

Towards high-efficiency nanoelectrocatalysts for oxygen advanced carbon nanomaterials

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Heteroatom-Doped Carbon Nanostructures Derived from Conjugated Polymers for Energy Applications. <i>Polymers</i> , 2016, 8, 366.	2.0	41
2	Synthesis of mesoporous Fe/N/C oxygen reduction catalysts through NaCl crystallite-confined pyrolysis of polyvinylpyrrolidone. <i>Journal of Materials Chemistry A</i> , 2016, 4, 12768-12773.	5.2	55
3	Cobalt-Carbon Core-Shell Nanoparticles Aligned on Wrinkle of N-Doped Carbon Nanosheets with Pt-Like Activity for Oxygen Reduction. <i>Small</i> , 2016, 12, 2839-2845.	5.2	83
5	Geometries of low spin states of multi-centre transition metal complexes through extended broken symmetry variational Monte Carlo. <i>Journal of Chemical Physics</i> , 2016, 145, 124107.	1.2	7
6	Fe-N-doped carbon-based composite as an efficient and durable electrocatalyst for the oxygen reduction reaction. <i>RSC Advances</i> , 2016, 6, 114553-114559.	1.7	29
7	Hierarchical porous N-doped graphene foams with superior oxygen reduction reactivity for polymer electrolyte membrane fuel cells. <i>Applied Energy</i> , 2016, 175, 459-467.	5.1	51
8	Rational design of graphitic carbon based nanostructures for advanced electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2016, 4, 8497-8511.	5.2	73
9	Facile Synthesis of a N-Doped Fe ₃ C@CNT/Porous Carbon Hybrid for an Advanced Oxygen Reduction and Water Oxidation Electrocatalyst. <i>Journal of Physical Chemistry C</i> , 2016, 120, 11006-11013.	1.5	54
10	Covalently functionalized carbon nanotubes as stable cathode materials of lithium/organic batteries. <i>Journal of Materials Chemistry A</i> , 2016, 4, 15036-15040.	5.2	19
11	Constructing B and N separately co-doped carbon nanocapsules-wrapped Fe/Fe ₃ C for oxygen reduction reaction with high current density. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 26572-26578.	1.3	12
12	Novel Hydrogel-Derived Bifunctional Oxygen Electrocatalyst for Rechargeable Air Cathodes. <i>Nano Letters</i> , 2016, 16, 6516-6522.	4.5	241
13	N-, Fe-Doped carbon sphere/oriented carbon nanofiber nanocomposite with synergistically enhanced electrochemical activities. <i>RSC Advances</i> , 2016, 6, 92739-92747.	1.7	1
14	Single Cobalt Atoms with Precise N-Coordination as Superior Oxygen Reduction Reaction Catalysts. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 10800-10805.	7.2	1,836
15	Single Cobalt Atoms with Precise N-Coordination as Superior Oxygen Reduction Reaction Catalysts. <i>Angewandte Chemie</i> , 2016, 128, 10958-10963.	1.6	373
16	Two-dimensional iron-tetracyanoquinodimethane (Fe-TCNQ) monolayer: an efficient electrocatalyst for the oxygen reduction reaction. <i>RSC Advances</i> , 2016, 6, 72952-72958.	1.7	22
17	The synthesis of elegant hierarchical CdS via a facile hydrothermal method assisted by inorganic salt, with photocorrosion inhibition. <i>CrystEngComm</i> , 2016, 18, 7523-7529.	1.3	12
18	DFT-based study on the mechanisms of the oxygen reduction reaction on Co(acetylacetonate) ₂ supported by N-doped graphene nanoribbon. <i>RSC Advances</i> , 2016, 6, 79662-79667.	1.7	5
19	A review of applications of poly(diallyldimethyl ammonium chloride) in polymer membrane fuel cells: From nanoparticles to support materials. <i>Chinese Journal of Catalysis</i> , 2016, 37, 1025-1036.	6.9	14

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20	Potential Application of Novel Boron-Doped Graphene Nanoribbon as Oxygen Reduction Reaction Catalyst. <i>Journal of Physical Chemistry C</i> , 2016, 120, 17427-17434.	1.5	131
21	Nitrogen-doped mesoporous carbon nanosheet/carbon nanotube hybrids as metal-free bi-functional electrocatalysts for water oxidation and oxygen reduction. <i>Journal of Materials Chemistry A</i> , 2016, 4, 13133-13141.	5.2	116
22	Self-powered fluorescence display devices based on a fast self-charging/recharging battery (Mg/Prussian blue). <i>Chemical Science</i> , 2016, 7, 6721-6727.	3.7	45
23	Molybdenum carbide nanotubes: a novel multifunctional material for label-free electrochemical immunosensing. <i>Nanoscale</i> , 2016, 8, 15303-15308.	2.8	46
24	Morphology Control and Electro catalytic Activity towards Oxygen Reduction of Peptide-Templated Metal Nanomaterials: A Comparison between Au and Pt. <i>ChemistrySelect</i> , 2016, 1, 6044-6052.	0.7	19
25	Oxygen reduction reaction: A framework for success. <i>Nature Energy</i> , 2016, 1, .	19.8	34
26	Nitrogen, phosphorus and sulfur co-doped ultrathin carbon nanosheets as a metal-free catalyst for selective oxidation of aromatic alkanes and the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2016, 4, 18470-18477.	5.2	93
27	Hierarchically porous Fe-N-C derived from covalent-organic materials as a highly efficient electrocatalyst for oxygen reduction. <i>Nanoscale</i> , 2016, 8, 14271-14277.	2.8	62
28	Comprehensive electronic structure characterization of pristine and nitrogen/phosphorus doped carbon nanocages. <i>Carbon</i> , 2016, 103, 480-487.	5.4	23
