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**Core-Shell ZIF-8@ZIF-67-Derived CoP
Nanoparticle-Embedded N-Doped Carbon Nanotube
Hollow Polyhedron for Efficient Overall Water Splitting**

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1316	Cobalt layered double hydroxides derived CoP/CoP hybrids for electrocatalytic overall water splitting. 2018 , 10, 21019-21024	54
1315	Hollow cobalt phosphide octahedral pre-catalysts with exceptionally high intrinsic catalytic activity for electro-oxidation of water and methanol. 2018 , 6, 20646-20652	66
1314	Energy-efficient 1.67 V single- and 0.90 V dual-electrolyte based overall water-electrolysis devices enabled by a ZIF-L derived acidBase bifunctional cobalt phosphide nanoarray. 2018 , 6, 24277-24284	38
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1312	Preparation of Hollow Nitrogen Doped Carbon via Stresses Induced Orientation Contraction. 2018 , 14, e1804183	47

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1310	Toward Bifunctional Overall Water Splitting Electrocatalyst: General Preparation of Transition Metal Phosphide Nanoparticles Decorated N-Doped Porous Carbon Spheres. 2018 , 10, 44201-44208	51
1309	MOF-Derived CoPx Nanoparticles Embedded in Nitrogen-Doped Porous Carbon Polyhedrons for Nanomolar Sensing of p-Nitrophenol. 2018 , 1, 5843-5853	35
1308	Phosphorus-Based Mesoporous Materials for Energy Storage and Conversion. 2018 , 2, 2289-2306	46
1307	A Janus Nickel Cobalt Phosphide Catalyst for High-Efficiency Neutral-pH Water Splitting. 2018 , 57, 15445-15448	982
1306	Interfacial Electron Transfer of Ni P-NiP Polymorphs Inducing Enhanced Electrochemical Properties. 2018 , 30, e1803590	200
1305	A Janus Nickel Cobalt Phosphide Catalyst for High-Efficiency Neutral-pH Water Splitting. 2018 , 130, 15671-15674	75
1304	Electrochemical Energy Conversion and Storage with Zeolitic Imidazolate Framework Derived Materials: A Perspective. 2018 , 5, 3571-3588	31
1303	Hollow Porous Heterometallic Phosphide Nanocubes for Enhanced Electrochemical Water Splitting. 2018 , 14, e1802442	104
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1301	A MOFs plus MOFs strategy toward CoMo2N tubes for efficient electrocatalytic overall water splitting. 2018 , 6, 20100-20109	75
1300	Hierarchically structured CoN/Cu3N nanotube array supported on copper foam as an efficient bifunctional electrocatalyst for overall water splitting. 2018 , 5, 2906-2913	17
1299	Individual High-Quality N-Doped Carbon Nanotubes Embedded with Nonprecious Metal Nanoparticles toward Electrochemical Reaction. 2018 , 10, 39757-39767	25
1298	Three-Dimensional N-doped Porous Carbon Derived from Monosodium Glutamate for Capacitive Deionization and the Oxygen Reduction Reaction. 2018 , 5, 3873-3880	9
1297	Constructing NiCo/FeO Heteroparticles within MOF-74 for Efficient Oxygen Evolution Reactions. <i>Journal of the American Chemical Society</i> , 2018 , 140, 15336-15341	16.4 193
1296	Large-Scale Synthesis of Co/CoOx Encapsulated in Nitrogen-, Oxygen-, and Sulfur-Tridoped Three-Dimensional Porous Carbon as Efficient Electrocatalysts for Hydrogen Evolution Reaction. 2018 , 1, 6250-6259	13
1295	MOF-derived Mn doped porous CoP nanosheets as efficient and stable bifunctional electrocatalysts for water splitting. 2018 , 47, 14679-14685	66
1294	Rhombic porous CoP2 nanowire arrays synthesized by alkaline etching as highly active hydrogen-evolution-reaction electrocatalysts. 2018 , 6, 19038-19046	50

1293	An Intriguing Pea-Like Nanostructure of Cobalt Phosphide on Molybdenum Carbide Incorporated Nitrogen-Doped Carbon Nanosheets for Efficient Electrochemical Water Splitting. 2018 , 11, 3956-3964	40
1292	Surface reconstruction engineering of cobalt phosphides by Ru inducement to form hollow Ru-RuPx-CoxP pre-electrocatalysts with accelerated oxygen evolution reaction. 2018 , 53, 270-276	102
1291	Three-Dimensional Hierarchical Multimetal-LDH Nanoflakes and Their Derived Spinel Oxides for Efficient Oxygen Evolution. 2018 , 1, 4998-5007	6
1290	Sunlight-driven water-splitting using two-dimensional carbon based semiconductors. 2018 , 6, 12876-12931	159
1289	Ni2P@carbon core-shell nanorod array derived from ZIF-67-Ni: Effect of phosphorization temperature on morphology, structure and hydrogen evolution reaction performance. 2018 , 457, 933-941	29
1288	Dual-metal zeolitic imidazolate frameworks and their derived nanoporous carbons for multiple environmental and electrochemical applications. 2018 , 351, 641-649	30
1287	Metal-organic frameworks derived hollow NiS2 spheres encased in graphene layers for enhanced sodium-ion storage. 2018 , 6, 14077-14082	45
1286	Reduced Graphene Oxide-Supported [email-protected] Porous Carbon Nano-octahedrons as High-Performance Electrocatalysts for Hydrogen Evolution. 2018 , 6, 10252-10259	30
1285	Assembling Ni-Co phosphides/carbon hollow nanocages and nanosheets with carbon nanotubes into a hierarchical necklace-like nanohybrid for electrocatalytic oxygen evolution reaction. 2018 , 10, 13555-13564	58
1284	Electronic Structure Evolution in Tricomponent Metal Phosphides with Reduced Activation Energy for Efficient Electrocatalytic Oxygen Evolution. 2018 , 14, e1801756	52
1283	PdCu nanoalloy immobilized in ZIF-derived N-doped carbon/graphene nanosheets: Alloying effect on catalysis. 2018 , 353, 311-318	37
1282	Construction of Single-Crystalline Prussian Blue Analog Hollow Nanostructures with Tailorable Topologies. 2018 , 4, 1967-1982	91
1281	Microporosity-Controlled Synthesis of Heteroatom Codoped Carbon Nanocages by Wrap-Bake-Sublime Approach for Flexible All-Solid-State-Supercapacitors. 2018 , 28, 1803786	63
1280	Metal-organic-framework template-derived hierarchical porous CoP arrays for energy-saving overall water splitting. 2018 , 284, 504-512	42
1279	Metal/covalent-organic frameworks-based electrocatalysts for water splitting. 2018 , 6, 15905-15926	180
1278	Cu-Doped CoP Nanorod Arrays: Efficient and Durable Hydrogen Evolution Reaction Electrocatalysts at All pH Values. 2018 , 1, 3835-3842	41
1277	Multi-Level Architecture Optimization of MOF-Templated Co-Based Nanoparticles Embedded in Hollow N-Doped Carbon Polyhedra for Efficient OER and ORR. 2018 , 8, 7879-7888	247
1276	Metallic and superhydrophilic nickel cobalt diselenide nanosheets electrodeposited on carbon cloth as a bifunctional electrocatalyst. 2018 , 6, 17353-17360	70

1275	Three-Dimensional Hierarchical Nickel Cobalt Phosphide Nanoflowers as an Efficient Electrocatalyst for the Hydrogen Evolution Reaction under Both Acidic and Alkaline Conditions. 2018 , 1, 3742-3751	20
1274	Formation of Yolk-Shelled Nickel-Cobalt Selenide Dodecahedral Nanocages from Metal-Organic Frameworks for Efficient Hydrogen and Oxygen Evolution. 2018 , 6, 10952-10959	80
1273	Tunable CoFe-based active sites on 3D heteroatom doped graphene aerogel electrocatalysts via annealing gas regulation for efficient water splitting. 2018 , 6, 15728-15737	44
1272	Surface engineering of nickel selenide for an enhanced intrinsic overall water splitting ability. 2018 , 2, 1725-1731	30
1271	MOF-Derived Hollow CoS Decorated with CeOx Nanoparticles for Boosting Oxygen Evolution Reaction Electrocatalysis. 2018 , 130, 8790-8794	49
1270	Co@C Nanoparticle Embedded Hierarchically Porous N-Doped Hollow Carbon for Efficient Oxygen Reduction. 2018 , 24, 10178	32
1269	A general ligand-assisted self-assembly approach to crystalline mesoporous metal oxides. 2018 , 10, 800-809	30
1268	Rationally Dispersed Molybdenum Phosphide on Carbon Nanotubes for the Hydrogen Evolution Reaction. 2018 , 6, 11414-11423	31
1267	Co-N-C catalysts synthesized by pyrolysis of Co-based deep eutectic solvents for aerobic oxidation of alcohols. 2018 , 42, 15871-15878	9
1266	Highly active and stable electrocatalyst of Ni ₂ P nanoparticles supported on 3D ordered macro-/mesoporous Co-N-doped carbon for acidic hydrogen evolution reaction. 2018 , 6, 12751-12758	31
1265	Three-dimensional-networked Ni ₂ P/Ni ₃ S ₂ heteronanoflake arrays for highly enhanced electrochemical overall-water-splitting activity. 2018 , 51, 26-36	249
1264	Transition Metal Induced the Contraction of Tungsten Carbide Lattice as Superior Hydrogen Evolution Reaction Catalyst. 2018 , 10, 22094-22101	45
1263	Electrochemical Hydrogen Evolution Reaction Efficiently Catalyzed by Ru P Nanoparticles. 2018 , 11, 2724-2729	71
1262	Secondary-Component Incorporated Hollow MOFs and Derivatives for Catalytic and Energy-Related Applications. 2019 , 31, e1800743	88
1261	Functionalization of Hollow Nanomaterials for Catalytic Applications: Nanoreactor Construction. 2019 , 31, e1800426	147
1260	Recent Approaches to Design Electrocatalysts Based on Metal-Organic Frameworks and Their Derivatives. 2019 , 14, 3474-3501	25
1259	Double functionalization of N-doped carbon carved hollow nanocubes with mixed metal phosphides as efficient bifunctional catalysts for electrochemical overall water splitting. 2019 , 65, 103995	83
1258	N-enriched porous carbon encapsulated bimetallic phosphides with hierarchical structure derived from controlled electrodepositing multilayer ZIFs for electrochemical overall water splitting. 2019 , 259, 118053	34

1257	MoS ₂ /Co ₃ S ₄ hollow polyhedrons derived from ZIF-67 towards hydrogen evolution reaction and hydrodesulfurization. 2019 , 44, 24246-24255	11
1256	Morphological and Electronic Tuning of Ni ₂ P through Iron Doping toward Highly Efficient Water Splitting. 2019 , 9, 8882-8892	137
1255	Carbon-incorporated porous honeycomb NiCoFe phosphide nanospheres derived from a MOF precursor for overall water splitting. 2019 , 55, 10896-10899	48
1254	Core-shell-type ZIF-8@ZIF-67@POM hybrids as efficient electrocatalysts for the oxygen evolution reaction. 2019 , 6, 2514-2520	50
1253	A KCl-assisted pyrolysis strategy to fabricate nitrogen-doped carbon nanotube hollow polyhedra for efficient bifunctional oxygen electrocatalysts. 2019 , 7, 20310-20316	23
1252	CoMoO ₄ decorated on the surface of Co,N-doped carbon polyhedrons as the support of platinum with excellent electrocatalytic activity and durability. 2019 , 277, 751-760	6
1251	A biomimetic nanoleaf electrocatalyst for robust oxygen evolution reaction. 2019 , 259, 118017	28
1250	Uniform copper-cobalt phosphides embedded in N-doped carbon frameworks as efficient bifunctional oxygen electrocatalysts for rechargeable Zn-air batteries. 2019 , 11, 17384-17395	22
1249	Hierarchical Ni-Co-O-C-P hollow tetragonal microtubes grown on Ni foam for efficient overall water splitting in alkaline media.. 2019 , 9, 26051-26060	1
1248	Boosted Interfacial Polarization from Multishell TiO @Fe O @PPy Heterojunction for Enhanced Microwave Absorption. 2019 , 15, e1902885	167
1247	Brain-Coral-Like Mesoporous Hollow CoS ₂ @N-Doped Graphitic Carbon Nanoshells as Efficient Sulfur Reservoirs for Lithium-Sulfur Batteries. 2019 , 29, 1903712	75
1246	Self-Templated Conversion of Metallogel into Heterostructured TMP@Carbon Quasiasaerogels Boosting Bifunctional Electrocatalysis. 2019 , 29, 1903660	66
1245	Co and Fe Codoped WO ₃ as Alkaline-Solution-Available Oxygen Evolution Reaction Catalyst to Construct Photovoltaic Water Splitting System with Solar-To-Hydrogen Efficiency of 16.9. 2019 , 6, 1900465	37
1244	Hollow nickel-cobalt-manganese hydroxide polyhedra via MOF templates for high-performance quasi-solid-state supercapacitor. 2019 , 378, 122210	65
1243	Mn-Doped Co ₃ O ₄ Dodecahedron as a Bifunctional Electrocatalyst for Highly Efficient Zn-Air Batteries. 2019 , 7, 14180-14188	53
1242	Core-shell FeCo Prussian Blue Analogue/Ni(OH) ₂ Derived Porous Ternary Transition Metal Phosphides Connected by Graphene for Effectively Electrocatalytic Water Splitting. 2019 , 7, 13523-13531	24
1241	Supporting Ultrathin ZnIn ₂ S ₄ Nanosheets on Co/N-Doped Graphitic Carbon Nanocages for Efficient Photocatalytic H ₂ Generation. 2019 , 31, e1903404	172
1240	Novel ZnCdS Quantum Dots Engineering for Enhanced Visible-Light-Driven Hydrogen Evolution. 2019 , 7, 13805-13814	38

1239	Manipulation of 2D carbon nanoplates with a core-shell structure for high-performance potassium-ion batteries. 2019 , 7, 19929-19938	29
1238	Fabrication of hierarchical BiOCl-CoP heterojunction on magnetic mesoporous silica microspheres with double-cavity structure for effective photocatalysis. 2019 , 491, 395-404	12
1237	Effective Electrocatalytic Hydrogen Evolution in Neutral Medium Based on 2D MoP/MoS Heterostructure Nanosheets. 2019 , 11, 25986-25995	56
1236	Regulating the electron density of dual transition metal sulfide heterostructures for highly efficient hydrogen evolution in alkaline electrolytes. 2019 , 11, 14016-14023	18
1235	A highly efficient porous rod-like Ce-doped ZnO photocatalyst for the degradation of dye contaminants in water. 2019 , 10, 1157-1165	19
1234	Interior Supported Hierarchical TiO ₂ @Co ₃ O ₄ Derived from MOF-on-MOF Architecture with Enhanced Electrochemical Properties for Lithium Storage. 2019 , 6, 3657-3666	16
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1232	Tungsten-Doped CoP Nanoneedle Arrays Grown on Carbon Cloth as Efficient Bifunctional Electrocatalysts for Overall Water Splitting. 2019 , 6, 5229-5236	23
1231	Hollow Cobalt Phosphide with N-Doped Carbon Skeleton as Bifunctional Electrocatalyst for Overall Water Splitting. 2019 , 58, 14652-14659	27
1230	Self-crosslinking carbon dots loaded ruthenium dots as an efficient and super-stable hydrogen production electrocatalyst at all pH values. 2019 , 65, 104023	80
1229	CoZnMoO/C Nanosheet Composite: Rational Construction via a One-Stone-Three-Birds Strategy and Superior Lithium Storage Performances for Lithium-Ion Batteries. 2019 , 11, 42139-42148	20
1228	Nanostructured Carbon Based Heterogeneous Electrocatalysts for Oxygen Evolution Reaction in Alkaline Media. 2019 , 11, 5855-5874	49
1227	Rapid, High-Temperature, In Situ Microwave Synthesis of Bulk Nanocatalysts. 2019 , 15, e1904881	15
1226	Engineering Bimetal Synergistic Electrocatalysts Based on Metal-Organic Frameworks for Efficient Oxygen Evolution. 2019 , 15, e1903410	82
1225	Hollow Spherical (Co, Zn)/N, S-Doped Carbons: Efficient Catalysts for Oxygen Reduction in Both Alkaline and Acidic Media. 2019 , 7, 18912-18925	21
1224	Highly purified dicobalt phosphide nanodendrites on exfoliated graphene: In situ synthesis and as robust bifunctional electrocatalysts for overall water splitting. 2019 , 14, 100336	13
1223	Triple-Shelled Co-VSe Hollow Nanocages as Superior Bifunctional Electrode Materials for Efficient Pt-Free Dye-Sensitized Solar Cells and Hydrogen Evolution Reactions. 2019 , 11, 43278-43286	14
1222	Glycine-Induced Electrodeposition of Nanostructured Cobalt Hydroxide: A Bifunctional Catalyst for Overall Water Splitting. 2019 , 12, 5300	3

1221	Boosting the activity of Prussian-blue analogue as efficient electrocatalyst for water and urea oxidation. 2019 , 9, 15965	23
1220	Self-Supportive Mesoporous Ni/Co/Fe Phosphosulfide Nanorods Derived from Novel Hydrothermal Electrodeposition as a Highly Efficient Electrocatalyst for Overall Water Splitting. 2019 , 15, e1905201	47
1219	Facile fabrication of ultrafine Pt nanoparticles supported on 3D macro-/oversized mesoporous N-doped carbon for efficient methanol oxidation. 2019 , 44, 30388-30400	15
1218	Co ₃ O ₄ nanoparticles embedded in 1D porous N-doped carbon nanofibers derived from ZIFs for high-capacity sodium-ion batteries. 2019 , 177, 107400	15
1217	Amorphous Fe-Ni-P-B-O Nanocages as Efficient Electrocatalysts for Oxygen Evolution Reaction. 2019 , 13, 12969-12979	80
1216	Superb water splitting activity of the electrocatalyst FeCo(PO) designed with computation aid. 2019 , 10, 5195	65
1215	Electrochemical Sensing Based on Nitrogen-Doped Hollow Carbon Nanospheres Wrapped with MoS ₂ Nanosheets. 2019 , 166, B1392-B1399	7
1214	Atomic Layer Deposition Inducing Integration of Co, N Codoped Carbon Sphere on 3D Foam with Hierarchically Porous Structures for Flexible Hydrogen Producing Device. 2019 , 29, 1906365	21
1213	Atomic- and Molecular-Level Design of Functional Metal-Organic Frameworks (MOFs) and Derivatives for Energy and Environmental Applications. 2019 , 6, 1901129	77
1212	Nuclear receptor corepressor 1 represses cardiac hypertrophy. 2019 , 11, e9127	16
1211	Augmenting Intrinsic Fenton-Like Activities of MOF-Derived Catalysts via N-Molecule-Assisted Self-catalyzed Carbonization. 2019 , 11, 87	37
1210	Electrochemically engineering defect-rich nickel-iron layered double hydroxides as a whole water splitting electrocatalyst. 2019 , 44, 23689-23698	11
1209	Model Reduction of A Real Time Multidisciplinary Mechatronic System. 2019 ,	2
1208	C-CoP hollow microporous nanocages based on phosphating regulation: a high-performance bifunctional electrocatalyst for overall water splitting. 2019 , 11, 17084-17092	30
1207	Tungsten phosphide (WP) nanoparticles with tunable crystallinity, W vacancies, and electronic structures for hydrogen production. 2019 , 323, 134798	18
1206	Carbon shell encapsulated cobalt phosphide nanoparticles embedded in carbon nanotubes supported on carbon nanofibers: A promising anode for potassium ion battery. 2019 , 556, 432-440	39
1205	A "MOF-Protective-Pyrolysis" Strategy for the Preparation of Fe-N-C Catalysts and the Role of Fe, N, and C in the Oxygen Reduction Reaction in Acidic Medium. 2019 , 11, 35755-35763	36
1204	Microwave-assisted synthesis of carbon nanotubes threaded core-shell CoP /Co-N -C@CNT and its performance as an efficient bifunctional oxygen catalyst for the rechargeable zinc-air battery. 2019 , 9, 100132	11

1203	Hetero-coupling of a carbonate hydroxide and sulfide for efficient and robust water oxidation. 2019 , 7, 21959-21965	11
1202	MoS ₂ -nanosheet-decorated C-N/Co ₄ S ₃ nanorod hybrid as a bifunctional electrocatalyst. 2019 , 106, 106515	7
1201	Trifunctional Fishbone-like PtCo/Ir Enables High-Performance Zinc-Air Batteries to Drive the Water-Splitting Catalysis. 2019 , 31, 8136-8144	37
1200	Well-defined CoP/Ni ₂ P nanohybrids encapsulated in a nitrogen-doped carbon matrix as advanced multifunctional electrocatalysts for efficient overall water splitting and zinc-air batteries. 2019 , 3, 2428-2436	32
1199	Template-Directed Bifunctional Dodecahedral CoP/CN@MoS Electro-catalyst for High Efficient Water Splitting. 2019 , 11, 36649-36657	45
1198	N, P-co-doped carbon coupled with CoP as superior electrocatalysts for hydrogen evolution reaction and overall water splitting. 2019 , 44, 24342-24352	19
1197	In Situ Derived Electrocatalysts from Fe ₃ O ₄ Sulfides with Enhanced Activity toward Oxygen Evolution. 2019 , 58, 18976-18985	17
1196	An acid-responsive all-in-one signal amplification strategy for the ultrasensitive prostate-specific antigen detection. 2019 , 43, 15910-15914	1
1195	Nitrogen-Rich Porous Carbon-Stabilized Ni ₃ Co Nanoparticles for the Hydrogenation of Quinolines. 2019 , 2, 6763-6768	13
1194	Electroactive metal-organic framework composites: Design and biosensing application. 2019 , 146, 111743	41
1193	Three-Dimensional Hierarchical Flowerlike FeP Wrapped with N-Doped Carbon Possessing Improved Li Diffusion Kinetics and Cyclability for Lithium-Ion Batteries. 2019 , 11, 39961-39969	26
1192	Zeolitic-imidazolate-framework-derived Co@Co ₃ O ₄ embedded into iron, nitrogen, sulfur Co-doped reduced graphene oxide as efficient electrocatalysts for overall water splitting and zinc-air batteries. 2019 , 323, 134821	22
1191	A simple strategy to construct cobalt oxide-based high-efficiency electrocatalysts with oxygen vacancies and heterojunctions. 2019 , 326, 134979	20
1190	From ZIF nanoparticles to hierarchically porous carbon: toward very high surface area and high-performance supercapacitor electrode materials. 2019 , 6, 32-39	13
1189	Well-defined cobalt sulfide nanoparticles locked in 3D hollow nitrogen-doped carbon shells for superior lithium and sodium storage. 2019 , 18, 114-124	33
1188	Smart Yolk/Shell Hybrids as Efficient Electrocatalysts for the Oxygen Evolution Reaction. 2019 , 7, 5027-5033	72
1187	Cobalt Oxide Nanoparticles Embedded in N-Doped Porous Carbon as an Efficient Electrode for Supercapacitor. 2019 , 7, 1800963	19
1186	Formation of CoTe ₂ embedded in nitrogen-doped carbon nanotubes-grafted polyhedrons with boosted electrocatalytic properties in dye-sensitized solar cells. 2019 , 476, 769-777	21

1185	Polydopamine-assisted construction of cobalt phosphide encapsulated in N-doped carbon porous polyhedrons for enhanced overall water splitting. 2019 , 145, 694-700	46
1184	Heterogeneous NiSe ₂ /Ni Ultrafine Nanoparticles Embedded into an N,S-Codoped Carbon Framework for pH-Universal Hydrogen Evolution Reaction. 2019 , 7, 4119-4127	20
1183	Hollow core-shell NiCo ₂ S ₄ @MoS ₂ dodecahedrons with enhanced performance for supercapacitors and hydrogen evolution reaction. 2019 , 43, 3601-3608	46
1182	Atomic Heterointerface-Induced Local Charge Distribution and Enhanced Water Adsorption Behavior in a Cobalt Phosphide Electrocatalyst for Self-Powered Highly Efficient Overall Water Splitting. 2019 , 11, 9023-9032	23
1181	CoP-Doped MOF-Based Electrocatalyst for pH-Universal Hydrogen Evolution Reaction. 2019 , 58, 4679-4684	348
1180	Cobalt oxide doped with titanium dioxide and embedded with carbon nanotubes and graphene-like nanosheets for efficient trifunctional electrocatalyst of hydrogen evolution, oxygen reduction, and oxygen evolution reaction. 2019 , 414, 333-344	31
1179	Growth of ZIF-8 on molecularly ordered 2-methylimidazole/single-walled carbon nanotubes to form highly porous, electrically conductive composites. 2019 , 10, 737-742	24
1178	Hierarchical Hollow Nanocages Derived from Polymer/Cobalt Complexes for Electrochemical Overall Water Splitting. 2019 , 7, 10912-10919	18
1177	Rational design of positive-hexagon-shaped two-dimensional ZIF-derived materials as improved bifunctional oxygen electrocatalysts for use as long-lasting rechargeable Zn/Air batteries. 2019 , 256, 117871	40
1176	Porous Organic Polymer-Driven Evolution of High-Performance Cobalt Phosphide Hybrid Nanosheets as Vanillin Hydrodeoxygenation Catalyst. 2019 , 11, 24140-24153	35
1175	Nickel Nitride Particles Supported on 2D Activated Graphene-Black Phosphorus Heterostructure: An Efficient Electrocatalyst for the Oxygen Evolution Reaction. 2019 , 15, e1901530	46
1174	Self-supported bimetallic phosphide-carbon nanostructures derived from metal-organic frameworks as bifunctional catalysts for highly efficient water splitting. 2019 , 318, 244-251	24
1173	Self-ZIF template-directed synthesis of a CoS nanoflake array as a Janus electrocatalyst for overall water splitting. 2019 , 6, 2090-2095	23
1172	ZIF-67 derived hierarchical hollow sphere-like CoNiFe phosphide for enhanced performances in oxygen evolution reaction and energy storage. 2019 , 318, 883-891	23
1171	Metal-free multiporous carbon for electrochemical energy storage and electrocatalysis applications. 2019 , 43, 11653-11659	15
1170	Heterogeneous CoFe ₁₀ O ₈ FeS ₈ nanoparticles embedded in CNT networks as highly efficient and stable electrocatalysts for oxygen evolution reaction. 2019 , 433, 126688	61
1169	Polydopamine coated prussian blue analogue derived hollow carbon nanoboxes with FeP encapsulated for hydrogen evolution. 2019 , 152, 16-23	27
1168	Transition metal electrocatalysts encapsulated into N-doped carbon nanotubes on reduced graphene oxide nanosheets: efficient water splitting through synergistic effects. 2019 , 7, 15145-15155	42

