

Minghua Huang

List of Publications by Year in descending order

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74
papers

3,384
citations

126708

33
h-index

155451

55
g-index

76
all docs

76
docs citations

76
times ranked

3550
citing authors

#	ARTICLE	IF	CITATIONS
1	Improved light-harvesting and thermal management for efficient solar-driven water evaporation using 3D photothermal cones. <i>Journal of Materials Chemistry A</i> , 2018, 6, 9874-9881.	5.2	266
2	Sulfur-nitrogen rich carbon as stable high capacity potassium ion battery anode: Performance and storage mechanisms. <i>Energy Storage Materials</i> , 2020, 27, 212-225.	9.5	235
3	Asymmetric Trilayer All-Polymer Dielectric Composites with Simultaneous High Efficiency and High Energy Density: A Novel Design Targeting Advanced Energy Storage Capacitors. <i>Advanced Functional Materials</i> , 2021, 31, 2100280.	7.8	179
4	Sulfur-Rich Graphene Nanoboxes with Ultra-High Potassiation Capacity at Fast Charge: Storage Mechanisms and Device Performance. <i>ACS Nano</i> , 2021, 15, 1652-1665.	7.3	132
5	An electrodeposited cobalt-selenide-based film as an efficient bifunctional electrocatalyst for full water splitting. <i>Journal of Materials Chemistry A</i> , 2016, 4, 10933-10939.	5.2	130
6	Discovery of Quantitative Electronic Structure-OER Activity Relationship in Metal-Organic Framework Electrocatalysts Using an Integrated Theoretical-Experimental Approach. <i>Advanced Functional Materials</i> , 2021, 31, 2102066.	7.8	114
7	Co/MoN hetero-interface nanoflake array with enhanced water dissociation capability achieves the Pt-like hydrogen evolution catalytic performance. <i>Applied Catalysis B: Environmental</i> , 2021, 286, 119882.	10.8	109
8	Achieving Concurrent High Energy Density and Efficiency in All-Polymer Layered Paraelectric/Ferroelectric Composites via Introducing a Moderate Layer. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 27522-27532.	4.0	87
9	Alternate Assemblies of Platinum Nanoparticles and Metalloporphyrins as Tunable Electrocatalysts for Dioxxygen Reduction. <i>Langmuir</i> , 2005, 21, 323-329.	1.6	86
10	Salt assisted fabrication of lignin-derived Fe, N, P, S codoped porous carbon as trifunctional catalyst for Zn-air batteries and water-splitting devices. <i>Chemical Engineering Journal</i> , 2021, 421, 129704.	6.6	86
11	Nanocomposite Multilayer Film of Preyssler-Type Polyoxometalates with Fine Tunable Electrocatalytic Activities. <i>Journal of Physical Chemistry B</i> , 2004, 108, 9780-9786.	1.2	81
12	Asymmetric Co ₃ N ₃ P ₁ Trifunctional Catalyst with Tailored Electronic Structures Enabling Boosted Activities and Corrosion Resistance in an Uninterrupted Seawater Splitting System. <i>Advanced Materials</i> , 2022, 34, .	11.1	80
13	In situ Grown Ni phosphate@Ni ₁₂ P ₅ Nanorod Arrays as a Unique Core-Shell Architecture: Competitive Bifunctional Electrocatalysts for Urea Electrolysis at Large Current Densities. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 7463-7471.	3.2	75
14	Oxygen Engineering Enables N-Doped Porous Carbon Nanofibers as Oxygen Reduction/Evolution Reaction Electrocatalysts for Flexible Zinc-Air Batteries. <i>ACS Catalysis</i> , 2022, 12, 4002-4015.	5.5	68
15	Enabling the full exposure of Fe ₂ P@Ni ₃ P heterostructures in tree-branch-like nanoarrays for promoted urea electrolysis at high current densities. <i>Chemical Engineering Journal</i> , 2021, 417, 128067.	6.6	66
16	Modulation of the crystalline/amorphous interface engineering on Ni-P-O-based catalysts for boosting urea electrolysis at large current densities. <i>Chemical Engineering Journal</i> , 2021, 425, 130514.	6.6	65
17	Metal-organic framework derived N-doped CNT@ porous carbon for high-performance sodium- and potassium-ion storage. <i>Electrochimica Acta</i> , 2019, 319, 541-551.	2.6	63
18	Hydrogen generation from catalytic glucose oxidation by Fe-based electrocatalysts. <i>Electrochemistry Communications</i> , 2017, 83, 11-15.	2.3	58