29	Nitrogen and sulphur co-doped crumbled graphene for the oxygen reduction reaction with improved activity and stability in acidic medium. <i>Journal of Materials Chemistry A</i> , 2016, 4, 6014-6020.	5.2	46
30	Transition metal-nitrogen-carbon nanostructured catalysts for the oxygen reduction reaction: From mechanistic insights to structural optimization. <i>Nano Research</i> , 2017, 10, 1449-1470.	5.8	144
31	Polymerizable ionic liquid-derived carbon for oxygen reduction and evolution. <i>Journal of Applied Electrochemistry</i> , 2017, 47, 351-359.	1.5	9
32	Fe-Cluster Pushing Electrons to N-Doped Graphitic Layers with Fe ₃ C(Fe) Hybrid Nanostructure to Enhance O ₂ Reduction Catalysis of Zn-Air Batteries. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 4587-4596.	4.0	117
33	Visible-light-driven overall water splitting with a largely-enhanced efficiency over a Cu ₂ O@ZnCr-layered double hydroxide photocatalyst. <i>Nano Energy</i> , 2017, 32, 463-469.	8.2	92
34	Efficient Synthesis of Nitrogen- and Sulfur-co-Doped Ketjenblack with a Single-Source Precursor for Enhancing Oxygen Reduction Reaction Activity. <i>Chemistry - A European Journal</i> , 2017, 23, 3674-3682.	1.7	25
35	A novel luminescence-functionalized metal-organic framework nanoflowers electrochemiluminescence sensor via on-off system. <i>Biosensors and Bioelectronics</i> , 2017, 91, 436-440.	5.3	44
36	Nanocarbon for Oxygen Reduction Electrocatalysis: Dopants, Edges, and Defects. <i>Advanced Materials</i> , 2017, 29, 1604103.	11.1	701
37	Hybrid carbon nanowire networks with Fe-P bond active site for efficient oxygen/hydrogen-based electrocatalysis. <i>Nano Energy</i> , 2017, 33, 221-228.	8.2	121

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38	Photoactive materials based on semiconducting nanocarbons – A challenge opening new possibilities for photocatalysis. <i>Journal of Energy Chemistry</i> , 2017, 26, 207-218.	7.1	31
39	From Carbon-Based Nanotubes to Nanocages for Advanced Energy Conversion and Storage. <i>Accounts of Chemical Research</i> , 2017, 50, 435-444.	7.6	196
40	Perovskite/Carbon Composites: Applications in Oxygen Electrocatalysis. <i>Small</i> , 2017, 13, 1603793.	5.2	277
41	Simple-Cubic Carbon Frameworks with Atomically Dispersed Iron Dopants toward High-Efficiency Oxygen Reduction. <i>Nano Letters</i> , 2017, 17, 2003-2009.	4.5	168
42	Fe ₉ S ₁₀ -decorated N, S co-doped graphene as a new and efficient electrocatalyst for oxygen reduction and oxygen evolution reactions. <i>Catalysis Science and Technology</i> , 2017, 7, 1181-1192.	2.1	37
43	A high-performance composite ORR catalyst based on the synergy between binary transition metal nitride and nitrogen-doped reduced graphene oxide. <i>Journal of Materials Chemistry A</i> , 2017, 5, 5829-5837.	5.2	93
44	Electrocatalysts for low temperature fuel cells. <i>Catalysis Today</i> , 2017, 285, 3-12.	2.2	50
45	Efficient and Facile Fabrication of Hierarchical Carbon Foams with Abundant Nanoscale Pores for Use in Supercapacitors. <i>Bulletin of the Korean Chemical Society</i> , 2017, 38, 350-355.	1.0	8
46	Atomic Modulation of FeCo–Nitrogen–Carbon Bifunctional Oxygen Electrodes for Rechargeable and Flexible All-Solid-State Zinc–Air Battery. <i>Advanced Energy Materials</i> , 2017, 7, 1602420.	10.2	692
47	Roles of Fe [~] N ₃ and Fe [~] Fe ₃ C@C Species in Fe [~] N/C Electrocatalysts for Oxygen Reduction Reaction. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 9567-9575.	4.0	151
48	One-pot synthesized covalent porphyrin polymer-derived core-shell Fe ₃ C@carbon for efficient oxygen electroreduction. <i>Carbon</i> , 2017, 116, 606-614.	5.4	33
49	Design and Application of Foams for Electrocatalysis. <i>ChemCatChem</i> , 2017, 9, 1721-1743.	1.8	245
50	A novel flower-like architecture of FeCo@NC-functionalized ultra-thin carbon nanosheets as a highly efficient 3D bifunctional electrocatalyst for full water splitting. <i>Journal of Materials Chemistry A</i> , 2017, 5, 5413-5425.	5.2	124
51	Co@Pt Core@Shell nanoparticles encapsulated in porous carbon derived from zeolitic imidazolate framework 67 for oxygen electroreduction in alkaline media. <i>Journal of Power Sources</i> , 2017, 343, 458-466.	4.0	99
52	Hexagonal tungsten oxide nanoflowers as enzymatic mimetics and electrocatalysts. <i>Scientific Reports</i> , 2017, 7, 40928.	1.6	29
53	NiMn ₂ O ₄ Nanosheet-Decorated Hierarchically Porous Polyaromatic Carbon Spheres for High-Performance Supercapacitors. <i>ChemElectroChem</i> , 2017, 4, 1214-1221.	1.7	39
54	POSS-Based Nitrogen-Doped Hierarchically Porous Carbon as Metal-Free Oxidation Catalyst. <i>ChemistrySelect</i> , 2017, 2, 3381-3387.	0.7	11
55	Sandwich-like octahedral cobalt disulfide/reduced graphene oxide as an efficient Pt-free electrocatalyst for high-performance dye-sensitized solar cells. <i>Carbon</i> , 2017, 119, 225-234.	5.4	63

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56	Nitrogen and Fluorine-Codoped Carbon Nanowire Aerogels as Metal-Free Electrocatalysts for Oxygen Reduction Reaction. <i>Chemistry - A European Journal</i> , 2017, 23, 10460-10464.	1.7	52
