Jia-Cheng Wang

List of Publications by Year
in descending order

117 papers	8,925 citations	53794 45 h-index	42399 92 g-index
117 all docs	117 docs citations	117 times ranked	10603 citing authors

#	Article	IF	Citations
1	KOH activation of carbon-based materials for energy storage. Journal of Materials Chemistry, 2012, 22, 23710.	6.7	2,127
2	A review of oxygen reduction mechanisms for metal-free carbon-based electrocatalysts. Npj Computational Materials, 2019, 5, .	8.7	480
3	Ultrafine Molybdenum Carbide Nanoparticles Composited with Carbon as a Highly Active Hydrogenâ€Evolution Electrocatalyst. Angewandte Chemie - International Edition, 2015, 54, 14723-14727.	13.8	396
4	KOH activation of biomass-derived nitrogen-doped carbons forÂsupercapacitor and electrocatalytic oxygen reduction. Electrochimica Acta, 2018, 261, 49-57.	5.2	345
5	Zirconium nitride catalysts surpass platinum for oxygen reduction. Nature Materials, 2020, 19, 282-286.	27.5	293
6	Fungi-based porous carbons for CO2 adsorption and separation. Journal of Materials Chemistry, 2012, 22, 13911.	6.7	204
7	Highly porous nitrogen-doped polyimine-based carbons with adjustable microstructures for CO2 capture. Journal of Materials Chemistry A, 2013, 1, 10951.	10.3	189
8	A Glassâ€Ceramic with Accelerated Surface Reconstruction toward the Efficient Oxygen Evolution Reaction. Angewandte Chemie - International Edition, 2021, 60, 3773-3780.	13.8	164
9	Imine-Linked Polymer-Derived Nitrogen-Doped Microporous Carbons with Excellent CO₂ Capture Properties. ACS Applied Materials & Interfaces, 2013, 5, 3160-3167.	8.0	158
10	Novel Route to Feâ€Based Cathode as an Efficient Bifunctional Catalysts for Rechargeable Znâ€"Air Battery. Advanced Energy Materials, 2018, 8, 1800955.	19.5	146
11	N-doped hierarchically macro/mesoporous carbon with excellent electrocatalytic activity and durability for oxygen reduction reaction. Carbon, 2015, 86, 108-117.	10.3	145
12	Phosphorus/sulfur Co-doped porous carbon with enhanced specific capacitance for supercapacitor and improved catalytic activity for oxygen reduction reaction. Journal of Power Sources, 2016, 314, 39-48.	7.8	141
13	A covalent route for efficient surface modification of ordered mesoporous carbon as high performance microwave absorbers. Nanoscale, 2013, 5, 12502.	5.6	129
14	Nitrogen-doped hollow mesoporous carbon spheres as a highly active and stable metal-free electrocatalyst for oxygen reduction. Carbon, 2017, 114, 177-186.	10.3	122
15	Oxygen Reduction Reactions of Fe-N-C Catalysts: Current Status and the Way Forward. Electrochemical Energy Reviews, 2019, 2, 252-276.	25.5	119
16	Auto-optimizing Hydrogen Evolution Catalytic Activity of ReS₂ through Intrinsic Charge Engineering. ACS Nano, 2018, 12, 4486-4493.	14.6	111
17	Chemically activated fungi-based porous carbons for hydrogen storage. Carbon, 2014, 75, 372-380.	10.3	106
18	Creation of Triple Hierarchical Micro-Meso-Macroporous N-doped Carbon Shells with Hollow Cores Toward the Electrocatalytic Oxygen Reduction Reaction. Nano-Micro Letters, 2018, 10, 3.	27.0	99

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19	Intrinsic Electron Localization of Metastable MoS₂ Boosts Electrocatalytic Nitrogen Reduction to Ammonia. Advanced Materials, 2021, 33, e2007509.	21.0	96
20	A skin-like sensor for intelligent Braille recognition. Nano Energy, 2020, 68, 104346.	16.0	87