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19	Electrochemical Designing of Au/Pt Core Shell Nanoparticles as Nanostructured Catalyst with Tunable Activity for Oxygen Reduction. <i>Electroanalysis</i> , 2007, 19, 506-509.	1.5	55
20	A Facile and General Strategy to Deposit Polypyrrole on Various Substrates for Efficient Solar-Driven Evaporation. <i>Advanced Sustainable Systems</i> , 2019, 3, 1800108.	2.7	52
21	Controllable amorphization engineering on bimetallic metal-organic frameworks for ultrafast oxygen evolution reaction. <i>Chemical Engineering Journal</i> , 2021, 418, 129330.	6.6	51
22	Engineering core-shell Co ₉ S ₈ /Co nanoparticles on reduced graphene oxide: Efficient bifunctional Mott-Schottky electrocatalysts in neutral rechargeable Zn-Air batteries. <i>Journal of Energy Chemistry</i> , 2022, 68, 113-123.	7.1	51
23	Controllable Ni/NiO interface engineering on N-doped carbon spheres for boosted alkaline water-to-hydrogen conversion by urea electrolysis. <i>Nano Research</i> , 2022, 15, 7124-7133.	5.8	49
24	A simple route to incorporate redox mediator into carbon nanotubes/Nafion composite film and its application to determine NADH at low potential. <i>Talanta</i> , 2007, 74, 132-139.	2.9	46
25	Enhanced durability and activity of the perovskite electrocatalyst Pr _{0.5} Ba _{0.5} Co ₃ by Ca doping for the oxygen evolution reaction at room temperature. <i>Chemical Communications</i> , 2017, 53, 5132-5135.	2.2	46
26	Designed Nanostructured Pt Film for Electrocatalytic Activities by Underpotential Deposition Combined Chemical Replacement Techniques. <i>Journal of Physical Chemistry B</i> , 2005, 109, 15264-15271.	1.2	45
27	Thin-Film Cu-Pt(111) Near-Surface Alloys: Active Electrocatalysts for the Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2012, 2, 1457-1460.	5.5	41
28	Fe ₃ C Nanoparticles Encapsulated in N-Doped Hollow Carbon Spheres as Efficient Electrocatalysts for the Oxygen Reduction Reaction over a Wide pH Range. <i>Chemistry - A European Journal</i> , 2019, 25, 9650-9657.	1.7	41
29	Tuning the morphology and structure of nanocarbons with activating agents for ultrafast ionic liquid-based supercapacitors. <i>Journal of Power Sources</i> , 2017, 361, 182-194.	4.0	39
30	Sustainable nitrogen-doped carbon electrodes for use in high-performance supercapacitors and Li-ion capacitors. <i>Sustainable Energy and Fuels</i> , 2020, 4, 1789-1800.	2.5	38
31	Enhanced bifunctional fuel cell catalysis via Pd/PtCu core/shell nanoplates. <i>Chemical Communications</i> , 2018, 54, 1315-1318.	2.2	37
32	Electrospun hetero-CoP/FeP embedded in porous carbon nanofibers: enhanced Na ⁺ kinetics and specific capacity. <i>Nanoscale</i> , 2020, 12, 24477-24487.	2.8	36
33	Sulfur and nitrogen codoped cyanoethyl cellulose-derived carbon with superior gravimetric and volumetric capacity for potassium ion storage. , 2022, 4, 986-1001.		36
34	Small molecules as cross-linkers: fabrication of carbon nanotubes/thionine self-assembled multilayers on amino functionalized surfaces. <i>Chemical Communications</i> , 2005, , 5560.	2.2	34
35	3D PtFe Clusters with Cube-in-Cube Structure Enhance Oxygen Reduction Catalysis and Electrochemical Sensing. <i>Small Methods</i> , 2018, 2, 1800073.	4.6	34
36	Nitrogen and Sulfur Co-doped Mesoporous Carbon for Sodium Ion Batteries. <i>ACS Applied Nano Materials</i> , 2019, 2, 5643-5654.	2.4	33