57	Effect of the well-designed functional groups and defects of porous carbon spheres on the catalytic oxidation performance. <i>Microporous and Mesoporous Materials</i> , 2017, 250, 35-42.	2.2	10
58	Defect Chemistry of Nonprecious-Metal Electrocatalysts for Oxygen Reactions. <i>Advanced Materials</i> , 2017, 29, 1606459.	11.1	1,260
59	From ionic liquid-modified cellulose nanowhiskers to highly active metal-free nanostructured carbon catalysts for the hydrazine oxidation reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 1066-1077.	5.2	40
60	A reduced graphene oxide/covalent cobalt porphyrin framework for efficient oxygen reduction reaction. <i>Dalton Transactions</i> , 2017, 46, 9344-9348.	1.6	53
61	On the synthesis of RuSe oxygen reduction nano-catalysts for direct methanol fuel cells. <i>Journal of Solid State Electrochemistry</i> , 2017, 21, 3103-3111.	1.2	3
62	Nitrogen and Iron-Codoped Carbon Hollow Nanotubes as High-Performance Catalysts toward Oxygen Reduction Reaction: A Combined Experimental and Theoretical Study. <i>Chemistry of Materials</i> , 2017, 29, 5617-5628.	3.2	92
63	Iodine-Doped Graphene for Enhanced Electrocatalytic Oxygen Reduction Reaction in Proton Exchange Membrane Fuel Cell Applications. <i>Journal of Electrochemical Energy Conversion and Storage</i> , 2017, 14, .	1.1	21
64	General Oriented Formation of Carbon Nanotubes from Metal-Organic Frameworks. <i>Journal of the American Chemical Society</i> , 2017, 139, 8212-8221.	6.6	777
65	Directly anchoring Fe ₃ C nanoclusters and Fe _N x sites in ordered mesoporous nitrogen-doped graphitic carbons to boost electrocatalytic oxygen reduction. <i>Carbon</i> , 2017, 121, 143-153.	5.4	71
66	2D Porous Carbons prepared from Layered Organic-Inorganic Hybrids and their Use as Oxygen-Reduction Electrocatalysts. <i>Advanced Materials</i> , 2017, 29, 1700707.	11.1	129
67	Nitrogen doped carbon materials derived from <i>Gentiana scabra</i> Bunge as high-performance catalysts for the oxygen reduction reaction. <i>New Journal of Chemistry</i> , 2017, 41, 7392-7399.	1.4	23
68	Synthesis of Fe ₂ O ₃ in situ on the surface of mesoporous carbon from alginate as a high-performance anode for lithium-ion batteries. <i>Materials Letters</i> , 2017, 205, 10-14.	1.3	25
69	Biomass derived porous nitrogen doped carbon for electrochemical devices. <i>Green Energy and Environment</i> , 2017, 2, 84-99.	4.7	141
70	Electronically tailoring 3D flower-like graphene via alumina doping and incorporating Co as an efficient oxygen electrode catalyst in both alkaline and acid media. <i>Journal of Power Sources</i> , 2017, 353, 28-39.	4.0	22
71	Fe, Co bimetal activated N-doped graphitic carbon layers as noble metal-free electrocatalysts for high-performance oxygen reduction reaction. <i>Journal of Alloys and Compounds</i> , 2017, 710, 57-65.	2.8	52
72	Metallic State FeS Anchored (Fe) ₃ O ₄ /N-Doped Graphitic Carbon with Porous Spongelike Structure as Durable Catalysts for Enhancing Bioelectricity Generation. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 10777-10787.	4.0	29
73	Nickel cobaltite@nanocarbon hybrid materials as efficient cathode catalyst for oxygen reduction in microbial fuel cells. <i>Journal of Materials Science</i> , 2017, 52, 7539-7545.	1.7	10

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74	Co-N-doped MoO ₂ nanowires as efficient electrocatalysts for the oxygen reduction reaction and hydrogen evolution reaction. <i>Nano Energy</i> , 2017, 41, 772-779.	8.2	118
75	Metal-Free Motifs for Solar Fuel Applications. <i>Annual Review of Physical Chemistry</i> , 2017, 68, 305-331.	4.8	14
76	Peptide A4 based AuAg alloyed nanoparticle networks for electrocatalytic reduction of oxygen. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 11295-11303.	3.8	16
77	N-doped 3D Carbon Aerogel with Trace Fe as an Efficient Catalyst for the Oxygen Reduction Reaction. <i>ChemElectroChem</i> , 2017, 4, 514-520.	1.7	43
78	Cobalt nanoparticles/nitrogen-doped graphene with high nitrogen doping efficiency as noble metal-free electrocatalysts for oxygen reduction reaction. <i>Journal of Colloid and Interface Science</i> , 2017, 490, 576-586.	5.0	26
79	A new method for developing defect-rich graphene nanoribbons/onion-like carbon@Co nanoparticles hybrid materials as an excellent catalyst for oxygen reactions. <i>Nanoscale</i> , 2017, 9, 1738-1744.	2.8	56
80	Small Dopants Make Big Differences: Enhanced Electrocatalytic Performance of MoS ₂ Monolayer for Oxygen Reduction Reaction (ORR) by N- and P-Doping. <i>Electrochimica Acta</i> , 2017, 225, 543-550.	2.6	106
81	Unusual formation of tetragonal microstructures from nitrogen-doped carbon nanocapsules with cobalt nanocores as a bi-functional oxygen electrocatalyst. <i>Journal of Materials Chemistry A</i> , 2017, 5, 2271-2279.	5.2	80
82	Heat-treatment effects on the ORR activity of Pt nanoparticles deposited on multi-walled carbon nanotubes using magnetron sputtering technique. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 5958-5970.	3.8	64