21	In situ growth of spinel CoFe₂O₄ nanoparticles on rod-like ordered mesoporous carbon for bifunctional electrocatalysis of both oxygen reduction and oxygen evolution. Journal of Materials Chemistry A, 2015, 3, 15598-15606.	10.3	86
22	Advance on flexible pressure sensors based on metal and carbonaceous nanomaterial. Nano Energy, 2021, 87, 106181.	16.0	86
23	Facile Synthesis of N-Doped Graphene-Like Carbon Nanoflakes as Efficient and Stable Electrocatalysts for the Oxygen Reduction Reaction. Nano-Micro Letters, 2018, 10, 29.	27.0	85
24	Partialâ€Singleâ€Atom, Partialâ€Nanoparticle Composites Enhance Water Dissociation for Hydrogen Evolution. Advanced Science, 2021, 8, 2001881.	11.2	85
25	Novel synthesis of N-doped graphene as an efficient electrocatalyst towards oxygen reduction. Nano Research, 2016, 9, 808-819.	10.4	81
26	An efficient one-step condensation and activation strategy to synthesize porous carbons with optimal micropore sizes for highly selective CO₂ adsorption. Nanoscale, 2014, 6, 4148-4156.	5.6	80
27	Coordination environment tuning of nickel sites by oxyanions to optimize methanol electro-oxidation activity. Nature Communications, 2022, 13, .	12.8	78
28	Hierarchical N-Doped Porous Carbons for Znâ€"Air Batteries and Supercapacitors. Nano-Micro Letters, 2020, 12, 20.	27.0	73
29	Structural change and characterization in nitrogen-incorporated SBA15 oxynitride mesoporous materials via different thermal history. Microporous and Mesoporous Materials, 2005, 83, 225-232.	4.4	67
30	Edge-sited Fe-N4 atomic species improve oxygen reduction activity via boosting O2 dissociation. Applied Catalysis B: Environmental, 2020, 265, 118593.	20.2	63
31	Mesoporous Ternary Nitrides of Earth-Abundant Metals as Oxygen Evolution Electrocatalyst. Nano-Micro Letters, 2020, 12, 79.	27.0	63
32	Efficient N-doping of hollow core-mesoporous shelled carbon spheres via hydrothermal treatment in ammonia solution for the electrocatalytic oxygen reduction reaction. Microporous and Mesoporous Materials, 2018, 261, 88-97.	4.4	62
33	Synthesis of Nitrogen-Doped Porous Carbon Spheres with Improved Porosity toward the Electrocatalytic Oxygen Reduction. ACS Sustainable Chemistry and Engineering, 2017, 5, 11105-11116.	6.7	61
34	Multidimensional graphene structures and beyond: Unique properties, syntheses and applications. Progress in Materials Science, 2020, 113, 100665.	32.8	61
35	MIL-100-Fe derived N-doped Fe/Fe3C@C electrocatalysts for efficient oxygen reduction reaction. Applied Surface Science, 2018, 434, 1266-1273.	6.1	59
36	Ordered Mesoporous Cobaltâ€"Nickel Nitride Prepared by Nanocasting for Oxygen Evolution Reaction Electrocatalysis. Advanced Materials Interfaces, 2019, 6, 1900960.	3.7	57

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37	Three-dimensional interconnected nitrogen-doped mesoporous carbons as active electrode materials for application in electrocatalytic oxygen reduction and supercapacitors. Journal of Colloid and Interface Science, 2018, 527, 230-240.	9.4	56
38	Mechanochemical synthesis of multi-site electrocatalysts as bifunctional zincâ€"air battery electrodes. Journal of Materials Chemistry A, 2019, 7, 19355-19363.	10.3	53
39	An Ordered Mesoporous Aluminosilicate Oxynitride Template to Prepare N-Incorporated Ordered Mesoporous Carbon. Journal of Physical Chemistry C, 2007, 111, 7266-7272.	3.1	52
