> heterojunction nanorod array photocathode decorated with a MoS <sub>x</sub> catalyst for efficient solar hydrogen evolution. <b>2020</b> , 8, 23385-23394	11
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576	The in situ preparation of iron phosphide using ionic liquids as iron and phosphorus sources for efficient hydrogen evolution reactions. <b>2020</b> , 10, 33026-33032	1
575	Uncovering the role of Ag in layer-alternating Ni <sub>3</sub> S <sub>2</sub> /Ag/Ni <sub>3</sub> S <sub>2</sub> as an electrocatalyst with enhanced OER performance. <b>2020</b> , 7, 3627-3635	15
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569	Regulating the electronic structure of CoMoO microrod by phosphorus doping: an efficient electrocatalyst for the hydrogen evolution reaction. <b>2020</b> , 49, 13152-13159	9
568	Transition-Metal Phosphides: Activity Origin, Energy-Related Electrocatalysis Applications, and Synthetic Strategies. <b>2020</b> , 30, 2004009	122

567	Hybrid structured CoNiS/NiS nanowires with multifunctional performance for hybrid capacitor electrodes and overall water splitting.. <b>2020</b> , 10, 33428-33435	4
566	One-step phosphating synthesis of CoP nanosheet arrays combined with NiP as a high-performance electrode for supercapacitors. <b>2020</b> , 12, 20710-20718	25
565	Insights into the Mo-Doping Effect on the Electrocatalytic Performance of Hierarchical CoMoS Nanosheet Arrays for Hydrogen Generation and Urea Oxidation. <b>2020</b> , 12, 40194-40203	36
564	A combined experimental and theoretical approach revealing a direct mechanism for bifunctional water splitting on doped copper phosphide. <b>2020</b> , 12, 17769-17779	5
563	Anion-Modulated Platinum for High-Performance Multifunctional Electrocatalysis toward HER, HOR, and ORR. <b>2020</b> , 23, 101793	20
562	A supramolecular-confinement pyrolysis route to ultrasmall rhodium phosphide nanoparticles as a robust electrocatalyst for hydrogen evolution in the entire pH range and seawater electrolysis. <b>2020</b> , 8, 25768-25779	10
561	Hydrothermal Synthesis of Polyhedral Nickel Sulfide by Dual Sulfur Source for Highly-Efficient Hydrogen Evolution Catalysis. <b>2020</b> , 10,	1
560	First-principles study of catalytic activity of W-doped cobalt phosphide toward the hydrogen evolution reaction. <b>2020</b> , 41, 1698-1705	7
559	Oxidation-etching induced morphology regulation of Cu catalysts for high-performance electrochemical N <sub>2</sub> reduction. <b>2020</b> , 2, e12026	7
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557	Energy-Efficient Hydrogen Evolution Reactions via Hydrazine Oxidation over Facile Synthesis of Cobalt Tetraoxide Electrodes. <b>2020</b> , 8, 7973-7980	19
556	Advancement of Platinum (Pt)-Free (Non-Pt Precious Metals) and/or Metal-Free (Non-Precious-Metals) Electrocatalysts in Energy Applications: A Review and Perspectives. <b>2020</b> , 34, 6634-6695	53
555	Synthesis of Hydroxyl-Group-Rich Single-Crystalline SrTaO <sub>2</sub> N from Single-Crystalline NaTaO <sub>3</sub> by Topotactic Transformation. <b>2020</b> , 20, 4307-4312	4
554	Exceptional Performance of MOF-Derived N-Doped CoP and Fe-Doped CoOOH Ultrathin Nanosheets Electrocatalysts for Overall Water Splitting. <b>2020</b> , 8, 8949-8957	21
553	Canonic-Like HER Activity of Cr Mo B Solid Solution: Overpowering Pt/C at High Current Density. <b>2020</b> , 32, e2000855	32
552	Hierarchical CoP@Ni(OH) <sub>2</sub> .75H <sub>2</sub> O core-shell nanosheet arrays on carbon cloth for high-performance supercapacitors. <b>2020</b> , 578, 1-9	12
551	Oxygen evolution reaction efficiently catalyzed by a quasi-single-crystalline cobalt fluoride. <b>2020</b> , 397, 125500	39
550	Core/shell -structured NiMoO <sub>4</sub> @ MoSe <sub>2</sub> /Ni <sub>3</sub> S <sub>2</sub> Nanorod on Ni Foam as a Bifunctional Electrocatalyst for Efficient Overall Water Splitting. <b>2020</b> , 599, 124888	15

549	Surface modification engineering on three-dimensional self-supported NiCoP to construct NiCoOx/NiCoP for highly efficient alkaline hydrogen evolution reaction. <b>2020</b> , 835, 155364	6
548	Bifunctional and binder-free S-doped Ni-P nanospheres electrocatalyst fabricated by pulse electrochemical deposition method for overall water splitting. <b>2020</b> , 577, 265-278	15
547	Coupling interface structure in NiS/CuFeS hybrid with enhanced electrocatalytic activity for alkaline hydrogen evolution reaction. <b>2020</b> , 578, 668-676	11
546	Plasma-assisted nitrogen doping in Ni-Co-P hollow nanocubes for efficient hydrogen evolution electrocatalysis. <b>2020</b> , 12, 13708-13718	13
545	Phosphate ion functionalized CoP nanowire arrays for efficient alkaline hydrogen evolution. <b>2020</b> , 56, 7159-7162	26
544	Oxygen-Defect-Rich Cobalt Ferrite Nanoparticles for Practical Water Electrolysis with High Activity and Durability. <b>2020</b> , 13, 3875	22
543	CoP Microscale Prism-like Superstructure Arrays on Ni Foam as an Efficient Bifunctional Electrocatalyst for Overall Water Splitting. <b>2020</b> , 59, 8522-8531	25
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541	Ultrafine CoP/CoP Nanorods Encapsulated in Janus/Twins-type Honeycomb 3D Nitrogen-Doped Carbon Nanosheets for Efficient Hydrogen Evolution. <b>2020</b> , 23, 101264	19
540	Peroxymonosulfate activation of magnetic Co nanoparticles relative to an N-doped porous carbon under confinement: Boosting stability and performance. <b>2020</b> , 250, 117237	51
539	Recent Advances in Nanocasting Cobalt-Based Mesoporous Materials for Energy Storage and Conversion. <b>2020</b> , 11, 465-484	6
538	Real-Time Visualization of the Single-Nanoparticle Electrocatalytic Hydrogen Generation Process and Activity under Dark Field Microscopy. <b>2020</b> , 92, 9016-9023	15
537	A cobalt-phosphorus nanoparticle decorated N-doped carbon nanosheet array for efficient and durable hydrogen evolution at alkaline pH. <b>2020</b> , 4, 3884-3887	94
536	Remarkably improved oxygen evolution reaction activity of cobalt oxides by an Fe ion solution immersion process. <b>2020</b> , 7, 3327-3339	13
535	2D MoSe <sub>2</sub> /CoP intercalated nanosheets for efficient electrocatalytic hydrogen production. <b>2020</b> , 45, 19246-19256	13
534	Recent Studies on Multifunctional Electrocatalysts for Fuel Cell by Various Nanomaterials. <b>2020</b> , 10, 621	3
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532	FeNiMo trimetallic nanoparticles encapsulated in carbon cages as efficient hydrogen evolution reaction electrocatalysts. <b>2020</b> , 1, 54-60	6



531	Nano-garden cultivation for electrocatalysis: controlled synthesis of Nature-inspired hierarchical nanostructures. <b>2020</b> , 8, 7626-7632	6
530	Vertically Aligned NiCo <sub>2</sub> S <sub>4</sub> Nanosheets Deposited on N-Doped Graphene for Bifunctional and Durable Electrode of Overall Water Splitting. <b>2020</b> , 7, 2000138	8
529	Heterostructured CoP/MoO <sub>2</sub> on Mo foil as high-efficiency electrocatalysts for the hydrogen evolution reaction in both acidic and alkaline media. <b>2020</b> , 8, 6732-6739	38
528	Self-supported materials for battery technology-A review. <b>2020</b> , 831, 154844	5
527	Self-Standing 3D Core-shell Nanohybrids Based on Amorphous CoFeBi Nanosheets Grafted on NiCo <sub>2</sub> O <sub>4</sub> Nanowires for Efficient and Durable Water Oxidation. <b>2020</b> , 3, 4338-4347	5
526	NiF Nanorod Arrays for Supercapattery Applications. <b>2020</b> , 5, 9768-9774	8
525	Recent progress in electrode fabrication for electrocatalytic hydrogen evolution reaction: A mini review. <b>2020</b> , 393, 124726	62
524	Facile synthesis of FeNi bimetallic N-doped carbon framework for efficient electrochemical hydrogen evolution reaction. <b>2020</b> , 16, 100387	16
523	Mesoporous cobalt-cobalt phosphide electrocatalyst for water splitting. <b>2020</b> , 16, 100398	2
522	CoS <sub>2</sub> @N-doped carbon core-shell nanorod array grown on Ni foam for enhanced electrocatalytic water oxidation. <b>2020</b> , 8, 6795-6803	45
521	Transition Metal Phosphide-Based Materials for Efficient Electrochemical Hydrogen Evolution: A Critical Review. <b>2020</b> , 13, 3357-3375	88
520	Phosphating 2D CoAl LDH anchored on 3D self-assembled NiTiO <sub>3</sub> hollow rods for efficient hydrogen evolution. <b>2020</b> , 10, 2931-2947	29
519	Porous phosphorus-rich CoP <sub>3</sub> /CoSnO <sub>2</sub> hybrid nanocubes for high-performance Zn-air batteries. <b>2020</b> , 63, 475-482	23
518	Promoting Electrocatalytic Oxygen Reduction in a Model Composite Using Selective Metal Ions. <b>2020</b> , 3, 3645-3652	2
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516	Electronic Modulation of Nickel Disulfide toward Efficient Water Electrolysis. <b>2020</b> , 16, e1905885	31
515	Enhanced Hydrogen Evolution over Sea-Urchin-Structure NiCoP Decorated ZnCdS Photocatalyst. <b>2020</b> , 150, 2937-2950	18
514	In-situ growth of Ni nanoparticle-encapsulated N-doped carbon nanotubes on carbon nanorods for efficient hydrogen evolution electrocatalysis. <b>2020</b> , 13, 975-982	25