83	Ultrafine Co-doped ZnO nanoparticles on reduced graphene oxide as an efficient electrocatalyst for oxygen reduction reaction. <i>Electrochimica Acta</i> , 2017, 224, 561-570.	2.6	42
84	Porous Boron Carbon Nitride Nanosheets as Efficient Metal-Free Catalysts for the Oxygen Reduction Reaction in Both Alkaline and Acidic Solutions. <i>ACS Energy Letters</i> , 2017, 2, 306-312.	8.8	176
85	A hierarchically structured anatase-titania/indium-tin-oxide nanocomposite as an anodic material for lithium-ion batteries. <i>CrystEngComm</i> , 2017, 19, 6972-6978.	1.3	11
86	Investigation of Fe ₂ N@carbon encapsulated in N-doped graphene-like carbon as a catalyst in sustainable zinc-air batteries. <i>Catalysis Science and Technology</i> , 2017, 7, 5670-5676.	2.1	56
87	From covalent triazine-based frameworks to N-doped porous carbon/reduced graphene oxide nanosheets: efficient electrocatalysts for oxygen reduction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 23170-23178.	5.2	60
88	A modified molecular framework derived highly efficient Mn-Co carbon cathode for a flexible Zn-air battery. <i>Chemical Communications</i> , 2017, 53, 11596-11599.	2.2	75
89	Carbon oxidation reactions could misguide the evaluation of carbon black-based oxygen-evolution electrocatalysts. <i>Chemical Communications</i> , 2017, 53, 11556-11559.	2.2	43
90	Foam-like CoO@N,S-codoped carbon composites derived from a well-designed N,S-rich Co-MOF for lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 22964-22969.	5.2	106
91	A novel Fe-N-C catalyst for efficient oxygen reduction reaction based on polydopamine nanotubes. <i>Nanoscale</i> , 2017, 9, 17364-17370.	2.8	118

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92	A review of nanocarbons in energy electrocatalysis: Multifunctional substrates and highly active sites. <i>Journal of Energy Chemistry</i> , 2017, 26, 1077-1093.	7.1	287
93	One-pot synthesis of Pd@PtNi core-shell nanoflowers supported on the multi-walled carbon nanotubes with boosting activity toward oxygen reduction in alkaline electrolyte. <i>Journal of Power Sources</i> , 2017, 365, 26-33.	4.0	31
94	Metal-free nitrogen-doped carbon nanoribbons as highly efficient electrocatalysts for oxygen reduction reaction. <i>Carbon</i> , 2017, 124, 34-41.	5.4	46
95	Promoting the Electrochemical Performances by Chemical Depositing of Gold Nanoparticles Inside Pores of 3D Nitrogen-Doped Carbon Nanocages. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 31968-31976.	4.0	20
96	Platinum Particles Electrochemically Deposited on Multiwalled Carbon Nanotubes for Oxygen Reduction Reaction in Acid Media. <i>Journal of the Electrochemical Society</i> , 2017, 164, F1014-F1021.	1.3	19
97	Metal-Free Carbon Materials for CO ₂ Electrochemical Reduction. <i>Advanced Materials</i> , 2017, 29, 1701784.	11.1	558
98	Exposed N and S Active Sites: An Indicator for Oxygen Reduction on Metal-Free Yamâ€Derived Porous Carbons. <i>ChemElectroChem</i> , 2017, 4, 3156-3162.	1.7	6
99	Nickel-Based Electrocatalysts for Energy-Related Applications: Oxygen Reduction, Oxygen Evolution, and Hydrogen Evolution Reactions. <i>ACS Catalysis</i> , 2017, 7, 7196-7225.	5.5	857
100	Effect of molybdophosphoric acid in iron and cobalt graphene/chitosan composites for oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 28093-28101.	3.8	12
101	Nitrogen-Doped Porous Carbon Nanosheets Derived from Coal Tar Pitch as an Efficient Oxygen-Reduction Catalyst. <i>Industrial & Engineering Chemistry Research</i> , 2017, 56, 8880-8887.	1.8	23
102	Defects-rich graphene/carbon quantum dot composites as highly efficient electrocatalysts for aqueous zinc/air batteries. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 21305-21310.	3.8	34
103	Controllable Synthesis of Ultrathin NiCo ₂ O ₄ Nanosheets Incorporated onto Composite Nanotubes for Efficient Oxygen Reduction. <i>Chemistry - an Asian Journal</i> , 2017, 12, 2426-2433.	1.7	13
104	3D Space-Confined Pyrolysis of Double-Network Aerogels Containing In-Fe Cyanogel and Polyaniline: A New Approach to Hierarchically Porous Carbon with Exclusive Fe-N _x Active Sites for Oxygen Reduction Catalysis. <i>Small Methods</i> , 2017, 1, 1700167.	4.6	85
105	Pre-surface functionalization of commercial conductive carbon for effective N doping as a highly efficient electrocatalyst. <i>Materials Letters</i> , 2017, 207, 33-36.	1.3	2
106	Electrocatalysts Derived from Metal-Organic Frameworks for Oxygen Reduction and Evolution Reactions in Aqueous Media. <i>Small</i> , 2017, 13, 1701143.	5.2	150
107	Facile Synthesis of a Heteroatoms-Quaternary-Doped Porous Carbon as an Efficient and Stable Metal-Free Catalyst for Oxygen Reduction. <i>ChemistrySelect</i> , 2017, 2, 6129-6134.	0.7	5
108	Effects of Static Correlation between Spin Centers in Multicenter Transition Metal Complexes. <i>Journal of Chemical Theory and Computation</i> , 2017, 13, 4675-4683.	2.3	8
109	Hollow Co ₃ O ₄ Nanocages Decorated Graphene Aerogels Derived from Carbon Wrapped Nano-Co for Efficient Oxygen Reduction Reaction. <i>ChemistrySelect</i> , 2017, 2, 6359-6363.	0.7	6