40	In situ formation of nitrogen-doped carbon nanoparticles on hollow carbon spheres as efficient oxygen reduction electrocatalysts. Nanoscale, 2016, 8, 18134-18142.	5.6	52
41	Ruthenium Triazine Composite: A Good Match for Increasing Hydrogen Evolution Activity through Contact Electrification. Advanced Energy Materials, 2020, 10, 2000067.	19.5	52
42	Reconstruction-induced NiCu-based catalysts towards paired electrochemical refining. Energy and Environmental Science, 2022, 15, 3004-3014.	30.8	51
43	Synthesis, characterization, and hydrogen storage capacities of hierarchical porous carbide derived carbon monolith. Journal of Materials Chemistry, 2012, 22, 23893.	6.7	50
44	Ionic liquid-assisted synthesis of dual-doped graphene as efficient electrocatalysts for oxygen reduction. Carbon, 2016, 102, 58-65.	10.3	50
45	Suppressing Dissolution of Ptâ€Based Electrocatalysts through the Electronic Metalâ€"Support Interaction. Advanced Energy Materials, 2021, 11, 2101050.	19.5	50
46	Achieving excellent activity and stability for oxygen reduction electrocatalysis by hollow mesoporous ironâ€"nitrogen-doped graphitic carbon spheres. Journal of Materials Chemistry A, 2017, 5, 12243-12251.	10.3	48
47	Ultrafine WC nanoparticles anchored on co-encased, N-doped carbon nanotubes for efficient hydrogen evolution. Energy Storage Materials, 2017, 6, 104-111.	18.0	48
48	A facile nanocasting strategy to nitrogen-doped porous carbon monolith by treatment with ammonia for efficient oxygen reduction. Journal of Materials Chemistry A, 2015, 3, 12836-12844.	10.3	44
49	Nickelâ€"Iron Nitrideâ€"Nickel Sulfide Composites for Oxygen Evolution Electrocatalysis. ACS Applied Materials & Interfaces, 2020, 12, 41464-41470.	8.0	44
50	Ultrahigh-Sensitive Finlike Double-Sided E-Skin for Force Direction Detection. ACS Applied Materials & Interfaces, 2020, 12, 14136-14144.	8.0	44
51	In situ formation of iron-cobalt sulfides embedded in N,S-doped mesoporous carbon as efficient electrocatalysts for oxygen reduction reaction. Microporous and Mesoporous Materials, 2018, 270, 1-9.	4.4	43
52	Three-Dimensional Mesoporous Phosphideâ€"Spinel Oxide Heterojunctions with Dual Function as Catalysts for Overall Water Splitting. ACS Applied Energy Materials, 2020, 3, 1684-1693.	5.1	43
53	Post iron-doping of activated nitrogen-doped carbon spheres as a high-activity oxygen reduction electrocatalyst. Energy Storage Materials, 2018, 13, 142-150.	18.0	42
54	Influence of spatial configurations on electromagnetic interference shielding of ordered mesoporous carbon/ordered mesoporous silica/silica composites. Scientific Reports, 2013, 3, 3252.	3.3	40

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55	Correlating electrocatalytic oxygen reduction activity with d-band centers of metallic nanoparticles. Energy Storage Materials, 2018, 13, 189-198.	18.0	40
56	An In Situ Sourceâ€Templateâ€Interface Reaction Route to 3D Nitrogenâ€Doped Hierarchical Porous Carbon as Oxygen Reduction Electrocatalyst. Advanced Materials Interfaces, 2015, 2, 1500199.	3.7	39
57	Fungi-derived hierarchically porous carbons for high-performance supercapacitors. RSC Advances, 2015, 5, 4396-4403.	3.6	38
58	Spider Web-like Flexible Tactile Sensor for Pressure-Strain Simultaneous Detection. ACS Applied Materials & Interfaces, 2021, 13, 10428-10436.	8.0	37