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37	Magnet-assisted assembly of 1-dimensional hollow PtCo nanomaterials on an electrode surface. <i>Journal of Materials Chemistry</i> , 2008, 18, 923.	6.7	32
38	Dual-doped hierarchical porous carbon derived from biomass for advanced supercapacitors and lithium ion batteries. <i>RSC Advances</i> , 2019, 9, 32382-32394.	1.7	32
39	Multifunctional perovskite oxide for efficient solar-driven evaporation and energy-saving regeneration. <i>Nano Energy</i> , 2020, 70, 104538.	8.2	32
40	Improved dielectric permittivity and retained low loss in layer-structured films via controlling interfaces. <i>Advanced Composites and Hybrid Materials</i> , 2018, 1, 548-557.	9.9	30
41	High potassium ion storage capacity with long cycling stability of sustainable oxygen-rich carbon nanosheets. <i>Nanoscale</i> , 2021, 13, 2389-2398.	2.8	30
42	All-cellulose-based quasi-solid-state supercapacitor with nitrogen and boron dual-doped carbon electrodes exhibiting high energy density and excellent cyclic stability. <i>Green Energy and Environment</i> , 2023, 8, 1091-1101.	4.7	30
43	Manipulation of New Married Edge-Adjacent Fe ₂ N ₅ Catalysts and Identification of Active Species for Oxygen Reduction in Wide pH Range. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	29
44	Solar-Intensified Ultrafiltration System Based on Porous Photothermal Membrane for Efficient Water Treatment. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 4889-4896.	3.2	27
45	N,P-Doped Carbon-Based Freestanding Electrodes Enabled by Cellulose Nanofibers for Superior Asymmetric Supercapacitors. <i>ACS Applied Energy Materials</i> , 2021, 4, 2327-2338.	2.5	26
46	Multifunctional Nickel Sulfide Nanosheet Arrays for Solar-Intensified Oxygen Evolution Reaction. <i>Small</i> , 2020, 16, e2002550.	5.2	25
47	Bio-derived 3D TiO ₂ hollow spheres with a mesocrystal nanostructure to achieve improved electrochemical performance of Na-ion batteries in ether-based electrolytes. <i>Journal of Materials Chemistry A</i> , 2019, 7, 3399-3407.	5.2	24
48	Engineering solid-liquid-gas interfaces of single-atom cobalt catalyst for enhancing the robust stability of neutral Zn-air batteries under high current density. <i>Chemical Engineering Journal</i> , 2022, 433, 133685.	6.6	23
49	Spatially Confined -Edge-Strategy for Achieving Compact Na ⁺ /K ⁺ Storage: Constructing Hetero-Ni ₃ S ₂ in Densified Carbons. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	23
50	Wettable photothermal hollow fibers arrays for efficient solar-driven desalination under omnidirectional illumination without salt precipitation. <i>Materials Today Energy</i> , 2020, 16, 100391.	2.5	22
51	The marriage of crystalline/amorphous Co/Co ₃ O ₄ heterostructures with N-doped hollow carbon spheres: efficient and durable catalysts for oxygen reduction. <i>Materials Today Energy</i> , 2020, 18, 100497.	2.5	19
52	Nitrogen and Oxygen Co-Doping Assisted Synthesis of Highly Dispersed Pd Nanoparticles on Hollow Carbon Spheres as Efficient Electrocatalysts for Oxygen Reduction Reaction. <i>Chemistry - A European Journal</i> , 2020, 26, 12589-12595.	1.7	19
53	Synthesis of hierarchical transition metal oxyhydroxides in aqueous solution at ambient temperature and their application as OER electrocatalysts. <i>Journal of Energy Chemistry</i> , 2022, 71, 89-97.	7.1	18
54	An efficient pH-universal electrocatalyst for oxygen reduction: defect-rich graphitized carbon shell wrapped cobalt within hierarchical porous N-doped carbon aerogel. <i>Materials Today Energy</i> , 2020, 17, 100452.	2.5	17