1167	Hierarchical nanotubes constructed from CoSe ₂ nanorods with an oxygen-rich surface for an efficient oxygen evolution reaction. 2019 , 7, 15073-15078	32
1166	Hard-templated preparation of mesoporous cobalt phosphide as an oxygen evolution electrocatalyst. 2019 , 104, 106476	12
1165	Design of Heterostructured Hollow Photocatalysts for Solar-to-Chemical Energy Conversion. 2019 , 31, e1900281	191
1164	Ultrathin-Carbon-Layer-Protected PtCu Nanoparticles Encapsulated in Carbon Capsules: A Structure Engineering of the Anode Electrocatalyst for Direct Formic Acid Fuel Cells. 2019 , 36, 1900100	4
1163	In situ metal-organic framework-derived c-doped Ni ₃ S ₄ /Ni ₂ P hybrid co-catalysts for photocatalytic H ₂ production over g-C ₃ N ₄ via dye sensitization. 2019 , 44, 16336-16347	19
1162	A universal strategy for carbon-based ORR-active electrocatalyst: One porogen, two pore-forming mechanisms, three pore types. 2019 , 62, 628-637	62
1161	FeNi-Based Coordination Crystal Directly Serving as Efficient Oxygen Evolution Reaction Catalyst and Its Density Functional Theory Insight on the Active Site Change Mechanism. 2019 , 11, 20778-20787	20
1160	Efficient platinum harvesting of MOF-derived N-doped carbon through cathodic cyclic voltammetry for hydrogen evolution. 2019 , 317, 173-181	8
1159	Scalable synthesis of self-assembled bimetallic phosphide/N-doped graphene nanoflakes as an efficient electrocatalyst for overall water splitting. 2019 , 11, 12837-12845	38
1158	Heteroatom-doped nanoporous carbon initiated from bimetallic molecular framework micro-rods for supercapacitor electrodes.. 2019 , 9, 17521-17529	3
1157	Co Nanoislands Rooted on Co-N-C Nanosheets as Efficient Oxygen Electrocatalyst for Zn-Air Batteries. 2019 , 31, e1901666	232
1156	Ultrastable and efficient H ₂ production via membrane-free hybrid water electrolysis over a bifunctional catalyst of hierarchical MoNi alloy nanoparticles. 2019 , 7, 16501-16507	20
1155	Ultrathin nickel-cobalt inorganic-organic hydroxide hybrid nanobelts as highly efficient electrocatalysts for oxygen evolution reaction. 2019 , 318, 966-976	12
1154	Enhanced electrochemical properties of cellular CoPS@C nanocomposites for HER, OER and Li-ion batteries.. 2019 , 9, 14859-14867	7
1153	Graphdiyne and its Assembly Architectures: Synthesis, Functionalization, and Applications. 2019 , 31, e1803101	133
1152	Rationally engineered active sites for efficient and durable hydrogen generation. 2019 , 10, 2281	34
1151	Point-Defect-Rich Carbon Sheets as the High-Activity Catalyst Toward Oxygen Reduction and Hydrogen Evolution. 2019 , 9, 386	4
1150	A facile and controllable, deep eutectic solvent aided strategy for the synthesis of graphene encapsulated metal phosphides for enhanced electrocatalytic overall water splitting. 2019 , 7, 13455-13459	17

1149	Enhancing Catalytic Activity of Titanium Oxide in Lithium-Sulfur Batteries by Band Engineering. 2019 , 9, 1900953	210
1148	Enhanced the Hydrogen Evolution Performance by Ruthenium Nanoparticles Doped into Cobalt Phosphide Nanocages. 2019 , 7, 9737-9742	22
1147	A kinetically well-matched full-carbon sodium-ion capacitor. 2019 , 7, 13540-13549	87
1146	Detection of Phenylketonuria Markers Using a ZIF-67 Encapsulated PtPd Alloy Nanoparticle (PtPd@ZIF-67)-Based Disposable Electrochemical Microsensor. 2019 , 11, 20734-20742	25
1145	Nanoarchitected metal-organic framework-derived hollow carbon nanofiber filters for advanced oxidation processes. 2019 , 7, 13743-13750	74
1144	Polyethylenimine-modified nickel phosphide nanosheets: interfacial protons boost the hydrogen evolution reaction. 2019 , 7, 13770-13776	51
1143	Reactable ionic liquid in situ-induced synthesis of Fe ₃ O ₄ nanoparticles modified N-doped hollow porous carbon microtubes for boosting multifunctional electrocatalytic activity. 2019 , 797, 849-858	14
1142	Defective metal-organic framework derivative by room-temperature exfoliation and reduction for highly efficient oxygen evolution reaction. 2019 , 7, 14011-14018	16
1141	Vertical CoP Nanoarray Wrapped by N,P-Doped Carbon for Hydrogen Evolution Reaction in Both Acidic and Alkaline Conditions. 2019 , 9, 1803970	179
1140	Nitrogen-coordinated cobalt nanocrystals for oxidative dehydrogenation and hydrogenation of N-heterocycles. 2019 , 10, 5345-5352	39
1139	Unique nanosheet-nanowire structured CoMnFe layered triple hydroxide arrays as self-supporting electrodes for a high-efficiency oxygen evolution reaction. 2019 , 7, 13130-13141	49
1138	Nucleic Acid Amplification Strategies for Biosensing, Bioimaging and Biomedicine. 2019 ,	1
1137	"Superaerophobic" Nickel Phosphide Nanoarray Catalyst for Efficient Hydrogen Evolution at Ultrahigh Current Densities. <i>Journal of the American Chemical Society</i> , 2019 , 141, 7537-7543	16.4 233
1136	Experimental and computational studies on copper-mercury catalysts supported on nitrogen-doped porous carbon for preferential oxidation of CO. 2019 , 9, 3023-3035	8
1135	MOF-templated cobalt nanoparticles embedded in nitrogen-doped porous carbon: a bifunctional electrocatalyst for overall water splitting. 2019 , 1, 2293-2302	15
1134	Metal-organic framework-derived hierarchical MoS ₂ /CoS ₂ nanotube arrays as pH-universal electrocatalysts for efficient hydrogen evolution. 2019 , 7, 13339-13346	81
1133	Efficient Oxygen Evolution Catalysis Triggered by Nickel Phosphide Nanoparticles Compositing with Reduced Graphene Oxide with Controlled Architecture. 2019 , 7, 9566-9573	21
1132	Nucleic Acid Amplification Strategies-Based Chemiluminescence Biosensors. 2019 , 45-66	1

1131	A Single-Crystal Open-Capsule Metal-Organic Framework. <i>Journal of the American Chemical Society</i> , 2019 , 141, 7906-7916	16.4	106
1130	Single Atoms and Clusters Based Nanomaterials for Hydrogen Evolution, Oxygen Evolution Reactions, and Full Water Splitting. 2019 , 9, 1900624		294
1129	Nitrogen-doped CoP as robust electrocatalyst for high-efficiency pH-universal hydrogen evolution reaction. 2019 , 253, 21-27		92
1128	Copper Phosphide-Enhanced Lower Charge Trapping Occurrence in Graphitic-CN for Efficient Noble-Metal-Free Photocatalytic H Evolution. 2019 , 11, 16527-16537		68
1127	CoP ₃ /CoMoP Heterogeneous Nanosheet Arrays as Robust Electrocatalyst for pH-Universal Hydrogen Evolution Reaction. 2019 , 7, 9309-9317		63
1126	Trimetallic Metal-Organic Framework Derived Carbon-Based Nanoflower Electrocatalysts for Efficient Overall Water Splitting. 2019 , 6, 1900290		55
1125	Homogeneously Distributed NiFe Alloy Nanoparticles on 3D Carbon Fiber Network as a Bifunctional Electrocatalyst for Overall Water Splitting. 2019 , 6, 2497-2502		23
1124	Nanocubic bimetallic organic framework self-templated from Ni precursor as efficient electrocatalysts for oxygen evolution reaction. 2019 , 44, 11705-11716		8
1123	Highly conductive and metallic cobalt-nickel selenide nanorods supported on Ni foam as an efficient electrocatalyst for alkaline water splitting. 2019 , 11, 7959-7966		72
1122	Rational Design of Manganese Cobalt Phosphide with Yolk-Shell Structure for Overall Water Splitting. 2019 , 7, 1900066		6
1121	Cactus-Inspired Bimetallic Metal-Organic Framework-Derived 1D-2D Hierarchical Co/N-Decorated Carbon Architecture toward Enhanced Electromagnetic Wave Absorbing Performance. 2019 , 11, 13564-13573	123	
1120	Cage-structured M _x Py@CNCs (M = Co and Zn) from MOF confined growth in carbon nanocages for superior lithium storage and hydrogen evolution performance. 2019 , 7, 8443-8450		41
1119	Support and Interface Effects in Water-Splitting Electrocatalysts. 2019 , 31, e1808167		314
1118	MOF-derived nitrogen-doped core-shell hierarchical porous carbon confining selenium for advanced lithium-selenium batteries. 2019 , 11, 6970-6981		51
1117	Intercalated Graphite between Ni Foam and Ni ₃ S ₂ Nanocrystals for the Activity Promotion in Overall Water Splitting. 2019 , 7, 1900063		6
1116	Zeolitic Imidazolate Framework-Derived Core-Shell-Structured CoS ₂ /CoS ₂ -N-C Supported on Electrochemically Exfoliated Graphene Foil for Efficient Oxygen Evolution. 2019 , 2, 348-354		19
1115	Mesoporous Ultrathin Cobalt Oxides Nanosheets Grown on Carbon Cloth as a High-Performance Electrode for Oxygen Evolution Reaction. 2019 , 2, 1977-1987		16
1114	Hybrid implanted hybrid hollow nanocube electrocatalyst facilitates efficient hydrogen evolution activity. 2019 , 7, 11150-11159		36

1113	Oriented Transformation of Co-LDH into 2D/3D ZIF-67 to Achieve Co ₃ N ₄ Hybrids for Efficient Overall Water Splitting. 2019 , 9, 1803918	172
1112	Bimetallic Metal-Organic Framework-Derived Nanosheet-Assembled Nanoflower Electrocatalysts for Efficient Oxygen Evolution Reaction. 2019 , 14, 1590-1594	15
1111	Formation of nickel-cobalt sulphide@graphene composites with enhanced electrochemical capacitive properties.. 2019 , 9, 6946-6955	7
1110	Metal-Organic Framework-Derived Co _x Fe _{1-x} P Nanoparticles Encapsulated in N-Doped Carbon as Efficient Bifunctional Electrocatalysts for Overall Water Splitting. 2019 , 2, 2734-2742	30
1109	Engineering Ternary Pyrite-Type CoPS Nanosheets with an Ultrathin Porous Structure for Efficient Electrocatalytic Water Splitting. 2019 , 6, 2852-2859	9
1108	Two-dimensional dual carbon-coupled defective nickel quantum dots towards highly efficient overall water splitting. 2019 , 250, 213-223	68
1107	Ni ₃ ZnCo _{0.7} nanodots decorating nitrogen-doped carbon nanotube arrays as a self-standing bifunctional electrocatalyst for water splitting. 2019 , 148, 496-503	36
1106	The controlled synthesis of complex hollow nanostructures and prospective applications. 2019 , 475, 20180677	19
1105	Hierarchical hetero-Ni ₃ Se ₄ @NiFe LDH micro/nanosheets as efficient bifunctional electrocatalysts with superior stability for overall water splitting. 2019 , 4, 1132-1138	54
1104	Self-supported nanoporous cobalt phosphosulfate electrodes for efficient hydrogen evolution reaction. 2019 , 251, 213-219	38
1103	Binding Energy Optimization Strategy Inducing Enhanced Catalytic Performance on MIL-100(FeNi) To Catalyze Water Oxidation Directly. 2019 , 7, 7496-7501	20
1102	Inlay of ultrafine Ru nanoparticles into a self-supported Ni(OH) ₂ nanoarray for hydrogen evolution with low overpotential and enhanced kinetics. 2019 , 7, 11062-11068	43
1101	Microwave-assisted ultrafast synthesis of adjustable bimetal phosphide/graphene heterostructures from MOFs for efficient electrochemical water splitting. 2019 , 7, 14526-14535	50
1100	MOF-74-immobilized ternary Rh Ni P nanoparticles as highly efficient hydrous hydrazine dehydrogenation catalysts in alkaline solutions. 2019 , 44, 6383-6391	16
1099	CoP@N,P-Codoped Carbon Nanofiber as a Free-Standing Air Electrode for Zn-Air Batteries: Synergy Effects of CoN Satellite Shells. 2019 , 11, 10364-10372	51
1098	Morphology-Controlled Metal Sulfides and Phosphides for Electrochemical Water Splitting. 2019 , 31, e1806682	304
1097	CoP-Doped MOF-Based Electrocatalyst for pH-Universal Hydrogen Evolution Reaction. 2019 , 131, 4727-4732	56
1096	Bifunctional cobalt phosphide nanoparticles with convertible surface structure for efficient electrocatalytic water splitting in alkaline solution. 2019 , 371, 262-269	31

1095	Hollow Functional Materials Derived from Metal-Organic Frameworks: Synthetic Strategies, Conversion Mechanisms, and Electrochemical Applications. 2019 , 31, e1804903	248
1094	Pseudocapacitive P-doped NiCo ₂ O ₄ microspheres as stable anode for lithium ion batteries. 2019 , 787, 1051-1062	14
1093	Design of basal plane active MoS ₂ through one-step nitrogen and phosphorus co-doping as an efficient pH-universal electrocatalyst for hydrogen evolution. 2019 , 58, 862-869	53
1092	A protective roasting strategy for preparation of stable mesoporous hollow CeO ₂ microspheres with enhanced catalytic activity for one-pot synthesis of imines from benzyl alcohols and anilines. 2019 , 6, 829-836	13
1091	Prussian blue analog-derived 2D ultrathin CoFe ₂ O ₄ nanosheets as high-activity electrocatalysts for the oxygen evolution reaction in alkaline and neutral media. 2019 , 7, 7328-7332	42
1090	Cr-Doped FeNi-P Nanoparticles Encapsulated into N-Doped Carbon Nanotube as a Robust Bifunctional Catalyst for Efficient Overall Water Splitting. 2019 , 31, e1900178	172
1089	Cobalt oxyhydroxide with highly porous structures as active and stable phase for efficient water oxidation. 2019 , 303, 231-238	15
1088	Ultrathin wrinkled NiFeP nanosheets enable efficient oxygen evolution electrocatalysis. 2019 , 97, 200-206	13
1087	ZIF-67-Derived CoSe/NC Composites as Anode Materials for Lithium-Ion Batteries. 2019 , 14, 358	16
1086	High efficiency of toluene adsorption over a novel ZIF-67 membrane coating on paper-like stainless steel fibers. 2019 , 279, 120976	6
1085	Nanocomposites Based on Ruthenium Nanoparticles Supported on Cobalt and Nitrogen-Codoped Graphene Nanosheets as Bifunctional Catalysts for Electrochemical Water Splitting. 2019 , 11, 46912-46919	21
1084	Coupling low platinum and tungsten carbide supported on ZIFs-Derived porous carbon for efficient hydrogen evolution. 2019 , 328, 135077	4
1083	ZIF-derived Co nanoparticle/N-doped CNTs composites embedded in N-doped carbon substrate as efficient electrocatalyst for hydrogen and oxygen evolution. 2019 , 30, 21388-21397	6
1082	Intermetallic compounds with high hydrogen evolution reaction performance: a case study of a MCo (M = Ti, Zr, Hf and Sc) series. 2019 , 55, 14406-14409	13
1081	Polymer network-derived nitrogen/sulphur co-doped three-dimensionally interconnected hierarchically porous carbon for oxygen reduction, lithium-ion battery, and supercapacitor.. 2019 , 9, 36570-36577	7
1080	A pyrolysis-phosphorization approach to fabricate carbon nanotubes with embedded CoP nanoparticles for ambient electrocatalysis of ammonia. 2019 , 55, 12376-12379	16
1079	Core-shell hybrid nanowires with Co nanoparticles wrapped in N-doped porous carbon for lightweight microwave absorption. 2019 , 48, 15263-15271	16
1078	Phosphorus dual-site driven CoS ₂ @S, N co-doped porous carbon nanosheets for flexible quasi-solid-state supercapacitors. 2019 , 7, 26618-26630	39

1077	Metal-organic framework derived Co@NC/CNT hybrid as a multifunctional electrocatalyst for hydrogen and oxygen evolution reaction and oxygen reduction reaction. 2019 , 44, 32054-32065	36
1076	Multiple modulations of pyrite nickel sulfides via metal heteroatom doping engineering for boosting alkaline and neutral hydrogen evolution. 2019 , 7, 25628-25640	40
1075	Single nickel atom supported on hybridized grapheneBoron nitride nanosheet as a highly active bi-functional electrocatalyst for hydrogen and oxygen evolution reactions. 2019 , 7, 26261-26265	25
1074	Porous N-doped-carbon coated CoSe ₂ anchored on carbon cloth as 3D photocathode for dye-sensitized solar cell with efficiency and stability outperforming Pt. 2019 , 12, 159-163	40
1073	Metallic FePSe ₃ nanoparticles anchored on N-doped carbon framework for All-pH hydrogen evolution reaction. 2019 , 57, 222-229	87
1072	Fe/Fe ₂ O ₃ @N-doped Porous Carbon: A High-Performance Catalyst for Selective Hydrogenation of Nitro Compounds. 2019 , 11, 724-728	30
1071	CoSe ₂ /N-Doped Carbon Hybrid Derived from ZIF-67 as High-Efficiency Counter Electrode for Dye-Sensitized Solar Cells. 2019 , 7, 2784-2791	43
1070	N-doped carbon shell coated CoP nanocrystals encapsulated in porous N-doped carbon substrate as efficient electrocatalyst of water splitting. 2019 , 144, 464-471	82
1069	Carbon-Encapsulated Electrocatalysts for the Hydrogen Evolution Reaction. 2019 , 2, 105-127	90
1068	Ni ₃ Fe nanoarray encapsulated in Co, N-dual doped carbon shell for efficient electrocatalytic oxygen evolution in both alkaline and carbonate electrolyte. 2019 , 296, 738-745	10
1067	Electronic structure and d-band center control engineering over M-doped CoP (M = Ni, Mn, Fe) hollow polyhedron frames for boosting hydrogen production. 2019 , 56, 411-419	252
1066	Enhancing enrichment ability of a nanoporous carbon based solid-phase microextraction device by a morphological modulation strategy. 2019 , 1047, 1-8	14
1065	Co-Fe-P nanotubes electrocatalysts derived from metal-organic frameworks for efficient hydrogen evolution reaction under wide pH range. 2019 , 56, 225-233	160
1064	In situ derived Ni ₂ P/Ni encapsulated in carbon/g-C ₃ N ₄ hybrids from metalorganic frameworks/g-C ₃ N ₄ for efficient photocatalytic hydrogen evolution. 2019 , 246, 72-81	90
1063	Hierarchically structured bimetallic electrocatalyst synthesized via template-directed fabrication MOF arrays for high-efficiency oxygen evolution reaction. 2019 , 298, 525-532	39
1062	Zeolitic imidazolate frameworks derived novel polyhedral shaped hollow Co-B-O@Co ₃ O ₄ electrocatalyst for oxygen evolution reaction. 2019 , 299, 213-221	14
1061	Solid-phase hot-pressing of POMs-ZIFs precursor and derived phosphide for overall water splitting. 2019 , 245, 528-535	80
1060	Metal-organic frameworks derived bundled N-doped carbon nanowires confined cobalt phosphide nanocrystals as a robust electrocatalyst for hydrogen production. 2019 , 299, 423-429	24

1059	Nitrogen-doped nanocarbons (NNCs): Current status and future opportunities. 2019 , 15, 67-76	14
1058	Phase-Controlled Synthesis of 1T-MoSe ₂ /NiSe Heterostructure Nanowire Arrays via Electronic Injection for Synergistically Enhanced Hydrogen Evolution. 2019 , 3, 1800317	41
1057	One-step and scalable synthesis of Ni ₂ P nanocrystals encapsulated in N,P-codoped hierarchically porous carbon matrix using a bipyridine and phosphonate linked nickel metal-organic framework as highly efficient electrocatalysts for overall water splitting. 2019 , 297, 755-766	26
1056	Hierarchical CoP@FeP Branched Heterostructures for Highly Efficient Electrocatalytic Water Splitting. 2019 , 7, 2335-2342	92
1055	Synergistically well-mixed MOFs grown on nickel foam as highly efficient durable bifunctional electrocatalysts for overall water splitting at high current densities. 2019 , 57, 1-13	127
1054	Surface reconstruction engineering of twinned Pd ₂ CoAg nanocrystals by atomic vacancy inducement for hydrogen evolution and oxygen reduction reactions. 2019 , 241, 424-429	23
1053	In-situ anchoring Ag through organic polymer for configuring efficient plasmonic BiVO ₄ photoanode. 2019 , 358, 658-665	70
1052	Recent progress on earth abundant electrocatalysts for hydrogen evolution reaction (HER) in alkaline medium to achieve efficient water splitting [A review]. 2019 , 34, 111-160	198
1051	Ultrathin Graphdiyne-Wrapped Iron Carbonate Hydroxide Nanosheets toward Efficient Water Splitting. 2019 , 11, 2618-2625	48
1050	3D flower-like defected MoS ₂ magnetron-sputtered on candle soot for enhanced hydrogen evolution reaction. 2020 , 263, 117750	49
1049	State of the Art and Prospects in Metal-Organic Framework (MOF)-Based and MOF-Derived Nanocatalysis. 2020 , 120, 1438-1511	727
1048	Efficient charge transfer in aluminum-cobalt layered double hydroxide derived from Co-ZIF for enhanced catalytic degradation of tetracycline through peroxymonosulfate activation. 2020 , 382, 122802	91
1047	Hierarchical bimetal embedded in carbon nanoflower electrocatalysts derived from metal-organic frameworks for efficient oxygen evolution reaction. 2020 , 813, 152192	14
1046	3D ordered mesoporous cobalt ferrite phosphides for overall water splitting. 2020 , 63, 240-248	48
1045	Engineering a light-weight, thin and dual-functional interlayer as polysulfides sieve capable of synergistic adsorption for high-performance lithium-sulfur batteries. 2020 , 383, 123163	29
1044	In-situ transformation to accordion-like core-shell structured metal@metallic hydroxide nanosheet from nanorod morphology for overall water-splitting in alkaline media. 2020 , 559, 105-114	7
1043	A Novel Spherical Boron Phosphide as a High-Efficiency Overall Water Splitting Catalyst: A Density Functional Theory Study. 2020 , 150, 544-554	3
1042	Multifunctional Transition Metal-Based Phosphides in Energy-Related Electrocatalysis. 2020 , 10, 1902104	174

1041	Synergistically Interactive Pyridinic-N-MoP Sites: Identified Active Centers for Enhanced Hydrogen Evolution in Alkaline Solution. 2020 , 59, 8982-8990	134
1040	N, S-codoped graphene loaded Ni-Co bimetal sulfides for enhanced oxygen evolution activity. 2020 , 503, 144146	22
1039	Carbon-encapsulated CoS ₂ nanoparticles anchored on N-doped carbon nanofibers derived from ZIF-8/ZIF-67 as anode for sodium-ion batteries. 2020 , 380, 122548	44
1038	Metal-organic framework-derived nanocomposites for electrocatalytic hydrogen evolution reaction. 2020 , 108, 100618	93
1037	Bimetallic Sulfide Co ₉ S ₈ /N-C@MoS ₂ Dodecahedral Heterogeneous Nanocages for Boosted Li/K Storage. 2020 , 6, 132-138	22
1036	Charge Transfer Engineering via Multiple Heteroatom Doping in Dual Carbon-Coupled Cobalt Phosphides for Highly Efficient Overall Water Splitting. 2020 , 268, 118404	47
1035	Atypical Hybrid Metal-Organic Frameworks (MOFs): A Combinative Process for MOF-on-MOF Growth, Etching, and Structure Transformation. 2020 , 59, 1327-1333	65
1034	FeNi alloys encapsulated in N-doped CNTs-tangled porous carbon fibers as highly efficient and durable bifunctional oxygen electrocatalyst for rechargeable zinc-air battery. 2020 , 263, 118344	94
1033	MnO nanorods coated by Co-decorated N-doped carbon as anodes for high performance lithium ion batteries. 2020 , 504, 144479	19
1032	3D hierarchical MOF-derived CoP@N-doped carbon composite foam for efficient hydrogen evolution reaction. 2020 , 505, 144503	17
1031	Pressure-driven catalyst synthesis of Co-doped Fe ₃ C@Carbon nano-onions for efficient oxygen evolution reaction. 2020 , 268, 118385	27
1030	Sandwich-like structured NiSe ₂ /Ni ₂ P@FeP interface nanosheets with rich defects for efficient electrocatalytic water splitting. 2020 , 445, 227294	37
1029	Atypical Hybrid Metal-Organic Frameworks (MOFs): A Combinative Process for MOF-on-MOF Growth, Etching, and Structure Transformation. 2020 , 132, 1343-1349	18
1028	Synthesis of Metal Phosphide Nanoparticles Supported on Porous N-Doped Carbon Derived from Spirulina for Universal-pH Hydrogen Evolution. 2020 , 13, 351-359	12
1027	Cobalt Nanoparticles and Atomic Sites in Nitrogen-Doped Carbon Frameworks for Highly Sensitive Sensing of Hydrogen Peroxide. 2020 , 16, e1902860	17
1026	Synergistically Interactive Pyridinic-N-MoP Sites: Identified Active Centers for Enhanced Hydrogen Evolution in Alkaline Solution. 2020 , 132, 9067-9075	24
1025	Hierarchical porous bimetal-sulfide bi-functional nanocatalysts for hydrogen production by overall water electrolysis. 2020 , 560, 426-435	19
1024	Three-dimensional open CoMoO _x /CoMoS _x /CoS _x nanobox electrocatalysts for efficient oxygen evolution reaction. 2020 , 265, 118605	109

1023	A redox interaction-engaged strategy for multicomponent nanomaterials. 2020 , 49, 736-764	15
1022	A buckypaper decorated with CoP/Co for nonenzymatic amperometric sensing of glucose. 2020 , 187, 101	4
1021	Core-shell Zn/Co MOFs derived Co ₃ O ₄ /CNTs as an efficient magnetic heterogeneous catalyst for persulfate activation and oxytetracycline degradation. 2020 , 387, 124008	86
1020	Metal-organic frameworks-derived hollow-structured iron-cobalt bimetallic phosphide electrocatalysts for efficient oxygen evolution reaction. 2020 , 821, 153463	19
1019	Nitrogen-Doped Graphitic Carbon-Supported Ultrafine Co Nanoparticles as an Efficient Multifunctional Electrocatalyst for HER and Rechargeable Zn-Air Batteries. 2020 , 12, 5717-5729	39
1018	Puzzle-inspired carbon dots coupled with cobalt phosphide for constructing a highly-effective overall water splitting interface. 2019 , 56, 257-260	21
1017	Highly efficient catalytic CoS _{1.097} embedded in biomass nanosheets for oxygen evolution reaction. 2020 , 45, 2765-2773	5
1016	Cubic Co-Co prussian blue MOF-based transition metal phosphide as an efficient catalyst for visible light-driven water oxidation. 2020 , 382, 13-21	12
1015	Space-Confined Synthesis of Lasagna-like N-Doped Graphene-Wrapped Copper/Cobalt Sulfides as Efficient and Durable Electrocatalysts for Oxygen Reduction and Oxygen Evolution Reactions. 2020 , 8, 1004-1014	10
1014	Defect enhanced CoP/Reduced graphene oxide electrocatalytic hydrogen production with pt-like activity. 2020 , 265, 118576	26
1013	Amorphous cobalt phosphate porous nanosheets derived from two-dimensional cobalt phosphonate organic frameworks for high performance of oxygen evolution reaction. 2020 , 18, 100517	18
1012	Development of an efficient catalyst with controlled sulfur vacancies and high pyridine nitrogen content for the photoelectrochemical reduction of CO into methanol. 2020 , 702, 134981	8
1011	Nanoreactors derived from silica-protection-assisted metal-organic framework. 2020 , 31, 2207-2210	2
1010	Direct synthesis of bifunctional nanorods from a CoEdenineMoO ₃ hybrid for overall water splitting. 2020 , 4, 546-554	10
1009	Stacked Co ₆ W ₆ C nanocrystals anchored on N-doping carbon nanofibers with excellent electrocatalytic performance for HER in wide-range pH. 2020 , 45, 1901-1910	9
1008	Tailoring the nanostructure and electronic configuration of metal phosphides for efficient electrocatalytic oxygen evolution reactions. 2020 , 69, 104453	79
1007	Core-Shell NiO/C@NiFe-LDH Nanocomposite as an Efficient Electrocatalyst for Oxygen Evolution Reaction. 2020 , 167, 024501	7
1006	Synthesis of micro/nanoscaled metal-organic frameworks and their direct electrochemical applications. 2020 , 49, 301-331	416