59	Engineering Hierarchical CoO Nanospheres Wrapped by Graphene via Controllable Sulfur Doping for Superior Li Ion Storage. Small, 2020, 16, e2003643.	10.0	36
60	Carbon dioxide activated carbon nanofibers with hierarchical micro-/mesoporosity towards electrocatalytic oxygen reduction. Journal of Materials Chemistry A, 2016, 4, 5553-5560.	10.3	35
61	Interface Engineering with Ultralow Ruthenium Loading for Efficient Water Splitting. ACS Applied Materials & Interfaces, 2020, 12, 36177-36185.	8.0	35
62	One stone two birds: Vanadium doping as dual roles in self-reduced Pt clusters and accelerated water splitting. Journal of Energy Chemistry, 2022, 66, 493-501.	12.9	35
63	Hollow MXene Sphere-Based Flexible E-Skin for Multiplex Tactile Detection. ACS Applied Materials & Interfaces, 2021, 13, 45924-45934.	8.0	34
64	Surface decoration accelerates the hydrogen evolution kinetics of a perovskite oxide in alkaline solution. Energy and Environmental Science, 2020, 13, 4249-4257.	30.8	33
65	Increased activity of nitrogen-doped graphene-like carbon sheets modified by iron doping for oxygen reduction. Journal of Colloid and Interface Science, 2019, 536, 42-52.	9.4	32
66	Oxygen vacancy-expedited ion diffusivity in transition-metal oxides for high-performance lithium-ion batteries. Science China Materials, 2022, 65, 1421-1430.	6.3	32
67	Poly(3,4-ethylenedioxythiophene)/Mesoporous Carbon Composite. Journal of Physical Chemistry C, 2007, 111, 18073-18077.	3.1	31
68	Reactive template synthesis of nitrogen-doped graphene-like carbon nanosheets derived from hydroxypropyl methylcellulose and dicyandiamide as efficient oxygen reduction electrocatalysts. Journal of Power Sources, 2017, 345, 120-130.	7.8	30
69	Highly Porous Nitrogen-Doped Carbon Nanofibers as Efficient Metal-Free Catalysts toward the Electrocatalytic Oxygen Reduction Reaction. Nano Advances, 2016, , 79-89.	0.4	29
70	Holey Sheets of Interconnected Carbon-Coated Nickel Nitride Nanoparticles as Highly Active and Durable Oxygen Evolution Electrocatalysts. ACS Applied Energy Materials, 2018, 1, 6774-6780.	5.1	28
71	A Glassâ€Ceramic with Accelerated Surface Reconstruction toward the Efficient Oxygen Evolution Reaction. Angewandte Chemie, 2021, 133, 3817-3824.	2.0	28
72	Dual-doping of ruthenium and nickel into Co₃O₄for improving the oxygen evolution activity. Materials Chemistry Frontiers, 2020, 4, 1390-1396.	5.9	26

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73	Mesoporous silicon oxynitride thin films. Chemical Communications, 2006, , 900.	4.1	25
74	An experimental study of the mechanisms of freeze/thaw and wind erosion of ancient adobe buildings in northwest China. Bulletin of Engineering Geology and the Environment, 2007, 66, 153-159.	3.5	25
75	RuCo alloy trifunctional electrocatalysts with ratio-dependent activity for Znâ€“air batteries and self-powered water splitting. Chemical Communications, 2021, 57, 1498-1501.	4.1	25
76	Synthesis and electromagnetic interference shielding effectiveness of ordered mesoporous carbon filled poly(methyl methacrylate) composite films. RSC Advances, 2013, 3, 23715.	3.6	24
77	Co2N nanoparticles embedded N-doped mesoporous carbon as efficient electrocatalysts for oxygen reduction reaction. Applied Surface Science, 2019, 473, 555-563.	6.1	23