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110	Single Cell Fabrication Towards the Realistic Evaluation of a CNTâ€‘Strung ZIFâ€‘Derived Electrocatalyst as a Cathode Material in Alkaline Fuel Cells and Metalâ€‘Air Batteries. <i>ChemElectroChem</i> , 2017, 4, 2928-2933.	1.7	23
111	Spinel: Controlled Preparation, Oxygen Reduction/Evolution Reaction Application, and Beyond. <i>Chemical Reviews</i> , 2017, 117, 10121-10211.	23.0	1,157
112	One-pot controlled synthesis of AuPd@Pd core-shell nanocrystals with enhanced electrocatalytic performances for formic acid oxidation and glycerol oxidation. <i>Journal of Colloid and Interface Science</i> , 2017, 508, 551-558.	5.0	35
113	Nitrogen-Doped Porous Graphdiyne: A Highly Efficient Metal-Free Electrocatalyst for Oxygen Reduction Reaction. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 29744-29752.	4.0	166
114	Biomass willow catkin-derived Co ₃ O ₄ /N-doped hollow hierarchical porous carbon microtubes as an effective tri-functional electrocatalyst. <i>Journal of Materials Chemistry A</i> , 2017, 5, 20170-20179.	5.2	102
115	High-performance Waste Biomass-derived Microporous Carbon Electrocatalyst with a Towel-like Surface for Alkaline Metal/air batteries. <i>Electrochimica Acta</i> , 2017, 250, 384-392.	2.6	15
116	Multi-walled carbon nanotubes modified Bi ₂ S ₃ microspheres for enhanced photocatalytic decomposition efficiency. <i>Ceramics International</i> , 2017, 43, 15080-15088.	2.3	32
117	Encapsulated iron-based oxygen reduction electrocatalysts by high pressure pyrolysis. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 22887-22896.	3.8	8
118	3D hierarchical nitrogen-doped carbon nanoflower derived from chitosan for efficient electrocatalytic oxygen reduction and high performance lithiumâ€‘sulfur batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 18193-18206.	5.2	86
119	Synergistic Effects between Doped Nitrogen and Phosphorus in Metal-Free Cathode for Zinc-Air Battery from Covalent Organic Frameworks Coated CNT. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 44519-44528.	4.0	65
120	Graphdiyne as Electrode Material: Tuning Electronic State and Surface Chemistry for Improved Electrode Reactivity. <i>Analytical Chemistry</i> , 2017, 89, 13008-13015.	3.2	67
121	Boosting oxygen reduction activity of spinel CoFe ₂ O ₄ by strong interaction with hierarchical nitrogen-doped carbon nanocages. <i>Science Bulletin</i> , 2017, 62, 1365-1372.	4.3	18
122	A Facile Activation Strategy for an MOF-Derived Metal-Free Oxygen Reduction Reaction Catalyst: Direct Access to Optimized Pore Structure and Nitrogen Species. <i>ACS Catalysis</i> , 2017, 7, 6082-6088.	5.5	188
123	A comprehensive review on recent progress in aluminumâ€‘air batteries. <i>Green Energy and Environment</i> , 2017, 2, 246-277.	4.7	280
124	Facile synthesis of flower-like Au@AuPd nanocrystals with highly electrocatalytic activity for formic acid oxidation and hydrogen evolution reactions. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 19894-19902.	3.8	34
125	PMo ₁₁ V@N-CNT electrochemical properties and its application as electrochemical sensor for determination of acetaminophen. <i>Journal of Solid State Electrochemistry</i> , 2017, 21, 1059-1068.	1.2	16
126	Nitrogen-doped reduced graphene oxide-supported Mn ₃ O ₄ : An efficient heterogeneous catalyst for the oxidation of vanillyl alcohol to vanillin. <i>Journal of Materials Science</i> , 2017, 52, 164-172.	1.7	36
127	Advances in Transitionâ€‘Metal Phosphide Applications in Electrochemical Energy Storage and Catalysis. <i>ChemElectroChem</i> , 2017, 4, 20-34.	1.7	155

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128	Use of Cobalt Polyphthalocyanine and Graphene as Precursors to Construct an Efficient Co ₉ S ₈ /N,S-G Electro catalyst for the Oxygen Electrode Reaction in Harsh Media. ChemCatChem, 2017, 9, 308-315.	1.8	20
129	Well-dispersed NiO nanoparticles supported on nitrogen-doped carbon nanotube for methanol electrocatalytic oxidation in alkaline media. Applied Surface Science, 2017, 392, 562-571.	3.1	50
130	Direct synthesis of Pt-free catalyst on gas diffusion layer of fuel cell and usage of high boiling point fuels for efficient utilization of waste heat. Applied Energy, 2017, 205, 1050-1058.	5.1	20
131	Synthesis of 2D Nitrogen-Doped Mesoporous Carbon Catalyst for Oxygen Reduction Reaction. Materials, 2017, 10, 197.	1.3	11
132	Enhanced Oxygen Reduction Reaction by In Situ Anchoring Fe ₂ N Nanoparticles on Nitrogen-Doped Pomelo Peel-Derived Carbon. Nanomaterials, 2017, 7, 404.	1.9	39
133	Electrocatalytic Performance of Reduced Graphene Oxide Based Materials for Oxygen Reduction Reaction (ORR). , 2017, , .		0
134	Atomically Dispersed Metal Sites in MOF-Based Materials for Electrocatalytic and Photocatalytic Energy Conversion. Angewandte Chemie - International Edition, 2018, 57, 9604-9633.	7.2	452
135	Pt nanoparticles sputter-deposited on TiO ₂ /MWCNT composites prepared by atomic layer deposition: Improved electrocatalytic activity towards the oxygen reduction reaction and durability in acid media. International Journal of Hydrogen Energy, 2018, 43, 4967-4977.	3.8	26