513	Carbon cloth supported hierarchical core-shell NiCo <sub>2</sub> S <sub>4</sub> @CoNi-LDH nanoarrays as catalysts for efficient oxygen evolution reaction in alkaline solution. <b>2020</b> , 830, 154658	26
512	Efficient hydrogen recovery with CoP-NF as cathode in microbial electrolysis cells. <b>2020</b> , 264, 114700	19
511	Fabrication, photoelectrochemical and electrocatalytic activity of 1D linear Co(II) and Fe(III) TPP-based coordination compounds. <b>2020</b> , 45, 9328-9341	
510	Heterostructure Co <sub>3</sub> O <sub>4</sub> @NiWO <sub>4</sub> nanocone arrays with enriched active area for efficient hydrogen evolution reaction. <b>2020</b> , 844, 156095	10
509	A general approach to the synthesis of transition metal phosphide nanoarrays on MXene nanosheets for pH-universal hydrogen evolution and alkaline overall water splitting. <b>2020</b> , 8, 14234-14242	39
508	(P, W)-codoped MoO <sub>2</sub> nanoflowers on nickel foam as an efficient bifunctional electrocatalyst for overall water splitting. <b>2020</b> , 529, 146987	11
507	Solvothermal synthesis of iron phosphides and their application for efficient electrocatalytic hydrogen evolution. <b>2020</b> , 45, 21473-21482	10
506	Cobalt phosphide nanoarrays with crystalline-amorphous hybrid phase for hydrogen production in universal-pH. <b>2020</b> , 13, 2469-2477	28
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502	Recent progress on metal-organic frameworks and their derived materials for electrocatalytic water splitting. <b>2020</b> , 8, 14326-14355	42
501	In Situ Photosynthesis of an MAPbI <sub>3</sub> /CoP Hybrid Heterojunction for Efficient Photocatalytic Hydrogen Evolution. <b>2020</b> , 30, 2001478	41
500	Nickel-cobalt bimetallic sulfide NiCoS nanostructures for a robust hydrogen evolution reaction in acidic media.. <b>2020</b> , 10, 22196-22203	1
499	Facile construction of 3D hyperbranched PtRh nanoassemblies: A bifunctional electrocatalyst for hydrogen evolution and polyhydric alcohol oxidation reactions. <b>2020</b> , 45, 8433-8443	17
498	Strong electronic couple engineering of transition metal phosphides-oxides heterostructures as multifunctional electrocatalyst for hydrogen production. <b>2020</b> , 269, 118803	35
497	Hollow nanosheet array of phosphorus-anion-decorated cobalt disulfide as an efficient electrocatalyst for overall water splitting. <b>2020</b> , 390, 124556	40
496	Electrodeposited cobalt phosphides with hierarchical nanostructure on biomass carbon for bifunctional water splitting in alkaline solution. <b>2020</b> , 829, 154535	22

495	Non-noble metal single-atom catalysts prepared by wet chemical method and their applications in electrochemical water splitting. <b>2020</b> , 47, 333-345	52
494	Intermolecular electron modulation by P/O bridging in an IrO <sub>2</sub> -CoPi catalyst to enhance the hydrogen evolution reaction. <b>2020</b> , 8, 8273-8280	13
493	Dynamic evolution of a hydroxylated layer in ruthenium phosphide electrocatalysts for an alkaline hydrogen evolution reaction. <b>2020</b> , 8, 5655-5662	7
492	Metal free triad from red phosphorous, reduced graphene oxide and graphitic carbon nitride (red P-rGO-g-C <sub>3</sub> N <sub>4</sub> ) as robust electro-catalysts for hydrogen evolution reaction. <b>2020</b> , 338, 135851	14
491	Cobalt-Copper-Boron nanoparticles as catalysts for the efficient hydrolysis of alkaline sodium borohydride solution. <b>2020</b> , 45, 9845-9853	16
490	Potential of core-shell NiFe layered double hydroxide@Co <sub>3</sub> O <sub>4</sub> nanostructures as cathode catalysts for oxygen reduction reaction in microbial fuel cells. <b>2020</b> , 453, 227877	37
489	Activating Titanium Dioxide as a New Efficient Electrocatalyst: From Theory to Experiment. <b>2020</b> , 12, 11607-11615	5
488	Electronic Redistribution: Construction and Modulation of Interface Engineering on CoP for Enhancing Overall Water Splitting. <b>2020</b> , 30, 1909618	122
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486	Transition metal M (M = Co, Ni, and Fe) and boron co-modulation in Rh-based aerogels for highly efficient and pH-universal hydrogen evolution electrocatalysis. <b>2020</b> , 8, 5595-5600	17
485	Supramolecular assisted one-pot synthesis of donut-shaped CoP@PNC hybrid nanostructures as multifunctional electrocatalysts for rechargeable Zn-air batteries and self-powered hydrogen production. <b>2020</b> , 28, 27-36	37
484	Tetra-carboxylic acid based metal-organic framework as a high-performance bifunctional electrocatalyst for HER and OER. <b>2020</b> , 45, 11077-11088	20
483	Cu/Cu <sub>2</sub> O Nanoparticle-Decorated MoO <sub>2</sub> Nanoflowers as a Highly Efficient Electrocatalyst for Hydrogen Evolution Reaction. <b>2020</b> , 8, 1901392	6
482	Versatile Route To Fabricate Precious-Metal Phosphide Electrocatalyst for Acid-Stable Hydrogen Oxidation and Evolution Reactions. <b>2020</b> , 12, 11737-11744	24
481	Co-Ni-doped single-crystal V <sub>3</sub> S <sub>4</sub> nanoparticles as pH-universal electrocatalysts for enhanced hydrogen evolution reaction. <b>2020</b> , 335, 135696	7
480	Transition metal-doped FeP nanoparticles for hydrogen evolution reaction catalysis. <b>2020</b> , 510, 145427	17
479	Three-Dimensional Mesoporous Phosphide-Spinel Oxide Heterojunctions with Dual Function as Catalysts for Overall Water Splitting. <b>2020</b> , 3, 1684-1693	20
478	Iron-doped nickel cobalt ternary phosphide hyperbranched hierarchical arrays for efficient overall water splitting. <b>2020</b> , 334, 135633	19

477	Spatial Compartmentalization of Cobalt Phosphide in P-Doped Dual Carbon Shells for Efficient Alkaline Overall Water Splitting. <b>2020</b> , 59, 1996-2004	26
476	A novel MoNi@Ni(OH) heterostructure with Pt-like and stable electrocatalytic activity for the hydrogen evolution reaction. <b>2020</b> , 56, 1729-1732	10
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472	Single-Atom Catalysts for Electrochemical Hydrogen Evolution Reaction: Recent Advances and Future Perspectives. <b>2020</b> , 12, 21	83
471	Metal-organic frameworks derived carbon-incorporated cobalt/dicobalt phosphide microspheres as Mott-Schottky electrocatalyst for efficient and stable hydrogen evolution reaction in wide-pH environment. <b>2020</b> , 565, 513-522	9
470	A hierarchical CoMoO <sub>4</sub> nanoparticle decorated nanoplate array as an electrocatalyst toward improved alkaline oxygen evolution reaction. <b>2020</b> , 4, 1595-1599	7
469	Ruthenium doped Ni <sub>2</sub> P nanosheet arrays for active hydrogen evolution in neutral and alkaline water. <b>2020</b> , 4, 1883-1890	7
468	Regulating the electronic configuration of ruthenium nanoparticles via coupling cobalt phosphide for hydrogen evolution in alkaline media. <b>2020</b> , 12, 100182	17
467	Synergetic effect between MoS <sub>2</sub> and N, S- doped reduced graphene oxide supported palladium nanoparticles for hydrogen evolution reaction. <b>2020</b> , 251, 123106	15
466	Facile synthesis of cobalt phosphide nanoparticles as highly active electrocatalysts for hydrogen evolution reaction. <b>2020</b> , 600, 124925	7
465	Biomass-derived self-supported porous carbon membrane embedded with Co nanoparticles as an advanced electrocatalyst for efficient and robust hydrogen evolution reaction. <b>2020</b> , 155, 447-455	10
464	Stacking faults triggered strain engineering of ZIF-67 derived Ni-Co bimetal phosphide for enhanced overall water splitting. <b>2020</b> , 272, 118951	41
463	Remarkably enhanced visible-light photocatalytic hydrogen evolution and antibiotic degradation over g-C <sub>3</sub> N <sub>4</sub> nanosheets decorated by using nickel phosphide and gold nanoparticles as cocatalysts. <b>2020</b> , 517, 146187	17
462	Co nanoparticles coupling induced high catalytic activity of nitrogen doped carbon towards hydrogen evolution reaction in acidic/alkaline solutions. <b>2020</b> , 342, 136076	10
461	F dopants triggered active sites in bifunctional cobalt sulfide@nickel foam toward electrocatalytic overall water splitting in neutral and alkaline media: Experiments and theoretical calculations. <b>2020</b> , 385, 129-139	26
460	Subnano Ruthenium Species Anchored on Tin Dioxide Surface for Efficient Alkaline Hydrogen Evolution Reaction. <b>2020</b> , 1, 100026	10