78	Nanoheterostructures of Partially Oxidized RuNi Alloy as Bifunctional Electrocatalysts for Overall Water Splitting. ChemSusChem, 2020, 13, 2739-2744.	6.8	23
79	A phosphate semiconductor-induced built-in electric field boosts electron enrichment for electrocatalytic hydrogen evolution in alkaline conditions. Journal of Materials Chemistry A, 2021, 9, 13109-13114.	10.3	23
80	Nitrogen Loss and Structural Change of Nitrogen-incorporated SBA-15 Mesoporous Materials Under Different Treatment Conditions. Journal of Materials Research, 2005, 20, 2296-2301.	2.6	22
81	Design Strategies for Single-Atom Iron Electrocatalysts toward Efficient Oxygen Reduction. Journal of Physical Chemistry Letters, 2022, 13, 168-174.	4.6	22
82	Highly Localized Câ€“N2 Sites for Efficient Oxygen Reduction. ACS Catalysis, 2020, 10, 9366-9375.	11.2	21
83	<i>In situ</i> growth of free-standing perovskite hydroxide electrocatalysts for efficient overall water splitting. Journal of Materials Chemistry A, 2020, 8, 5919-5926.	10.3	21
84	Oxygen Coordination on Feâ€“Nâ€“C to Boost Oxygen Reduction Catalysis. Journal of Physical Chemistry Letters, 2021, 12, 517-524.	4.6	20
85	Self-Assembly of Nitrogen-doped Graphene-Wrapped Carbon Nanoparticles as an Efficient Electrocatalyst for Oxygen Reduction Reaction. Electrochimica Acta, 2016, 216, 347-354.	5.2	19
86	A Thermally Decomposable Template Route to Synthesize Nitrogen-Doped Wrinkled Carbon Nanosheets as Highly Efficient and Stable Electrocatalysts for the Oxygen Reduction Reaction. ACS Sustainable Chemistry and Engineering, 2018, 6, 1951-1960.	6.7	19
87	Graphene-wrapped nitrogen-doped hollow carbon spheres for high-activity oxygen electroreduction. Materials Chemistry Frontiers, 2018, 2, 1489-1497.	5.9	19
88	Efficient electrocatalysis of hydrogen evolution by ultralow-Pt-loading bamboo-like nitrogen-doped carbon nanotubes. Materials Today Energy, 2017, 6, 173-180.	4.7	18
89	Geometric Structure and Electronic Polarization Synergistically Boost Hydrogen Evolution Kinetics in Alkaline Medium. Journal of Physical Chemistry Letters, 2020, 11, 3436-3442.	4.6	18
90	Fe₃C cluster-promoted single-atom Fe, N doped carbon for oxygen-reduction reaction. Physical Chemistry Chemical Physics, 2020, 22, 7218-7223.	2.8	17

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91	Nitrogen-doped carbon spheres decorated with CoSx nanoparticles as multifunctional electrocatalysts for rechargeable zn-air battery and overall water splitting. Materials Research Bulletin, 2020, 125, 110770.	5.2	17
92	Caged-Cation-Induced Lattice Distortion in Bronze TiO₂for Cohering Nanoparticulate Hydrogen Evolution Electrocatalysts. ACS Nano, 2022, 16, 9920-9928.	14.6	17
93	Incomplete amorphous phosphorization on the surface of crystalline cobalt molybdate to accelerate hydrogen evolution. Journal of Materials Chemistry A, 2021, 9, 21859-21866.	10.3	16
94	Crystallinity Effect of NiFe LDH on the Growth of Pt Nanoparticles and Hydrogen Evolution Performance. Journal of Physical Chemistry Letters, 2021, 12, 7221-7228.	4.6	16
95	Halosilane triggers anodic silanization and cathodic redox for stable and efficient lithiumâ€"O₂ batteries. Journal of Materials Chemistry A, 2019, 7, 18237-18243.	10.3	15
96	Iron-nitrogen dual-doped three-dimensional mesoporous carbons for high-activity electrocatalytic oxygen reduction. Applied Materials Today, 2018, 13, 174-181.	4.3	14