136	Anchoring Iron-EDTA Complex on Graphene toward the Synthesis of Highly Efficient Fe-N Oxygen Reduction Electrocatalyst for Fuel Cells. Chinese Journal of Chemistry, 2018, 36, 287-292.	2.6	22
137	Ternary PtPdCu Multicubes as a Highly Active and Durable Catalyst toward the Oxygen Reduction Reaction. ChemElectroChem, 2018, 5, 1345-1349.	1.7	18
138	Atomar dispergierte Metallzentren in Metallorganischen Gerüststrukturen für die elektrokatalytische und photokatalytische Energieumwandlung. Angewandte Chemie, 2018, 130, 9750-9780.	1.6	58
139	Recent Advances on Non-precious Metal Porous Carbon-based Electrocatalysts for Oxygen Reduction Reaction. ChemElectroChem, 2018, 5, 1775-1785.	1.7	146
140	Earthworm-like N, S-Doped carbon tube-encapsulated Co ₉ S ₈ nanocomposites derived from nanoscaled metal-organic frameworks for highly efficient bifunctional oxygen catalysis. Journal of Materials Chemistry A, 2018, 6, 5935-5943.	5.2	101
141	Magnetic and electronic properties of single-walled Mo ₂ C nanotube: a first-principles study. Journal of Physics Condensed Matter, 2018, 30, 155305.	0.7	6
142	Template Conversion of Covalent Organic Frameworks into 2D Conducting Nanocarbons for Catalyzing Oxygen Reduction Reaction. Advanced Materials, 2018, 30, e1706330.	11.1	151
143	3D Robust Carbon Aerogels Immobilized with Pd ₃ Pb Nanoparticles for Oxygen Reduction Catalysis. ACS Applied Nano Materials, 2018, 1, 1904-1911.	2.4	29
144	Recent Advances in Carbon-Based Bifunctional Oxygen Electrocatalysts for Zn-Air Batteries. ChemElectroChem, 2018, 5, 1424-1434.	1.7	129
145	Carbon Nanostructured Catalysts as High Efficient Materials for Low Temperature Fuel Cells. , 2018, , 1-29.		0

#	ARTICLE	IF	CITATIONS
146	Deflagration synthesis of nitrogen/fluorine co-doped hollow carbon nanoparticles with excellent oxygen reduction performance. <i>Inorganic Chemistry Frontiers</i> , 2018, 5, 1307-1313.	3.0	16
147	Boosting ORR Catalytic Activity by Integrating Pyridine- π Dopants, a High Degree of Graphitization, and Hierarchical Pores into a MOF-Derived N-Doped Carbon in a Tandem Synthesis. <i>Chemistry - an Asian Journal</i> , 2018, 13, 1318-1326.	1.7	24
148	Control of the Interfacial Wettability to Synthesize Highly Dispersed PtPd Nanocrystals for Efficient Oxygen Reduction Reaction. <i>Chemistry - an Asian Journal</i> , 2018, 13, 1119-1123.	1.7	14
149	Crab Shell- π -templated Fe and N Co-Doped Mesoporous Carbon Nanofibers as a Highly Efficient Oxygen Reduction Reaction Electrocatalyst. <i>ChemistrySelect</i> , 2018, 3, 3722-3730.	0.7	6
150	Carbon-based catalysts by structural manipulation with iron for oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2018, 6, 8405-8412.	5.2	38
151	Ammonia modification of high-surface-area activated carbons as metal-free electrocatalysts for oxygen reduction reaction. <i>Electrochimica Acta</i> , 2018, 263, 465-473.	2.6	27
152	Metal-free mesoporous carbon with higher contents of active N and S codoping by template method for superior ORR efficiency to Pt/C. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 3705-3715.	3.8	52
153	Recent Progress of Carbon-Based Materials in Oxygen Reduction Reaction Catalysis. <i>ChemElectroChem</i> , 2018, 5, 1764-1774.	1.7	66
154	Microwave assisted synthesis of carbon dots in ionic liquid as metal free catalyst for highly selective production of hydrogen peroxide. <i>Carbon</i> , 2018, 130, 544-552.	5.4	94
155	Novel MOF-Derived Co@N-C Bifunctional Catalysts for Highly Efficient Zn-Air Batteries and Water Splitting. <i>Advanced Materials</i> , 2018, 30, 1705431.	11.1	667
156	Cubic Mn ₂ O ₃ nanoparticles on carbon as bifunctional electrocatalyst for oxygen reduction and oxygen evolution reactions. <i>Molecular Catalysis</i> , 2018, 451, 153-160.	1.0	61
157	Exploring the catalytic efficiency of X-doped (X=B, N, P) graphene in oxygen reduction reaction: Influence of solvent and border effects. <i>International Journal of Quantum Chemistry</i> , 2018, 118, e25579.	1.0	4
158	Polymer Brushes Ionic Liquid as a Catalyst for Oxygen Reduction and Oxygen Evolution Reactions. <i>ACS Catalysis</i> , 2018, 8, 869-875.	5.5	38
159	Synergetic Contribution of Boron and Fe-N Species in Porous Carbons toward Efficient Electrocatalysts for Oxygen Reduction Reaction. <i>ACS Energy Letters</i> , 2018, 3, 252-260.	8.8	269
160	A Thermally Decomposable Template Route to Synthesize Nitrogen-Doped Wrinkled Carbon Nanosheets as Highly Efficient and Stable Electrocatalysts for the Oxygen Reduction Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 1951-1960.	3.2	19
161	Monodisperse Palladium Sulfide as Efficient Electrocatalyst for Oxygen Reduction Reaction. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 753-761.	4.0	68
162	Theoretical insights into the catalytic mechanism for the oxygen reduction reaction on M ₃ (hexaiminotriphenylene) ₂ (M = Ni, Cu). <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 1821-1828.	1.3	11