1005	Earth-abundant transition-metal-based bifunctional catalysts for overall electrochemical water splitting: A review. 2020 , 819, 153346	115
1004	Regulating the Electronic Structure of CoP Nanosheets by O Incorporation for High-Efficiency Electrochemical Overall Water Splitting. 2020 , 30, 1905252	124
1003	Large-Scale Synthesis of MOF-Derived Superporous Carbon Aerogels with Extraordinary Adsorption Capacity for Organic Solvents. 2020 , 132, 2082-2086	39
1002	Large-Scale Synthesis of MOF-Derived Superporous Carbon Aerogels with Extraordinary Adsorption Capacity for Organic Solvents. 2020 , 59, 2066-2070	118
1001	Facile synthesis of flower-like dual-metal (Co/Zn) MOF-derived 3D porous Co@Co-NPC as reversible oxygen electrocatalyst for rechargeable zinc-air batteries. 2020 , 26, 1913-1922	12
1000	Atomically Dispersed Mo Supported on Metallic Co ₉ S ₈ Nanoflakes as an Advanced Noble-Metal-Free Bifunctional Water Splitting Catalyst Working in Universal pH Conditions. 2020 , 10, 1903137	97
999	Carbon nanotube hollow polyhedrons derived from ZIF-8@ZIF-67 coupled to electro-deposited gold nanoparticles for voltammetric determination of acetaminophen. 2019 , 187, 6	18
998	Three-Dimensional Hierarchical Porous Nanotubes Derived from Metal-Organic Frameworks for Highly Efficient Overall Water Splitting. 2020 , 23, 100761	19
997	Vertical V-Doped CoP Nanowall Arrays as a Highly Efficient and Stable Electrocatalyst for the Hydrogen Evolution Reaction at all pH Values. 2020 , 3, 1027-1035	26
996	Plasma-assisted synthesis of hierarchical NiCo _x Py nanosheets as robust and stable electrocatalyst for hydrogen evolution reaction in both acidic and alkaline media. 2020 , 331, 135431	12
995	Tailoring the thickness of MoSe ₂ layer of the hierarchical double-shelled N-doped carbon@MoSe ₂ hollow nanoboxes for efficient and stable hydrogen evolution reaction. 2020 , 381, 363-373	35
994	Red phosphorus confined in MOF-derived N-doped carbon-based composite polyhedrons on carbon nanotubes for high-areal-capacity lithium storage. 2020 , 385, 123456	17
993	Construction strategy of Mo-S@Mo-P heterojunction formed with in-situ phosphating Mo-S nanospheres toward efficient photocatalytic hydrogen production. 2020 , 391, 123545	40
992	Boronization-Induced Ultrathin 2D Nanosheets with Abundant Crystalline-Amorphous Phase Boundary Supported on Nickel Foam toward Efficient Water Splitting. 2020 , 10, 1902714	111
991	Unique synergistic effects of ZIF-9(Co)-derived cobalt phosphide and CeVO ₄ heterojunction for efficient hydrogen evolution. 2020 , 41, 82-94	88
990	Nitrogen-coordinated metallic cobalt disulfide self-encapsulated in graphitic carbon for electrochemical water oxidation. 2020 , 268, 118449	22
989	CoP nanowires coupled with CoMoP nanosheets as a highly efficient cooperative catalyst for hydrogen evolution reaction. 2020 , 68, 104332	105
988	CoP Nanoframes as Bifunctional Electrocatalysts for Efficient Overall Water Splitting. 2020 , 10, 412-419	188

987	Nitrogen-doped porous carbon tubes composites derived from metal-organic framework for highly efficient capacitive deionization. 2020 , 331, 135420	18
986	Plasma-Engineered MoP with nitrogen doping: Electron localization toward efficient alkaline hydrogen evolution. 2020 , 268, 118441	39
985	A Freestanding 3D Heterostructure Film Stitched by MOF-Derived Carbon Nanotube Microsphere Superstructure and Reduced Graphene Oxide Sheets: A Superior Multifunctional Electrode for Overall Water Splitting and Zn-Air Batteries. 2020 , 32, e2003313	96
984	Facile synthesis of difunctional NiV LDH@ZIF-67 p-n junction: Serve as prominent photocatalyst for hydrogen evolution and supercapacitor electrode as well. 2020 , 162, 535-549	30
983	Fe-MOFs as signal probes coupling with DNA tetrahedral nanostructures for construction of ratiometric electrochemical aptasensor. 2020 , 1135, 123-131	10
982	In situ immobilization of copper oxide thin-layer on Zeolitic Imidazolate Framework-67-derived cobalt oxide@nitrogen-doped carbon with multi-level architecture and versatile active sites for enhancing oxygen evolution/reduction reactions. 2020 , 478, 228707	18
981	Boosting oxygen evolution reactivity by modulating electronic structure and honeycomb-like architecture in Ni ₂ P/N,P-codoped carbon hybrids. 2020 ,	4
980	Nickel foam-supported Fe,Ni-Porphyrin microparticles: Efficient bifunctional catalysts for overall water splitting in alkaline media. 2020 , 45, 28860-28869	7
979	Bottom-Up Synthesis of MoS ₂ /CNTs Hollow Polyhedron with 1T/2H Hybrid Phase for Superior Potassium-Ion Storage. 2020 , 16, e2004178	19
978	Atomic Layer Deposition-Derived Nanomaterials: Oxides, Transition Metal Dichalcogenides, and Metal-Organic Frameworks. 2020 , 32, 9056-9077	9
977	MOF-Derived 2D/3D Hierarchical N-Doped Graphene as Support for Advanced Pt Utilization in Ethanol Fuel Cell. 2020 , 12, 47667-47676	9
976	Metal-Organic Powder Thermochemical Solid-Vapor Architectonics toward Gradient Hybrid Monolith with Combined Structure-Function Features. 2020 , 3, 879-891	13
975	Orbital-regulated interfacial electronic coupling endows Ni ₃ N with superior catalytic surface for hydrogen evolution reaction. 2020 , 63, 1563-1569	10
974	In-situ synthesis of hollow CoMoS ₂ nanocomposites on the carbon nanowire arrays/carbon cloth as high-performance catalyst for hydrogen evolution reaction. 2020 , 45, 28361-28371	8
973	In situ growth of urchin-like cobalt-chromium phosphide on 3D graphene foam for efficient overall water splitting. 2020 , 7, 4913-4923	5
972	A Collaborative Strategy for Boosting Lithium Storage Performance of Iron Phosphide by Fabricating Hollow Structure and Doping Cobalt Species. 2020 , 5, 11378-11382	4
971	ZIF-8 derived nitrogen-doped carbon composites boost the rate performance of organic cathodes for sodium ion batteries. 2020 , 362, 137115	7
970	Rapid microwave-assisted construction of ZIF-8 derived ZnO and ZnO@Ta ₂ O ₅ nanocomposite as an efficient electrode for methanol and urea electro-oxidation. 2020 , 878, 114634	11

969	A Simple Route for the Synthesis of Cobalt Phosphate Nanoparticles for Electrocatalytic Water Oxidation in Alkaline Medium. 2020 , 34, 12891-12899	10
968	In Situ Growth of Tetrametallic FeCoMnNi-MOF-74 on Nickel Foam as Efficient Bifunctional Electrocatalysts for the Evolution Reaction of Oxygen and Hydrogen. 2020 , 59, 15467-15477	15
967	Ultrathin Nanosheet-Assembled Co-Fe Hydroxide Nanotubes: Sacrificial Template Synthesis, Topotactic Transformation, and Their Application as Electrocatalysts for Efficient Oxygen Evolution Reaction. 2020 , 12, 46578-46587	5
966	Selective oxidation of crotyl alcohol by AuxPd bimetallic pseudo-single-atom catalysts. 2020 , 10, 7706-7718	1
965	Dual functions of glucose induced composition-controllable Co/C microspheres as high-performance microwave absorbing materials. 2020 , 168, 404-414	42
964	MOF-Derived NiCo@Carbon with Tunable Nano-Microstructure as Lightweight and Highly Efficient Electromagnetic Wave Absorber. 2020 , 12, 150	95
963	Phosphorus-Accumulating Organism Assisted Phosphorization of Ni-Fe Nanocomposites for Efficient Oxygen Evolution Reaction. 2020 , 8, 11456-11464	1
962	Anode-Driven Controlled Release of Cathodic Fuel via pH Response for Smart Enzymatic Biofuel Cell. 2020 , 23, 101133	7
961	Defect CTF derived Ru-based catalysts for high performance overall water splitting reaction. 2020 , 50, 135-142	3
960	Bimetallic organic framework-derived rich pyridinic N-doped carbon nanotubes as oxygen catalysts for rechargeable Zn-air batteries. 2020 , 472, 228470	16
959	Metal-Organic Framework-Derived Fe-Doped Co Te Embedded in Nitrogen-Doped Carbon Nanotube for Water Splitting. 2020 , 13, 5239-5247	11
958	Multiregion Janus-Featured Cobalt Phosphide-Cobalt Composite for Highly Reversible Room-Temperature Sodium-Sulfur Batteries. 2020 , 14, 10284-10293	44
957	Engineering Hierarchical-Dimensional Co(OH)F into CoP Superstructure for Electrocatalytic Water Splitting. 2020 , 12, 4770-4774	4
956	Electronic modulation by N incorporation boosts the electrocatalytic performance of urchin-like Ni ₅ P ₄ hollow microspheres for hydrogen evolution. 2020 , 402, 126302	22
955	S element-doped synergistically well-mixed MOFs as highly efficient oxygen precipitation electrocatalyst. 2020 , 45, 24333-24340	12
954	Highly dispersed ultrafine Ni particles embedded into MOF-74 arrays by partial carbonization for highly efficient hydrogen evolution. 2020 , 1, 1212-1219	5
953	PVP/ZIF-8-Derived Zn, Ni Co-loaded N-Doped Porous Carbon as a Catalyst for an Efficient Hydrogen Evolution Reaction. 2020 , 8, 723	5
952	Synergistically engineering ultralow Pt doped FeNi alloy/FeNi phosphide nanoparticles for advanced hydrogen evolution reaction. 2020 , 604, 125313	8

951	Multilayer stabilization for fabricating high-loading single-atom catalysts. 2020 , 11, 5892	94
950	Selective and Continuous Electrosynthesis of Hydrogen Peroxide on Nitrogen-doped Carbon Supported Nickel. 2020 , 1, 100255	7
949	CoP and NiP implanted in a hollow porous N-doped carbon polyhedron for pH universal hydrogen evolution reaction and alkaline overall water splitting. 2020 , 12, 23851-23858	16
948	Transition Metal and Metal-N Codoped MOF-Derived Fenton-Like Catalysts: A Comparative Study on Single Atoms and Nanoparticles. 2020 , 16, e2005060	28
947	Cobalt-Based Metal-Organic Frameworks and Their Derivatives for Hydrogen Evolution Reaction. 2020 , 8, 592915	8
946	Engineering Electronic Structures of Nickel Cobalt Phosphide via Iron Doping for Efficient Overall Water Splitting. 2020 , 7, 4913-4921	6
945	Fabrication strategies of porous precious-metal-free bifunctional electrocatalysts for overall water splitting: Recent advances. 2020 , 6, 620-620	7
944	Reaction environment self-modification on low-coordination Ni ²⁺ octahedra atomic interface for superior electrocatalytic overall water splitting. 2020 , 13, 3068-3074	20
943	Facile one-step in-situ encapsulation of non-noble metal Co ₂ P nanoparticles embedded into B, N, P tri-doped carbon nanotubes for efficient hydrogen evolution reaction. 2020 , 45, 24312-24321	15
942	Transition metal-based metal-organic frameworks for oxygen evolution reaction. 2020 , 424, 213488	62
941	Heterogeneous CoSe ₂ @CoO nanoparticles immobilized into N-doped carbon fibers for efficient overall water splitting. 2020 , 356, 136822	9
940	Ce-Doped IrO ₂ Electrocatalysts with Enhanced Performance for Water Oxidation in Acidic Media. 2020 , 12, 37006-37012	14
939	Co/CoP Nanoparticles Encapsulated Within N, P-Doped Carbon Nanotubes on Nanoporous Metal-Organic Framework Nanosheets for Oxygen Reduction and Oxygen Evolution Reactions. 2020 , 15, 82	14
938	MOF-derived V-CoxP@NC nanoarchitectures for highly enhanced electrocatalytic water splitting through electronical tuning. 2020 , 357, 136850	15
937	Megamerger of MOFs and g-C ₃ N ₄ for energy and environment applications: upgrading the framework stability and performance. 2020 , 8, 17883-17906	19
936	Phosphorus-Based Electrocatalysts: Black Phosphorus, Metal Phosphides, and Phosphates. 2020 , 7, 2000676	14
935	Dual-metal NiCo nanoparticles in B-doped carbon layers as efficient and durable electrocatalyst for oxygen evolution reaction. 2020 , 532, 147381	13
934	SnO-Modified Two-Dimensional CuO for Enhanced Electrochemical Reduction of CO to CH ₄ . 2020 , 12, 36128-36136	23

933	NiCo ₂ O ₄ @Ni ₂ P nanorods grown on nickel nanorod arrays as a bifunctional catalyst for efficient overall water splitting. 2020 , 17, 100490	14
932	Core-shell as Highly Efficient and Durable Bifunctional Electrodes for Electrochemical Water Splitting. 2020 , 34, 10276-10281	10
931	A review of recent work on using metal-organic frameworks to grow carbon nanotubes. 2020 , 56, 10809-1082364	
930	Metal-Organic-Framework-Derived Co P Nanoparticle/Multi-Doped Porous Carbon as a Trifunctional Electrocatalyst. 2020 , 32, e2003649	120
929	A photo-activated process cascaded electrocatalysis for the highly efficient CO ₂ reduction over a core-shell ZIF-8@Co/C. 2020 , 8, 16616-16623	8
928	Nickel/cobalt bimetallic phosphides derived metal-organic frameworks as bifunctional electrocatalyst for oxygen and hydrogen evolution reaction. 2020 , 847, 156514	26
927	Insights into the synergistic effect of multi-walled carbon nanotube decorated Mo-doped CoP ₂ hybrid electrocatalysts toward efficient and durable overall water splitting. 2020 , 8, 17621-17633	26
926	CoMnFe hydroxysulfide nanowire@Ni(OH) ₂ nanorod arrays as self-supporting electrodes for high-efficiency oxygen evolution reaction. 2020 , 356, 136793	5
925	Hybrid CoP ₂ @Pt/BTO nanoarchitecture for bifunctional electrocatalysts in H ₂ generation by water splitting. 2020 , 9, 100045	7
924	Hierarchical CoFe oxyhydroxides nanosheets and Co ₂ P nanoparticles grown on Ni foam for overall water splitting. 2020 , 360, 136994	7
923	Highly Phosphatized Magnetic Catalyst with Electron Transfer Induced by Quaternary Synergy for Efficient Dehydrogenation of Ammonia Borane. 2020 , 12, 43854-43863	9
922	Ionic-liquid assisted architecture of amorphous nanoporous zinc-rich carbon-based microstars for lithium storage. 2020 , 56, 12206-12209	1
921	Au-Co nanoparticles-embedded N-doped carbon nanotube hollow polyhedron modified electrode for electrochemical determination of quercetin. 2020 , 187, 546	5
920	Metal-organic framework-derived hierarchical ultrathin CoP nanosheets for overall water splitting. 2020 , 8, 19254-19261	51
919	Interface Engineering of Partially Phosphidated Co@Co-P@NPCNTs for Highly Enhanced Electrochemical Overall Water Splitting. 2020 , 16, e2002124	29
918	Nano/Microscale Integrated Mushroom-Shaped Hydrophilic with Optimized Gas Bubble Release for High-Performance Water Splitting Catalysis. 2020 , 3, 9769-9784	4
917	Fe-doped Ni ₃ S ₂ nanoneedles directly grown on Ni foam as highly efficient bifunctional electrocatalysts for alkaline overall water splitting. 2020 , 361, 137080	25
916	Engineering hierarchical MOFs-derived Fe ₃ O ₄ nanostructure with improved oxygen reduction activity for zinc-air battery: the role of iron oxide. 2020 , 18, 100500	19

915	Fabrication of Magnetic Superstructure NiFeO@MOF-74 and Its Derivative for Electrocatalytic Hydrogen Evolution with AC Magnetic Field. 2020 , 12, 45987-45996	16
914	Optimization of the overall water-splitting performance of N, S co-doped carbon-supported NiCoMnSxO at high current densities by the introduction of sulfur defects and oxygen vacancies. 2020 , 22, 6239-6248	5
913	In situ growth of CoP nanoparticles anchored on (N,P) co-doped porous carbon engineered by MOFs as advanced bifunctional oxygen catalyst for rechargeable Zn-air battery. 2020 , 8, 19043-19049	35
912	Closest Packing Polymorphism Interfaced Metastable Transition Metal for Efficient Hydrogen Evolution. 2020 , 32, e2002857	28
911	Metal-Organic-Framework Derived Core-Shell N-Doped Carbon Nanocages Embedded with Cobalt Nanoparticles as High-Performance Anode Materials for Lithium-Ion Batteries. 2020 , 30, 2006188	41
910	Rutile TiO Nanoparticles Encapsulated in a Zeolitic Imidazolate Framework-Derived Hierarchical Carbon Framework with Engineered Dielectricity as an Excellent Microwave Absorber. 2020 , 12, 48140-48149	11
909	Porphyritic Metal-Organic Frameworks Derived Carbon-Based Nanomaterials for Hydrogen Evolution Reaction. 2020 , 5, 10988-10995	1
908	Integrating Conductivity, Captivity, and Immobility Ability into N/O Dual-Doped Porous Carbon Nanocage Anchored with CNT as an Effective Se Host for Advanced K-Se Battery. 2020 , 30, 2003871	21
907	Low-Dimensional Metallic Nanomaterials for Advanced Electrocatalysis. 2020 , 30, 2006317	84
906	Hierarchical Nitrogen-doped Mo ₂ C Nanoparticle-in-microflower Electrocatalyst: in Situ Synthesis and Efficient Hydrogen-evolving Performance in Alkaline and Acidic Media. 2020 , 12, 6040-6049	5
905	Confinement of CoP Nanoparticles in Nitrogen-Doped Yolk-Shell Porous Carbon Polyhedron for Ultrafast Catalytic Oxidation. 2020 , 30, 2003947	42
904	One-step phosphating synthesis of CoP nanosheet arrays combined with NiP as a high-performance electrode for supercapacitors. 2020 , 12, 20710-20718	25
903	Enhancing Adsorption and Reaction Kinetics of Polysulfides Using CoP-Coated N-Doped Mesoporous Carbon for High-Energy-Density Lithium-Sulfur Batteries. 2020 , 12, 43844-43853	31
902	CoP QD anchored carbon skeleton modified CdS nanorods as a co-catalyst for photocatalytic hydrogen production. 2020 , 12, 19203-19212	23
901	Co-Induced Electronic Optimization of Hierarchical NiFe LDH for Oxygen Evolution. 2020 , 16, e2002426	87
900	An in situ phosphorization strategy towards doped CoP scaffolded within echinus-like carbon for overall water splitting. 2020 , 12, 19253-19258	10
899	Tailoring the electronic structure by constructing the heterointerface of RuO ₂ /NiO for overall water splitting with ultralow overpotential and extra-long lifetime. 2020 , 8, 18945-18954	13
898	Transformation of hollow ZnFe-ZIF-8 nanocrystals into hollow ZnFe/C electrocatalysts for the oxygen reduction reaction. 2020 , 44, 21183-21191	0

- 897 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. **2020**, 8, 25768-25779 10
- 896 Facile Synthesis of Size-Controlled Nitrogen-Doped Mesoporous Carbon Nanosphere Supported Ultrafine Ru Nanoparticles for Selective Hydrogenation of Quinolines. **2020**, 26, 17000-17004 3
- 895 Advances and challenges in metal-organic framework derived porous materials for batteries and electrocatalysis. **2020**, 8, 24895-24919 38
- 894 3D Printed Mechanically Robust Graphene/CNT Electrodes for Highly Efficient Overall Water Splitting. **2020**, 32, e1908201 36
- 893 First-principles study of catalytic activity of W-doped cobalt phosphide toward the hydrogen evolution reaction. **2020**, 41, 1698-1705 7
- 892 Role of active sites in N-coordinated Fe-Co dual-metal doped graphene for oxygen reduction and evolution reactions: A theoretical insight. **2020**, 525, 146588 29
- 891 Removing the barrier to water dissociation on single-atom Pt sites decorated with a CoP mesoporous nanosheet array to achieve improved hydrogen evolution. **2020**, 8, 11246-11254 22
- 890 Single-atom-Ni-decorated, nitrogen-doped carbon layers for efficient electrocatalytic CO₂ reduction reaction. **2020**, 116, 106758 13
- 889 Crystalline Cobalt/Amorphous LaCoO Hybrid Nanoparticles Embedded in Porous Nitrogen-Doped Carbon as Efficient Electrocatalysts for Hydrazine-Assisted Hydrogen Production. **2020**, 12, 24701-24709 22
- 888 Synergistically enhanced hydrogen evolution reaction by ruthenium nanoparticles dispersed on N-doped carbon hollow nanospheres. **2020**, 56, 6802-6805 17
- 887 Metal organic frameworks for biomass conversion. **2020**, 49, 3638-3687 91
- 886 Surface and interface engineering of noble-metal-free electrocatalysts for efficient overall water splitting. **2020**, 418, 213374 91
- 885 General approach to construct hierarchical-structured porous Co/Ni bimetallic oxides for efficient oxygen evolution. **2020**, 7, 2611-2620 5
- 884 Enhanced Oxygen Evolution Reaction Activity of a CoP@NC-FeP Composite Boosted by Interfaces Between a N-Doped Carbon Matrix and FeP Microspheres. **2020**, 12, 25884-25894 30
- 883 Employing dual-ligand co-coordination compound to construct nanorod-like Bi-metallic (Fe, Co)P decorated with nitrogen-doped graphene for electrocatalytic overall water splitting. **2020**, 350, 136338 10
- 882 CNT-Assembled Octahedron Carbon-Encapsulated CuP/Cu Heterostructure by In Situ MOF-Derived Engineering for Superior Lithium Storage: Investigations by Experimental Implementation and First-Principles Calculation. **2020**, 7, 2000736 31
- 881 A novel hybrid electrode of zeolitic imidazolate framework-derived carbon encapsulated in reduced-TiO₂ nanotube arrays: Fabrication and photoelectrocatalytic activity. **2020**, 34, e5791 4
- 880 C₃N₄ modified with single layer ZIF67 nanoparticles for efficient photocatalytic degradation of organic pollutants under visible light. **2020**, 41, 1894-1905 13

- 879 Contrallable synthesis of peony-like porous Mn-CoP nanorod electrocatalyst for highly efficient hydrogen evolution in acid and alkaline. **2020**, 577, 379-387 19
- 878 Wettability transition of Ni₃B₄-doped MoS₂ for hydrogen evolution reaction by magnetron sputtering. **2020**, 510, 145368 5
- 877 Multicomponent N doped graphene coating Co@Zn heterostructures electrocatalysts as high efficiency HER electrocatalyst in alkaline electrolyte. **2020**, 45, 16326-16336 10
- 876 CoP Microscale Prism-like Superstructure Arrays on Ni Foam as an Efficient Bifunctional Electrocatalyst for Overall Water Splitting. **2020**, 59, 8522-8531 25
- 875 Fischer-Tropsch Synthesis: Cobalt Nanoparticle-Embedded Nanocage Catalysts. **2020**, 59, 12352-12359 9
- 874 Ultrafine CoP/CoP Nanorods Encapsulated in Janus/Twins-type Honeycomb 3D Nitrogen-Doped Carbon Nanosheets for Efficient Hydrogen Evolution. **2020**, 23, 101264 19
- 873 Peroxymonosulfate activation of magnetic Co nanoparticles relative to an N-doped porous carbon under confinement: Boosting stability and performance. **2020**, 250, 117237 51
- 872 Surface morphology-controllable magnetic covalent organic frameworks: A novel electrocatalyst for simultaneously high-performance detection of p-nitrophenol and o-nitrophenol. **2020**, 219, 121255 19
- 871 Embedding Co₂P nanoparticles into co-doped carbon hollow polyhedron as a bifunctional electrocatalyst for efficient overall water splitting. **2020**, 45, 16540-16549 25
- 870 Electronically Modulated CoP by Ce Doping as a Highly Efficient Electrocatalyst for Water Splitting. **2020**, 8, 10009-10016 45
- 869 Simultaneous tuning of the cation content and pore structure of cobalt-iron bimetal phosphide to enhance the electrochemical oxygen evolution. **2020**, 842, 155784 5
- 868 Cobalt-based heterogeneous catalysts in an electrolyzer system for sustainable energy storage. **2020**, 49, 11430-11450 9
- 867 Nitrogen-, phosphorus-doped carbon-carbon nanotube CoP dodecahedra by controlling zinc content for high-performance electrocatalytic oxygen evolution. **2020**, 39, 680-687 37
- 866 Boosting the Oxygen Evolution Electrocatalysis Performance of Iron Phosphide via Architectural Design and Electronic Modulation. **2020**, 8, 9206-9216 7
- 865 N doped carbon coated multi-metals nanoparticles decorated perovskite as electrocatalyst for efficient hydrogen evolution reaction. **2020**, 399, 125779 13
- 864 KOH activated ZIF-L derived N-doped porous carbon with enhanced adsorption performance towards antibiotics removal from aqueous solution. **2020**, 289, 121492 16
- 863 MOF-derived hierarchical 3D bi-doped CoP nanoflower eletrocatalyst for hydrogen evolution reaction in both acidic and alkaline media. **2020**, 56, 7702-7705 18
- 862 In situ encapsulated and well dispersed Co₃O₄ nanoparticles as efficient and stable electrocatalysts for high-performance CO₂ reduction. **2020**, 8, 15675-15680 16

861	Nature-inspired design of NiS/carbon microspheres for high-performance hybrid supercapacitors. 2020 , 528, 146976	21
860	Metal-Organic Framework-Derived NiS/FeO Heterostructure-Decorated Carbon Nanotubes as Highly Efficient and Durable Electrocatalysts for Oxygen Evolution Reaction. 2020 , 12, 31552-31563	42
859	Compositional engineering of sulfides, phosphides, carbides, nitrides, oxides, and hydroxides for water splitting. 2020 , 8, 13415-13436	51
858	Graphene-Templated Cobalt Nanoparticle Embedded Nitrogen-Doped Carbon Nanotubes for Efficient Visible-Light Photocatalysis. 2020 , 20, 4627-4639	15
857	Structure Design of NiCo Hydroxide Nanoarrays with Facet Engineering on Carbon Chainlike Nanofibers for High-Efficiency Oxygen Evolution. 2020 , 3, 6240-6248	15
856	The thermal stability of metal-organic frameworks. 2020 , 419, 213388	74
855	Revealing the effect of phosphorus doping on Co@carbon in boosting oxygen evolution catalytic activity. 2020 , 843, 156001	5
854	Facile Route to Achieve Co@Mo2C Encapsulated by N-Doped Carbon as Efficient Electrocatalyst for Overall Water Splitting in Alkaline Media. 2020 , 167, 044520	8
853	CoS2@N-doped carbon core-shell nanorod array grown on Ni foam for enhanced electrocatalytic water oxidation. 2020 , 8, 6795-6803	45
852	Creating Competitive Active Sites on CNTs Walls by N-Doping and Sublayer Co4N Encapsulating for Efficient Hydrogen Evolution Reaction. 2020 , 7, 2065-2072	2
851	Transition Metal Phosphide-Based Materials for Efficient Electrochemical Hydrogen Evolution: A Critical Review. 2020 , 13, 3357-3375	88
850	Porous phosphorus-rich CoP3/CoSnO2 hybrid nanocubes for high-performance Zn-air batteries. 2020 , 63, 475-482	23
849	Bottom-up preparation of hierarchically porous MOF-modified carbon sphere derivatives for efficient oxygen reduction. 2020 , 12, 8785-8792	20
848	Structural Designs and in-situ X-ray Characterizations of Metal Phosphides for Electrocatalysis. 2020 , 12, 3621-3638	9
847	Zeolitic Imidazolate Framework-67-Derived CoP/,P-Doped Carbon Nanoparticle Composites with Graphitic Carbon Nitride for Enhanced Photocatalytic Production of H2 and H2O2. 2020 , 3, 3558-3567	16
846	A yolk-shell structured metal-organic framework with encapsulated iron-porphyrin and its derived bimetallic nitrogen-doped porous carbon for an efficient oxygen reduction reaction. 2020 , 8, 9536-9544	45
845	Spherical Superstructure of Boron Nitride Nanosheets Derived from Boron-Containing Metal-Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2020 , 142, 8755-8762	16.4 43
844	Engineering Local and Global Structures of Single Co Atoms for a Superior Oxygen Reduction Reaction. 2020 , 10, 5862-5870	76