97	Conversion inorganic interlayer of a LiF/graphene composite in all-solid-state lithium batteries. Chemical Communications, 2020, 56, 1725-1728.	4.1	14
98	S, N dual-doped porous carbon materials derived from biomass for Na ion storage and O2 electroreduction. Microporous and Mesoporous Materials, 2020, 294, 109930.	4.4	14
99	The impact of solar radiation upon rock weathering at low temperature: a laboratory study. Permafrost and Periglacial Processes, 2003, 14, 61-67.	3.4	13
100	A stretchable hardness sensor for systemic sclerosis diagnosis. Nano Energy, 2022, 98, 107242.	16.0	13
101	Synthesis and characterization of ordered mesoporous SiOxNythin films with different nitrogen contents. Nanotechnology, 2006, 17, 2828-2834.	2.6	12
102	The direct growth of highly dispersed CoO nanoparticles on mesoporous carbon as a high-performance electrocatalyst for the oxygen reduction reaction. RSC Advances, 2016, 6, 70763-70769.	3.6	12
103	Surface Engineering of Cr-Doped Cobalt Molybdate toward High-Performance Hydrogen Evolution. ACS Applied Materials & Interfaces, 2022, 14, 18607-18615.	8.0	12
104	Synthesis, characterization, and baseâ€"catalytic performance of ordered mesoporous aluminophosphate oxynitride materials. Journal of Materials Research, 2007, 22, 3330-3337.	2.6	10
105	A porous framework infiltrating Liâ€"O₂ battery: a low-resistance and high-safety system. Sustainable Energy and Fuels, 2020, 4, 1600-1606.	4.9	10
106	Boosting the transport kinetics of free-standing SnS₂@Carbon nanofibers by electronic structure modulation for advanced lithium storage. Journal of Materials Chemistry A, 2022, 10, 9468-9481.	10.3	9
107	A nitridation route to construct high-activity interfaces toward alkaline hydrogen evolution. Journal of Materials Chemistry A, 2022, 10, 11205-11212.	10.3	9
108	Hexagonally ordered mesoporous phosphates oxynitrides. Microporous and Mesoporous Materials, 2008, 107, 233-239.	4.4	8

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109	Optimized electron occupancy of solid-solution transition metals for suppressing the oxygen evolution of Li₂MnO₃. Journal of Materials Chemistry A, 2021, 9, 9337-9346.	10.3	7
110	Direct Observation of Fe-N4 Species as Active Sites for the Electrocatalytic Oxygen Reduction. Nano Advances, 2017, 2, 45-46.	0.4	7
111	Mechanism of frost heave by film water migration under temperature gradient. Science Bulletin, 1997, 42, 1290-1294.	1.7	6
112	Stable Rooted Solid Electrolyte Interphase for Lithium-Ion Batteries. Journal of Physical Chemistry Letters, 2021, 12, 10521-10531.	4.6	6
113	Spin engineering of single-site metal catalysts. Innovation(China), 2022, 3, 100268.	9.1	6
114	Hollow MoS₂/Co nanopillars with boosted Li-ion diffusion rate and long-term cycling stability. Chemical Communications, 2021, 57, 11521-11524.	4.1	5
115	A multicolorâ€emitted phosphor for temperature sensing and multimode dynamic antiâ€counterfeiting. Journal of the American Ceramic Society, 2022, 105, 6241-6251.	3.8	5
116	Multifunctional hosts of Zinc sulfide coated carbon nanotubes for lithium sulfur batteries. SN Applied Sciences, 2020, 2, 1.	2.9	3
117	Nitrogen-Doped Hollow Carbon Spheres with Embedded Co Nanoparticles as Active Non-Noble-Metal Electrocatalysts for the Oxygen Reduction Reaction. Journal of Carbon Research, 2018, 4, 11.	2.7	1