163	Improved electrocatalytic oxygen evolution reaction properties using PVP modified direct growth Co-based metal oxides electrocatalysts on nickel foam. <i>Electrochimica Acta</i> , 2018, 263, 362-372.	2.6	26

#	ARTICLE	IF	CITATIONS
164	Post iron-doping of activated nitrogen-doped carbon spheres as a high-activity oxygen reduction electrocatalyst. <i>Energy Storage Materials</i> , 2018, 13, 142-150.	9.5	42
165	Hierarchical tubular structures composed of CoP _x and carbon nanotubes: Highly effective electrocatalyst for oxygen reduction. <i>Carbon</i> , 2018, 130, 241-249.	5.4	27
166	Electrochemical sensing platform based on kelp-derived hierarchical meso-macroporous carbons. <i>Analytica Chimica Acta</i> , 2018, 1003, 16-25.	2.6	24
167	The Solid-Phase Synthesis of an Fe-N-C Electrocatalyst for High-Power Proton-Exchange Membrane Fuel Cells. <i>Angewandte Chemie</i> , 2018, 130, 1218-1222.	1.6	57
168	Facile Synthesis of N-Doped Graphene-Like Carbon Nanoflakes as Efficient and Stable Electrocatalysts for the Oxygen Reduction Reaction. <i>Nano-Micro Letters</i> , 2018, 10, 29.	14.4	85
169	Anion-Regulated Hydroxysulfide Monoliths as OER/ORR/HER Electrocatalysts and their Applications in Self-Powered Electrochemical Water Splitting. <i>Small Methods</i> , 2018, 2, 1800055.	4.6	91
170	Biochemistry and biomedicine of quantum dots: from biodetection to bioimaging, drug discovery, diagnostics, and therapy. <i>Acta Biomaterialia</i> , 2018, 74, 36-55.	4.1	84
171	Nitrogen-doped carbon nanosheets and nanoflowers with holey mesopores for efficient oxygen reduction catalysis. <i>Journal of Materials Chemistry A</i> , 2018, 6, 10354-10360.	5.2	66
172	Facile synthesis of mesoporous carbon material from treated kitchen waste for energy applications. <i>Materials for Renewable and Sustainable Energy</i> , 2018, 7, 1.	1.5	9
173	Isolated Fe and Co dual active sites on nitrogen-doped carbon for a highly efficient oxygen reduction reaction. <i>Chemical Communications</i> , 2018, 54, 4274-4277.	2.2	166
174	Fabrication of $\mu\text{-Fe}_2\text{N}$ Catalytic Sites in Porous Carbons Derived from an Iron-Triazolate Crystal. <i>Chemistry of Materials</i> , 2018, 30, 1830-1834.	3.2	24
175	N-doped porous carbon-encapsulated Fe nanoparticles as efficient electrocatalysts for oxygen reduction reaction. <i>Applied Surface Science</i> , 2018, 445, 462-470.	3.1	35
176	Recent advances in synthesis of three-dimensional porous graphene and its applications in construction of electrochemical (bio)sensors for small biomolecules detection. <i>Biosensors and Bioelectronics</i> , 2018, 110, 180-192.	5.3	65
177	Role of the Carbon Support on the Oxygen Reduction and Evolution Activities in LaNiO ₃ Composite Electrodes in Alkaline Solution. <i>ACS Applied Energy Materials</i> , 2018, 1, 1549-1558.	2.5	40
178	Oxygen Reduction Reaction Catalyzed by Small Gold Cluster on h-BN/Au(111) Support. <i>Electrocatalysis</i> , 2018, 9, 182-188.	1.5	14
179	Heteroatom-doped porous carbon from methyl orange dye wastewater for oxygen reduction. <i>Green Energy and Environment</i> , 2018, 3, 172-178.	4.7	39
180	3D Porous Carbon Framework Stabilized Ultra-Uniform Nano Fe_2O_3 : A Useful Catalyst System. <i>Chemistry - an Asian Journal</i> , 2018, 13, 89-98.	1.7	21
181	Nitrogen and sulfur co-doped porous carbon derived from bio-waste as a promising electrocatalyst for zinc-air battery. <i>Energy</i> , 2018, 143, 43-55.	4.5	98

#	ARTICLE	IF	CITATIONS
182	3D Porous Carbonaceous Electrodes for Electrocatalytic Applications. <i>Joule</i> , 2018, 2, 76-93.	11.7	92
183	The biomass of ground cherry husks derived carbon nanoplates for electrochemical sensing. <i>Sensors and Actuators B: Chemical</i> , 2018, 255, 3248-3256.	4.0	59
184	Simple synthesis of self-supported hierarchical AuPd alloyed nanowire networks for boosting electrocatalytic activity toward formic acid oxidation. <i>Journal of Colloid and Interface Science</i> , 2018, 513, 324-330.	5.0	21
185	Electrochemical probing into the active sites of graphitic-layer encapsulated iron oxygen reduction reaction electrocatalysts. <i>Science Bulletin</i> , 2018, 63, 24-30.	4.3	18
186	Electrochemically Inert gC_3N_4 Promotes Water Oxidation Catalysis. <i>Advanced Functional Materials</i> , 2018, 28, 1705583.	7.8	84
187	The Solid-Phase Synthesis of an Fe-N Electro catalyst for High-Power Proton-Exchange Membrane Fuel Cells. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 1204-1208.	7.2	293
188	Hydrogen oxidation reaction in alkaline media: From mechanism to recent electrocatalysts. <i>Nano Energy</i> , 2018, 44, 288-303.	8.2	216
189	In-situ synthesized TiC@CNT as high-performance catalysts for oxygen reduction reaction. <i>Carbon</i> , 2018, 126, 566-573.	5.4	23
190	Uniform Pt@Pd nanocrystals supported on N-doped reduced graphene oxide as catalysts for effective reduction of highly toxic chromium(VI). <i>Materials Chemistry and Physics</i> , 2018, 205, 64-71.	2.0	41
191	Bulk Production of Non-Precious Metal Catalysts with High Surface Area and Excellent Activity in the Oxygen Reduction Reaction. <i>ChemElectroChem</i> , 2018, 5, 1854-1861.	1.7	6