459	Direct deposition of a nanoporous palladium electrocatalyst for efficient hydrogen evolution reaction. <b>2020</b> , 44, 7795-7801	7
458	Designing transition-metal-boride-based electrocatalysts for applications in electrochemical water splitting. <b>2020</b> , 12, 9327-9351	35
457	Plasma-reduced Co(OH) <sub>2</sub> with activated hydrogen evolution and overall water splitting performance. <b>2020</b> , 4, 2645-2649	7
456	Crystalline core/morphous shell heterostructures: epitaxial assembly of NiB nanosheets onto PtPd mesoporous hollow nanopolyhedra for enhanced hydrogen evolution electrocatalysis. <b>2020</b> , 8, 8927-8933	12
455	Preparation of cobalt-based nanomaterials carried by nitrogen-doped carbon nanotubes as high performance electrocatalysts for hydrogen evolution reaction. <b>2020</b> , 35, 87-96	3
454	MOFs-derived Cu <sub>3</sub> P@CoP p-n heterojunction for enhanced photocatalytic hydrogen evolution. <b>2020</b> , 395, 125113	71
453	Three-dimensional Ni <sub>2</sub> P/MoP <sub>2</sub> mesoporous nanorods array as self-standing electrocatalyst for highly efficient hydrogen evolution. <b>2020</b> , 45, 15063-15075	14
452	Self-Supported FeP-CoMoP Hierarchical Nanostructures for Efficient Hydrogen Evolution. <b>2020</b> , 15, 1590-1597	3
451	Phosphorus-doped CoTe/C nanoparticles create new Co-P active sites to promote the hydrogen evolution reaction. <b>2020</b> , 12, 9171-9177	11
450	Noble-metal-free Co P nanoparticles: modified perovskite oxide ultrathin nanosheet photocatalysts with significantly enhanced photocatalytic hydrogen evolution activity. <b>2020</b> , 31, 325401	2
449	Assembled 3D MOF on 2D Nanosheets for Self-boosting Catalytic Synthesis of N-doped Carbon Nanotube Encapsulated Metallic Co Electrocatalysts for Overall Water Splitting. <b>2020</b> , 271, 118939	63
448	High-precision regulation synthesis of Fe-doped Co <sub>2</sub> P nanorod bundles as efficient electrocatalysts for hydrogen evolution in all-pH range and seawater. <b>2021</b> , 55, 92-101	28
447	Maize-like CoP nanorod arrays as an efficient and robust electrocatalyst for superior hydrogen generation. <b>2021</b> , 46, 2026-2035	9
446	Oxygen vacancies engineered self-supported B doped Co <sub>3</sub> O <sub>4</sub> nanowires as an efficient multifunctional catalyst for electrochemical water splitting and hydrolysis of sodium borohydride. <b>2021</b> , 404, 126474	38
445	Boosting electrocatalytic hydrogen generation by a renewable porous wood membrane decorated with Fe-doped NiP alloys. <b>2021</b> , 56, 23-33	24
444	Rational design of hollow oxygen deficiency-enriched NiFe <sub>2</sub> O <sub>4</sub> @N/rGO as bifunctional electrocatalysts for overall water splitting. <b>2021</b> , 54, 595-603	16
443	Efficient hydrogen evolution reaction in alkaline via novel hybrid of Pt deposited zinc phosphide nanosheets. <b>2021</b> , 133, 111024	5
442	Nanostructured NiCo alloy electrodes for both hydrogen and oxygen evolution reaction in alkaline electrolyzer. <b>2021</b> , 46, 10082-10092	15

441	Ru doped bimetallic phosphide derived from 2D metal organic framework as active and robust electrocatalyst for water splitting. <b>2021</b> , 536, 147952	35
440	The mechanism and surface engineering of carbon encapsulate defects-rich molybdenum phosphide for the hydrogen evolution reaction in alkaline media. <b>2021</b> , 850, 156737	5
439	Enhancing water splitting via weakening H <sub>2</sub> and O <sub>2</sub> adsorption on NiCo-LDH@CdS due to interstitial nitrogen doping: A close look at the mechanism of electron transfer. <b>2021</b> , 57, 118-130	2
438	Heterogeneous Bimetallic Phosphide Ni <sub>2</sub> P-Fe <sub>2</sub> P as an Efficient Bifunctional Catalyst for Water/Seawater Splitting. <b>2021</b> , 31, 2006484	134
437	Amorphous phosphatized ruthenium-iron bimetallic nanoclusters with Pt-like activity for hydrogen evolution reaction. <b>2021</b> , 283, 119583	27
436	Sprout-shaped Mo-doped CoP with maximized hydrophilicity and gas bubble release for high-performance water splitting catalyst. <b>2021</b> , 408, 127331	19
435	Recent advances in non-precious metal electrocatalysts for pH-universal hydrogen evolution reaction. <b>2021</b> , 6, 458-478	22
434	Computational and experimental investigation of Co and S-doped Ni <sub>2</sub> P as an efficient electrocatalyst for acid mediated proton exchange membrane hydrogen evolution reaction. <b>2021</b> , 11, 861-873	6
433	Recent progress on synthetic strategies and applications of transition metal phosphides in energy storage and conversion. <b>2021</b> , 47, 4404-4425	47
432	Boosting pseudocapacitive energy storage performance via both phosphorus vacancy defect and charge injection technique over the CoP electrode. <b>2021</b> , 864, 158106	10
431	Ultrafine multi-metallic carbide nanocrystals encased in a carbon matrix as durable electrocatalysts towards effective alkaline hydrogen evolution reaction. <b>2021</b> , 2, 336-344	2
430	Integrated selective nitrite reduction to ammonia with tetrahydroisoquinoline semi-dehydrogenation over a vacancy-rich Ni bifunctional electrode. <b>2021</b> , 9, 239-243	18
429	A review: Target-oriented transition metal phosphide design and synthesis for water splitting. <b>2021</b> , 46, 5131-5149	22
428	Al, Fe-codoped CoP nanoparticles anchored on reduced graphene oxide as bifunctional catalysts to enhance overall water splitting. <b>2021</b> , 421, 127856	15
427	Engineering iron phosphide-on-plasmonic Ag/Au-nanoshells as an efficient cathode catalyst in water splitting for hydrogen production. <b>2021</b> , 218, 119520	3
426	Highly active non-noble electrocatalyst from Co <sub>2</sub> P/Ni <sub>2</sub> P nanohybrids for pH-universal hydrogen evolution reaction. <b>2021</b> , 16, 100314	28
425	Synergistic electronic and morphological modulation on ternary Co <sub>1-x</sub> V <sub>x</sub> P nanoneedle arrays for hydrogen evolution reaction with large current density. <b>2021</b> , 64, 880-891	9
424	NiCoP nanorod arrays as high-performance bifunctional electrocatalyst for overall water splitting at high current densities. <b>2021</b> , 484, 229269	26