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55	A new strategy for achieving high K ⁺ storage capacity with fast kinetics: realizing covalent sulfur-rich carbon by phosphorous doping. <i>Nanoscale</i> , 2021, 13, 4911-4920.	2.8	17
56	Nitrogen-doped Sr ₂ Fe _{1.5} Mo _{0.5} O _{6-δ} perovskite as an efficient and stable catalyst for hydrogen evolution reaction. <i>Materials Today Energy</i> , 2021, 20, 100695.	2.5	16
57	Coupled cobalt oxide/hollow carbon sphere as an efficient electrocatalyst for the oxygen reduction reaction. <i>RSC Advances</i> , 2016, 6, 34159-34164.	1.7	14
58	High-Performance Sodium-Ion Capacitor Constructed by Well-Matched Dual-Carbon Electrodes from a Single Biomass. <i>ACS Sustainable Chemistry and Engineering</i> , 0, , .	3.2	14
59	One-pot synthesis of nanosized MnO incorporated into N-doped carbon nanosheets for high performance lithium storage. <i>Journal of Alloys and Compounds</i> , 2022, 902, 163827.	2.8	14
60	Synthesis of two-dimensional layered double hydroxides: a systematic overview. <i>CrystEngComm</i> , 2022, 24, 4639-4655.	1.3	14
61	A hybrid composite catalyst of Fe ₃ O ₄ nanoparticles-based carbon for electrochemical reduction of oxygen. <i>New Journal of Chemistry</i> , 2017, 41, 4959-4965.	1.4	13
62	High-rate sodium storage performance enabled using hollow Co ₃ O ₄ nanoparticles anchored in porous carbon nanofibers anode. <i>Journal of Alloys and Compounds</i> , 2021, 868, 159262.	2.8	11
63	Facile Synthesis of Size-Controlled Nitrogen-Doped Mesoporous Carbon Nanosphere Supported Ultrafine Ru Nanoparticles for Selective Hydrogenation of Quinolines. <i>Chemistry - A European Journal</i> , 2020, 26, 17000-17004.	1.7	10
64	Polyethyleneimine-Mediated Polyamide Composite Membrane with High Permselectivity for Forward Osmosis. <i>Macromolecular Materials and Engineering</i> , 2021, 306, 2000818.	1.7	9
65	Morphological modulation of CoFe-based metal organic frameworks for oxygen evolution reaction. <i>Catalysis Communications</i> , 2022, 165, 106445.	1.6	7
66	Morphology-controlled growth of perylene derivative induced by double-hydrophilic block copolymers. <i>APL Materials</i> , 2016, 4, 015705.	2.2	6
67	Sandwich-like hierarchical porous dual-carbon catalyst with more accessible sites for boosting oxygen reduction reaction. <i>Materials Today Energy</i> , 2021, 21, 100809.	2.5	6
68	Multifunctional reduced graphene oxide film as electrocatalysts and photothermal layer for broad spectrum solar-enhanced oxygen evolution reaction. <i>Materials Today Energy</i> , 2022, 25, 100966.	2.5	6
69	Interconnected honeycomb-like carbon with rich nitrogen/sulfur doping for stable potassium ion storage. <i>Electrochimica Acta</i> , 2022, 424, 140596.	2.6	6
70	Synthesis of ultrathin metal oxide and hydroxide nanosheets using formamide in water at room temperature. <i>CrystEngComm</i> , 2021, 23, 3794-3801.	1.3	5
71	Plasma-Assisted Engineering of MOF Electrocatalyst for Highly Efficient Oxygen Evolution Reaction. <i>ChemElectroChem</i> , 0, , .	1.7	5
72	Evolution of "adsorption" insertion K ⁺ storage behaviors in flower-like carbons with tunable heteroatom doping and graphitic structures. <i>Sustainable Energy and Fuels</i> , 0, , .	2.5	4

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73	Improving the electron transfer in the oxygen reduction reaction by N/S co-doping for high-performance of Zn-air batteries. Sustainable Energy and Fuels, 2022, 6, 3383-3393.	2.5	4
74	Cable-like heterogeneous porous carbon fibers with ultrahigh-rate capability and long cycle life for fast charging lithium-ion storage devices. Nanoscale, 2019, 11, 20893-20902.	2.8	1