843	Optimized Metal Chalcogenides for Boosting Water Splitting. 2020 , 7, 1903070	81
842	Interface Engineering of Hierarchical Branched Mo-Doped Ni ₃ S ₂ /Ni ₂ P Hollow Heterostructure Nanorods for Efficient Overall Water Splitting. 2020 , 10, 1903891	225
841	2D Fe-doped NiO nanosheets with grain boundary defects for the advanced oxygen evolution reaction. 2020 , 49, 6355-6362	16
840	Bifunctional Heterostructured Transition Metal Phosphides for Efficient Electrochemical Water Splitting. 2020 , 30, 2003261	149
839	Strongly coupled dual zerovalent nonmetal doped nickel phosphide Nanoparticles/N, B-graphene hybrid for pH-Universal hydrogen evolution catalysis. 2020 , 278, 119284	27
838	Phosphorus-Doped Iron Nitride Nanoparticles Encapsulated by Nitrogen-Doped Carbon Nanosheets on Iron Foam In Situ Derived from <i>Saccharomyces Cerevisiae</i> for Electrocatalytic Overall Water Splitting. 2020 , 16, e2001980	15
837	In situ construction and post-electrolysis structural study of porous Ni ₂ P@C nanosheet arrays for efficient water splitting. 2020 , 7, 2960-2968	6
836	In situ grown Cu-Based metal-organic framework on copper foam as high-performance electrocatalysts for oxygen evolution reaction. 2020 , 45, 21540-21546	7
835	Enhanced oxygen evolution reaction of defective CoP/MOF-integrated electrocatalyst by partial phosphating. 2020 , 8, 14099-14105	23
834	CuCo ₂ S ₄ hollow nanoneedle arrays supported on Ni foam as efficient trifunctional electrocatalysts for overall water splitting and Al ³⁺ /air batteries. 2020 , 845, 155392	5
833	Core-shell hybrid zeolitic imidazolate framework-derived hierarchical carbon for capacitive deionization. 2020 , 8, 14653-14660	23
832	Electrochemical sensor based on super-magnetic metal-organic framework@molecularly imprinted polymer for Sarcosine detection in urine. 2020 , 24, 620-630	19
831	Recent progress on metal-organic frameworks and their derived materials for electrocatalytic water splitting. 2020 , 8, 14326-14355	42
830	Zeolitic imidazolate framework-67 derived ultra-small CoP particles incorporated into N-doped carbon nanofiber as efficient bifunctional catalysts for oxygen reaction. 2020 , 452, 227837	47
829	Synthesis of Ru-Doped VN by a Soft-Urea Pathway as an Efficient Catalyst for Hydrogen Evolution. 2020 , 7, 1201-1206	6
828	Formation of cobalt phosphide nanodisks as a bifunctional electrocatalyst for enhanced water splitting. 2020 , 4, 1616-1620	10
827	Large-Size, Porous, Ultrathin NiCoP Nanosheets for Efficient Electro/Photocatalytic Water Splitting. 2020 , 30, 1910830	66
826	Self-transforming ultrathin NiCo(OH) ₂ nanosheet arrays from metal-organic framework modified graphene oxide with sandwichlike structure for efficient electrocatalytic oxygen evolution. 2020 , 13, 810-817	30

825	Porous CoP@N/P co-doped carbon/CNTs nanocubes: In-situ autocatalytic synthesis and excellent performance as the anode for lithium-ion batteries. 2020 , 513, 145777	23
824	FeNi ₃ Be ₃ O ₄ Heterogeneous Nanoparticles Anchored on 2D MOF Nanosheets/1D CNT Matrix as Highly Efficient Bifunctional Electrocatalysts for Water Splitting. 2020 , 8, 3820-3831	43
823	MOF-Directed Fabrication of Nickel/Cobalt Bimetallic Phosphides as Robust Electrocatalyst for Oxygen Evolution Reaction. 2020 , 167, 026512	12
822	Enhanced visible light photocatalytic activity of CdS through controllable self-assembly compositing with ZIF-67. 2020 , 485, 110797	17
821	Controlled Synthesis of Co@N-Doped Carbon by Pyrolysis of ZIF with 2-Aminobenzimidazole Ligand for Enhancing Oxygen Reduction Reaction and the Application in Zn-Air Battery. 2020 , 12, 11693-11701 ³⁶	
820	Synthesis of an Ultrafine CoP Nanocrystal/Graphene Sandwiched Structure for Efficient Overall Water Splitting. 2020 , 36, 1916-1922	11
819	A Remarkable Class of Nanocomposites: Aerogel Supported Bimetallic Nanoparticles. 2020 , 7,	12
818	Decorating CoNi layered double hydroxides nanosheet arrays with fullerene quantum dot anchored on Ni foam for efficient electrocatalytic water splitting and urea electrolysis. 2020 , 390, 124525	64
817	Structure and electrochemical properties of hierarchically porous carbon nanomaterials derived from hybrid ZIF-8/ZIF-67 bi-MOF coated cyclomatrix poly(organophosphazene) nanospheres. 2020 , 44, 4353-4362	1
816	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. 2020 , 28, 27-36	37
815	Selective Acceptorless Dehydrogenation of Primary Amines to Imines by Core-Shell Cobalt Nanoparticles. 2020 , 132, 7571-7577	5
814	Electrocatalyst engineering and structure-activity relationship in hydrogen evolution reaction: From nanostructures to single atoms. 2020 , 63, 921-948	48
813	Strongly Coupled Ni/Ni(OH) ₂ Hybrid Nanocomposites as Highly Active Bifunctional Electrocatalysts for Overall Water Splitting. 2020 , 8, 4431-4439	31
812	MOF-derived electrocatalysts for oxygen reduction, oxygen evolution and hydrogen evolution reactions. 2020 , 49, 1414-1448	587
811	Selective Acceptorless Dehydrogenation of Primary Amines to Imines by Core-Shell Cobalt Nanoparticles. 2020 , 59, 7501-7507	19
810	Band Modulation and Interfacial Engineering to Generate Efficient Visible-Light-Induced Bifunctional Photocatalysts. 2020 , 8, 2919-2930	14
809	Tuning electronic correlations of ultra-small IrO ₂ nanoparticles with La and Pt for enhanced oxygen evolution performance and long-durable stability in acidic media. 2020 , 266, 118643	23
808	ZIF-8@ZIF-67-Derived Nitrogen-Doped Porous Carbon Confined CoP Polyhedron Targeting Superior Potassium-Ion Storage. 2020 , 16, e1906566	78

807	Fabrication of ZIF-8@Polyphosphazene core-shell structure and its efficient synergism with ammonium polyphosphate in flame-retarding epoxy resin. 2020 , 31, 997-1006	12
806	Spatial Compartmentalization of Cobalt Phosphide in P-Doped Dual Carbon Shells for Efficient Alkaline Overall Water Splitting. 2020 , 59, 1996-2004	26
805	Curbing polysulfide shuttling by synergistic engineering layer composed of supported Sn4P3 nanodots electrocatalyst in lithium-sulfur batteries. 2020 , 70, 104532	53
804	An effective "precursor-transformation" route toward the high-yield synthesis of ZIF-8 tubes. 2020 , 56, 2913-2916	20
803	Rational Design of Core@shell Structured CoSx@Cu2MoS4 Hybridized MoS2/N,S-Codoped Graphene as Advanced Electrocatalyst for Water Splitting and Zn-Air Battery. 2020 , 10, 1903289	101
802	Non-3d Metal Modulation of a 2D Ni-Co Heterostructure Array as Multifunctional Electrocatalyst for Portable Overall Water Splitting. 2020 , 16, e1906775	78
801	ZIF-Derived CoNiS Nanoparticles Immobilized on N-Doped Carbons as Efficient Catalysts for High-Performance Zinc-Air Batteries. 2020 , 12, 5847-5856	31
800	Nickel nanograins anchored on a carbon framework for an efficient hydrogen evolution electrocatalyst and a flexible electrode. 2020 , 8, 3499-3508	13
799	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. 2020 , 565, 513-522	9
798	Stringing Bimetallic Metal-Organic Framework-Derived Cobalt Phosphide Composite for High-Efficiency Overall Water Splitting. 2020 , 7, 1903195	127
797	Nickel-ruthenium nanoalloy encapsulated in mesoporous carbon as active electrocatalysts for highly efficient overall water splitting in alkaline solution. 2020 , 334, 135653	2
796	Turning on electrocatalytic oxygen reduction by creating robust Fe-N species in hollow carbon frameworks via in situ growth of Fe doped ZIFs on g-CN. 2020 , 12, 5601-5611	18
795	A wearable breathable pressure sensor from metal-organic framework derived nanocomposites for highly sensitive broad-range healthcare monitoring. 2020 , 70, 104560	56
794	3D layered nano-flower MoSx anchored with CoP nanoparticles form double proton adsorption site for enhanced photocatalytic hydrogen evolution under visible light driven. 2020 , 45, 2578-2592	34
793	In situ interfacial engineering of nickel tungsten carbide Janus structures for highly efficient overall water splitting. 2020 , 65, 640-650	22
792	Controllable synthesis of an intercalated ZIF-67/EG structure for the detection of ultratrace Cd ²⁺ , Cu ²⁺ , Hg ²⁺ and Pb ²⁺ ions. 2020 , 395, 125216	62
791	The Importance of Ligand Selection on the Formation of Metal Phosphonate-Derived CoMoP and CoMoP ₂ Nanoparticles for Catalytic Hydrogen Evolution. 2020 , 3, 4147-4156	12
790	Large-scale multirole Zn(II) programmed synthesis of ultrathin hierarchically porous carbon nanosheets. 2020 , 63, 1730-1738	6

789	MOF-derived N-doped carbon coated CoP/carbon nanotube Pt-based catalyst for efficient methanol oxidation. 2020 , 45, 15630-15641	26
788	A Low-Cost and High-Efficiency Integrated Device toward Solar-Driven Water Splitting. 2020 , 14, 5426-5434	14
787	PtCo/N-doped carbon sheets derived from a simple pyrolysis of graphene oxide/ZIF-67/H ₂ PtCl ₆ composites as an efficient catalyst for methanol electro-oxidation. 2020 , 45, 12766-12776	10
786	Synergistic tuning of oxygen vacancies and d-band centers of ultrathin cobaltous dihydroxycarbonate nanowires for enhanced electrocatalytic oxygen evolution. 2020 , 12, 11735-11745	4
785	Exploring the impact of atomic lattice deformation on oxygen evolution reactions based on a sub-5 nm pure face-centred cubic high-entropy alloy electrocatalyst. 2020 , 8, 11938-11947	42
784	Simple 2 D/0 D CoP Integration in a Metal-Organic Framework-Derived Bifunctional Electrocatalyst for Efficient Overall Water Splitting. 2020 , 13, 3495-3503	12
783	Stacking faults triggered strain engineering of ZIF-67 derived Ni-Co bimetal phosphide for enhanced overall water splitting. 2020 , 272, 118951	41
782	Selective selenization of mixed-linker Ni-MOFs: NiSe ₂ @NC core-shell nano-octahedrons with tunable interfacial electronic structure for hydrogen evolution reaction. 2020 , 272, 118976	60
781	Enhanced electron transport through a nanoforest-like structure of CoNi nanoalloy@nitrogen-doped carbon nanotubes for highly efficient catalysis of overall water splitting. 2020 , 517, 145841	12
780	Highly uniform hollow CuCo ₂ S ₄ @C dodecahedra derived from ZIF-67 for high performance lithium-ion batteries. 2020 , 832, 154978	14
779	A Universal Strategy for Carbon-Supported Transition Metal Phosphides as High-Performance Bifunctional Electrocatalysts towards Efficient Overall Water Splitting. 2020 , 12, 19447-19456	45
778	Hierarchical Mesoporous MXene-NiCoP Electrocatalyst for Water-Splitting. 2020 , 12, 18570-18577	66
777	Engineering yolk-shell P-doped NiS ₂ /C spheres via a MOF-template for high-performance sodium-ion batteries. 2020 , 8, 8612-8619	42
776	Single-crystalline CoFe nanoparticles encapsulated in N-doped carbon nanotubes as a bifunctional catalyst for water splitting. 2020 , 4, 2307-2313	9
775	Bimetallic metal-organic frameworks and their derivatives. 2020 , 11, 5369-5403	115
774	CoP@SiO ₂ nanoreactors: A core-shell structure for efficient electrocatalytic oxygen evolution reaction. 2020 , 31, 2300-2304	22
773	Morphological and Electronic Dual Regulation of Cobalt-Nickel Bimetal Phosphide Heterostructures Inducing High Water-Splitting Performance. 2020 , 11, 3911-3919	18
772	Defect-induced nucleation and epitaxial growth of a MOF-derived hierarchical MoC@Co architecture for an efficient hydrogen evolution reaction.. 2020 , 10, 13838-13847	3

771	Highly-dispersed ruthenium precursors a self-assembly-assisted synthesis of uniform ruthenium nanoparticles for superior hydrogen evolution reaction.. 2020 , 10, 14313-14316	5
770	Assembled 3D MOF on 2D Nanosheets for Self-boosting Catalytic Synthesis of N-doped Carbon Nanotube Encapsulated Metallic Co Electrocatalysts for Overall Water Splitting. 2020 , 271, 118939	63
769	The preparation of Ag/ZIF-8@ZIF-67 core-shell composites as excellent catalyst for degradation of the nitroaromatic compounds. 2020 , 516, 146160	22
768	Rational design of 2D super holey metal carboniride leaf-like nanostructure for efficient oxygen electrocatalysis. 2020 , 164, 287-295	10
767	Ultrafine Co nanodots embedded in N-doped carbon nanotubes grafted on hexagonal VN for highly efficient overall water splitting. 2020 , 73, 104788	38
766	Cobalt phosphide nanoparticles supported within network of N-doped carbon nanotubes as a multifunctional and scalable electrocatalyst for water splitting. 2021 , 52, 130-138	37
765	Prussian Blue AnaloguesDerived CoFeB Nanocubes with Increased Specific Surface Area and Modulated Electronic Structure as Enhanced Oxygen Evolution Electrocatalysts. 2021 , 9, 2000178	6
764	CoP@NC electrocatalyst promotes hydrogen and oxygen productions for overall water splitting in alkaline media. 2021 , 46, 2095-2102	5
763	A co-coordination strategy to realize janus-type bimetallic phosphide as highly efficient and durable bifunctional catalyst for water splitting. 2021 , 74, 11-20	24
762	Construction of caterpillar-like hierarchically structured Co/MnO/CNTs derived from MnO ₂ /ZIF-8@ZIF-67 for electromagnetic wave absorption. 2021 , 173, 521-527	35
761	Hierarchical core-shell TiO ₂ @LDH@Ni(OH) ₂ architecture with regularly-oriented nanocatalyst shells: Towards improving the mechanical performance, flame retardancy and toxic smoke suppression of unsaturated polyester resin. 2021 , 405, 126650	33
760	Earth-abundant coal-derived carbon nanotube/carbon composites as efficient bifunctional oxygen electrocatalysts for rechargeable zinc-air batteries. 2021 , 56, 87-97	15
759	Nitrogen-doped carbon-decorated yolk-shell CoP@FeCoP micro-polyhedra derived from MOF for efficient overall water splitting. 2021 , 403, 126312	110
758	Carbon quantum dots for advanced electrocatalysis. 2021 , 55, 279-294	69
757	Chitin nanofibers as versatile bio-templates of zeolitic imidazolate frameworks for N-doped hierarchically porous carbon electrodes for supercapacitor. 2021 , 251, 117107	21
756	Multiphase phosphide cocatalyst for boosting efficient photocatalytic H ₂ production and enhancing the stability. 2021 , 47, 1414-1420	7
755	Nitrogen-Coordinated Cobalt Embedded in a Hollow Carbon Polyhedron for Superior Catalytic Oxidation of Organic Contaminants with Peroxymonosulfate. 2021 , 1, 76-85	21
754	Facile construction of mesoporous carbon enclosed with NiCoPx nanoparticles for desirable Pt-based catalyst support in methanol oxidation. 2021 , 481, 228888	21

753	Co/Co ₃ O ₄ -embedded N-doped hollow carbon composite derived from a bimetallic MOF/ZnO Core-shell template as a sulfur host for Li-S batteries. 2021 , 407, 126967	36
752	N- doped CoP nanoparticles embedded in electrospun N-doped porous carbon nanofiber as high-efficiency oxygen evolution electrocatalysts. 2021 , 854, 156830	7
751	Organic carboxylate-based MOFs and derivatives for electrocatalytic water oxidation. 2021 , 428, 213619	35
750	Carbon dots-confined CoP-CoO nanoheterostructure with strong interfacial synergy triggered the robust hydrogen evolution from ammonia borane. 2021 , 57, 198-205	33
749	Sprout-shaped Mo-doped CoP with maximized hydrophilicity and gas bubble release for high-performance water splitting catalyst. 2021 , 408, 127331	19
748	Bimetallic oxide nanoparticles confined in ZIF-67-derived carbon for highly selective oxidation of saturated C-H bond in alkyl arenes. 2021 , 35,	3
747	Metal-organic frameworks-derived novel nanostructured electrocatalysts for oxygen evolution reaction. 2021 , 3, 66-100	28
746	Recent progress on synthetic strategies and applications of transition metal phosphides in energy storage and conversion. 2021 , 47, 4404-4425	47
745	Defect-rich bimetallic yolk-shell metal-cyanide frameworks as efficient electrocatalysts for oxygen evolution reactions. 2021 , 9, 2135-2144	11
744	Contemporaneous inverse manipulation of the valence configuration to preferred Co ²⁺ and Ni ³⁺ for enhanced overall water electrocatalysis. 2021 , 284, 119725	23
743	Hierarchically 3D bifunctional catalysts assembled with 1D MoC core/branched N-doped CNT arrays for zinc-air batteries. 2021 , 367, 137522	4
742	Double metal-organic frameworks derived FeCoNi phosphides nanosheets as high-performance electrocatalyst for alkaline electrochemical water splitting. 2021 , 367, 137536	13
741	Yolk-shell ZIF-8@ZIF-67 derived Co ₃ O ₄ @NiCo ₂ O ₄ catalysts with effective electrochemical properties for Li-O ₂ batteries. 2021 , 861, 157945	12
740	The importance of the iron valence state in NiCoFe nanosheet array catalysts for the oxygen evolution reaction. 2021 , 8, 766-776	2
739	Al, Fe-codoped CoP nanoparticles anchored on reduced graphene oxide as bifunctional catalysts to enhance overall water splitting. 2021 , 421, 127856	15
738	Template-free fabrication of MoP nanoparticles encapsulated in N-doped hollow carbon spheres for efficient alkaline hydrogen evolution. 2021 , 416, 127677	20
737	Hierarchically porous CoP@CNR nanorod derived from metal-organic frameworks as noble-metal-free catalyst for dehydrogenation of ammonia-borane. 2021 , 46, 5345-5354	2
736	Metal-organic framework-derived porous carbon templates for catalysis. 2021 , 73-121	

- 735 Interface engineering: NiAl-LDH in-situ derived NiP₂ quantum dots and Cu₃P nanoparticles ingeniously constructed p-n heterojunction for photocatalytic hydrogen evolution. **2021**, 420, 127682 27
- 734 Facet controlled polyhedral ZIF-8 MOF nanostructures for excellent NO₂ gas-sensing applications. **2021**, 136, 111133 28
- 733 Metal-Organic Framework-Based Hybrid Frameworks. **2021**, 2, 2000078 31
- 732 NiCoP nanorod arrays as high-performance bifunctional electrocatalyst for overall water splitting at high current densities. **2021**, 484, 229269 26
- 731 ZIF-8@ZIF-67T-derived ZnCo₂O₄@nitrogen-doped carbon/carbon nanotubes wrapped by a carbon layer: a stable oxygen reduction catalyst with a competitive strength in acid media. **2021**, 19, 100574 4
- 730 A core-shell structured metal-organic frameworks-derived porous carbon nanowires as a superior anode for alkaline metal-ion batteries. **2021**, 541, 148473 5
- 729 Microstructural Engineering of Cathode Materials for Advanced Zinc-Ion Aqueous Batteries. **2020**, 8, 2002722 21
- 728 Interfacial Engineering-Triggered Bifunctionality of CoS /MoS Nanocubes/Nanosheet Arrays for High-Efficiency Overall Water Splitting. **2021**, 14, 699-708 23
- 727 Well-dispersed ultrafine CoFe nanoalloy decorated N-doped hollow carbon microspheres for rechargeable/flexible Zn-air batteries. **2021**, 407, 127961 24
- 726 Construction of cobalt nanoparticles decorated intertwined N-doped carbon nanotube clusters with dual active sites for highly effective 4-nitrophenol reduction. **2021**, 858, 158287 1
- 725 Recent Tactics and Advances in the Application of Metal Sulfides as High-Performance Anode Materials for Rechargeable Sodium-Ion Batteries. **2021**, 31, 2006761 26
- 724 Hollow Carbon-Based Nanoarchitectures Based on ZIF: Inward/Outward Contraction Mechanism and Beyond. **2021**, 17, e2004142 21
- 723 Beyond traditional water splitting for energy-efficient waste-to-hydrogen conversion with an inorganic-carbon hybrid nanosheet electrocatalyst. **2021**, 9, 5364-5373 3
- 722 Unprecedented electrocatalytic oxygen evolution performances by cobalt-incorporated molybdenum carbide microflowers with controlled charge re-distribution. **2021**, 9, 1770-1783 3
- 721 Ultra-small Sn-RuO₂ nanoparticles supported on N-doped carbon polyhedra for highly active and durable oxygen evolution reaction in acidic media. **2021**, 409, 128155 3
- 720 Controlled Selenium Infiltration of Cobalt Phosphide Nanostructure Arrays from a Two-Dimensional Cobalt Metal-Organic Framework: A Self-Supported Electrode for Flexible Quasi-Solid-State Asymmetric Supercapacitors. **2021**, 4, 404-415 20
- 719 Design of hollow carbon-based materials derived from metal-organic frameworks for electrocatalysis and electrochemical energy storage. **2021**, 9, 3880-3917 41
- 718 Novel silver(I) cluster-based coordination polymers as efficient luminescent thermometers. **2021**, 23, 56-63 5

7 ¹⁷	A sequential template strategy toward hierarchical hetero-metal phosphide hollow nanoboxes for electrocatalytic oxygen evolution. 2021 , 9, 3482-3491	7
7 ¹⁶	Colloidal Ni ₂ P Nanocrystals Encapsulated in Heteroatom-Doped Graphene Nanosheets: A Synergy of [email[protected]] Heterostructure Toward Overall Water Splitting. 2021 , 33, 234-245	26
7 ¹⁵	Porous CoP/Co ₂ P heterostructure for efficient hydrogen evolution and application in magnesium/seawater battery. 2021 , 486, 229351	30
7 ¹⁴	Co/N co-doped carbonaceous polyhedron as efficient peroxymonosulfate activator for degradation of organic pollutants: Role of cobalt. 2021 , 417, 127921	27
7 ¹³	Cobalt embedded in nitrogen-doped porous carbon as a robust heterogeneous catalyst for the atom-economic alcohol dehydrogenation to carboxylic acids. 2021 , 174, 284-294	8
7 ¹²	Engineering nanointerface of molybdenum-based heterostructures to boost the electrocatalytic hydrogen evolution reaction. 2021 , 58, 370-376	7
7 ¹¹	Recent advances in electrocatalysts for neutral and large-current-density water electrolysis. 2021 , 80, 105545	49
7 ¹⁰	One-dimensional nitrogen-doped carbon frameworks embedded with zinc-cobalt nanoparticles for efficient overall water splitting. 2021 , 585, 800-807	9
7 ⁰⁹	A new steric tetra-imidazole for facile synthesis of high loading atomically dispersed FeN ₄ electrocatalysts. 2021 , 80, 105533	16
7 ⁰⁸	Metal-organic framework derived Fe-Co-CN/reduced graphene oxide for efficient HER and OER. 2021 , 365, 137384	27
7 ⁰⁷	Facile formation of Fe-doped NiCoP hollow nanocages as bifunctional electrocatalysts for overall water splitting. 2021 , 23, 3861-3869	3
7 ⁰⁶	Exploring the electrocatalytic activity of cobalt disulfide nanosheets towards the hydrogen evolution reaction with in situ ECAFM. 2021 , 5, 4115-4125	3
7 ⁰⁵	N-Induced Electron Transfer Effect on Low-Temperature Activation of Nitrogen for Ammonia Synthesis over Co-Based Catalysts. 2021 , 9, 1529-1539	7
7 ⁰⁴	Enhanced OER performance of composite CoFe-based MOF catalysts via a one-pot ultrasonic-assisted synthetic approach. 2021 , 5, 1095-1102	6
7 ⁰³	Recent progress in water-splitting electrocatalysis mediated by 2D noble metal materials. 2021 , 13, 12088-12103	13
7 ⁰²	Ultrathin 2D flower-like CoP@C with the active (211) facet for efficient electrocatalytic water splitting. 2021 , 23, 1777-1784	4
7 ⁰¹	One-step construction of Co ₂ P nanoparticles encapsulated in N, P co-doped biomass-based porous carbon as bifunctional efficient electrocatalysts for overall water splitting. 2021 , 5, 2477-2485	1
7 ⁰⁰	Multi-shelled hollow layered double hydroxides with enhanced performance for the oxygen evolution reaction. 2021 , 57, 2752-2755	7

699	Advances in hydrogen production from electrocatalytic seawater splitting. 2021 , 13, 7897-7912	16
698	Metal-organic frameworks and their derivatives as electrocatalysts for the oxygen evolution reaction. 2021 , 50, 2663-2695	107
697	Co ₂ P nanoparticle/multi-doped porous carbon nanosheets for the oxygen evolution reaction. 2021 , 45, 8769-8774	3
696	A NiCoP nanocluster-anchored porous TiCT monolayer as high performance hydrogen evolution reaction electrocatalysts. 2021 , 13, 12854-12864	2
695	ZIF-67-based catalysts for oxygen evolution reaction. 2021 , 13, 12058-12087	6
694	Tailoring the d-band center of N-doped carbon nanotube arrays with Co ₄ N nanoparticles and single-atom Co for a superior hydrogen evolution reaction. 2021 , 13,	37
693	Interfacial electronic structure modulation enables CoMoO _x /CoO _x /RuO _x to boost advanced oxygen evolution electrocatalysis. 2021 , 9, 14601-14606	30
692	Porous nanosheets of Cu ₃ P@N,P co-doped carbon hosted on copper foam as an efficient and ultrastable pH-universal hydrogen evolution electrocatalyst. 2021 , 5, 2451-2457	3
691	Controllable generation of ZnO/ZnCoO arising from bimetal-organic frameworks for electrochemical detection of naphthol isomers. 2021 , 146, 3352-3360	2
690	3D self-supported porous vanadium-doped nickel nitride nanosheet arrays as efficient bifunctional electrocatalysts for urea electrolysis. 2021 , 9, 4159-4166	23
689	Concentration gradient induced in situ formation of MOF tubes. 2021 , 57, 7300-7303	0
688	The ammoxidation of alcohols over heterogeneous catalysts for the green synthesis of nitriles. 2021 , 8, 3137-3149	11
687	Porous Co ₃ O ₄ stabilized VS ₂ nanosheets obtained with a MOF template for the efficient HER. 2021 , 23, 5097-5105	0
686	Multifunctional metal-organic framework heterostructures for enhanced cancer therapy. 2021 , 50, 1188-1218	50
685	In-Situ Phosphating Co@Nitrogen-Doping Graphene Boosts Overall Water Splitting Under Alkaline Condition.	
684	Design of Ni ₃ N/Co ₂ N heterojunctions for boosting electrocatalytic alkaline overall water splitting. 2021 , 9, 10260-10269	12
683	MOF-derived Core-Shell CoP@NC@TiO ₂ Composite as a High-Performance Anode Material for Li-ion Batteries. 2021 , 16, 322-328	6
682	A Co-MOF-derived flower-like CoS@S,N-doped carbon matrix for highly efficient overall water splitting.. 2021 , 11, 16823-16833	5