4 <sup>23</sup>	Fe-doped NiCoP/Prussian blue analog hollow nanocubes as an efficient electrocatalyst for oxygen evolution reaction. <b>2021</b> , 367, 137492	11
4 <sup>22</sup>	Nickel selenide from single-molecule electrodeposition for efficient electrocatalytic overall water splitting. <b>2021</b> , 45, 351-357	11
4 <sup>21</sup>	Ruthenium nanodendrites on reduced graphene oxide: an efficient water and 4-nitrophenol reduction catalyst. <b>2021</b> , 45, 1556-1564	8
4 <sup>20</sup>	Porous CoP/Co <sub>2</sub> P heterostructure for efficient hydrogen evolution and application in magnesium/seawater battery. <b>2021</b> , 486, 229351	30
4 <sup>19</sup>	Hierarchical few-layer fluorine-free Ti <sub>3</sub> C <sub>2</sub> TX (T = O, OH)/MoS <sub>2</sub> hybrid for efficient electrocatalytic hydrogen evolution. <b>2021</b> , 9, 922-927	6
4 <sup>18</sup>	Carbon supported nickel phosphide as efficient electrocatalyst for hydrogen and oxygen evolution reactions. <b>2021</b> , 46, 622-632	14
4 <sup>17</sup>	Electrodeposition of Ir <sub>2</sub> O <sub>3</sub> thin films on copper foam as high-performance electrocatalysts for efficient water splitting in alkaline medium. <b>2021</b> , 46, 609-621	14
4 <sup>16</sup>	Engineering nanointerface of molybdenum-based heterostructures to boost the electrocatalytic hydrogen evolution reaction. <b>2021</b> , 58, 370-376	7
4 <sup>15</sup>	Recent advances in electrocatalysts for neutral and large-current-density water electrolysis. <b>2021</b> , 80, 105545	49
4 <sup>14</sup>	Vanadium doped cobalt phosphide nanorods array as a bifunctional electrode catalyst for efficient and stable overall water splitting. <b>2021</b> , 46, 599-608	12
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4 <sup>12</sup>	Porous Co <sub>2</sub> P film coated on carbon fiber as highly performance electrocatalyst toward overall water splitting. <b>2021</b> , 46, 31-40	3
4 <sup>11</sup>	Boosting pH-Universal Hydrogen Evolution of Molybdenum Disulfide Particles by Interfacial Engineering <b>2021</b> , 39, 288-294	7
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4 <sup>09</sup>	Hierarchical MnCo <sub>2</sub> O <sub>4</sub> nanowire@NiFe layered double hydroxide nanosheet heterostructures on Ni foam for overall water splitting.	2
4 <sup>08</sup>	Promoting electrocatalytic overall water splitting by sulfur incorporation into CoFe-(oxy)hydroxide.	1
4 <sup>07</sup>	Self-Supported Phosphorus-Doped Vertically Aligned Graphene Arrays Integrated with FeCoNiP Nanoparticles as Bifunctional Electrocatalysts for Water-Splitting Over a Wide pH Range. <b>2021</b> , 17, 87-101	8
4 <sup>06</sup>	Formation of graphene encapsulated cobalt/iron phosphide nanoneedles as an attractive electrocatalyst for overall water splitting. <b>2021</b> , 11, 1814-1826	6

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383	Highly dispersed cobalt metaphosphate nanoparticles embedded in tri-doped carbon as a pH-Wide electrocatalyst for hydrogen evolution. <b>2021</b> , 46, 6513-6521	4
382	Facile Construction of Metal Phosphides (MP, M = Co, Ni, Fe, and Cu) Wrapped in Three-Dimensional N,P-Codoped Carbon Skeleton toward Highly Efficient Hydrogen Evolution Catalysis and Lithium-Ion Storage. <b>2021</b> , 13, 9820-9829	13
381	Super-Hydrophilic Hierarchical Ni-Foam-Graphene-Carbon Nanotubes-NiP-CuP Nano-Architecture as Efficient Electrocatalyst for Overall Water Splitting. <b>2021</b> , 15, 5586-5599	63
380	Template-Free Synthesis of Zinc Cobalt Oxides/Phosphides (Co <sub>2</sub> P/CoO/ZnCo <sub>2</sub> O <sub>4</sub> ) Hollow Sub-Micron Boxes as Hydrogen Evolution Reaction Catalysts. <b>2021</b> , 6, 1685-1691	1
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377	Delicate Control on the Shell Structure of Hollow Spheres Enables Tunable Mass Transport in Water Splitting. <b>2021</b> , 60, 6926-6931	24
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375	Recent advances in nonmetallic atom-doped metal nanocrystals: Synthesis and catalytic applications. <b>2021</b> , 32, 2679-2679	1
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373	Pd <sup>II</sup> -Mediated Surface Engineering of AgMnO <sub>4</sub> Nanorods as Advanced Bifunctional Electrocatalysts for Highly Efficient Water Electrolysis. <b>2021</b> , 11, 3687-3703	4
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368	Theoretical and experimental investigations of Co-Cu bimetallic alloys-incorporated carbon nanowires as an efficient bi-functional electrocatalyst for water splitting. <b>2021</b> , 96, 243-253	13
367	A Co <sub>3</sub> O <sub>4</sub> /CuO composite nanowire array as low-cost and efficient bifunctional electrocatalyst for water splitting. <b>2021</b> , 127, 1	5
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363	Electro-catalyst [ZrO <sub>2</sub> /ZnO/PdO]-NPs green functionalization: Fabrication, characterization and water splitting potential assessment. <b>2021</b> , 46, 19347-19362	5
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358	Electrocatalysts for the hydrogen evolution reaction in alkaline and neutral media. A comparative review. <b>2021</b> , 493, 229708	39
357	The p-n heterojunction constructed by NiMnO <sub>3</sub> nanoparticles and Ni <sub>3</sub> S <sub>4</sub> to promote charge separation and efficient catalytic hydrogen evolution. <b>2021</b> ,	3
356	Interfacial Engineering of Nickel Hydroxide on Cobalt Phosphide for Alkaline Water Electrocatalysis. <b>2021</b> , 31, 2101578	38
355	A fuel cell-electrolyzer series device for simultaneous monoethanolamine degradation and hydrogen production: From anode screening and optimization to device investigation. <b>2021</b> , 494, 229783	1
354	Quaternary-metal phosphide as electrocatalyst for efficient hydrogen evolution reaction in alkaline solution. <b>2021</b> , 46, 18878-18886	3
353	Bifunctional and Self-Supported NiFeP-Layer-Coated NiP Rods for Electrochemical Water Splitting in Alkaline Solution. <b>2021</b> , 13, 23702-23713	9
352	Phase-Modulation of Iron/Nickel Phosphides Nanocrystals Armored with Porous P-Doped Carbon and Anchored on P-Doped Graphene Nanohybrids for Enhanced Overall Water Splitting. <b>2021</b> , 31, 2010912	16

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348	Novel urchin-like CoNiP as advanced pH-universal electrocatalysts toward hydrogen evolution reaction. <b>2021</b> , 54, 365502	1
347	Self-Supported CoP-Decorated Hierarchical CuO Nanowire Flowers Toward Enhanced Oxygen Evolution Reaction. <b>2021</b> , 8, 2101-2107	1
346	Hairy sphere-like Ni <sub>9</sub> S <sub>8</sub> /CuS/Cu <sub>2</sub> O composites grown on nickel foam as bifunctional electrocatalysts for hydrogen evolution and urea electrooxidation. <b>2021</b> , 46, 20950-20960	10
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340	Ambient ammonia production via electrocatalytic nitrite reduction catalyzed by a CoP nanoarray. 1	30
339	Ru atom-modified Co <sub>4</sub> N-CoF <sub>2</sub> heterojunction catalyst for high-performance alkaline hydrogen evolution. <b>2021</b> , 414, 128865	12
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334	Recent progress in cobalt-based carbon materials as oxygen electrocatalysts for zinc-air battery applications. <b>2021</b> , 20, 100659	16

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330	Flexible quasi-solid-state sodium-ion full battery with ultralong cycle life, high energy density and high-rate capability. 1	14
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326	Highly Efficient and Robust MoS <sub>2</sub> Nanoflake-Modified-TiN-Ceramic-Membrane Electrode for Electrocatalytic Hydrogen Evolution Reaction. <b>2021</b> , 4, 6730-6739	3
325	Structure and Interface Modification of Carbon Dots for Electrochemical Energy Application. <b>2021</b> , 17, e2102091	8
324	Nickel Foam Supported NiO@Ru Heterostructure Towards High-Efficiency Overall Water Splitting. <b>2021</b> , 22, 1785-1791	0
323	Modulating carbon-supported transition metal oxide by electron-giving and electron-absorbing functional groups towards efficient overall water splitting. <b>2021</b> , 416, 129124	10
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320	Enhancing electrocatalytic N <sub>2</sub> -to-NH <sub>3</sub> fixation by suppressing hydrogen evolution with alkylthiols modified Fe <sub>3</sub> P nanoarrays. 1	28
319	Tuning the Electrochemical Properties of Polymeric Cobalt Phthalocyanines for Efficient Water Splitting. <b>2021</b> , 31, 2103290	10
318	Fe-Doped CoP holey nanosheets as bifunctional electrocatalysts for efficient hydrogen and oxygen evolution reactions. <b>2021</b> , 46, 26391-26401	7
317	Template-free synthesis of 1D hollow Fe doped CoP nanoneedles as highly activity electrocatalysts for overall water splitting. <b>2021</b> , 46, 28053-28063	4
316	Transition metals decorated g-C <sub>3</sub> N <sub>4</sub> /N-doped carbon nanotube catalysts for water splitting: A review. <b>2021</b> , 895, 115510	12