681	Bioinspired interfacial engineering of a CoSe decorated carbon framework cathode towards temperature-tolerant and flexible Zn-air batteries. 2021 , 13, 3019-3026	22
680	Incomplete amorphous phosphorization on the surface of crystalline cobalt molybdate to accelerate hydrogen evolution.	2
679	Iridium coated Co nanoparticles embedded into highly porous N-doped carbon nanocubes grafted with carbon nanotubes as a catalytic cathode for high-performance LiO ₂ batteries. 2021 , 9, 17865-17875	8
678	Hydrogen and Potassium Acetate Co-Production from Electrochemical Reforming of Ethanol at Ultrathin Cobalt Sulfide Nanosheets on Nickel Foam. 2021 , 13, 4026-4033	12
677	Electrospun prussian blue analogue derived NiCo@N-doped carbon nanofibers as efficient and highly stable electrocatalysts for neutral overall water splitting. 2021 , 46, 8871-8884	4
676	Titanium Nitride-Supported Platinum with Metal-Support Interaction for Boosting Photocatalytic H Evolution of Indium Sulfide. 2021 , 13, 7238-7247	10
675	Shaggy-like Ru-clusters decorated core-shell metal-organic framework-derived CoOx@NPC as high-efficiency catalyst for NaBH ₄ hydrolysis. 2021 , 46, 7772-7781	10
674	Selective-etching of MOF toward hierarchical porous Mo-doped CoP/N-doped carbon nanosheet arrays for efficient hydrogen evolution at all pH values. 2021 , 405, 126981	22
673	Noble-metal-free Co@Co ₂ P/N-doped carbon nanotube polyhedron as an efficient catalyst for hydrogen generation from ammonia borane. 2021 , 46, 9030-9039	9
672	FeCoP Nanoparticles Embedded in N and P Co-doped Hierarchically Porous Carbon for Efficient Electrocatalytic Water Splitting. 2021 , 13, 8832-8843	11
671	Hollow FeCo-FeCoP@C nanocubes embedded in nitrogen-doped carbon nanocages for efficient overall water splitting. 2021 , 53, 1-8	13
670	Three-phase composites of NiFeO/Ni@C nanoparticles derived from metal-organic frameworks as electrocatalysts for the oxygen evolution reaction. 2021 , 32, 175701	4
669	CoP/Ni ₂ P heteronanoparticles integrated with atomic Co/Ni dual sites for enhanced electrocatalytic performance toward hydrogen evolution. 2021 , 46, 8431-8443	6
668	Metal-Organic Framework-Derived Hierarchical MnO/Co with Oxygen Vacancies toward Elevated-Temperature Li-Ion Battery. 2021 , 15, 4594-4607	40
667	Highly Stable Trimetallic (Co, Ni, and Fe) Zeolite Imidazolate Framework Microfibers: An Excellent Electrocatalyst for Water Oxidation. 2021 , 21, 1800-1809	11
666	Morphological engineering of carbon-based materials: in the quest of efficient catalysts for overall water splitting. 2021 , 46, 7284-7296	4
665	Stable core-shell ZIF-8@ZIF-67 MOFs photocatalyst for highly efficient degradation of organic pollutant and hydrogen evolution. 2021 , 36, 602-614	13
664	Spontaneous migration induced Co nanokarstcave encapsulated in N-doped carbon hybrids for efficient oxygen electrocatalyst. 2021 , 14, 4569	1

- 663 Multi-Phase Heterostructure of CoNiP/Co P for Enhanced Hydrogen Evolution Under Alkaline and Seawater Conditions by Promoting H O Dissociation. **2021**, 17, e2007557 19
- 662 Electrospun Fe-Incorporated ZIF-67 Nanofibers for Effective Electrocatalytic Water Splitting. **2021**, 60, 4034-4046 17
- 661 CoPSe: A New Ternary Anode Material for Stable and High-Rate Sodium/Potassium-Ion Batteries. **2021**, 33, e2007262 52
- 660 Boosting Electrocatalytic Activity of 3d-Block Metal (Hydro)oxides by Ligand-Induced Conversion. **2021**, 60, 10614-10619 42
- 659 Shungite-derived graphene as a carbon support for bifunctional oxygen electrocatalysts. **2021**, 395, 178-187 6
- 658 Boosting Electrocatalytic Activity of 3d-Block Metal (Hydro)oxides by Ligand-Induced Conversion. **2021**, 133, 10708-10713 1
- 657 Efficient Hydrogen Evolution on Nanoscale Graphdiyne. **2021**, 17, e2006136 14
- 656 Designing MOF Nanoarchitectures for Electrochemical Water Splitting. **2021**, 33, e2006042 76
- 655 In Situ Anchoring Polymetallic Phosphide Nanoparticles within Porous Prussian Blue Analogue Nanocages for Boosting Oxygen Evolution Catalysis. **2021**, 21, 3016-3025 75
- 654 An Ingenious Strategy to Integrate Multiple Electrocatalytically Active Components within a Well-Aligned Nitrogen-Doped Carbon Nanotube Array Electrode for Electrocatalysis. **2021**, 11, 3958-3974 11
- 653 A Three-in-one ZIFs-Derived CuCo(O)/GOx@PCNs Hybrid Cascade Nanozyme for Immunotherapy/Enhanced Starvation/Photothermal Therapy. **2021**, 13, 11683-11695 19
- 652 Noble metal-free electrocatalytic materials for water splitting in alkaline electrolyte. **2021**, 3, 100053 21
- 651 Catalytic Co-N-C hollow nanocages as separator coating layer for lithium-sulfur batteries. **2021**, 316, 110927 6
- 650 Phosphating-induced charge transfer on CoO/CoP interface for alkaline H₂ evolution. **2021**, 32, 3355-3355 9
- 649 Reasonably Introduced ZnInS@C to Mediate Polysulfide Redox for Long-Life Lithium-Sulfur Batteries. **2021**, 13, 14169-14180 7
- 648 Supported 2P Core/Shell Nanotube Arrays on Ni Foam for Hydrazine Electrooxidation. **2021**, 9, 4564-4570 3
- 647 Efficient Combination of G-C N and CDs for Enhanced Photocatalytic Performance: A Review of Synthesis, Strategies, and Applications. **2021**, 17, e2007523 32
- 646 MOF-on-MOF hybrids: Synthesis and applications. **2021**, 432, 213743 49

645	NiSe ₂ /Ni ₅ P ₄ nanosheets on nitrogen-doped carbon nano-fibred skeleton for efficient overall water splitting. 2021 , 614, 126189	3
644	Fabrication and properties of coral-like Ni/Mn-MOFs as electrode materials for supercapacitors. 2021 , 32, 13430-13439	2
643	Three-dimensional flower-like WP ₂ nanowire arrays grown on Ni foam for full water splitting. 2021 , 546, 148926	5
642	Selective phosphidation and reduction strategy to construct heterostructured porous nanorod of CoP coated on Mn ₃ O ₄ as a bifunctional electrocatalyst for overall water splitting. 2021 , 544, 148860	10
641	Graphene-Like Hydrogen-Bonded Melamine-Cyanuric Acid Supramolecular Nanosheets as Pseudo-Porous Catalyst Support. 2021 , 33, e2007368	5
640	Metal-Organic Gel Derived N-Doped Granular Carbon: Remarkable Toluene Uptake and Rapid Regeneration. 2021 , 13, 17543-17553	2
639	Controllable Microporous Framework Isomerism within Continuous Mesoporous Channels: Hierarchically Porous Structure for Capture of Bulky Molecules. 2021 , 60, 6633-6640	2
638	A confinement strategy for stabilizing two-dimensional carbon / CoP hybrids with enhanced hydrogen evolution. 2021 , 375, 137966	8
637	Strategic Structure Tuning of Yolk-Shell Microcages for Efficient Nitrogen Fixation. 2021 , 14, 2521-2528	1
636	Efficient suppression of surface charge recombination by CoP-Modified nanoporous BiVO ₄ for photoelectrochemical water splitting. 2021 , 46, 15517-15525	9
635	Stable, Efficient, Copper Coordination Polymer-Derived Heterostructured Catalyst for Oxygen Evolution under pH-Universal Conditions. 2021 , 13, 25461-25471	0
634	W-Doped MoP Nanospheres as Electrocatalysts for pH-Universal Hydrogen Evolution Reaction. 2021 , 4, 5992-6001	4
633	Copper-indium hybrid derived from indium-based metal-organic frameworks grown on oxidized copper foils promotes the efficient electroreduction of CO ₂ to CO. 2021 , 412, 128718	5
632	Cobalt/zinc based metal organic frameworks as an effective adsorbent for improved removal of As(V) and Cr(VI) in a wide pH range. 2021 , 12, 1845-1855	5
631	Rational construction of hierarchical Co@C@NPC nanocomposites derived from bimetallic hybrid ZIFs/biomass for boosting the microwave absorption. 2021 , 589, 462-471	67
630	Mo-doped CoP nanosheets as high-performance electrocatalyst for HER and OER. 2021 , 27, 3109-3118	4
629	MOFs-derived hollow materials for electromagnetic wave absorption: prospects and challenges. 1	1
628	V-doped Ni ₃ N/Ni heterostructure with engineered interfaces as a bifunctional hydrogen electrocatalyst in alkaline solution: Simultaneously improving water dissociation and hydrogen adsorption. 2021 , 14, 3489-3496	9

627	Bifunctional molybdenum carbide based hybrids for electrocatalytic water splitting. 2021 , 47, 24949-24949	0
626	ZIF-67 derived Co _x /NC catalysts for selective reduction of nitro compounds. 2021 , 28, 1279-1290	0
625	Carbonized Wood Decorated with Cobalt-Nickel Binary Nanoparticles as a Low-Cost and Efficient Electrode for Water Splitting. 2021 , 31, 2010951	8
624	Metal-Organic Frameworks and Metal-Organic Gels for Oxygen Electrocatalysis: Structural and Compositional Considerations. 2021 , 33, e2008023	21
623	Recent Advances in Multimetal and Doped Transition-Metal Phosphides for the Hydrogen Evolution Reaction at Different pH values. 2021 , 13, 22077-22097	21
622	Bimetallic Co-Mo nitride nanosheet arrays as high-performance bifunctional electrocatalysts for overall water splitting. 2021 , 411, 128433	45
621	In-situ evolution process understanding from a salen-ligated manganese cluster to supercapacitive application. 2022 , 15, 346	4
620	Active Site Identification and Interfacial Design of a MoP/N-Doped Carbon Catalyst for Efficient Hydrogen Evolution Reaction. 2021 , 4, 5486-5492	2
619	Metal-Organic Frameworks Derived Multidimensional CoP/N, P-Doped Carbon Architecture as an Efficient Electrocatalyst for Overall Water Splitting. 2021 , 13, 3037-3045	0
618	N-doped carbon-stabilized Pt ₃ Co nanoparticles as an efficient catalyst for methanol electro-oxidation. 2021 , 617, 126411	2
617	Synthetic methods, properties and controlling roles of synthetic parameters of zeolite imidazole framework-8: A review. 2021 , 297, 122040	17
616	One-dimensional nanomaterial supported metal single-atom electrocatalysts: Synthesis, characterization, and applications. 2021 , 2, 2072	1
615	Hierarchical fabrication of hollow CoP nanocages coated with ZnInS thin layer: Highly efficient noble-metal-free photocatalyst for hydrogen evolution. 2021 , 590, 632-640	14
614	High-Performance Ammonium Cobalt Phosphate Nanosheet Electrocatalyst for Alkaline Saline Water Oxidation. 2021 , 8, 2100498	8
613	CoP-anchored high N-doped carbon@graphene sheet as bifunctional electrocatalyst for efficient overall water splitting. 2021 , 46, 18224-18232	8
612	Metal-Organic Frameworks for Photo/Electrocatalysis. 2021 , 2, 2100033	47
611	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. 2021 , 31, 2010912	16
610	MOFs template derived Co/Fe binary phosphide nanocomposite embedded in ternary-doped carbon matrix for efficient water splitting. 2021 , 47, 12843-12850	4

609	Selective sulfuration, phosphorization and selenylation: A universal strategy toward Co-Ni-M@CeO ₂ /NF (M = O, S, P and Se) interface engineering for efficient water splitting electrocatalysis. 2021 , 864, 158486	7
608	Hierarchically Assembling CoFe Prussian Blue Analogue Nanocubes on CoP Nanosheets as Highly Efficient Electrocatalysts for Overall Water Splitting.. 2021 , 5, e2100125	5
607	Laser-Induced Annealing of Metal-Organic Frameworks on Conductive Substrates for Electrochemical Water Splitting. 2021 , 31, 2102648	14
606	Capsulation of AuNCs with AIE Effect into Metal-Organic Framework for the Marriage of a Fluorescence and Colorimetric Biosensor to Detect Organophosphorus Pesticides. 2021 , 93, 7275-7282	32
605	Ultrathin carbon-coated Zr ³⁺ -ZrO ₂ nanostructures for efficient visible light photocatalytic antibiotic elimination. 2021 , 412, 128621	23
604	Co-N/KB porous hybrid derived from ZIF 67/KB as a separator modification material for lithium-sulfur batteries. 2021 , 382, 138282	9
603	Enhanced electro-oxidation of urea using Ni-NiS debris via confinement in carbon derived from glucose. 2021 , 618, 126425	4
602	Advanced Transition Metal-Based OER Electrocatalysts: Current Status, Opportunities, and Challenges. 2021 , 17, e2100129	58
601	Macro-meso-microporous carbon composite derived from hydrophilic metal-organic framework as high-performance electrochemical sensor for neonicotinoid determination. 2021 , 411, 125122	12
600	Zn, Co, and Fe Tridoped N-C Core-Shell Nanocages as the High-Efficiency Oxygen Reduction Reaction Electrocatalyst in Zinc-Air Batteries. 2021 , 13, 28324-28333	13
599	Uniform Formation of Amorphous Cobalt Phosphate on Carbon Nanotubes for Hydrogen Evolution Reaction 2021 , 39, 2113-2118	2
598	Advances in CoP electrocatalysts for water splitting. 2021 , 20, 100698	27
597	Rational design of a cobalt sulfide/bismuth sulfide S-scheme heterojunction for efficient photocatalytic hydrogen evolution. 2021 , 592, 237-248	18
596	NiCoP/NF 1D/2D Biomimetic Architecture for Markedly Enhanced Overall Water Splitting. 2021 , 8, 3064-3072	2
595	Cobalt Phosphide Cocatalysts Coated with Porous N-doped Carbon Layers for Photocatalytic CO ₂ Reduction. 2021 , 13, 3581-3587	8
594	Single Zinc Atoms Anchored on MOF-Derived N-Doped Carbon Shell Cooperated with Magnetic Core as an Ultrawideband Microwave Absorber. 2021 , 17, e2101416	29
593	Self-supported Co/CoO anchored on N-doped carbon composite as bifunctional electrocatalyst for efficient overall water splitting. 2021 , 414, 128804	40
592	Controllable Construction of Bifunctional CoxP@N,P-Doped Carbon Electrocatalysts for Rechargeable Zinc-Air Batteries.	3

591	In-situ transformation obtained defect-rich porous hollow CuO@CoZn-LDH nanoarrays as self-supported electrode for highly efficient overall water splitting. 2021 , 414, 128809	19
590	A review of graphene-oxide/metal-organic framework composites materials: characteristics, preparation and applications. 2021 , 28, 1837	1
589	In Situ Synthesis of NiO/CuO Nanosheet Heterostructures Rich in Defects for Efficient Electrocatalytic Oxygen Evolution Reaction. 2021 , 125, 16516-16523	3
588	Selective Interface Synthesis of Cobalt Metaphosphate Nanosheet Arrays Motivated by Functionalized Carbon Cloths for Fast and Durable Na/K-Ion Storage. 2021 , 13, 34410-34418	2
587	Hierarchical CoFe LDH/MOF nanorods array with strong coupling effect grown on carbon cloth enables efficient oxidation of water and urea. 2021 , 32,	2
586	Promoting polysulfide redox kinetics by Co ₉ S ₈ nanoparticle-embedded in N-doped carbon nanotube hollow polyhedron for lithium sulfur batteries. 2021 , 869, 159306	7
585	A universal CoO/CoSe ₂ heterostructure electrocatalyst towards hydrogen evolution reaction via in-situ partial surface-oxidation-selenization method. 2021 , 267, 124644	2
584	Highly efficient photocatalytic CO ₂ reduction with an organic dye as photosensitizer. 2021 , 129, 108617	
583	Iridium-Doped N-Rich Mesoporous Carbon Electrocatalyst with Synthetic Macrocycles as Carbon Source for Hydrogen Evolution Reaction. 2021 , 31, 2105562	6
582	Metal-Organic Framework Derived Nanostructured Bifunctional Electrocatalysts for Water Splitting. 2021 , 8, 3782	0
581	Co-Ni alloy nanoparticles supported by carbon nanofibers for hydrogen evolution reaction. 2021 , 868, 159172	8
580	Fe ₃ C-porous carbon derived from Fe ₂ O ₃ loaded MOF-74(Zn) for the removal of high concentration BPA: The integrations of adsorptive/catalytic synergies and radical/non-radical mechanisms. 2021 , 413, 125305	19
579	Metal-Organic Frameworks-Derived Nitrogen-Doped Porous Carbon Nanocubes with Embedded Co Nanoparticles as Efficient Sulfur Immobilizers for Room Temperature Sodium-Sulfur Batteries.. 2021 , 5, e2100455	9
578	Metal-organic framework derived Co ₃ O ₄ /TiO ₂ heterostructure nanoarrays for promote photoelectrochemical water splitting. 2021 , 46, 24965-24976	10
577	MOF-derived hollow heterostructures for advanced electrocatalysis. 2021 , 439, 213946	63
576	A membrane-free flow electrolyzer operating at high current density using earth-abundant catalysts for water splitting. 2021 , 12, 4143	10
575	Rational Design and Growth of MOF-on-MOF Heterostructures. 2021 , 17, e2100607	15
574	A Simple Method for Preparing Carbon-doped CoP to Enhance Hydrogen Evolution Reaction. 2021 , 6, 7068-7075	1

573	Tuning the Electrochemical Properties of Polymeric Cobalt Phthalocyanines for Efficient Water Splitting. 2021 , 31, 2103290	10
572	Construction of heterostructured CoP/CN/Ni: Electron redistribution towards effective hydrogen generation and oxygen reduction. 2021 , 415, 129031	13
571	Cobalt nanoparticles encapsulated by nitrogen-doped carbon framework as anode materials for high performance lithium-ion capacitors. 2021 , 893, 115326	1
570	Porous array with CoP nanoparticle modification derived from MOF grown on carbon cloth for effective alkaline hydrogen evolution. 2021 , 416, 128943	9
569	Atomically controllable in-situ electrochemical treatment of metal-organic-framework-derived cobalt-embedded carbon composites for highly efficient electrocatalytic oxygen evolution. 2021 , 554, 149651	5
568	Heterostructure design of Ni/C/porous carbon nanosheet composite for enhancing the electromagnetic wave absorption. 2021 , 179, 566-578	54
567	The rational adjusting of proton-feeding by Pt-doped FeP/C hollow nanorod for promoting nitrogen reduction kinetics. 2021 , 291, 120047	14
566	Co nanoparticles and ZnS decorated N, S co-doped carbon nanotubes as an efficient oxygen reduction catalyst in zinc-air batteries. 2021 , 46, 30090-30100	2
565	One-step phosphorization preparation of gradient-P-doped CdS/CoP hybrid nanorods having multiple channel charge separation for photocatalytic reduction of water. 2021 , 596, 431-441	26
564	Co-modified Ni/N-doped carbon as electrocatalysts for HER and OER. 2021 , 32, 22974-22983	0
563	3D Se-doped NiCoP nanoarrays on carbon cloth for efficient alkaline hydrogen evolution. 2021 , 28, 2345-2359	9
562	Ultra-stable and high capacity flexible lithium-ion batteries based on bimetallic MOFs derivatives aiming for wearable electronic devices. 2021 , 417, 129200	12
561	On the Roles of Electron Transfer in Catalysis by Nanoclusters and Nanoparticles. 2021 , 27, 16291-16308	2
560	Tuning the oxidation state of Ru to surpass Pt in hydrogen evolution reaction. 2021 , 14, 4321	3
559	Temperature-controlled fabrication of Co-Fe-based nanoframes for efficient oxygen evolution. 1	11
558	NiCo alloy decorated on porous N-doped carbon derived from ZnCo-ZIF as highly efficient and magnetically recyclable catalyst for hydrogen evolution from ammonia borane. 2021 , 173, 273-282	12
557	Boosting the photoelectrochemical water oxidation performance of bismuth vanadate by ZnCo ₂ O ₄ nanoparticles. 2021 ,	2
556	Ruthenium Supported on Cobalt-Embedded Porous Carbon with Hollow Structure as Efficient Catalysts toward Ammonia-Borane Hydrolysis for Hydrogen Production. 2021 , 5, 2100209	2

555	Coral-like prussian blue analogues-derived bimetallic phosphide with enhanced electrocatalytic performance for hydrogen evolution reaction. 2021 , 46, 27883-27890	4
554	Coral-Like Ni ₂ P-Ni ₅ P ₄ Polymorphs as Noble Metal-Free Catalysts for Efficient Water Splitting. 2021 , 10, 085004	1
553	Synthesis of N-Heterocycles via Oxidant-Free Dehydrocyclization of Alcohols Using Heterogeneous Catalysts. 2021 , 60, 25188-25202	20
552	Synthesis of N-Heterocycles via Oxidant-Free Dehydrocyclization of Alcohols Using Heterogeneous Catalysts. 2021 , 133, 25392	1
551	N-functionalized hierarchical carbon composite derived from ZIF-67 and carbon foam for efficient overall water splitting. 2021 , 105, 222-222	1
550	Cobalt-promoted formation of oxygen vacancy in NiFe layered double hydroxide nanosheet arrays for electrocatalytic/photovoltage-driven overall water splitting. 2021 , 506, 230097	3
549	Hollow Carbon Nanoballs on Graphene as Metal-Free Catalyst for Overall Electrochemical Water Splitting. 2021 , 8, 2101265	1
548	Conductive Al-Doped ZnO Framework Embedded with Catalytic Nanocages as a Multistage-Porous Sulfur Host in Lithium-Sulfur Batteries. 2021 , 13, 44389-44400	4
547	Computational Studies on Carbon Dots Electrocatalysis: A Review. 2107196	13
546	1D CoreShell MOFs derived CoP Nanoparticles-Embedded N-doped porous carbon nanotubes anchored with MoS ₂ nanosheets as efficient bifunctional electrocatalysts. 2021 , 419, 129977	12
545	The construction of CoP nanoparticles coated with carbon layers derived from core-shell bimetallic MOF for electrochemical detection of dopamine. 2021 , 168, 106432	4
544	Self-supported N-Doped Carbon@NiCo ₂ -XP core-shell nanorod arrays on 3D Ni foam for boosted hydrogen evolution reaction. 2021 , 46, 36046-36046	4
543	The Interfacial Electronic Engineering in Binary Sulfiphilic Cobalt Boride Heterostructure Nanosheets for Upgrading Energy Density and Longevity of Lithium-Sulfur Batteries. 2021 , 33, e2102338	19
542	O doping hierarchical NiCoP/Ni ₂ P hybrid with modulated electron density for efficient alkaline hydrogen evolution reaction. 2021 , 293, 120196	16
541	Nitrogen-doped carbonCobalt-modified MnO nanowires as cathodes for high-performance lithium sulfur batteries. 2021 , 900, 115721	3
540	FeNiP three-dimensional oriented nanosheet array bifunctional catalysts with better full water splitting performance than the full noble metal catalysts. 2021 , 608, 2192-2192	1
539	Polar O-Co-P Surface for Bimolecular Activation in Catalytic Hydrogen Generation.	0
538	Highly ordered micro-meso-macroporous Co-N-doped carbon polyhedrons from bimetal-organic frameworks for rechargeable Zn-air batteries. 2021 , 598, 83-92	8

537	Porous metal-organic framework (MOF)-based and MOF-derived electrocatalytic materials for energy conversion. 2021 , 21, 100816	10
536	Activation of interfacial P sites of CoP in RuP ₃ /CoP nanosheets boosts hydrogen evolution reaction at all pH values. 2021 , 13, 100074	2
535	Iron and chromium co-doped cobalt phosphide porous nanosheets as robust bifunctional electrocatalyst for efficient water splitting. 2021 , 33,	0
534	Bifunctional Catalyst Derived from Sulfur-Doped VMO ₂ Nanolayer Shelled Co Nanosheets for Efficient Water Splitting. 2021 , 13, 42944-42956	5
533	Electric field polarized sulfonated carbon dots/NiFe layered double hydroxide as highly efficient electrocatalyst for oxygen evolution reaction. 2021 , 420, 129690	5
532	Metal-Organic Frameworks-Derived Self-Supported Carbon-Based Composites for Electrocatalytic Water Splitting. 2021 , 27, 15866-15888	5
531	Designing and Understanding the Outstanding Tri-Iodide Reduction of N-Coordinated Magnetic Metal Modified Defect-Rich Carbon Dodecahedrons in Photovoltaics. 2021 , 17, e2102300	7
530	Amorphous Yolk-Shelled ZIF-67@Co(PO) as Nonprecious Bifunctional Catalysts for Boosting Overall Water Splitting. 2021 , 60, 14880-14891	1
529	Ultralow Ru doping induced interface engineering in MOF derived ruthenium-cobalt oxide hollow nanobox for efficient water oxidation electrocatalysis. 2021 , 420, 129805	43
528	Tuning Hydrogen Binding Energy by Interfacial Charge Transfer Enables pH-Universal Hydrogen Evolution Catalysis of Metal Phosphides. 2021 , 132699	4
527	ZIF-8@ZIF-67-Derived Co Embedded into Nitrogen-Doped Carbon Nanotube Hollow Porous Carbon Supported Pt as an Efficient Electrocatalyst for Methanol Oxidation. 2021 , 11,	1
526	CoP Nanoparticles Fabricated Through the Nanoscale Kirkendall Effect Immobilized in 3D Hollow Carbon Frameworks for Oxygen Evolution Reaction. 2021 , 168, 094501	1
525	Nested hollow architectures of nitrogen-doped carbon-decorated Fe, Co, Ni-based phosphides for boosting water and urea electrolysis. 1	6
524	Phosphorus-doping induced electronic modulation of CoS ₂ /MoS ₂ hollow spheres on MoO ₂ film-Mo foil for synergistically boosting alkaline hydrogen evolution reaction. 2021 , 46, 33388-33396	1
523	Electronic Structure Modulation of Nanoporous Cobalt Phosphide by Carbon Doping for Alkaline Hydrogen Evolution Reaction. 2107333	22
522	Material libraries for electrocatalytic overall water splitting. 2021 , 444, 214049	21
521	NiCoP nanowire arrays embedded in 3D integrated N-doped carbon network for enhanced electrochemical oxygen evolution. 2021 , 192, 110395	2
520	Mechanistic Insight into the Synergetic Interaction of Ammonia Borane and Water on ZIF-67-Derived Co@Porous Carbon for Controlled Generation of Dihydrogen. 2021 , 13, 47465-47477	2

519	MOF-derived NiCoZnP nanoclusters anchored on hierarchical N-doped carbon nanosheets array as bifunctional electrocatalysts for overall water splitting. 2021 , 422, 130533	16
518	1D/2D nanoconfinement Fe _x O _y and nitrogen-doped carbon matrix for catalytic self-cleaning membranes removal for pollutants. 2021 , 9, 106076	2
517	Ultrathin 2D catalysts with N-coordinated single Co atom outside Co cluster for highly efficient Zn-air battery. 2021 , 421, 129719	6
516	Cobalt single atom site isolated Pt nanoparticles for efficient ORR and HER in acid media. 2021 , 88, 106221	41
515	Bimetal organic framework/graphene oxide derived magnetic porous composite catalyst for peroxymonosulfate activation in fast organic pollutant degradation. 2021 , 419, 126427	7
514	Nanowire-structured FeP-CoP arrays as highly active and stable bifunctional electrocatalyst synergistically promoting high-current overall water splitting. 2021 , 600, 811-819	4
513	In-situ phosphatizing of cobalt-molybdenum nanosheet arrays on self-supporting rGO/CNTs film as efficient electrocatalysts for hydrogen evolution reaction. 2021 , 422, 130355	4
512	A self-supporting bifunctional catalyst electrode made of amorphous and porous CoP ₃ nanoneedle array: exhaling during overall water splitting. 2021 , 393, 138986	2
511	CNTs-intertwined and N-doped porous carbon wrapped silicon anode for high performance lithium-ion batteries. 2021 , 877, 160240	8
510	Hollow carbon nanocages toward long cycle lifespan lithium/sodium-ion half/full batteries. 2021 , 421, 129827	7
509	Recent progress in CoP-based materials for electrochemical water splitting. 2021 , 46, 34194-34215	9
508	Long-Range Alignment of Liquid Crystalline Small Molecules on Metal-Organic Framework Micropores by Physical Anchoring. 2021 ,	
507	S vacancy modulated Zn Cd ₁₈ /CoP quantum dots for efficient H ₂ evolution from water splitting under visible light. 2021 , 61, 210-218	10
506	Co/CoO heterojunctions encapsulated N-doped carbon sheets via a dual-template-guided strategy as efficient electrocatalysts for rechargeable Zn-air battery. 2021 , 599, 46-57	14
505	In situ integration of Fe ₃ N@Co ₄ N@CoFe alloy nanoparticles as efficient and stable electrocatalyst for overall water splitting. 2021 , 395, 139218	1
504	Amino-functionalized TiCT loading ZIF-8 nanocontainer@benzotriazole as multifunctional composite filler towards self-healing epoxy coating. 2021 , 602, 131-145	14
503	Modulating electronic structure of metal-organic framework derived catalysts for electrochemical water oxidation. 2021 , 447, 214144	10
502	Facile synthesis of N-doped carbon nanoframes encapsulated by CoP nanoparticles for hydrogen evolution reaction. 2021 , 601, 338-345	9

501	Self-assembly of carbon nanotubes on a hollow carbon polyhedron to enhance the potassium storage cycling stability of metal organic framework-derived metallic selenide anodes. 2021 , 601, 60-69	4
500	Insight into electrocatalytic activity and mechanism of bimetal niobium-based oxides in situ embedded into biomass-derived porous carbon skeleton nanohybrids for photovoltaics and alkaline hydrogen evolution. 2021 , 601, 12-29	6
499	Design and construction of 2D/2D sheet-on-sheet transition metal sulfide/phosphide heterostructure for efficient oxygen evolution reaction. 2021 , 565, 150510	5
498	Reduced porous carbon/N-doped graphene nanocomposites for accelerated conversion and effective immobilization of lithium polysulfides in lithium-sulfur batteries. 2021 , 397, 139268	4
497	Nickel-cobalt phosphate nanoparticles wrapped in nitrogen-doped carbon loading on partially phosphatized foamed nickel as efficient electrocatalyst for water splitting. 2021 , 426, 130854	6
496	Fe, Cu-coordinated ZIF-derived bimetal encapsulated N-doped carbon nanotube for efficient remediation of various aqueous pollutants. 2021 , 426, 131801	2
495	Coordination confinement pyrolysis to Flower-like nanocomposites composed of ultrathin nanosheets with embedded ultrasmall CoP nanoparticles for overall water splitting. 2021 , 569, 151099	0
494	Hybrid heterojunction of molybdenum disulfide/single cobalt atoms anchored nitrogen, sulfur-doped carbon nanotube /cobalt disulfide with multiple active sites for highly efficient hydrogen evolution. 2021 , 298, 120630	12
493	Mixed matrix membranes comprising dual-facilitated bio-inspired filler for enhancing CO ₂ separation. 2021 , 276, 119347	10
492	A hexagonal 2D ZIF-Co-L variant: Unusual role of graphene oxide on the water-regulated morphology of ZIF hybrid and their derived Co@N-doped carbon electrocatalyst for hydrogen evolution reaction. 2021 , 426, 131270	5
491	Ion-exchange strategy of CoS ₂ /Sb ₂ S ₃ hetero-structured nanocrystals encapsulated into 3D interpenetrating dual-carbon framework for high-performance Na ⁺ /K ⁺ batteries. 2021 , 425, 130657	17
490	Porous Mn-doped cobalt phosphide nanosheets as highly active electrocatalysts for oxygen evolution reaction. 2021 , 425, 131642	19
489	An electrostatic repulsion strategy construct ZIFs based liquids with permanent porosity for efficient CO ₂ capture. 2021 , 276, 119305	4
488	Multiple effects driven by AC magnetic field for enhanced electrocatalytic oxygen evolution in alkaline electrolyte. 2021 , 426, 130785	7
487	Interface and defect engineering enable fast and high-efficiency Li extraction of metatitanic acid adsorbent. 2021 , 425, 130550	1
486	Highly active catalyst using zeolitic imidazolate framework derived nano-polyhedron for the electro-oxidation of l-cysteine and amperometric sensing. 2021 , 603, 822-833	3
485	Strawberry-like Co ₃ O ₄ -Ag bifunctional catalyst for overall water splitting. 2021 , 299, 120658	8
484	Gold nanodot assembly within a cobalt chalcogenide nanoshell: Promotion of electrocatalytic activity. 2022 , 605, 274-285	0

- 483 The activation of inert NiFe Prussian Blue analogues to boost oxygen evolution reaction activity. **2022**, 607, 967-977 7
- 482 Ga doping enables superior alkaline hydrogen evolution reaction performances of CoP. **2022**, 429, 132012 8
- 481 Efficient detection of hazardous HS gas using multifaceted CoO/ZnO hollow nanostructures. **2022**, 287, 132178 10
- 480 Developing zeolitic imidazolate frameworks 67-derived fluorides using 2-methylimidazole and ammonia fluoride for energy storage and electrocatalysis. **2022**, 239, 122129 4
- 479 In situ coupled MoO₃ with CoP/rGO to construct three-dimensional self-supported catalyst for highly efficient alkaline hydrogen evolution reaction. **2022**, 104, 194-201 2
- 478 Unique ternary Ni-MOF-74/NiP/MoS composite for efficient photocatalytic hydrogen production: Role of NiP for accelerating separation of photogenerated carriers. **2022**, 605, 385-397 16
- 477 Amino-functionalized ZIFs-based porous liquids with low viscosity for efficient low-pressure CO₂ capture and CO₂/N₂ separation. **2022**, 429, 132296 3
- 476 Rational design and mass-scale synthesis of guar-derived bifunctional oxygen catalyst for rechargeable Zn-air battery with active sites validation. **2022**, 428, 131225 3
- 475 Hierarchical N-doped CNTs grafted onto MOF-derived porous carbon nanomaterials for efficient oxygen reduction. **2022**, 606, 1833-1841 6
- 474 Metal sulfides based composites as promising efficient microwave absorption materials: A review. **2022**, 104, 244-268 10
- 473 An etch-doping strategy: cobalt-iron bimetallic phosphide as a bifunctional electrocatalyst for highly efficient water splitting. **2021**, 45, 8527-8534 2
- 472 Versatile construction of a hierarchical porous electrode and its application in electrochemical hydrogen production: a mini review. **2021**, 2, 1177-1189 4
- 471 Tuning and understanding the electronic effect of Co/Mo sites in bifunctional electrocatalysts for ultralong-lasting rechargeable zinc-air batteries. 1
- 470 Enhanced electrocatalytic performance in dye-sensitized solar cell via coupling CoSe₂@N-doped carbon and carbon nanotubes. **2021**, 9, 7046-7056 2
- 469 Recent progress in metal-organic framework/graphene-derived materials for energy storage and conversion: design, preparation, and application. **2021**, 12, 5737-5766 22
- 468 Hollow ZIF-67 derived porous cobalt sulfide as an efficient bifunctional electrocatalyst for overall water splitting. **2021**, 45, 17313-17319 2
- 467 Preparation of a one-dimensional hierarchical MnO@CNT@CoNi/C ternary nanostructure as a high-performance bifunctional electrocatalyst for rechargeable Zn-air batteries. 6
- 466 CoS₂ strongly coupled with porous FeNC as efficient and stable electrocatalyst for rechargeable zinc-air batteries. **2021**, 118, 334-341 3

465	Fe Doped MIL-101/Graphene Nanohybrid for Photocatalytic Oxidation of Alcohols Under Visible-Light Irradiation. 2021 , 151, 2384	2
464	Sacrificial ZnO nanorods drive N and O dual-doped carbon towards trifunctional electrocatalysts for Zn air batteries and self-powered water splitting devices. 2021 , 11, 4149-4161	2
463	Review on Synthesis and Catalytic Coupling Mechanism of Highly Active Electrocatalysts for Water Splitting. 2021 , 9, 2000855	6
462	pH-dependent hydrogen evolution using spatially confined ruthenium on hollow N-doped carbon nanocages as a MottSchottky catalyst. 2021 , 9, 13958-13966	16
461	Current perspectives on 3D ZIFs incorporated with 1D carbon matrices as fibers via electrospinning processes towards electrocatalytic water splitting: a review. 2021 , 9, 11961-12002	11
460	Boosting the rate performance of Li S batteries under high mass-loading of sulfur based on a hierarchical NCNT@Co-CoP nanowire integrated electrode. 2021 , 9, 11151-11159	8
459	Engineering Bimetallic NiFe-Based Hydroxides/Selenides Heterostructure Nanosheet Arrays for Highly-Efficient Oxygen Evolution Reaction. 2021 , 17, e2007334	39
458	Highly dispersed CoP on three-dimensional ordered mesoporous FeP for efficient electrocatalytic hydrogen production.	3
457	Phosphorization Engineering on Metal-Organic Frameworks for Quasi-Solid-State Asymmetry Supercapacitors. 2021 , 17, e2007062	29
456	Superior energy-saving catalyst of Mn@ZIF67 for reclaiming byproduct in wet magnesia desulfurization. 2020 , 275, 119143	20
455	Controllable synthesis of core-shell Co@C@SiO ₂ catalysts for enhancing product selectivity in Fischer-Tropsch synthesis by tuning the mass transfer resistance. 2020 , 51, 199-206	10
454	Facile one-pot synthesis of layered double hydroxides nanosheets with oxygen vacancies grown on carbon nanotubes for efficient oxygen evolution reaction. 2020 , 467, 228354	12
453	Metal-organic framework derived CoSe@Nitrogen-doped porous carbon as a high-performance anode material for lithium ion batteries. 2020 , 31, 215602	5
452	Nitrogen Coordinated Copper Co-Doped Multi-Walled Carbon Nanotubes for High-Efficiency Electrochemical Sensing of Bisphenol A. 2020 , 167, 146515	1
451	Zeolitic-imidazolate Framework (ZIF)@ZnCo-ZIF Core-shell Template Derived Co, N-doped Carbon Catalysts for Oxygen Reduction Reaction. 2018 ,	14
450	An electrochemical sensor based on a glassy carbon electrode modified with sandwich structured ZIF-67@rGO for bisphenol A measurement. 2021 , 13, 5777-5786	
449	Encapsulating Fe ₃ O ₄ Nanotubes into Carbon-Coated Co ₉ S ₈ Nanocages Derived from a MOFs-Directed Strategy for Efficient Oxygen Evolution Reactions and Li-Ions Storage. 2021 , 17, e2103178	5
448	Enhanced Electrocatalytic Activity of Nickel Cobalt Phosphide Nanoparticles Anchored on Porous N-Doped Fullerene Nanorod for Efficient Overall Water Splitting. 2021 , 13, 48949-48961	6

- 447 Synergistic CoFe-Fe₅C₂ nanocrystal wrapped in N-doped carbon/carbon nanotubes as enhanced and CO-resistant electrocatalyst for methanol oxidation. **2021**, 627, 118383
- 446 A Facile Strategy to Create Electrocatalysts of Highly Dispersive NiMo Sulfide Nanosheets on Graphene by Derivation of Polyoxometalate Coordination Polymer for Advanced H₂ Evolution. 0
- 445 1D/3D Heterogeneous Assembling Body as Trifunctional Electrocatalysts Enabling Zinc-Air Battery and Self-Powered Overall Water Splitting. 2107608 12
- 444 Nitrogen-Doped Carbon Networks with Consecutive Conductive Pathways from a Facile Competitive Carbonization-Etching Strategy for High-Performance Energy Storage. **2021**, e2104375 3
- 443 Bimetallic metal-organic framework derived 3D hierarchical NiO/Co₃O₄/C hollow microspheres on biodegradable garbage bag for sensitive, selective, and flexible enzyme-free electrochemical glucose detection. **2021**, 430, 133157 4
- 442 Co/CoP Heterojunction on Hierarchically Ordered Porous Carbon as a Highly Efficient Electrocatalyst for Hydrogen and Oxygen Evolution. **2021**, 11, 2102134 23
- 441 Fabrication of Co(PO₃)₂@NPC/MoS₂ heterostructures for enhanced electrocatalytic hydrogen evolution. **2021**, 162411 2
- 440 Recent developments on transition metal-based electrocatalysts for application in anion exchange membrane water electrolysis. 6
- 439 Active Site Engineering in CoP@NC/Graphene Heterostructures Enabling Enhanced Hydrogen Evolution. **2021**, 60, 16761-16768 1
- 438 Co/Co₂P Nanoparticles Encapsulated within Hierarchically Porous Nitrogen, Phosphorus, Sulfur Co-doped Carbon as Bifunctional Electrocatalysts for Rechargeable Zinc-Air Batteries. **2021**, 8, 4286 0
- 437 Synthesis of amorphous FeNiCo trimetallic hybrid electrode from ZIF precursors for efficient oxygen evolution reaction. **2021**, 33, 4
- 436 Cobalt-Based Incorporated Metals in Metal-Organic Framework-Derived Nitrogen-Doped Carbon as a Robust Catalyst for Triiodide Reduction in Photovoltaics. 13680-13695 9
- 435 Metal-Organic Powder Thermochemical Solid-Vapor Architectonics Towards Gradient Hybrid Monolith with Combined Structure-Function Features. 4
- 434 Construction of N-doped carbon frames anchored with Co single atoms and Co nanoparticles as robust electrocatalyst for hydrogen evolution in the entire pH range. **2021**, 67, 147-147 4
- 433 Morphology controlling strategy of ZnS/CeO₂ catalysts to enhance the photocatalytic performance for hydrogen production. **2021**, 4, 100030 1
- 432 Hollow-structured CoP nanotubes wrapped by N-doped carbon layer with interfacial charges polarization for efficiently boosting oxygen reduction/evolution reactions. **2021**, 133238 4
- 431 2 D -Materials-Based Heterostructures for EC Energy Conversion. **2022**, 53-128 4
- 430 Expandable nitrogen-doped carbon-based anodes fabricated from self-sacrificial metal-organic frameworks for ultralong-life lithium storage. **2022**, 186, 46-54 2

- 429 Single atoms supported on metal oxides for energy catalysis. 2
- 428 Metal-Organic Frameworks for Electrocatalysis. **2020**, 29-66
- 427 2D/3D ZIF-9/Mo15S19 S-Scheme Heterojunction for Productive Photocatalytic Hydrogen Evolution. 2100669 0
- 426 One-Pot Synthesis of N and P Co-doped Carbon Layer Stabilized Cobalt-doped MoP 3D Porous Structure for Enhanced Overall Water Splitting. **2021**, 162595 3
- 425 Nanoporous Carbon Nanowires Derived from One-Dimensional Metal-Organic Framework Core-Shell Hybrids for Enhanced Electrochemical Energy Storage. **2021**, 151800 0
- 424 Modification of NiCo-S with Phytate for Enhanced Electrocatalytic Hydrogen Evolution Activity. 0
- 423 Interfacial engineering of nickel/iron/ruthenium phosphides for efficient overall water splitting powered by solar energy. 4
- 422 In-situ etching strategy to construct yolk-shell CoSe₂@NiCoSe₄@NC heterostructures for high-performance sodium ion battery. 0
- 421 Nickel hydroxide armour promoted CoP nanowires for alkaline hydrogen evolution at large current density. **2021**, 47, 1016-1016 1
- 420 Cobalt Single Atom Incorporated in Ruthenium Oxide Sphere: A Robust Bifunctional Electrocatalyst for HER and OER. 9
- 419 Structural and Componential Engineering of CoP&CoP@N-C Nanoarrays for Energy-Efficient Hydrogen Production from Water Electrolysis. **2021**, 13, 56064-56072 0
- 418 Critical Review, Recent Updates on Zeolitic Imidazolate Framework-67 (ZIF-67) and Its Derivatives for Electrochemical Water Splitting. **2021**, e2107072 12
- 417 Non-oxygen anion-regulated in situ cobalt based heterojunctions for active alkaline hydrogen evolution catalysis. **2021**, 133514 4
- 416 Anisotropic MOF-on-MOF Growth of Isostructural Multilayer Metal-Organic Framework Heterostructures. **2021**, 2021, 9854946 0
- 415 Recent Progress and Perspective of Co-based Catalysts for Water Splitting: Design and Nanoarchitectonics. **2021**, 100911 4
- 414 Hollow CoP Encapsulated in an N-Doped Carbon Nanocage as an Efficient Bifunctional Electrocatalyst for Overall Water Splitting. 3
- 413 Engineering of sugarcane bagasse based porous carbon nanofiber-supported the CoP/Co₂P heterostructure for efficient overall water splitting. **2021**, 404, 139578 0
- 412 Heterointerface Engineering of Ni₂P@Co₂P Nanoframes for Efficient Water Splitting. 6

411	Hierarchical Mn ₂ P nanoflake@Co _{0.5} Fe _{0.5} P nanowire arrays on carbon cloth as efficient catalytic electrodes for hydrogen evolution reaction. 1	
410	Interface Catalysis of Nickel Molybdenum (NiMo) Alloys on Two-Dimensional (2D) MXene for Enhanced Hydrogen Electrochemistry. 2021 , 12, 11361-11370	1
409	Critical Role of Phosphorus in Hollow Structures Cobalt-Based Phosphides as Bifunctional Catalysts for Water Splitting. 2021 , e2103561	10
408	Surface Electronic Structure Modulation of Cobalt Nitride Nanowire Arrays via Selenium Deposition for Efficient Hydrogen Evolution. 2109792	5
407	Metal-Organic Framework-Derived Tubular InO-C/CdInS Heterojunction for Efficient Solar-Driven CO Conversion. 2021 ,	0
406	MoP-Mo ₂ C quantum dot heterostructures uniformly hosted on a heteroatom-doped 3D porous carbon sheet network as an efficient bifunctional electrocatalyst for overall water splitting. 2021 , 133719	7
405	Phase-mediated cobalt phosphide with unique core-shell architecture serving as efficient and bifunctional electrocatalyst for hydrogen evolution and oxygen reduction reaction. 2021 ,	3
404	In-situ phosphating Co@Nitrogen-doping graphene boosts overall water splitting under alkaline condition. 2021 , 115882	2
403	Cobalt Single Atom Incorporated in Ruthenium Oxide Sphere: A Robust Bifunctional Electrocatalyst for HER and OER. 2021 ,	16
402	In-situ nanoarchitectonics of noble-metal-free g-C ₃ N ₄ @C-Ni/Ni ₂ P cocatalyst with core-shell structure for efficient photocatalytic H ₂ evolution. 2021 , 162583	0
401	Strategies of designing electrocatalysts for seawater splitting. 2021 , 306, 122799	2
400	NiAlP@Cobalt substituted nickel carbonate hydroxide heterostructure engineered for enhanced supercapacitor performance. 2021 , 609, 1-11	1
399	Green and efficient synthesis of Co-MOF-based/g-CN composite catalysts to activate peroxymonosulfate for degradation of the antidepressant venlafaxine.. 2021 , 610, 280-294	2
398	Ultrafine VN nanodots induced generation of abundant cobalt single-atom active sites on nitrogen-doped carbon nanotube for efficient hydrogen evolution. 2021 ,	0
397	Self-supporting CoP-C nanosheet arrays derived from a metal-organic framework as synergistic catalysts for efficient water splitting. 2021 , 50, 17549-17558	3
396	Carbon Nanotube for Water Splitting and Fuel Cell. 2021 , 1-29	
395	Atomic-Level Metal Electrodeposition: Synthetic Strategies, Applications, and Catalytic Mechanism in Electrochemical Energy Conversion. 2100185	4
394	Phase Segregation via Etching-Induced Cation Migration in Co _{Sx} -ZnS Nanoarchitectures for Solar Hydrogen Evolution.	0

393	Mechanochemical coordination self-assembly for Cobalt-based metal-organic framework-derived bifunctional oxygen electrocatalysts.. 2022 , 613, 733-746	3
392	Porous N-doped carbon with confined Fe-doped CoP grown on CNTs for superefficient oxygen evolution electrocatalysis.. 2022 ,	0
391	Carbon-based iron-cobalt phosphate FeCoP/C as an effective ORR/OER/HER trifunctional electrocatalyst. 2022 , 635, 128118	6
390	Cobalt fluoride/nitrogen-doped carbon derived from ZIF-67 for oxygen evolution reaction. 2022 , 162, 106394	0
389	Three-dimensional hierarchical graphitic carbon encapsulated CoNi alloy/N-doped CNTs/carbon nanofibers as an efficient multifunctional electrocatalyst for high-performance microbial fuel cells. 2022 , 231, 109573	7
388	Strategic design of cellulose nanofibers@zeolitic imidazolate frameworks derived mesoporous carbon-supported nanoscale CoFe ₂ O ₄ /CoFe hybrid composition as trifunctional electrocatalyst for Zn-air battery and self-powered overall water-splitting. 2022 , 521, 230925	3
387	Alkaline oxygen evolution: exploring synergy between fcc and hcp cobalt nanoparticles entrapped in N-doped graphene. 2022 , 23, 100668	3
386	Ru doping NiCoP hetero-nanowires with modulated electronic structure for efficient overall water splitting.. 2021 , 610, 213-220	2
385	Two-Dimensional Co/Co ₉ S ₈ Nanoparticles Decorated N, S Dual-Doped Carbon Composite as an Efficient Electrocatalyst for Zinc-Air Battery. 2022 , 897, 163108	1
384	Metal-organic framework derived binary-metal oxide/MXene composite as sulfur host for high-performance lithium-sulfur batteries. 2022 , 899, 163369	6
383	Salt shielded preparation of MOF-derived open hollow carbon structure in air for high-performance supercapacitors. 2022 , 900, 163330	3
382	Constructing surface micro-electric fields on hollow single-atom cobalt catalyst for ultrafast and anti-interference advanced oxidation. 2022 , 305, 121057	1
381	Fermi-level-tuned MOF-derived N-ZnO@NC for photocatalysis: A key role of pyridine-N-Zn bond. 2022 , 112, 68-76	3
380	Metal-organic frameworks derived transition metal phosphides for electrocatalytic water splitting. 2022 , 68, 494-520	6
379	FeCo Nanoalloys Encapsulated in Porous Nitrogen-Doped Carbon Derived from F127-Assisted Metal-Organic Frameworks for Efficient Oxygen Reduction Reaction.	
378	Fluorine-Regulated Binary Cobalt Nickel Phosphides Nanoarrays on NF for Enhanced Hydrogen Evolution Reaction.	
377	Plasma Induced Transformation:A New Strategy to in situ Engineer MOF-derived Heterointerface for High-Efficiency Electrochemical Hydrogen Evolution.	0
376	Dynamics and control of active sites in hierarchically nanostructured cobalt phosphide/chalcogenide-based electrocatalysts for water splitting.. 2022 , 15, 727-739	11

375	Heterostructured hybrids of metal-organic frameworks (MOFs) and covalent-organic frameworks (COFs). 2022 , 10, 475-507	9
374	Process of metal-organic framework (MOF)/covalent-organic framework (COF) hybrids-based derivatives and their applications on energy transfer and storage.. 2022 ,	9
373	Autogenous growth of highly active bifunctional NiFe ₂ S nanosheet arrays toward efficient overall water splitting. 2022 , 47, 8303-8313	2
372	Uniform cobalt grafted on vanadium nitride as a high efficient oxygen evolution reaction catalyst. 2022 , 47, 4386-4393	1
371	Modified Metal-Organic Frameworks for Electrochemical Applications. 2100200	4
370	Fe incorporation-induced electronic modification of Co-tannic acid complex nanoflowers for high-performance water oxidation.	1
369	Tailoring atomically dispersed cobalt-nitrogen active sites in wrinkled carbon nanosheets via freeze-drying for highly sensitive detection of hydrogen peroxide. 2022 , 10, 3190-3200	1
368	A novel 3D hybrid carbon-based conductive network constructed by bimetallic MOF-derived CNTs embedded nitrogen-doped carbon framework for oxygen reduction reaction. 2022 , 47, 5474-5485	2
367	One-step integration of amorphous Ru _x and crystalline Ru nanoparticles into B/N-doped porous carbon polyhedra for robust electrocatalytic activity towards the HER in both acidic and basic media.	2
366	Micro-flower like Core-shell structured ZnCo@C@1T-2H-MoS ₂ composites for broadband electromagnetic wave absorption and photothermal performance.. 2022 , 622, 261-271	0
365	A 3D hierarchical network derived from 2D Fe-doped NiSe nanosheets/carbon nanotubes with enhanced OER performance for overall water splitting. 2022 , 10, 3102-3111	4
364	Nitrogen-doped porous carbon derived from bimetallic zeolitic imidazolate frameworks for electrochemical Li ⁺ /Na ⁺ storage. 2022 , 26, 683-693	0
363	ZIF-67 derived hierarchical hollow Co ₃ S ₄ @Mo ₂ S ₃ dodecahedron with an S-scheme surface heterostructure for efficient photocatalytic hydrogen evolution.	1
362	A molecular cobaloxime cocatalyst and ultrathin FeOOH nanolayers co-modified BiVO ₄ photoanode for efficient photoelectrochemical water oxidation. 2022 ,	0
361	Chitosan-encapsulated carbon framework-encapsulated Cu catalyst facilitates base-free hydrogen evolution from methanol/water.	0
360	ZIF67@MoO ₃ NSs@NF composite electrocatalysts reinforced by chemical bonds and oxygen vacancy for efficient oxygen evolution reaction and overall water-splitting. 2022 , 47, 9606-9615	1
359	C-O-Co bond-stabilized CoP on carbon cloth toward hydrogen evolution reaction. 2022 , 47, 9209-9219	0
358	PtNi Alloy Coated in Porous Nitrogen-Doped Carbon as Highly Efficient Catalysts for Hydrogen Evolution Reactions.. 2022 , 27,	0

357	Dual function metal-organic frameworks based ratiometric electrochemical sensor for detection of doxorubicin.. 2022 , 1196, 339545	1
356	Vanadium-based metal-organic frameworks and their derivatives for electrochemical energy conversion and storage.	6
355	Amorphous-crystalline cobalt-molybdenum bimetallic phosphide heterostructured nanosheets as Janus electrocatalyst for efficient water splitting. 2022 , 47, 7783-7792	2
354	Rational Construction of Cobalt Sulfide Nanoparticles Embedded in Hollow N, P, S Codoped Carbon Shells for Enhanced Supercapacitor Performance.	0
353	Coupling overall water splitting and biomass oxidation via Fe-doped Ni ₂ P@C nanosheets at large current density. 2022 , 307, 121170	6
352	Okra-like hollow Cu _{0.15} -CoP/Co ₃ O ₄ @CC nanotube arrays catalyst for overall water splitting. 2022 , 47, 7168-7179	0
351	Metal-organic-framework based catalyst for hydrogen production: Progress and perspectives. 2022 , ,	0
350	Self-grown layered double hydroxide nanosheets on bimetal-organic frameworks-derived N-doped CoOx carbon polyhedra for flexible all-solid-state rechargeable Zn-air batteries. 2022 , 524, 231076	0
349	One-step synthesis of Mn ₃ O ₄ @ZIF-67 on carbon cloth: As an effective non-enzymatic glucose sensor. 2022 , 175, 107203	2
348	Rational design of self-supported WC/Co ₃ W ₃ N/Co@NC yolk/shell nitrogen-doped porous carbon catalyst for highly efficient overall water splitting. 2022 , 902, 163627	0
347	Different loading of Ni ₂ P nanoparticles supported on Co-N-doped ordered macro-/mesoporous carbon for hydrogen evolution reaction. 2022 , 309, 122941	0
346	Nanoarchitectonics of uniformly distributed noble-metal-free CoP in g-C ₃ N ₄ via in-situ fabrication for enhanced photocatalytic and electrocatalytic hydrogen production. 2022 , 904, 163861	4
345	A facile templating fabrication of porous CoP nanoparticles towards electrocatalytic oxygen evolution. 2022 , 583, 152402	1
344	Core-Shell ZIF-67@ZIF-8-derived multi-dimensional cobalt-nitrogen doped hierarchical carbon nanomaterial for efficient oxygen reduction reaction. 2022 , 903, 163701	7
343	ZnO/nitrogen-doped carbon nanocomplex with controlled morphology for highly efficient electromagnetic wave absorption. 2022 , 114, 206-214	2
342	A simultaneous phosphorization and carbonization strategy to synthesize a defective Co ₂ P/doped-CNTs composite for bifunctional oxygen electrocatalysis. 2022 , 435, 134612	0
341	In-situ construction of N-doped carbon nanosnakes encapsulated FeCoSe nanoparticles as efficient bifunctional electrocatalyst for overall water splitting. 2022 , 68, 699-708	2
340	Cobalt nanoparticles encapsulated in iron and nitrogen co-doped urchin-like porous carbons as an efficient bifunctional oxygen reversible catalyst for Zn-air batteries. 2022 , 436, 135191	1