315	Spanish-dagger shaped CoP blooms decorated N-doped carbon branch anode for high-performance lithium and sodium storage. <b>2021</b> , 388, 138628	5
314	In situ construction of heterostructured bimetallic sulfide/phosphide with rich interfaces for high-performance aqueous Zn-ion batteries. 1	23
313	PANI/ Ni2P hybrid electrocatalysts towards substantially enhance performance through protonated amino groups process in acid media. <b>2021</b> , 872, 159694	3
312	Photoelectrochemical water splitting on the Pt-In2S3/CuInS2 photoelectrode under solar light irradiation: Effects of electrolytes on the solar energy to hydrogen conversion. <b>2021</b> , 895, 115489	4
311	FeTiO3 Perovskite Nanoparticles for Efficient Electrochemical Water Splitting. <b>2021</b> , 11, 1028	2
310	N-doped graphitic CN nanosheets decorated with CoP nanoparticles: A highly efficient activator in singlet oxygen dominated visible-light-driven peroxymonosulfate activation for degradation of pharmaceuticals and personal care products. <b>2021</b> , 416, 125891	5
309	Fabrication of chrysanthemum-like CdSe/bulk WC: A novel Schottky-junction photocatalyst for improving photocatalytic hydrogen production. <b>2021</b> , 872, 159691	5
308	Three-dimensional nano/micro-structured porous MoP/CNTs microspheres as high-capacity anode for lithium-ion batteries. <b>2021</b> , 872, 159608	2
307	Core-shell Ni2P@CoP nanoarrays supported on NF as a highly efficient electrocatalyst for hydrogen evolution reaction. <b>2021</b> , 623, 126526	3
306	Interface Engineering of CoS2@TeO2/Ti Nanocatalyst for Artificial N2 Fixation.	3
305	Recent development in electrocatalysts for hydrogen production through water electrolysis. <b>2021</b> , 46, 32284-32317	39
304	High-Density Ruthenium Single Atoms Anchored on Oxygen-Vacancy-Rich g-CN-C-TiO Heterostructural Nanosphere for Efficient Electrocatalytic Hydrogen Evolution Reaction. <b>2021</b> , 13, 46608-46619	3
303	Extended Gate Field Effect Transistor-Based N-Type Gallium Nitride as a pH Sensor. <b>2021</b> , 50, 7071	
302	Atmosphere plasma treatment and Co heteroatoms doping on basal plane of colloidal 2D VSe2 nanosheets for enhanced hydrogen evolution. <b>2021</b> , 46, 32425-32434	1
301	CoNi alloy nanoparticles coated with carbon layer doped with P atom for efficient hydrogen evolution reaction. <b>2021</b> , 46, 36753-36753	0
300	Confinement of transition metal phosphides in N, P-doped electrospun carbon fibers for enhanced electrocatalytic hydrogen evolution. <b>2021</b> , 875, 159934	3
299	Interfacial electronic engineering of carbon encapsulated Co5.47N-WO2 for boosting overall water splitting. <b>2021</b> , 390, 138887	4
298	Electrocatalytic Hydrogen Evolution Reaction Related to Nanochannel Materials. <b>2021</b> , 2, 2100076	10

297	Tuning Hydrogen Binding Energy by Interfacial Charge Transfer Enables pH-Universal Hydrogen Evolution Catalysis of Metal Phosphides. <b>2021</b> , 132699	4
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295	The cutting-edge phosphorus-rich metal phosphides for energy storage and conversion. <b>2021</b> , 40, 101245	10
294	Rational design of core-shell-structured CoP <sub>x</sub> @FeOOH for efficient seawater electrolysis. <b>2021</b> , 294, 120256	33
293	Recent progress in CoP-based materials for electrochemical water splitting. <b>2021</b> , 46, 34194-34215	9
292	Syntheses, characterization and oxygen evolution reaction (OER) electrocatalytic properties of M(II) based bromo-salophen complexes. <b>2021</b> , 1243, 130928	2
291	Electrospun IrP <sub>2</sub> -carbon nanofibers for hydrogen evolution reaction in alkaline medium. <b>2021</b> , 565, 150461	1
290	Interfacial engineering of Co nanoparticles/Co <sub>2</sub> C nanowires boosts overall water splitting kinetics. <b>2021</b> , 296, 120334	22
289	Highly efficient sub-nanometer RuCuP nanoclusters designed for hydrogen evolution under alkaline media. <b>2021</b> , 602, 222-231	0
288	Phosphorus-doped molybdenum carbide/MXene hybrid architectures for upgraded hydrogen evolution reaction performance over a wide pH range. <b>2021</b> , 423, 130183	10
287	Interfacial charge redistribution in interconnected network of Ni <sub>2</sub> P@Co <sub>2</sub> P boosting electrocatalytic hydrogen evolution in both acidic and alkaline conditions. <b>2021</b> , 424, 130444	20
286	Electrochemically grown highly crystalline single-phase Ni <sub>3</sub> P superstructure accelerating ionic diffusion in rechargeable Ni/Zn battery. <b>2021</b> , 512, 230527	3
285	P, N-codoped carbon nanofibers confined ultra-small bimetallic NiCoP for highly efficient overall water splitting. <b>2021</b> , 570, 151247	1
284	Electronic modulation of CoP nanoarrays by Cr-doping for efficient overall water splitting. <b>2021</b> , 425, 130651	9
283	Impacts of boron doping on the atomic structure, stability, and photocatalytic activity of Cu <sub>3</sub> P nanocrystals. <b>2021</b> , 298, 120515	3
282	Reduced graphene oxide supported ZIF-67 derived CoP enables high-performance potassium ion storage. <b>2021</b> , 604, 319-326	9
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278	Catalytic degradation of antibiotic by Co nanoparticles encapsulated in nitrogen-doped nanocarbon derived from Co-MOF for promoted peroxymonosulfate activation. <b>2022</b> , 429, 132269	2
277	In situ coupled MoO <sub>3</sub> with CoP/rGO to construct three-dimensional self-supported catalyst for highly efficient alkaline hydrogen evolution reaction. <b>2022</b> , 104, 194-201	2
276	NiP nanosheet array for high-efficiency electrohydrogenation of nitrite to ammonia at ambient conditions. <b>2022</b> , 606, 1055-1063	17
275	FeCoP multi-heterostructure arrays for efficient electrocatalytic water splitting.	11
274	Hole-rich CoP nanosheets with an optimized d-band center for enhancing pH-universal hydrogen evolution electrocatalysis. <b>2021</b> , 9, 8561-8567	26
273	NiCo LDH in situ derived NiCoP 3D nanoflowers coupled with a CuP p-n heterojunction for efficient hydrogen evolution. <b>2021</b> , 13, 13858-13872	8
272	Versatile construction of a hierarchical porous electrode and its application in electrochemical hydrogen production: a mini review. <b>2021</b> , 2, 1177-1189	4
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270	A strategy for preparing high-efficiency and economical catalytic electrodes toward overall water splitting. <b>2021</b> , 13, 10624-10648	13
269	Enhanced electrocatalytic H <sub>2</sub> S splitting on a multiwalled carbon nanotubes-graphene oxide nanocomposite.	2
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264	Boosting the hydrogen evolution reaction activity of Ru in alkaline and neutral media by accelerating water dissociation.. <b>2021</b> , 11, 6107-6113	7
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261	Alkylthiol surface engineering: an effective strategy toward enhanced electrocatalytic N <sub>2</sub> -to-NH <sub>3</sub> fixation by a CoP nanoarray. <b>2021</b> , 9, 13861-13866	45
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219	Engineering of sugarcane bagasse based porous carbon nanofiber-supported the CoP/CoP <sub>2</sub> heterostructure for efficient overall water splitting. <b>2021,</b> 404, 139578	0
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215	Enhanced the electrochemical performance of mesh nano composite based catalyst for oxygen evolution reaction: Recent development. <b>2021,</b>	0
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209	Self-assembly of bimetallic polyoxometalates and dicyandiamide to form Co/WC@NC for efficient electrochemical hydrogen generation. <b>2021,</b> 46, 178-184	3
208	Growth of branched heterostructure of nickel and iron phosphides on carbon cloth as electrode for hydrogen evolution reaction under wide pH ranges. <b>2022,</b> 26, 875	0

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203	Formation of carnation -like ZIF-9 nanostructure to achieve superior electrocatalytic oxygen evolution.. <b>2022</b> ,	0
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200	In-situ growth of hierarchical CuO@Cu <sub>3</sub> P heterostructures with transferable active centers on copper foam substrates as bifunctional electrocatalysts for overall water splitting in alkaline media. <b>2022</b> , 47, 9593-9605	1
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194	Regulation of hydrogen evolution performance of titanium oxide/carbon composites at high current density with a TiO <sub>2</sub> hybrid orbital.	1
193	Crystalline-Amorphous Interfaces Coupling of CoSe /CoP with Optimized d-band Center and Boosted Electrocatalytic Hydrogen Evolution.. <b>2022</b> , e2110631	32
192	C-O-Co bond-stabilized CoP on carbon cloth toward hydrogen evolution reaction. <b>2022</b> , 47, 9209-9219	0
191	Two Co(II)/Ni(II) complexes based on nitrogenous heterocyclic ligands as high-performance electrocatalysts for the hydrogen evolution reaction.. <b>2022</b> ,	7
190	Co <sup>II</sup> Active Sites between Co Nanoparticles and N-Doped Carbon toward Remarkably Enhanced Electrocatalytic Oxygen Evolution and Hydrogen Evolution Reactions. <b>2022</b> , 36, 1688-1696	2

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188	Tracking charge transfer pathways in SrTiO <sub>3</sub> /CoP/Mo <sub>2</sub> C nanofibers for enhanced photocatalytic solar fuel production. <b>2022</b> , 43, 507-518	4
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186	A facile templating fabrication of porous CoP nanoparticles towards electrocatalytic oxygen evolution. <b>2022</b> , 583, 152402	1
185	Efficient nitric oxide electroreduction toward ambient ammonia synthesis catalyzed by a CoP nanoarray.	7
184	Integrated electrocatalysts derived from metal organic frameworks for gas-involved reactions. <b>2022</b> ,	0
183	Superior Performances of Electroless-Deposited Ni <sub>3</sub> P Films Decorated with an Ultralow Content of Pt for Water-Splitting Reactions.	1
182	Finite phosphorene derived partial reduction of metal organic framework nanofoams for enhanced lithium storage capability. <b>2022</b> , 525, 231025	
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175	Lanthanum oxide rods as a novel and efficient bifunctional hydrogen and oxygen evolution electrocatalyst for overall water splitting. <b>2022</b> ,	
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172	Electrochemical hydrogen generation technology: Challenges in electrodes materials for a sustainable energy.	1