- 339 A novel honeycomb-like WS₂-x/CoS@C composite as anode for lithium ion batteries. **2022**, 57, 5118 0
- 338 Photocatalytic CO₂ reduction for C₂-C₃ oxy-compounds on ZIF-67 derived carbon with TiO₂. **2022**, 58, 101920 0
- 337 Spherical vs. planar: Steering the electronic communication between Ru nanoparticle and single atom to boost the electrocatalytic hydrogen evolution activity both in acid and alkaline. **2022**, 307, 121193 3
- 336 Mo,Fe-codoped metal phosphide nanosheets derived from Prussian blue analogues for efficient overall water splitting.. **2022**, 615, 456-464 0
- 335 Recent progress in template-assisted synthesis of porous carbons for supercapacitors. **2022**, 1, 100018 13
- 334 MOF-on-MOF Strategy to Construct a Nitrogen-Doped Carbon-Incorporated CoP@Fe-CoP Core-Shelled Heterostructure for High-Performance Overall Water Splitting.. **2021**, 3 3
- 333 Hierarchically Porous ZnO/g-CN S-Scheme Heterojunction Photocatalyst for Efficient H₂ Production. **2021**, 37, 14114-14124 18
- 332 Cobalt Nanoparticles Encapsulated in Iron and Nitrogen Co-Doped Urchin-Like Porous Carbons as an Efficient Bifunctional Oxygen Reversible Catalyst for Zn-Air Batteries. 0
- 331 Homologous NiCoP@NiFeP Heterojunction Array Achieving High-Current Hydrogen Evolution for Alkaline Anion Exchange Membrane Electrolyzers. 0
- 330 High-yielding preparation of hierarchically branched carbon nanotubes derived from zeolitic imidazolate frameworks for enhanced electrochemical K storage.. **2022**, 0
- 329 A dual-confinement strategy to construct cobalt-based phosphide nanoclusters within carbon nanofibers for bifunctional water splitting electrocatalysts.. **2022**, 0
- 328 Multi-stepwise charge transfer via MOF@MOF/TiO₂ dual-heterojunction photocatalysts towards hydrogen evolution. 3
- 327 Understanding the active sites of Fe-N-C materials and their properties in the ORR catalysis system.. **2022**, 12, 9543-9549 1
- 326 In-Situ Electrochemical Surface Reconstruction of FeCo Trimetal Phosphides to Active Oxyhydroxide for Large-Current-Density Oxygen Evolution. 0
- 325 Nickel@Carbon as a model for bifunctional OER/UOR electrocatalysts: pyrolysis temperature-electrochemical activity interconnection. 2
- 324 F127-assisted preparation of FeCo nanoalloys encapsulated in nitrogen-doped carbon for efficient oxygen reduction reaction. 1
- 323 The Effect of Zeolitic Imidazole Framework-8@Graphene Oxide on the Performance of Polymeric Membranes Used for Wasterwater Treatment. **2022**, 225-252 0
- 322 Homologous NiCoP@NiFeP Heterojunction Array Achieving High-Current Hydrogen Evolution for Alkaline Anion Exchange Membrane Electrolyzers. 1

321	Heteroepitaxially Grown Two-Dimensional Metal-Organic Framework and Its Derivative for Electrocatalytic Oxygen Reduction Reaction.	2
320	A 2.8 V Self-Supported $\text{Vo}(\text{Po}_3)_2$ Electrode for Aqueous Supercapacitors.	
319	Three-dimensional nano-framework $\text{CoP}/\text{Co}_2\text{P}/\text{Co}_3\text{O}_4$ heterojunction as trifunctional electrocatalyst for metal-air battery and water splitting.	2
318	Recent Research Trend of Zeolitic Imidazolate Framework-67 for Bifunctional Catalyst. 2022 , 32, 98-106	0
317	Pod-like 2D/3D- CoS_2 @CC Composite for Enhancing Electrocatalytic Hydrogen Evolution. 2022 , 13, 306-316	1
316	Perovskite Oxides as Electrocatalysts for Hydrogen Evolution Reaction.. 2022 , 7, 7444-7451	1
315	Ni Single Atoms and Ni Phosphate Clusters Synergistically Triggered Surface-Functionalized MoS_2 Nanosheets for High-performance Freshwater and Seawater Electrolysis.	1
314	Polydopamine-derived carbon layer anchoring NiCo-P nanowire arrays for high-performance binder-free supercapacitor and electrocatalytic hydrogen evolution.	0
313	Self-co-electrolysis for co-production of phosphate and hydrogen in neutral phosphate buffer electrolyte.. 2022 , e2200058	2
312	Self-supported ZIF-coated $\text{Co}_2\text{P}/\text{V}_3\text{P}$ bifunctional electrocatalyst for high-efficiency water splitting. 2022 ,	0
311	Co-Based Nanoparticles Fabricated on Ni Foams for Efficient Hydrogen Generation from Ammonia Borane.	1
310	MOF-Derived Ultrathin Cobalt Molybdenum Phosphide Nanosheets for Efficient Electrochemical Overall Water Splitting.. 2022 , 12,	1
309	Nanostructured Transition Metal Nitrides as Emerging Electrocatalysts for Water Electrolysis: Status and Challenges. 2022 , 4, 100072	4
308	Bimetal Metal-Organic Frameworks Derived Hierarchical Porous Cobalt@Nitrogen-Doped Carbon Tubes as An Efficient Electrocatalyst for Oxygen Reduction Reaction. 2022 , 9,	0
307	Electrochemical hydrogen generation technology: Challenges in electrodes materials for a sustainable energy.	1
306	Niobium-doped cobalt phosphide nanowires realizing enhanced electrocatalytic activity for overall water splitting. 2022 , 47, 13251-13260	0
305	A novel ZIF-8@ZIF-67/Au core-shell metal organic framework nanocomposite as a highly sensitive electrochemical sensor for nitrite determination. 2022 , 140278	2
304	Heteroatom-Doped Amorphous Cobalt-Molybdenum Oxides as a Promising Catalyst for Robust Hydrogen Evolution.. 2022 ,	2

303	Nanostructured Metal Phosphide Based Catalysts for Electrochemical Water Splitting: A Review.. 2022 , e2107572	7
302	Construction of CoP/CoP Coexisting Bifunctional Self-Supporting Electrocatalysts for High-Efficiency Oxygen Evolution and Hydrogen Evolution.. 2022 , 7, 12846-12855	2
301	An efficient and robust chain-mail electrocatalyst Ni ₂ P@g-C ₃ N ₄ for oxygen evolution in alkaline solution. 2022 , 128929	0
300	Pore architecture evolution and OER catalytic activity of hollow Co/Zn Zeolitic Imidazolate Frameworks. 2022 , 335, 111814	0
299	Oxygen vacancy-rich ultrafine CoP/Co ₃ O ₄ nanoparticles as high-efficiency trifunctional electrocatalyst. 2022 , 412, 140134	1
298	Bimetallic zeolitic imidazolate framework derived magnetic catalyst for high-efficiency CO ₂ chemical fixation. 2022 , 252, 117530	1
297	Co nanoparticles embedded in wheat-like porous carbon nanofibers as bifunctional electrocatalysts for rechargeable zinc-air batteries. 2022 , 411, 140090	0
296	Rational design and precise manipulation of nano-catalysts. 2022 , 43, 898-912	0
295	Superassembly of Surface-Enriched Ru Nanoclusters from Trapping-Bonding Strategy for Efficient Hydrogen Evolution.. 2022 ,	4
294	Cobalt phosphide embedded in a 3D carbon frame as a sulfur carrier for high-performance lithium-sulfur batteries. 2022 , 912, 116202	1
293	Porous rare earth-transition metal bimetallic oxide nanoparticles oxygen electrocatalyst for rechargeable Zinc-air battery. 2022 , 134, 104280	1
292	Zeolitic imidazolate frameworks-derived hollow Co/N-doped CNTs as oxidase-mimic for colorimetric-fluorescence immunoassay of ochratoxin A. 2022 , 359, 131609	2
291	Insight into the degradation of tetracycline hydrochloride by non-radical-dominated peroxymonosulfate activation with hollow shell-core Co@NC: Role of cobalt species. 2022 , 289, 120662	2
290	Interface oxygen vacancy enhanced alkaline hydrogen evolution activity of cobalt-iron phosphide/CeO ₂ hollow nanorods. 2022 , 437, 135376	4
289	In-situ construction of ultrathin MoP-MoS ₂ heterostructure on N, P and S co-doped hollow carbon spheres as nanoreactor for efficient hydrogen evolution. 2022 , 438, 135544	1
288	A review of metal-organic frameworks/graphitic carbon nitride composites for solar-driven green H ₂ production, CO ₂ reduction, and water purification. 2022 , 10, 107548	7
287	MOF-derived 3D petal-like CoNi-LDH array cooperates with MXene to effectively inhibit fire and toxic smoke hazards of FPUF.. 2022 , 134134	2
286	MOF-derived RuCoP nanoparticles-embedded nitrogen-doped polyhedron carbon composite for enhanced water splitting in alkaline media.. 2022 , 616, 803-812	2

285	Carbon nanotube-based materials for persulfate activation to degrade organic contaminants: Properties, mechanisms and modification insights.. 2022 , 431, 128536	3
284	A novel hierarchical CdS-DETA@CoP composite as highly stable photocatalyst for efficient H ₂ evolution from water splitting under visible light irradiation. 2022 , 588, 152890	1
283	Fabrication of cobaltous telluride and carbon composite as a promising carrier for boosting electro oxidation of ethylene glycol on palladium in alkaline medium.. 2022 , 616, 316-325	1
282	Pd ₂ WO heterostructures immobilized by MOFs-derived carbon cage for formic acid dehydrogenation. 2022 , 309, 121278	3
281	Surface bonding of CoP to biomass derived carbon microtube: Site-specific growth and high-efficiency catalysis. 2022 , 440, 135884	1
280	N-doped bimetallic sulfides hollow spheres derived from metal-organic frameworks toward cost-efficient and high performance oxygen evolution reaction. 2022 , 591, 153173	2
279	Metal-organic frameworks-derived nitrogen-doped carbon with anchored dual-phased phosphides as efficient electrocatalyst for overall water splitting. 2022 , 32, e00421	1
278	Atomic ruthenium coordinated with chlorine and nitrogen as efficient and multifunctional electrocatalyst for overall water splitting and rechargeable zinc-air battery. 2022 , 441, 136078	3
277	NiCu nanoalloy embedded in N-doped porous carbon composite as superior electrochemical sensor for neonicotinoid determination.. 2022 , 384, 132607	1
276	Carbon Dots as New Building Blocks for Electrochemical Energy Storage and Electrocatalysis. 2022 , 12, 2103426	13
275	A Substrate-Induced Fabrication of Active Free-Standing Nanocarbon Film as Air Cathode in Rechargeable Zinc-Air Batteries. 2021 , e2106606	3
274	Scalable synthesis of multi-shelled hollow N-doped carbon nanosheet arrays with confined Co/CoP heterostructures from MOFs for pH-universal hydrogen evolution reaction. 2022 , 65, 619-629	1
273	Combining Multivariate Electrospinning with Surface MOF Functionalization to Construct Tunable Active Sites toward Trifunctional Electrocatalysis.. 2021 , e2106260	2
272	Manipulation on active electronic states of metastable phase β -NiMoO ₄ for large current density hydrogen evolution. 2021 , 12, 5960	11
271	Co,Zn-MOF derived Co@C-NCNTs for boosting non-radical oxidation of norfloxacin by peroxymonosulfate. 2022 , 129037	0
270	Surface Engineering of Cr-Doped Cobalt Molybdate toward High-Performance Hydrogen Evolution.. 2022 ,	0
269	Peroxymonosulfate activation via CoP nanoparticles confined in nitrogen-doped porous carbon for enhanced degradation of sulfamethoxazole in wastewater with high salinity. 2022 , 107734	2
268	Enhanced hydrogen evolution activities of the hollow surface-oxidized cobalt phosphide nanofiber electrocatalysts in alkaline media.	0

- 267 Metal-organic frameworks derived carbon nanotube and carbonyl iron composite materials for broadband microwave absorbers with a wide filling range. **2022**, 169391 0
- 266 ZIF-derived Co/NCNTs as a Superior Catalyst for Aromatic Hydrocarbon Resin Hydrogenation: Scalable Green Synthesis and Insight into Reaction Mechanism. **2022**, 136193 0
- 265 Hierarchical Core-Shell Co N/CoP Embedded in N, P-doped Carbon Nanotubes as Efficient Oxygen Reduction Reaction Catalysts for Zn-air Batteries.. **2022**, e2108094 1
- 264 Advances and challenges of MOF derived carbon-based electrocatalysts and photocatalyst for water splitting: A review. **2022**, 15, 103906 2
- 263 Heterostructuring Cobalt Sulfide with Highly Oxophilic 1T-Tungsten Sulfide for Durable and Efficient Oxygen Electrocatalysis. 0
- 262 MOF-based electrocatalysts for oxygen evolution reactions. **2022**, 107-134 1
- 261 Free-standing Co/Zn sulfide supported on Cu-foam for efficient overall water splitting. 1
- 260 A MOF-derived hierarchical CoP@ZnInS photocatalyst for visible light-driven hydrogen evolution.. **2022**, 2
- 259 Acceleration of the pre-oxidation process by tuning the degree of sulfurization for promoted oxygen evolution reaction.. **2022**, 0
- 258 Co/Fe₃O₄ Nanoparticles Embedded in N-doped Hierarchical Porous Carbon Derived from Zeolitic Imidazolate Frameworks as Efficient Oxygen Reduction Electrocatalysts for Zinc-Air Battery-based Desalination. 0
- 257 Synthesis of CN@GC Nanomaterial Derived from Core-Shell ZIF-8@ZIF-67 and Its Application in the Detection of L-Cysteine. **2022**, 96, S153-S159
- 256 Temperature-Induced Structure Transformation from CoSe to Orthorhombic Phase CoSe Realizing Enhanced Hydrogen Evolution Catalysis.. **2022**, 7, 15901-15908
- 255 ZIF-8@ZIF-67 Derived Co/NPHC Catalysts for Efficient and Selective Hydrogenation of Nitroarenes. 0
- 254 Biaxial Strained MoS Nanoshells with Controllable Layers Boost Alkaline Hydrogen Evolution.. **2022**, e2202195 8
- 253 Atomic-bridge structure in B-Co-P dual-active sites on boron nitride nanosheets for catalytic hydrogen generation. **2022**, 121495 2
- 252 A universal synthesis of MOF-Hydroxyl for highly active oxygen evolution. **2022**, 1
- 251 Surface Modulation of 3D Porous CoNiP Nanoarrays In Situ Grown on Nickel Foams for Robust Overall Water Splitting. **2022**, 23, 5290 0
- 250 Highly dispersed CuO nanoparticle on ZIF-4 framework as anode material for LIBs. **2022**, 165316 0

249	Heteroatoms doped carbon decorated with tiny amount Pt nanoparticles as a bifunctional catalyst for hydrogen and chlorine generation from seawater. 2022,	0
248	Hollow Nanopompoms Engineered via a Weak-Strong Coetching Strategy for High-Performance Electrocatalysts. 2022, 136815	1
247	Flower-Like MOF-74 Nanocomposites Directed by Selenylation Towards High-Efficient Oxygen Evolution. 2022,	0
246	Synthesis of Carbon Nanoparticles with Cobalt-Rich Shell via Pyrolysis of Zn-ZIF@Co/Zn-ZIF: Relevance of Co(III) Precursors.. 2022,	
245	Interface engineering for boosting electrocatalytic performance of CoP-Co ₂ P polymorphs for all-pH hydrogen evolution reaction and alkaline overall water splitting. 1	2
244	A permselective and multifunctional 3D N-doped carbon nanotubes interlayer for high-performance lithium-sulfur batteries. 2022, 421, 140430	0
243	Norbornane derived N-doped sp ² carbon framework as an efficient electrocatalyst for oxygen reduction reaction and hydrogen evolution reaction. 2022, 323, 124420	0
242	Gap channel carbon layer coated bimetallic CoFe phosphate as a bifunctional electrocatalyst for overall water splitting. 2022, 538, 231571	0
241	Self-supported VO(PO ₃) ₂ electrode for 2.8V symmetric aqueous supercapacitors. 2022, 445, 136726	2
240	Realizing Interfacial Electron/Hole Redistribution and Superhydrophilic Surface through Building Heterostructural 2Dnm Co Se-NiSe Nanograins for Efficient Overall Water Splittings.. 2022, e2200459	2
239	Co-Fe-P Nanosheet Arrays as a Highly Synergistic and Efficient Electrocatalyst for Oxygen Evolution Reaction.. 2022,	2
238	PdCo Alloy Supported on a ZIF-Derived N-Doped Carbon Hollow Polyhedron for Dehydrogenation of Ammonia Borane.	2
237	Metal-organic frameworks-derived Zn-Ni-P nanostructures as high performance electrode materials for electrochemical sensing. 2022, 116441	1
236	Uniform cobalt nanoparticles embedded in nitrogen-doped graphene with abundant defects as high-performance bifunctional electrocatalyst in overall water splitting. 2022,	0
235	Nickel sulfide and cobalt-containing carbon nanoparticles formed from ZIF-67@ZIF-8 as advanced electrode materials for high-performance asymmetric supercapacitors. 2022, 648, 129241	1
234	Preventing surface passivation of transition metal nanoparticles in oxygen electrocatalyst to extend the lifespan of Zn-air battery. 2022, 128, 205-212	1
233	Interfacial Construction and Lattice Distortion-Triggered Bifunctionality of Mn-Nis/Mn-Ni ₃ s ₄ for H ₂ Production.	
232	First-row transition metal-based materials derived from bimetallic metal-organic frameworks as highly efficient electrocatalysts for electrochemical water splitting.	5

231	Interface Engineering of N-Doped Cop/Ceo2 Heterostructure for Efficient Overall Water Splitting with Durability Exceeding 1000 H.	
230	Hetero MOF-on-MOF-derived carbon nanotube interconnected nitrogen-doped carbon-encapsulated FeNi/FeF ₂ for efficient oxygen evolution reaction.	5
229	Cadmium sulfide embedded Prussian Blue as highly active bifunctional electrocatalyst for water-splitting process. 2022 , 47, 21160-21172	0
228	Integrating CoNiSe ₂ Nanorod-arrays onto N-doped Sea-sponge-C Spheres for highly efficient electrocatalysis of Hydrogen Evolution Reaction. 2022 , 137335	2
227	Atomically Dispersed CoN ₃ C ₁ -TeN ₁ C ₃ Diatomic Sites Anchored in N-Doped Carbon as Efficient Bifunctional Catalyst for Synergistic Electrocatalytic Hydrogen Evolution and Oxygen Reduction. 2201974	0
226	Azobenzene modified metal-organic framework: For solar energy storage. 2022 , 52, 104971	0
225	Synergistic capture and conversion of polysulfides in cathode composites with multidimensional framework structures. 2022 , 624, 471-481	1
224	Tunable fluorescence emission based on multi-layered MOF-on-MOF. 2022 , 51, 9397-9403	2
223	MOF nanosheet-derived carbon-layer-coated CoP/g-C ₃ N ₄ photocatalysts with enhance charge transfer for efficient photocatalytic H ₂ generation.	0
222	Electronic modulation of cobalt phosphide by lanthanum doping for efficient overall water splitting in alkaline media.	0
221	Empirical analysis and recent advances in metal-organic framework-derived electrocatalysts for oxygen reduction, hydrogen and oxygen evolution reactions. 2022 , 126438	1
220	Synthesis of Ga ³⁺ doped lithium manganese ion sieve for Li ⁺ extraction and its adsorption thermodynamic behavior. 1-14	1
219	Atmospheric-temperature chain reaction towards ultrathin non-crystal phase construction for high-efficient water splitting.	4
218	Three-Dimensional Structural Confinement Design of Conductive Metal Oxide for Efficient Sulfur Host in Lithium-sulfur Batteries. 2022 , 137656	2
217	Three-dimensional self-supporting Ni ₂ P-Ni ₁₂ P ₅ /NF heterostructure as an efficient electrocatalyst to enhance hydrogen evolution reaction.	0
216	Solid-State Reaction Synthesis of Nanoscale Materials: Strategies and Applications.	0
215	Porous Bimetallic Cobalt-Iron Phosphide Nanofoam for Efficient and Stable Oxygen Evolution Catalysis. 2022 ,	0
214	High-Alkaline Water-Splitting Activity of Mesoporous 3D Heterostructures: An Amorphous-Shell@Crystalline-Core Nano-Assembly of Co-Ni-Phosphate Ultrathin-Nanosheets and V-Doped Cobalt-Nitride Nanowires. 2201311	6

213	Fabrication of efficient electrocatalytic system with ruthenium cobalt sulfide over a carbon cloth. 2022,	0
212	Coupling nano-Fe ₃ O ₄ with oxygen vacancies on a hypercrosslinked iron porphyrin-coated ZIF-8 as a high-efficiency oxygen reduction reaction electrocatalyst. 2022, 642, 118712	
211	Engineering active sites on nitrogen-doped carbon nanotubes/cobaltosic oxide heterostructure embedded in biotemplate for high-performance supercapacitors. 2022, 53, 105094	3
210	Effect of cobalt doping and sugarcane bagasse carbon on the electrocatalytic performance of MoS ₂ nanocomposites. 2022, 324, 124814	1
209	Metal-Organic-Framework-Induced Construction of Carbon Nanotube Super-Assembly for Enhanced Fenton-Like Catalysis: Insights into Electron-Rich/Poor Centers Over C-C Bond Bridges.	
208	Laser Synthesis of Amorphous Co _x Nanospheres for Efficient Hydrogen Evolution and Nitrogen Reduction Reaction.	0
207	Construction of N-Doped Nickel Sulfide Nanosheets Via Pani as Nitrogen Donor to Achieve Robust Bifunctional Electrocatalysts for H ₂ Production.	
206	Surface evolution of Zn doped-RuO ₂ under different etching methods towards acidic oxygen evolution.	2
205	Pt-Embodiment Zif-67-Derived Nanocage as Enhanced Immunoassay for Infectious Virus Detection.	
204	In Situ Generation of NiCoP Nanoparticles on a BimetalOrganic Framework for High-Performance Supercapacitors. 2022, 61, 10435-10441	1
203	Coordination Number Dependent Catalytic Activity of Single-Atom Cobalt Catalysts for Fenton-Like Reaction. 2203001	6
202	Synergistic effect of Co ₃ O ₄ /Fe ₂ O ₃ nanoparticles encapsulated with MOFs-derived nitrogen-doped porous carbon for high-performance lithium-ion battery. 2022, 166231	0
201	MOF-derived Metal Sulfides for Electrochemical Energy Applications. 2022,	1
200	Elaboration of Ni ₂ P@C Composites with Hollow Porous Structure for Enhanced Overall Water Splitting. 2200673	0
199	Stable magnetic CoZn/N-doped polyhedron with self-generating carbon nanotubes for highly efficient removal of bisphenols from complex wastewaters. 2022, 439, 129584	
198	Directed synthesis of an unusual uniform trimetallic hydrogen evolution catalyst by a predesigned cobalt-bipy modified bivanadyl capped polymolybdate. 2022, 314, 123403	
197	Urchin-like CoNiO ₂ microspheres supported on reduced graphene oxide with N and S co-doped for overall water splitting with trace load as the bifunctional electrocatalyst. 2022, 922, 166254	
196	Enhancing the electronic metal-support interaction of CoRu alloy and pyridinic N for electrocatalytic pH-universal hydrogen evolution reaction. 2022, 450, 138026	1

195	CoV-LDH-Derived CoP 2 Active Sites and Zn x Cd 1k S Solid-Solution Ingeniously Constructed S-Scheme Heterojunction for Photocatalytic Hydrogen Evolution. 2200189	2
194	Enhanced Alkaline Oxygen Evolution Using Spin Polarization and Magnetic Heating Effects under an AC Magnetic Field.	2
193	Metal-organic framework nanocrystal-derived hollow porous materials: Synthetic strategies and emerging applications. 2022 , 3, 100281	16
192	Interfacial construction and lattice distortion-triggered bifunctionality of Mn-NiS/Mn-Ni3S4 for H2 production. 2022 , 328, 125337	1
191	Electrodeposited Cobalt Phosphide Film with Regulated Interfacial Structure and Wetting for Enhanced Hydrogen Evolution Performance: Effect of Saccharin.	
190	Lightest Metal Leads to Big Change: Lithium-Mediated Metal Oxides for Oxygen Evolution Reaction. 2201934	2
189	Constructing atomically-dispersed Mn on ZIF-derived nitrogen-doped carbon for boosting oxygen reduction. 10,	
188	Curving Engineering of Hollow Concave-Shaped Rhombic Dodecahedrons of N-Doped Carbon Encapsulated with Fe-Doped Co/Co3O4 Nanoparticles for an Efficient Oxygen Reduction Reaction and Zn-Air Batteries.	0
187	Enhanced interfacial polarization of defective porous carbon confined CoP nanoparticles forming Mott-Schottky heterojunction for efficient electromagnetic wave absorption.	1
186	Porous carbon framework decorated with carbon nanotubes encapsulating cobalt phosphide for efficient overall water splitting. 2022 ,	2
185	CeO 2 C 2 nanoparticles with oxygen-enriched vacancies in-site self-embedded in Fe, N co-doped carbon nanofibers as efficient oxygen reduction catalyst for Zn-air battery.	0
184	Interfacial Water Activation by Single-Atom CoN3 Sites Coupled with Encapsulated Co Nanocrystals for Accelerating Electrocatalytic Hydrogen Evolution. 10771-10780	5
183	Surface reconstruction, doping and vacancy engineering to improve the overall water splitting of CoP nanoarrays.	0
182	Lattice Strain Enhance the Activity of Ir-IrO2/C for Acidic Oxygen Evolution Reaction.	0
181	Metal Organic Framework-Derived Ultrafine ZnO/Co3ZnC Particles Embedded in N-Doped Carbon Concave-Dodecahedron Towards Enhanced Lithium Storage.	0
180	Multiple carbon interface engineering to boost oxygen evolution of NiFe nanocomposite electrocatalyst. 2022 , 43, 2354-2362	0
179	Confinement of ZIF-derived copper-cobalt-zinc oxides in carbon framework for degradation of organic pollutants. 2022 , 440, 129811	0
178	Comparative life cycle assessment on zeolitic imidazolate framework-8 (ZIF-8) production for CO2 capture. 2022 , 370, 133354	0

177	Synthesis of ternary CoZnAl layered double hydroxide and Co-embedded N-doped carbon nanotube hollow polyhedron nanocomposite as a bifunctional material for ORR electrocatalyst and supercapacitor electrode. 2022 , 54, 105377	1
176	Pt-embodiment ZIF-67-derived nanocage as enhanced immunoassay for infectious virus detection. 2022 , 215, 114602	0
175	Enhancing deep mineralization of refractory benzotriazole via carbon nanotubes-intercalated cobalt copper bimetallic oxide nanosheets activated peroxymonosulfate process: Mechanism, degradation pathway and toxicity. 2022 , 628, 448-462	1
174	Boosting lifespan of conversion-reaction anodes for full/half potassium-ion batteries via multi-dimensional carbon nano-architectures confinement effect. 2022 , 75, 55-65	0
173	Out-of-plane CoRu nanoalloy axially coupling CosNC for electron enrichment to boost hydrogen production. 2022 , 318, 121890	3
172	Metal doping and Hetero-engineering of Cu-doped CoFe/Co embedded in N-doped carbon for improving trifunctional electrocatalytic activity in alkaline seawater. 2023 , 451, 138699	
171	Interface-induced contraction of core-shell Prussian blue analogues toward hollow Ni-Co-Fe phosphide nanoboxes for efficient oxygen evolution electrocatalysis. 2023 , 451, 138515	1
170	Grain boundary and interface interaction Co-regulation promotes SnO ₂ quantum dots for efficient CO ₂ reduction. 2023 , 451, 138477	2
169	Metal-Organic Framework-Based Nanomaterials for Electrocatalytic Oxygen Evolution. 2200773	8
168	Fe/Fe ₃ O ₄ /biomass carbon derived from agaric to achieve high-performance microwave absorption. 2022 , 129, 109386	0
167	Metal-organic frameworks-derived catalysts for contaminant degradation in persulfate-based advanced oxidation processes. 2022 , 375, 134118	4
166	Recent advances in transition-metal phosphide electrocatalysts: Synthetic approach, improvement strategies and environmental applications. 2022 , 473, 214811	2
165	Phosphorus-functionalized low-crystallinity transition-metal oxide nanorod arrays grown on carbon cloth for high-performance asymmetric supercapacitors. 2022 , 654, 130189	0
164	Interface engineering of Co ₃ O ₄ /CeO ₂ heterostructure in-situ embedded in Co/N-doped carbon nanofibers integrating oxygen vacancies as effective oxygen cathode catalyst for Li-O ₂ battery. 2023 , 452, 139317	1
163	Modular assembly of MOF-derived carbon nanofibers into macroarchitectures for water treatment. 2022 , 13, 9159-9164	0
162	Introducing mesoporous silica-protected calcination for improving the electrochemical performance of Cu@Fe ₃ O ₄ composites in oxygen reduction reactions and supercapacitor applications. 2022 , 46, 18351-18365	0
161	Electrospun one-dimensional electrocatalysts for boosting electrocatalysis. 2022 , 24, 6289-6296	0
160	pπ hybridization in CoFe LDH nanoflowers for efficient oxygen evolution electrocatalysis.	1

159	CoreShell CoFeP/Nc@CoP/Ni ₂ P Heterostructure for Efficient Overall Water Splitting.	0
158	Surface Engineering of Morphology and Electronic Structure of CoP by Zn Doping for Enhanced Water Splitting Performance.	0
157	Modulating coordination structures and metal environments of MOFs-Engineered electrocatalysts for water electrolysis. 2023 , 452, 139475	1
156	Heterostructured Co ₂ P Nanocomposite Embedded in a N, P Co-Doped Carbon Layer as a High Performance Electrocatalyst for Overall Water Splitting. 2022 , 12, 957	0
155	Hollow CoP microspheres as superior bifunctional electrocatalysts for hydrogen evolution in a broad pH range and oxygen evolution reactions. 2022 , 123499	1
154	One-pot synthesis of POM-CaO ₂ @ZIF-8 nanoparticles with self-supply of H ₂ O ₂ for electrically enhanced chemodynamic therapy.	0
153	Sustainable 3D Printing of Recyclable Biocomposite Empowered by Flash Graphene.	0
152	Single-walled carbon nanohorns and cobalt@nitrogen-doped carbon nanotube polyhedrons modified electrode as sensitive electrochemical sensing platform for luteolin detection.	0
151	Influence of Nitrogen-Doped Carbon Quantum Dots on the Electrocatalytic Performance of the CoP Nanoflower Catalyst for OER. 2022 , 38, 11210-11218	1
150	Hollow ZnCdS and NiCoP Nanostructures for Photocatalytic Hydrogen Generation.	0
149	MOF-derived nanoporous carbons with diverse tunable nanoarchitectures.	14
148	Rational design of hierarchical MOF-derived CoP@Co-Fe LDH bifunctional electrocatalyst: An approach toward efficient overall water splitting in alkaline media.	1
147	Highly Efficient Water Splitting with Polyoxometalate Coated on Deliberately Designed Porous Carbon as a Bifunctional Electrocatalyst. 2022 , 7,	0
146	Designing nitrogen-enriched heterogeneous NiS@CoNi ₂ S ₄ embedded in nitrogen-doped carbon with hierarchical 2D/3D nanocage structure for efficient alkaline hydrogen evolution and triiodide reduction. 2022 ,	0
145	Plasmonic Nanostructures-Decorated ZIF-8-Derived Nanoporous Carbon for Surface-Enhanced Raman Scattering.	0
144	Metal-organic frameworks derived Co/N-doped carbon nanonecklaces as high-efficient oxygen reduction reaction electrocatalysts. 2022 ,	2
143	A novel core/shell cuprous oxide-based structure with improved microwave absorbing and antibacterial performance. 2022 , 134419	0
142	Confinement of CoOx-CoP nanoparticles inside nitrogen doped CNTs: A low-cost ORR electrocatalyst. 2022 ,	0

141	In Situ Grown CoMn-Based Metal-Organic Framework on Nickel Foam as Efficient and Robust Electrodes for Electrochemical Oxygen Evolution Reaction. 2023 , 20,	0
140	P-doped MoS ₂ /Co _x S _y heterojunction for high-efficiency electrocatalytic hydrogen evolution performance in both acidic and alkaline electrolytes. 2022 , 433, 141269	0
139	In situ growth of bimetal organic framework-derived phosphide on conductive substrate materials as bifunctional electrocatalysts for overall water splitting.	1
138	Regulating coordination capacity of ATMP by melamine: Facile synthesis of cobalt phosphides as bifunctional electrocatalysts for ORR and HER.	0
137	Engineering single atomic ruthenium on defective nickel vanadium layered double hydroxide for highly efficient hydrogen evolution.	0
136	Capacity determination of ZnCo _{0.26} O _{1.63} N _{0.18} Co _{0.82} derived from bimetallic zeolitic imidazolate framework as anode in sodium-ion battery.	0
135	Reducing energy barriers by multi-interface design on MXene with confined Fe-doped CoSe ₂ for ultra-efficient OER electrocatalysis. 2022 , 121, 173902	0
134	CeO ₂ nanoparticles decorated on porous NiBe bimetallic phosphide nanosheets for high-efficient overall water splitting. 2023 , 11, 159-167	0
133	Electrochemical Aptasensor Based on Au Nanoparticles Decorated Porous Carbon Derived from Metal-Organic Frameworks for Ultrasensitive Detection of Chloramphenicol. 2022 , 27, 6842	1
132	A new insight into the promoting effects of transition metal phosphides in methanol electrooxidation. 2022 , 107899	0
131	Engineering Gas-Solid-Liquid Triple-Phase Interfaces for Electrochemical Energy Conversion Reactions. 2022 , 5,	0
130	Superstructures of Zeolitic Imidazolate Frameworks to Single- and Multiatom Sites for Electrochemical Energy Conversion. 2203147	1
129	Boosting Fenton-like Catalysis via Electron Tunneling-Based Co Charge-Transfer Bridge in Nitrogen-Doped Cobalt@Carbon Nanotube-Grafted Carbon Polyhedron.	0
128	Surface engineering of morphology and electronic structure of CoP by Zn doping for enhanced water splitting performance. 2022 , 167828	0
127	Nickel-decorated RuO ₂ nanocrystals with rich oxygen vacancies for high-efficiency overall water splitting. 2023 , 630, 940-950	0
126	Modulating interfacial charge distribution of NiSe nanoarrays with NiFe-LDH nanosheets for boosting oxygen evolution reaction. 2023 , 332, 126227	3
125	Morphology engineering ultrathin nitrogen-doped carbon Co-FeP derived from Co-Fe Prussian Blue Analogs for wide spectrum photocatalytic H ₂ evolution. 2023 , 333, 126336	0
124	Modulating organic ligands to construct 2D/3D-hybrid porous P-doped metal-organic frameworks electrocatalyst for overall water splitting. 2023 , 933, 167670	0

123	Direct electrochemistry of doxorubicin and its ultra-sensitive detection at novel porous thorny carbon dodecahedron.	0
122	Carbon Nanotube for Water Splitting and Fuel Cell. 2022 , 1391-1418	0
121	Composite-structure-defined nitrogen-doped carbon nanocage embedded Co/CoxP for enhanced oxygen reduction and evolution reactions. 2023 , 437, 141514	1
120	Metal organic framework-derived hierarchical 0D/1D CoPC/CNTs architecture interlaminated in 2D MXene layers for superior absorption of electromagnetic waves. 2023 , 292, 117215	1
119	Recent advances in hybrid water electrolysis for energy-saving hydrogen production. 2022 ,	0
118	Electron Transfer-Induced Metal Spin-Crossover at NiCo ₂ S ₄ /ReS ₂ 2D/2D Interfaces for Promoting pH-universal Hydrogen Evolution Reaction. 2210072	0
117	Impact in rational synthesis Co-ZIF templates for derived the structural Co@NC catalysis for high efficient hydrogen and oxygen evolution reactions. 2022 ,	0
116	Plasma-modified graphitic C ₃ N ₄ @Cobalt hydroxide nanowires as a highly efficient electrocatalyst for oxygen evolution reaction. 2022 , 8, e11573	0
115	Effective regulation mechanisms of Fe-Ni(oxy)hydroxide: Ni-rich heteroatomic bonding (Ni _{1-x} Fe _x O _{1.5}) is essential.	0
114	MOF-Derived Non-Noble Metal CoP Nanoparticle Modified TiO ₂ for Enhanced Photocatalytic Hydrogen Production. 2022 , 61, 16653-16661	0
113	Steering the construction of amorphous/crystalline hierarchical structure for accelerating the oxygen evolution reaction rate. 2022 ,	0
112	Modulation to favorable surface adsorption energy for oxygen evolution reaction intermediates over carbon-tunable alloys towards sustainable hydrogen production.	0
111	Multifunctional Mesoporous Hollow Cobalt Sulfide Nanoreactors for Synergistic Chemodynamic/Photodynamic/Photothermal Therapy with Enhanced Efficacy. 2022 , 14, 50601-50615	0
110	Construction of ZIF-67-On-UiO-66 Catalysts as a Platform for Efficient Overall Water Splitting.	0
109	Zeolitic imidazolate framework-67-derived cobalt-based catalysts for water splitting. 2022 , 26, 101210	0
108	Pyrolytically synthesized cobalt based carbon nitrogen framework as an efficient cathode catalyst in MFC application. 2022 , 10, 108940	2
107	Self-Supporting Metal-Organic Framework-Based Nanoarrays for Electrocatalysis.	2
106	A reverse electro dialysis cell-modified photocatalytic fuel cell for efficient electricity and hydrogen generation from the degradation of refractory organic pollutants. 2022 , 130443	0

105	MOF-on-MOF heterostructures with core-shell and core-satellite structures via controllable nucleation of guest MOFs.	0
104	N, P-doped carbon nanotubes encapsulated with Co ₂ P nanoparticles as efficient bifunctional oxygen electrocatalysts for rechargeable Zn-air battery. 2023 , 928, 117016	0
103	CoFeP/NC@CoP/Ni ₂ P heterostructure for efficient overall water splitting.	0
102	Electronic distribution tuning of vanadium-cobalt bimetallic MOFs for highly efficient hydrazine-assisted energy-saving hydrogen production. 2023 , 439, 141682	0
101	Manipulating a smart multi-functional nano-carrier based on l-cysteine-GO-ZIF67@ZIF8 core@shell MOFs-LDH for designing an excellent self-healing coating. 2023 , 30, 101718	0
100	Engineering low platinum loaded defects enriched Pt _x Co wrapped by carbon layers for efficient methanol electrooxidation with CO-free dominant. 2023 , 440, 141750	0
99	Zeolitic-imidazolate framework derived magnetic N-doped hierarchical carbons with ultrahigh indole-3-butyric acid adsorption capacities: Behavior and mechanism. 2023 , 613, 156029	0
98	A magnetic adsorbent with metal-organic framework based on ammonium phosphomolybdenum heteropoly tungstate (AWP): Selective adsorption of Rb ⁺ and Cs ⁺ from aqueous resources and stripping with ammonium salts. 2023 , 216, 106011	0
97	Bi-Porphyrins MOF with confinement and ion-attracting effects in concert with RuO ₂ -doped CNT as efficient electrocatalysts for HER in acidic and alkaline media. 2023 , 612, 155870	0
96	P-induced Co-based interfacial catalysis on Ni foam for hydrogen generation from ammonia borane. 2023 , 325, 122317	0
95	DFT calculation screened CoCu and CoFe dual-atom catalysts with remarkable hydrogen evolution reaction activity. 2023 , 324, 122244	0
94	Strategies for enhancing the catalytic activity and electronic conductivity of MOFs-based electrocatalysts. 2023 , 478, 214969	1
93	Ultrathin oxygen-containing graphdiyne wrapping CoP for enhanced electrocatalytic hydrogen generation.	0
92	Template-free synthesis of hollow carbon-based nanostructures from MOFs for rechargeable battery applications.	1
91	Decorating Zn _{0.5} Cd _{0.5} S with C,N Co-Doped CoP: An Efficient Dual-Functional Photocatalyst for H ₂ Evolution and 2,5-Diformylfuran Oxidation. 2022 , 14, 54649-54661	3
90	Manipulating the Rectifying Contact between Ultrafine Ru Nanoclusters and N-Doped Carbon Nanofibers for High-Efficiency pH-Universal Electrocatalytic Hydrogen Evolution. 2206781	0
89	N-Doped Carbon Nanotube Shell Encapsulating the NiFe Metal Core for Enhanced Catalytic Stability in Methanol Oxidation Reaction by the Structural Cooperation Mechanism. 2022 , 38, 15198-15208	1
88	Highly active and durable nitrogen-doped CoP/CeO ₂ nanowire heterostructures for overall water splitting. 2022 , 141119	0

- 87 Construction of ZIF-67/MIL-88(Fe, Ni) catalysts as a novel platform for efficient overall water splitting. **2022**, 1
- 86 Refined alteration of active sites via O modification on CoP/Co2P@Carbon hetero-structural catalyst for hydrogen generation. **2022**, 122324 0
- 85 Defect-Rich MoS2/CoS2 Supported on In Situ Formed Graphene Layers for Efficient Overall Water Splitting. 0
- 84 Atomic Aerogel Materials (or single atom aerogels): an Interesting New Paradigm in Materials Science and Catalysis Science. 2211221 0
- 83 N-Doped Carbon-Coupled Nickel Nitride Species/Ni2P Heterostructure for Enhancing Electrochemical Overall Water Splitting Performance. **2023**, 141868 0
- 82 Co nanoparticles anchored on N-doped porous carbon derived from yeast for enhanced electrocatalytic oxygen reduction reaction. 0
- 81 Heteroatom Doped Amorphous/Crystalline Ruthenium Oxide Nanocages as a Remarkable Bifunctional Electrocatalyst for Overall Water Splitting. 2207235 0
- 80 Functional Metal/Carbon Composites Derived from Metal-Organic Frameworks: Insight into Structures, Properties, Performances, and Mechanisms. 1759-1790 0
- 79 Surface Reconstruction of Iron-Cobalt-Nickel Phosphides to Achieve High-Current-Density Water Oxidation Performance. 0
- 78 Principles of Design and Synthesis of Metal Derivatives from MOFs. 2210166 0
- 77 Inner-stress-dissipative, rapid self-healing core-shell sulfide quantum dots for remarkable potassium-ion storage. **2023**, 56, 96-107 0
- 76 Mo-doped CoFeP/nitrogen doped carbon porous nanocubes for alkaline hydrogen production. **2023**, 930, 117137 0
- 75 Oriented attachment of carbon/cobalt-cobalt oxide nanotubes on manganese-doped carbon nanofibers for flexible symmetric supercapacitors. **2023**, 615, 156386 0
- 74 CoS2/N-doped carbon nanotubes hollow polyhedron derived from core-shell ZIF-8@ZIF-67 for efficient hydrogen evolution reaction. **2022**, 0
- 73 An NIR-Driven Upconversion/C3N4/CoP Photocatalyst for Efficient Hydrogen Production by Inhibiting Electron-Hole Pair Recombination for Alzheimer's Disease Therapy. 0
- 72 Tailoring interfacial microbiome and charge dynamics via rationally designed atomic-nanoparticle bridge for bio-electrochemical CO2-fixation. 0
- 71 Cobalt carbonate hydroxide assisted formation of self-supported CoNi-based Metal-Organic framework nanostrips as efficient electrocatalysts for oxygen evolution reaction. **2023**, 0
- 70 Construction of multi-dimensional NiCo/C/CNT/rGO aerogel by MOF derivative for efficient microwave absorption. **2023**, 0

- 69 Design and Performance Enhancement of Cobalt-Encapsulated Nitrogen-Doped Carbon Nanofiber Electrocatalyst through Ionic Liquid Modification for Efficient Oxygen Reduction. **2023**, 6, 1975-1984 ○
- 68 Nanostructure and stoichiometry tailoring of CoS₂ for high performance hydrogen evolution reaction. **2023**, ○
- 67 Defective TiO₂-Supported Dual-Schottky Heterostructure Boosts Fast Reaction Kinetics for High Performance Lithium-Ion Storage. 1
- 66 Synthesis of the Ni₂P@Co Mott-Schottky Junction as an Electrocatalyst to Boost Sulfur Conversion Kinetics and Application in Separator Modification in Li-S Batteries. **2023**, 15, 5253-5264 ○
- 65 A trifunctional Co_{0.85}Se/NC collaborated electrocatalyst enables a self-powered energy system for uninterrupted H₂ production. **2023**, 11, 8024-8037 ○
- 64 Morphology control synthesis of [Mo₃S₁₃]₂-/Co-MOF-74 composite catalysts and their application in the oxygen evolution reaction. ○
- 63 Pomegranate-like Ni-doped cobalt boride implanted in B, N-doped carbon nanocages for enhanced electrochemical oxygen evolution. **2023**, ○
- 62 Boosting the Activity of the Oxygen Evolution Reaction through an Electrospun Nickel Manganese-Based Bimetallic Zeolite Imidazolate Framework Fibrous System in Alkaline Medium. ○
- 61 Bamboo-like N-doped carbon tubes encapsulated Co₂P@Fe₂P derived from zeolitic imidazolate framework as an efficient trifunctional electrocatalyst for water splitting and Zn-air batteries. **2023**, ○
- 60 Facile electrodeposition synthesis and super performance of nano-porous Ni-Fe-Cu-Co-W high entropy alloy electrocatalyst. **2023**, 459, 129407 ○
- 59 A Sandwich layer of N-doped carbon nanotubes coated on the surface of oxidized iron-foam is used to drive peroxydisulfate activation. **2023**, 311, 123273 ○
- 58 Metal-organic frameworks (MOFs) as efficient catalysts for electro-Fenton (EF) reactions: Current progress and prospects. **2023**, 463, 142287 ○
- 57 Heterostructure engineering and ultralow Pt-loaded multicomponent nanocage for efficient electrocatalytic oxygen evolution. **2023**, 639, 214-222 ○
- 56 Bilayer metal-organic frameworks/MXene/nanocellulose paper with electromagnetic double loss for absorption-dominated electromagnetic interference shielding. **2023**, 464, 142517 ○
- 55 Multi-hierarchical heterostructure of GO/ NiCo₂O₄/Co₃O₄ for high power lithium-ion batteries. **2023**, 946, 169447 ○
- 54 Unveiling reactive origin through the in situ 2D core-shell formation, Ni(CN)₂@Ni₂P, derived from Hofmann-type MOF for water oxidation. **2023**, 465, 142705 ○
- 53 Directional assembly of multi-catalytic sites CoCu-MOFs with porous carbon nanofiber templates as efficient catalyst for microbial fuel cells. **2023**, 11, 109662 ○
- 52 Hierarchical Ni@CNTs-bridged Mo₂C/Ni₂P heterostructure micro-pillars for enhanced seawater splitting and Mg/seawater battery. **2023**, 111, 108440 ○

- 51 Hierarchical phosphorus-oxygen incorporated cobalt sulfide hollow micro/nano-reactor for highly-efficient electrocatalytic overall water splitting. **2023**, 465, 142853 ○
- 50 MOF-based composites as photoluminescence sensing platforms for pesticides: Applications and mechanisms. **2023**, 226, 115664 ○
- 49 CoNi nanocrystal anchoring on MOF derived carbon skeleton autocatalytic growth N-doped carbon nanotubes for efficient bifunctional electrocatalyst towards methanol oxidation/oxygen reduction. **2023**, 952, 170079 ○
- 48 Porous heterojunction of Ni₂P/Ni₇S₆ with high crystalline phase and superior conductivity for industrial anion exchange membrane water electrolysis. **2023**, 330, 122633 ○
- 47 MOF-derived carbon nanotubes as an highly active electrocatalyst for oxygen reduction reaction in alkaline and acidic media. **2023**, 18, 100131 ○
- 46 Promotion of CO₂ reduction in a nanophotocatalyst by hydrogen peroxide. **2023**, 311, 123206 ○
- 45 Emerging trends of electrocatalytic technologies for renewable hydrogen energy from seawater: Recent advances, challenges, and techno-feasible assessment. **2023**, 80, 658-688 ○
- 44 Electrodeposited cobalt phosphide film with regulated interfacial structure and wetting for enhanced hydrogen evolution performance: Effect of saccharin. **2023**, 616, 156456 ○
- 43 Co₂P Nanoparticles Encapsulated in N-Doped Carbon Nanotubes as a Bifunctional Oxygen Catalyst for a High-Performance Rechargeable Zn||Air Battery. **2023**, 6, 2027-2034 ○
- 42 Rational design of hollow nitrogen-doped carbon supported nickel nanoparticles for efficient electrocatalytic CO₂ reduction. **2023**, 11, 109427 ○
- 41 Morphology control and electronic tailoring of CoxAy (A=Fe, P, S, Se) electrocatalysts for water splitting. **2023**, 460, 141674 ○
- 40 Matryoshka Doll Heterostructures Induce Electromagnetic Parameters Fluctuation to Tailor Electromagnetic Wave Absorption. 2200379 ○
- 39 Cobalt Phosphide Nanoparticles Synthesized by Solvothermal Phosphidization of Metal-Organic Frameworks for Electrocatalytic Oxygen Evolution. **2023**, 2023, 1-12 ○
- 38 Directional Charge Transfer Channels in a Monolithically Integrated Electrode for Photoassisted Overall Water Splitting. **2023**, 17, 3465-3482 1
- 37 Prussian Blue Analogue-Assisted Formation of Iron||Nickel Selenide Porous Nanosheets for Enhanced Oxygen Evolution. **2023**, 6, 2178-2186 ○
- 36 Post-Synthetic Surface Modification of Metal||Organic Frameworks and Their Potential Applications. **2023**, 7, ○
- 35 Challenges and Perspectives of Single-Atom-Based Catalysts for Electrochemical Reactions. **2023**, 3, 736-755 ○
- 34 Strategies for Promoting Catalytic Performance of Ru-Based Electrocatalysts towards Oxygen/Hydrogen Evolution Reaction. **2023**, 23, ○

- 33 A review of electrochemical glucose sensing based on transition metal phosphides. **2023**, 133, 070702 ○
- 32 Morphology-Engineering Construction of Anti-Aggregated Co/N-Doped Hollow Carbon from Metal-Organic Frameworks for Efficient Biomass Upgrading. 2207689 ○
- 31 Ligand-based modulation of the electronic structure at metal nodes in MOFs to promote the oxygen evolution reaction. **2023**, 11, 7239-7245 ○
- 30 Activation of peroxymonosulfate for degradation of norfloxacin by Mn-doped zeolitic imidazolate framework-67 nanocrystals. ○
- 29 Turning the Inert Element Zinc into an Active Single-Atom Catalyst for Efficient Fenton-Like Chemistry. **2023**, 135, ○
- 28 Turning the Inert Element Zinc into an Active Single-Atom Catalyst for Efficient Fenton-Like Chemistry. **2023**, 62, ○
- 27 Electronic and Lattice Engineering of Ruthenium Oxide towards Highly Active and Stable Water Splitting. 2300177 ○
- 26 Structural design of core-shell zeolitic imidazolate frameworks as an efficient catalyst for CO₂ cycloaddition to epoxides. **2023**, 70, 102451 ○
- 25 Rare-Earth Metal/Organic Framework-Derived La₂O₃/Ni_xPy Nanoparticles Embedded in Nitrogen-Doped Porous Carbon as Efficient Electrocatalysts for the Oxygen Evolution Reaction. **2023**, 6, 4349-4359 ○
- 24 Imidazole linker-induced covalent triazine framework/ZIF hybrids for confined hollow carbon super-heterostructures toward a long-life supercapacitor. ○
- 23 ZIF-67-derived nickel/cobalt phosphide nanocubes/N-doped carbon/nickel form composite for efficient overall water splitting. **2023**, ○
- 22 Interface synergism and engineering of Pd/Co@N-C for direct ethanol fuel cells. **2023**, 14, ○
- 21 Enhancing the electrocatalytic performance of nitrate reduction to ammonia by in-situ nitrogen leaching. **2023**, 108341 ○
- 20 Balancing sub-reaction activity to boost electrocatalytic urea synthesis using a metal-free electrocatalyst. ○
- 19 Oxygen Evolution/Reduction Reaction Catalysts: From In Situ Monitoring and Reaction Mechanisms to Rational Design. ○
- 18 Nitrogen-doped metal-organic framework derived porous carbon/polymer membrane for the simultaneous extraction of four benzotriazole ultraviolet stabilizers in environmental water. **2023**, 1695, 463929 ○
- 17 Multidimensional MOF-derived carbon nanomaterials for multifunctional applications. ○
- 16 Self-Reconstructed Spinel Surface Structure Enabling the Long-Term Stable Hydrogen Evolution Reaction/Oxygen Evolution Reaction Efficiency of FeCoNiRu High-Entropy Alloyed Electrocatalyst. 2300094 ○

- 15 Hierarchical porous yolk-shell Co-N-C nanocatalysts engaged in graphene nanopockets for high-performance Zn-air battery. ○
- 14 N-doped carbon wrapped CoFe alloy nanoparticles with MoS₂ nanosheets as electrocatalyst for hydrogen and oxygen evolution reactions. **2023**, ○
- 13 A pyrolysis-free Ni/Fe bimetallic electrocatalyst for overall water splitting. **2023**, 14, ○
- 12 Fluorine-regulated binary cobalt nickel phosphides nanoarrays on nickel foam for enhanced hydrogen evolution reaction. **2023**, 58, 6407-6418 ○
- 11 Synergistic Tuning of CoO/CoP Heterojunction Nanowire Arrays as Efficient Bifunctional Catalysts for Alkaline Overall Water Splitting. ○
- 10 Porous structure of fixed sulfur and networked electronic channels in three-dimensional skeletal structure of polyaniline and MOF-derived materials. **2023**, 669, 131440 ○
- 9 Design of high-performance ion-doped CoP systems for hydrogen evolution: From multi-level screening calculations to experiment. **2023**, ○
- 8 Highly Efficient Spatial Three-Level CoP@ZIF-8/pNF Based on Modified Porous NF as Dual Functional Electrocatalyst for Water Splitting. **2023**, 13, 1386 ○
- 7 Charge redistribution enhanced oxygen reduction of carbon-based electrocatalyst. **2023**, 627, 157303 ○
- 6 MOF-Derived Co₃S₄ Nanoparticles Embedded in Nitrogen-Doped Carbon for Electrochemical Oxygen Production. ○
- 5 Carbon nanostructures for energy generation and storage. **2023**, 57-94 ○
- 4 Transient and general synthesis of high-density and ultrasmall nanoparticles on two-dimensional porous carbon via coordinated carbothermal shock. **2023**, 14, ○
- 3 Self-Supporting Electrocatalyst Constructed from in-situ Transformation of Co(OH)₂ to Metal-Organic Framework to Co/CoP/NC Nanosheets for High-Current-Density Water Splitting. **2023**, ○
- 2 Recent Advances in Electrocatalytic Nitrate Reduction to Ammonia: Mechanism Insight and Catalyst Design. ○
- 1 Chemiluminescence-assisted study on a peracetic acid-based advanced oxidation process activated with CoP. ○