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168	Role of cobalt precursors in the synthesis of Co <sub>3</sub> O <sub>4</sub> hierarchical nanostructures toward the development of cobalt-based functional electrocatalysts for bifunctional water splitting in alkaline and acidic media.	
167	Low-Pressure Plasma-Processed Ruthenium/Nickel Foam Electrocatalysts for Hydrogen Evolution Reaction.. <b>2022</b> , 15,	0
166	Manganese oxide octahedral molecular sieves stabilized Rh nanoparticles for the hydrogen production from the ethylenediamine-bisborane hydrolysis. <b>2022</b> ,	0
165	Superassembly of Surface-Enriched Ru Nanoclusters from Trapping-Bonding Strategy for Efficient Hydrogen Evolution.. <b>2022</b> ,	4
164	Phosphorus/Phosphide-Based Materials for Alkali Metal-Ion Batteries.. <b>2022</b> , e2200740	1
163	MOF-derived RuCoP nanoparticles-embedded nitrogen-doped polyhedron carbon composite for enhanced water splitting in alkaline media.. <b>2022</b> , 616, 803-812	2
162	Interface engineering of S-doped Co <sub>2</sub> P@Ni <sub>2</sub> P core-shell heterostructures for efficient and energy-saving water splitting. <b>2022</b> , 439, 135743	5
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160	Electrocatalytic Water Splitting: From Harsh and Mild Conditions to Natural Seawater. <b>2021</b> , e2105830	9
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158	Designing Self-Supported Electrocatalysts for Electrochemical Water Splitting: Surface/Interface Engineering toward Enhanced Electrocatalytic Performance. <b>2021</b> ,	8
157	Nanoporous CoP nanowire arrays decorated with carbon-coated CoP nanoparticles: the role of interfacial engineering for efficient overall water splitting.	
156	Rational Design of Better Hydrogen Evolution Electrocatalysts for Water Splitting: A Review.. <b>2022</b> , e2200307	8
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154	Electro-Oxidation of Metal Oxide-Fabricated Graphitic Carbon Nitride for Hydrogen Production via Water Splitting. <b>2022</b> , 12, 548	1

153	Enhanced hydrogen evolution activities of the hollow surface-oxidized cobalt phosphide nanofiber electrocatalysts in alkaline media.	0
152	Anion-Exchange Membrane Water Electrolyzers.. <b>2022</b> ,	13
151	Defect- and nitrogen-rich porous carbon embedded with Co NPs derived from self-assembled Co-ZIF-8 @ anionic polyacrylamide network as PMS activator for highly efficient removal of tetracycline hydrochloride from water. <b>2022</b> , 443, 136439	1
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147	Ingenious Design of One Mixed-Valence Dual-Net Copper Metal-Organic Framework for Deriving Cu <sub>2</sub> O/CuO Heterojunction with Highly Electrocatalytic Performances from NO <sub>3</sub> <sup>-</sup> to NH <sub>3</sub> .	
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145	Improving the Electrochemical Activity of PdSe <sub>2</sub> by Constructing P/T Structural Interfaces. <b>2022</b> , 153626	
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142	Highly active platinum single-atom catalyst grafted onto 3D carbon cloth support for the electrocatalytic hydrogen evolution reaction. <b>2022</b> , 595, 153480	2
141	One-dimensional NiP/MnO nanostructures with enhanced oxygen evolution reaction activity.. <b>2022</b> , 623, 196-204	1
140	Water electrolysis: from textbook knowledge to the latest scientific strategies and industrial developments.. <b>2022</b> ,	21
139	Chalcogenides and Phosphides for High-Performance Supercapacitors. <b>2022</b> , 397-419	0
138	Electrochemical H <sub>2</sub> Production using Polypyrazole based Zinc(II) Complex in Alkaline Medium. <b>2022</b> , 34, 1366-1372	
137	Lattice-disorder layer generation from liquid processing at room temperature with boosted nanointerface exposure toward water splitting.	4
136	Bimetallic Intersection in PdFe@FeO x -C Nanomaterial for Enhanced Water Splitting Electrocatalysis. 2200096	

135	Highly dispersed platinum on LaNi nanoparticles/nanoporous carbon for highly efficient electrocatalytic hydrogen evolution. <b>2022,</b>	1
134	TiO <sub>2</sub> -Enhanced in situ Electrochemical Activation of Co <sub>3</sub> O <sub>4</sub> for the Alkaline Hydrogen Evolution Reaction.	1
133	Recent advances in cobalt phosphide-based materials for electrocatalytic water splitting: From catalytic mechanism and synthesis method to optimization design. <b>2022,</b>	0
132	Sepaktakraw-like catalyst Mn-doped CoP enabling ultrastable electrocatalytic oxygen evolution at 100 mA cm <sup>-2</sup> in alkali media.	0
131	Co <sub>2</sub> P nanorods with exposure of high-index facets for efficient photochemical reduction of CO <sub>2</sub> by promoting the directional transfer of electrons. <b>2022,</b>	0
130	Facile Single Step Electrochemical Growth of Ni <sub>3</sub> P on Carbon Cloth for Highly Efficient Hydrogen Evolution Reaction. <b>2022,</b> 169, 064511	1
129	Tuning the Mn Dopant To Boost the Hydrogen Evolution Performance of CoP Nanowire Arrays.	0
128	Hierarchically Self-Supporting Phosphorus-Doped CoMoO <sub>4</sub> Nanoflowers Arrays toward Efficient Hydrogen Evolution Reaction.	0
127	Fabrication of efficient electrocatalytic system with ruthenium cobalt sulfide over a carbon cloth. <b>2022,</b>	0
126	Synergistic Regulation of S-Vacancy of MoS <sub>2</sub> -Based Materials for Highly Efficient Electrocatalytic Hydrogen Evolution. 10,	0
125	Cobalt-phosphorous coatings with tunable composition fabricated by additive-controlled electrodeposition from choline chloride-ethylene glycol deep eutectic solvent for anti-corrosion application. <b>2022,</b> 443, 128610	0
124	Cobalt borophosphate on nickel foam as an electrocatalyst for water splitting. <b>2022,</b> 288, 126390	
123	Ru-doping modulated cobalt phosphide nanoarrays as efficient electrocatalyst for hydrogen evolution rection. <b>2022,</b> 625, 457-465	0
122	Functions and performance of ionic liquids in enhancing electrocatalytic hydrogen evolution reactions: a comprehensive review. <b>2022,</b> 12, 19452-19469	1
121	One-dimensional amorphous cobalt(ii) metal-organic framework nanowire for efficient hydrogen evolution reaction.	
120	Anion exchange membrane water electrolysis from catalyst design to the membrane electrode assembly.	3
119	Highly dispersed platinum deposited on nitrogen-doped vertical graphene array for efficient electrochemical hydrogen evolution.	0
118	Regulating the electronic structure of cobalt phosphide via dual-metal doping engineering to trigger efficient hydrogen evolution. <b>2022,</b> 121, 013904	1

117	Accelerating electrochemical hydrogen production on binder-free electrodeposited V- doped Ni-Mo-P Nanospheres. <b>2022</b> , 116627	0
116	Nitrogen and nitrogen-sulfur doped graphene nanosheets for efficient hydrogen productions for HER studies. <b>2022</b> ,	
115	Phosphorus-induced electronic structure reformation of hollow NiCo <sub>2</sub> Se <sub>4</sub> nanoneedle arrays enabling highly efficient and durable hydrogen evolution in all-pH media.	2
114	Insight into the boosted activity of TiO <sub>2</sub> -CoP composites for hydrogen evolution reaction: Accelerated mass transfer, optimized interfacial water, and promoted intrinsic activity. <b>2022</b> ,	1
113	Ingenious design of one mixed-valence dual-net copper metal-organic framework for deriving Cu <sub>2</sub> O/CuO heterojunction with highly electrocatalytic performances from NO <sub>3</sub> <sup>-</sup> to NH <sub>3</sub> . <b>2022</b> , 543, 231832	0
112	Multi-interfacial engineering of IrO <sub>x</sub> clusters coupled porous zinc Phosphide-Zinc phosphate heterostructure for efficient water splitting. <b>2022</b> , 600, 154206	1
111	Phosphorus ZIF-67@NiAl LDH S-scheme heterojunction for efficient photocatalytic hydrogen production. <b>2022</b> , 601, 154174	0
110	Br-induced P-poor defective nickel phosphide for highly efficient overall water splitting. <b>2022</b> , 316, 121686	2
109	Facet-Selective hydrogen evolution on Rh <sub>2</sub> P electrocatalysts in pH-Universal media. <b>2022</b> , 449, 137790	0
108	Electron enriched ternary NiMoB electrocatalyst for improved overall water splitting: Better performance as compared to the Pt/C    RuO <sub>2</sub> at high current density. <b>2022</b> , 29, 101579	0
107	Electrocatalytic Self-Supported-Electrode Based on Co <sub>x</sub> Ni <sub>1-x</sub> P/TiC 0.5 N 0.5 for Enhancing pH-Universal Hydrogen Evolution Electrocatalysis. 2200196	0
106	Defects engineering on CrOOH by Ni doping for boosting electrochemical oxygen evolution reaction.	
105	Synthesis of Ultrathin Porous Bimetallic NickelCobalt Phosphide Nanosheets as an Excellent Bifunctional Electrocatalyst for Overall Water Splitting. 2200537	0
104	Recent progress on rational design of catalysts for fermentative hydrogen production.	0
103	Superaerophobic CoP Nanowire Arrays as a Highly Effective Anode Electrocatalyst for Direct Hydrazine Fuel Cells. <b>2022</b> , 5, 9455-9462	0
102	Strategies for Designing High-Performance Hydrogen Evolution Reaction Electrocatalysts at Large Current Densities above 1000 mA cm <sup>-2</sup> . <b>2022</b> , 16, 11577-11597	3
101	Eco-friendly synthesis of sulphur-doped graphenes with applicability in caffeic acid electrochemical assay. <b>2022</b> , 148, 108228	1
100	Emerging Heterogeneous Supports for Efficient Electrocatalysis. 2200855	0



99	In-situ reconstructed hollow iridium-cobalt oxide nanosphere for boosting electrocatalytic oxygen evolution in acid. <b>2022</b> , 432, 141199	0
98	Constructing porous boron doped nickel phosphide (Ni <sub>2</sub> P) rod arrays with optimized electron coordination for alkaline hydrogen evolution. <b>2022</b> , 927, 166938	1
97	Recent advances in transition-metal phosphide electrocatalysts: Synthetic approach, improvement strategies and environmental applications. <b>2022</b> , 473, 214811	2
96	Construction of nanosized MoP decorated highly crystalline carbon nitride sphere as an excellent photocatalyst for boosted photocatalytic hydrogen production. <b>2022</b> , 33, 104354	0
95	Boron-doping on the surface mediated low-valence Co centers in cobalt phosphide for improved electrocatalytic hydrogen evolution. <b>2023</b> , 320, 122014	1
94	Controlled Synthesis of Molybdenum Based Catalyst and Its Performance in Electrolysis of Water. <b>2022</b> , 12, 240-253	0
93	Self-sacrificial reconstruction of MoO <sub>4</sub> <sup>2-</sup> intercalated NiFe LDH/Co <sub>2</sub> P heterostructures enabling interfacial synergies and oxygen vacancies for triggering oxygen evolution reaction. <b>2023</b> , 629, 896-907	1
92	Synthesis of self-supported metal fiber felt electrode for electrocatalytic hydrogen evolution. <b>2023</b> , 330, 133260	0
91	Edge-oriented N-Doped WS <sub>2</sub> Nanoparticles on Porous Co <sub>3</sub> N Nanosheets for Efficient Alkaline Hydrogen Evolution and Nitrogenous Nucleophile Electrooxidation. <b>2022</b> , 18, 2203171	2
90	Electrocatalytic hydrogenation of quinolines with water over a fluorine-modified cobalt catalyst. <b>2022</b> , 13,	1
89	Tuning the Interface of Co <sub>1-x</sub> S/Co(OH)F by Atomic Replacement Strategy toward High-Performance Electrocatalytic Oxygen Evolution. <b>2022</b> , 16, 15460-15470	2
88	The Role of Transition Metal-Based Electrocatalyst Toward Efficient Electrochemical Hydrogen Fuel Generation. <b>2022</b> , 220-248	0
87	Systematic development of bimetallic MOF and its phosphide derivative as an efficient multifunctional electrocatalyst for urea-assisted water splitting in alkaline medium. <b>2022</b> , 923, 116825	0
86	A Nanoneedle Ni <sub>12</sub> P <sub>5</sub> Array for Hydrogen Evolution Reaction with High Efficiency over a Wide pH Range. <b>2022</b> , 7,	0
85	Construction of CoP/TiO <sub>2</sub> nanoarray for enhanced electrochemical nitrate reduction to ammonia. <b>2022</b> , 28, 100854	8
84	RuO <sub>2</sub> nanoparticles decorated TiO <sub>2</sub> nanobelt array as a highly efficient electrocatalyst for hydrogen evolution reaction at all pH values.	4
83	Carbon-incorporated Ni <sub>2</sub> P@Ni <sub>2</sub> P hollow nanorods as superior electrocatalysts for the oxygen evolution reaction.	1
82	Se-Doped CoP Nanoneedle Arrays Grown on Carbon Cloth for an Efficient Hydrogen Evolution Reaction. <b>2022</b> , 36, 13212-13217	0

81	Peony flower-like CuxS@NiMn LDH heterostructure as an efficient electrocatalyst for the oxygen evolution reaction. <b>2022</b> ,	0
80	A simple electrospinning strategy to achieve the uniform distribution of ultra-fine CoP nanocrystals on carbon nanofibers for efficient lithium storage.	0
79	Janus (Mo/CoMo <sub>2</sub> C)@C heterostructure as an efficient electrocatalyst for the hydrogen evolution reaction in acidic and alkaline media.	0
78	Recent Advances in Ni-based electrocatalysts for hydrogen evolution reaction.	0
77	Performance of intrinsic heteroatoms in cobalt phosphide loaded ginkgo leaf-based carbon material on promoting the electrocatalytic activity during hydrogen evolution reaction and oxygen evolution reaction. <b>2023</b> , 333, 126368	0
76	Charge Transfer Modulated Heterointerface for Hydrogen Production at All pH.	2
75	Compressive strain induced superior HER performance of nickel in alkaline solution.	0
74	Designing dual-dimensional Co <sub>4</sub> N/Co nanoheterostructures by molybdenum incorporation for boosted alkaline hydrogen evolution catalysis. <b>2023</b> , 935, 167989	1
73	Atom Doping Engineering of Transition Metal Phosphides for Hydrogen Evolution Reactions. <b>2022</b> , 5,	2
72	Fabrication of 3D ordered mesoporous nickel phosphide for efficient hydrogen evolution reaction. <b>2022</b> ,	0
71	Rational Design of NiSe/ReSe <sub>2</sub> Nanocomposite For Efficient Electrochemical Hydrogen Evolution Reaction.	0
70	Amorphous Co-Mo-B Film: A High-Active Electrocatalyst for Hydrogen Generation in Alkaline Seawater. <b>2022</b> , 27, 7617	4
69	Aerogels-Inspired based Photo and Electrocatalyst for Water Splitting to Produce Hydrogen. <b>2022</b> , 29, 101670	0
68	Recent advances in understanding and design of efficient hydrogen evolution electrocatalysts for water splitting: A comprehensive review. <b>2022</b> , 102811	1
67	A reverse electrodialysis cell-modified photocatalytic fuel cell for efficient electricity and hydrogen generation from the degradation of refractory organic pollutants. <b>2022</b> , 130443	0
66	Highly Durable Compositionally Variant Bifunctional Tetrametallic NiCoMnFe Phosphide Electrocatalysts Synthesized by a Facile Electrodeposition Method for High-Performance Overall Water Splitting.	1
65	Interference effect of nitrogen-doped CQDs on tailoring nanostructure of CoMoP for improving high-effective water splitting. <b>2023</b> , 438, 141595	0
64	Advanced trifunctional electrodes for 1.5 V-based self-powered aqueous electrochemical energy devices. <b>2022</b> , 11, 374-384	1

- 63 Recent Progress on bulk Fe-based alloy for industrial alkaline water electrolysis. ○
- 62 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. **2023**, 478, 214956 ○
- 61 Electrocatalyst for oxygen evolution reaction and methanol oxidation using surface-oriented stable NiSnO<sub>3</sub> nanospheres anchored g-C<sub>3</sub>N<sub>4</sub> nanosheets. **2023**, 612, 155785 1
- 60 Ultrathin oxygen-containing graphdiyne wrapping CoP for enhanced electrocatalytic hydrogen generation. ○
- 59 Self-Supported Graphene Nanosheet-Based Composites as Binder-Free Electrodes for Advanced Electrochemical Energy Conversion and Storage. **2022**, 5, 1 ○
- 58 Hydrothermally modified ZnO-NiSe heterostructure as promising photoelectrocatalyst in hydrogen evolution reaction. **2022**, ○
- 57 Biomass-derived N/P-doped molybdenum oxy-sulfides grown on Ni foam as low-cost electrocatalysts for hydrogen evolution reaction. ○
- 56 Phase Transformation from Amorphous Ru<sub>x</sub> to Ru-Ru<sub>2</sub>S Hybrid Nanostructure for Efficient Water Splitting in Alkaline Media. ○
- 55 Engineering Active Iron Sites on Nanoporous Bimetal Phosphide/Nitride Heterostructure Array Enabling Robust Overall Water Splitting. 2209465 ○
- 54 Co<sub>3</sub>O<sub>4</sub> Nanowires Decorated with BO<sub>x</sub> Species for Electrocatalytic Oxygen Evolution. **2022**, 5, 18998-19005 ○
- 53 Recent Advances in Transition Metal Tellurides (TMTs) and Phosphides (TMPs) for Hydrogen Evolution Electrocatalysis. **2023**, 13, 113 ○
- 52 Constructing porous RuCu nanotubes with highly efficient alloy phase for water splitting in different pH conditions. **2023**, 456, 141148 1
- 51 Pd-based Metallic Glasses as Promising Materials for Hydrogen Energy Applications. ○
- 50 Electronic Structure Modulation of Nickel Sites by Cationic Heterostructures to Optimize Ethanol Electrooxidation Activity in Alkaline Solution. 2207086 ○
- 49 Anodic Etching of Amorphous Ni 81 P 19 Alloy in Hot Concentrated Chloride Solution for Enhanced Hydrogen Evolution in Alkaline Water Electrolysis. ○
- 48 Self-supporting NiCo<sub>2</sub>O<sub>4</sub> nanoneedle arrays on atomic-layer-deposited CoO nanofilms on nickel foam for efficient and stable hydrogen evolution reaction. **2023**, 289, 116255 ○
- 47 Facile hydrothermal synthesis of combined MoSe<sub>2</sub>PS nanostructures on nickel foam with superior electrocatalytic properties for hydrogen evolution reaction. **2022**, ○
- 46 Giant polyoxomolybdate clusters -derived bimetallic Ni/Mo<sub>2</sub>C catalyst for electrochemical hydrogen evolution. **2022**, ○

- 45 Amorphous Co-P Film: an Efficient Electrocatalyst for Hydrogen Evolution Reaction in Alkaline Seawater. ○
- 44 Effectively enhanced activity for overall water splitting through interfacially strong Pt<sup>δ+</sup> tetrahedral coupling interaction on CoO/CoP heterostructure hollow-nanoneedles. **2023**, 11, 3136-3147 ○
- 43 Influence of Element Doping and Surface Oxidation on CoP for Overall Water Splitting: A First-Principles Study. **2023**, 127, 1808-1821 ○
- 42 Inverse Intra-lattice Charge transfer in nickel-molybdenum dual electrocatalysts regulated by under-coordinating the molybdenum center. **2023**, 14, 3056-3069 ○
- 41 Comprehensive overview of polyoxometalates for electrocatalytic hydrogen evolution reaction. **2023**, 482, 215058 ○
- 40 Electronic structure reconfiguration of nickel-cobalt layered double hydroxide nanoflakes via engineered heteroatom and oxygen-vacancies defect for efficient electrochemical water splitting. **2023**, 463, 142396 ○
- 39 CoS<sub>2</sub> nanoparticles grown on Mo<sub>2</sub>TiC<sub>2</sub>T<sub>x</sub> as an efficient electrocatalyst for hydrogen evolution reaction. **2023**, 135, 109877 ○
- 38 Ru branched nanostructure on porous carbon nanosheet for superior hydrogen evolution over a wide pH range. **2023**, 947, 169393 ○
- 37 Hierarchical core-shell structural Ni<sub>2</sub>P/NiMoO<sub>4</sub>@CoP/FeP<sub>2</sub> nanorods as difunctional electrocatalysts for efficient overall water splitting. **2023**, 945, 169357 ○
- 36 Chemical etching and phase transformation of Nickel-Cobalt Prussian blue analogs for improved solar-driven water-splitting applications. **2023**, 641, 861-874 ○
- 35 Pd quantum dot induced changes in the photocatalytic, electrocatalytic, photoelectrochemical and thermoelectric performances of galvanically synthesized Sb<sub>2</sub>Se<sub>3</sub> thin films. **2023**, 178, 111333 ○
- 34 Diverse carbonous nanocomposites of Ce<sub>2</sub>Y<sub>2</sub>O<sub>7</sub> for boosting hydrogen storage capacity; Synthesis, characterization and electrochemical studies. **2023**, 63, 107032 ○
- 33 Interface-engineered Ni/CePO<sub>4</sub> heterostructures for efficient electro-/photo-catalytic hydrogen evolution. **2023**, 344, 127971 ○
- 32 Bifunctional Co<sub>3</sub>S<sub>4</sub> Nanowires for Robust Sulfion Oxidation and Hydrogen Generation with Low Power Consumption. **2023**, 33, 2212183 ○
- 31 One-pot synthesis of-carbon-supported MoO<sub>2</sub> nanoparticles for efficient oxygen evolution reaction. **2023**, 298, 127432 ○
- 30 Monometallic interphasic synergy via nano-hetero-interfacing for hydrogen evolution in alkaline electrolytes. **2023**, 14, ○
- 29 Aqueous pulsed electrochemistry enables one-pot cascade synthesis by reductive hydrogenation and oxidation-formed Cu(II) Catalyzed C-N Coupling. ○
- 28 Ion exchange synthesis of Fe-doped clustered CoP nanowires as superior electrocatalyst for hydrogen evolution reaction. **2023**, ○

- 27 Recent Progress on Metal Catalysts for Electrochemical Hydrogen Evolution. **2023**, 147-180 ○
- 26 High-Performance Bifunctional Porous Iron-Rich Phosphide/Nickel Nitride Heterostructures for Alkaline Seawater Splitting. 2207082 ○
- 25 Mechanistic insight into hydrothermally prepared molybdenum-based electrocatalyst for overall water splitting. **2023**, 445, 142050 ○
- 24 Pd oxide nanoparticles enhanced biomass driven N-doped carbon for hydrogen evolution reaction. **2023**, 815, 140372 ○
- 23 Electrochemical Methods and Materials for Transition Metal-Based Electrocatalysts in Alkaline and Acidic Media. 219-248 ○
- 22 Distorted octahedral cobalt(ii)β-cyclpyrazolone complex with a tunable lattice-strain structure is an efficient electrocatalyst for overall water splitting. **2023**, 13, 2184-2200 ○
- 21 A review of electrochemical glucose sensing based on transition metal phosphides. **2023**, 133, 070702 ○
- 20 Carbon Confined Mesoporous Catkin-like SnPS<sub>3</sub> Nanostructure for Lithium Storage with Great Superiority. **2023**, 5, 928-935 1
- 19 Ensemble Effect of Ruthenium Single-Atom and Nanoparticle Catalysts for Efficient Hydrogen Evolution in Neutral Media. ○
- 18 3D-Printed Hierarchically Micro/Nano-structured NiFe Catalysts for the Stable and Efficient Oxygen Evolution Reaction. **2023**, 6, 4602-4609 ○
- 17 Heterogeneous Cu<sub>1.92</sub>S@Cu<sub>3</sub>P/Ni<sub>2</sub>P Nanospheres on Nickel Foam for Effective Electrocatalytic Oxygen Evolution Reaction\*\*. ○
- 16 Unveiling the role of Zn dopants in NiFe phosphide nanosheet for oxygen evolution reaction. **2023**, ○
- 15 Recent Development of Self-Supported Alkaline Hydrogen Evolution Reaction Electrocatalysts for Industrial Electrolyzer. 2200178 ○
- 14 Multi-layer Architecture of Novel Sea Urchin-like Co-Hopite to Boosting Overall Alkaline Water Splitting. 2202349 ○
- 13 Enhanced alkaline water splitting on cobalt phosphide sites by 4d metal (Rh)-doping method. **2023**, ○
- 12 Nanocomposite of nickel benzene-1,3,5-tricarboxylic acid metal organic framework with multiwalled carbon nanotubes: A robust and effective electrocatalyst for oxygen evolution reaction in water splitting. ○
- 11 Nanostructured Ternary Nickel-Based Mixed Anionic (Telluro)-Selenide as a Superior Catalyst for Oxygen Evolution Reaction. ○
- 10 Bioinspired Dynamic Antifouling of Oil-Water Separation Membrane by Bubble-Mediated Shape Morphing. ○

- 9 N-doped carbon wrapped CoFe alloy nanoparticles with MoS<sub>2</sub> nanosheets as electrocatalyst for hydrogen and oxygen evolution reactions. **2023**, ○
- 8 Study of iron group transition metal phosphides (M<sub>2</sub>P, M ∈ [Ni, Co, Fe]) for boosting photocatalytic H<sub>2</sub> production. **2023**, 316, 123805 ○
- 7 Modulation of electronic density states of carbon atom via multifaceted Cu doped Co<sub>2</sub>P particle for robust and efficient electrocatalytic hydrogen evolution reaction in aqueous acidic medium. **2023**, 455, 142378 ○
- 6 Duplex Interpenetrating-Phase FeNiZn and FeNi<sub>3</sub> Heterostructure with Low-Gibbs Free Energy Interface Coupling for Highly Efficient Overall Water Splitting. **2023**, 15, ○
- 5 Synergistic Tuning of CoO/CoP Heterojunction Nanowire Arrays as Efficient Bifunctional Catalysts for Alkaline Overall Water Splitting. ○
- 4 Design of high-performance ion-doped CoP systems for hydrogen evolution: From multi-level screening calculations to experiment. **2023**, ○
- 3 Recent Advances in Water-Splitting Electrocatalysts Based on Electrodeposition. **2023**, 16, 3044 ○
- 2 TiO<sub>2</sub> Nanotubes modified with Cobalt Oxyphosphide Spheres for Efficient Electrocatalytic Hydrogen Evolution Reaction in Alkaline Medium. **2023**, 142436 ○
- 1 Electroless deposition of Ni-W-P films as binder-free, efficient and durable electrode for electrochemical hydrogen evolution. **2023**, 166, 112318 ○