192	Carbon Nanostructured Catalysts as High Efficient Materials for Low Temperature Fuel Cells. , 2018, , 1-28.		1
193	Electro-Reduction of Molecular Oxygen Mediated by a Cobalt(II)octaethylporphyrin System onto Oxidized Glassy Carbon/Oxidized Graphene Substrate. <i>Catalysts</i> , 2018, 8, 629.	1.6	2
194	Metal-organic frameworks-derived core-shell $\text{Fe}_3\text{O}_4/\text{Fe}_3\text{N}@$ graphite carbon nanocomposites as excellent non-precious metal electrocatalyst for oxygen reduction. <i>Dalton Transactions</i> , 2018, 47, 16567-16577.	1.6	29
195	Recent advances in energy chemistry of precious-metal-free catalysts for oxygen electrocatalysis. <i>Chinese Chemical Letters</i> , 2018, 29, 1757-1767.	4.8	63
196	Exploration of nanowire- and nanotube-based electrocatalysts for oxygen reduction and oxygen evolution reaction. <i>Materials Today Nano</i> , 2018, 3, 54-68.	2.3	32
197	Fabrication of Self-Entangled 3D Carbon Nanotube Networks from Metal-Organic Frameworks for Li-Ion Batteries. <i>ACS Applied Nano Materials</i> , 2018, 1, 7075-7082.	2.4	10
198	A Universal Method to Engineer Porous Carbon-based Electrocatalysts from Cow Dung for Oxygen Reduction. <i>International Journal of Electrochemical Science</i> , 2018, 13, 2154-2163.	0.5	1
199	Synthesis of a three-dimensional interconnected carbon nanorod aerogel from wax gourd for amperometric sensing. <i>Mikrochimica Acta</i> , 2018, 185, 482.	2.5	20

#	ARTICLE	IF	CITATIONS
200	Origin of the catalytic activity of phosphorus doped MoS ₂ for oxygen reduction reaction (ORR) in alkaline solution: a theoretical study. <i>Scientific Reports</i> , 2018, 8, 13292.	1.6	20
201	Chemically controlled in-situ growth of cobalt oxide microspheres on N,S-co-doped reduced graphene oxide as an efficient electrocatalyst for oxygen reduction reaction. <i>Journal of Power Sources</i> , 2018, 407, 70-83.	4.0	36
202	Boosting Microbial Electrocatalytic Kinetics for High Power Density: Insights into Synthetic Biology and Advanced Nanoscience. <i>Electrochemical Energy Reviews</i> , 2018, 1, 567-598.	13.1	33
203	Luminescent N, S-Doped Carbon Nanodot: An Effective Two-Fluorophore System of Pyridone and Thiazolopyridone. <i>Journal of Physical Chemistry C</i> , 2018, 122, 26722-26732.	1.5	7
204	One-Pot Seedless Aqueous Design of Metal Nanostructures for Energy Electrocatalytic Applications. <i>Electrochemical Energy Reviews</i> , 2018, 1, 531-547.	13.1	9
205	Grafting of porphyrin oligomers on single-walled carbon nanotubes by Hay coupling. <i>Organic and Biomolecular Chemistry</i> , 2018, 16, 6767-6772.	1.5	3
206	3D N-doped carbon framework with embedded CoS nanoparticles as highly active and durable oxygen reduction and evolution electrocatalyst. <i>Nanotechnology</i> , 2018, 29, 465402.	1.3	13
207	Surface activation of graphene nanoribbons for oxygen reduction reaction by nitrogen doping and defect engineering: An ab initio study. <i>Carbon</i> , 2018, 137, 349-357.	5.4	16
208	Recent advances in electrochemical non-enzymatic glucose sensors – A review. <i>Analytica Chimica Acta</i> , 2018, 1033, 1-34.	2.6	574
209	Notable light-free catalytic activity for pollutant destruction over flower-like BiOI microspheres by a dual-reaction-center Fenton-like process. <i>Journal of Colloid and Interface Science</i> , 2018, 527, 251-259.	5.0	35
210	Hybrid shells of MnO ₂ nanosheets encapsulated by N-doped carbon towards nonprecious oxygen reduction reaction catalysts. <i>Journal of Colloid and Interface Science</i> , 2018, 527, 241-250.	5.0	35
211	Spinel MnCo ₂ O ₄ Nanoparticles Supported on Three-Dimensional Graphene with Enhanced Mass Transfer as an Efficient Electrocatalyst for the Oxygen Reduction Reaction. <i>ChemSusChem</i> , 2018, 11, 2730-2736.	3.6	86
212	Oxygen reduction reaction on M ₃ (hexaiminobenzene) ₂ : A density function theory study. <i>Catalysis Communications</i> , 2018, 115, 17-20.	1.6	6
213	Nitrogen and Phosphorus Dual-Doped Porous Carbon Nanosheets for Efficient Oxygen Reduction in Both Alkaline and Acidic Media. <i>ChemCatChem</i> , 2018, 10, 4038-4046.	1.8	23
214	MOF Templated Nitrogen Doped Carbon Stabilized Pt-Co Bimetallic Nanoparticles: Low Pt Content and Robust Activity toward Electrocatalytic Oxygen Reduction Reaction. <i>ACS Applied Nano Materials</i> , 2018, 1, 3331-3338.	2.4	53
215	Use of Electrochemical Impedance Spectroscopy for the Evaluation of Performance of PEM Fuel Cells Based on Carbon Cloth Gas Diffusion Electrodes. <i>Journal of Spectroscopy</i> , 2018, 2018, 1-13.	0.6	12
216	Computational exploration of borophane-supported single transition metal atoms as potential oxygen reduction and evolution electrocatalysts. <i>Physical Chemistry Chemical Physics</i> , 2018, 20, 21095-21104.	1.3	54
217	Three-Dimensional Heteroatom-Doped Nanocarbon for Metal-Free Oxygen Reduction Electrocatalysis: A Review. <i>Catalysts</i> , 2018, 8, 301.	1.6	31

#	ARTICLE	IF	CITATIONS
218	Porphyrin-like Fe-N ₄ sites with sulfur adjustment on hierarchical porous carbon for different rate-determining steps in oxygen reduction reaction. <i>Nano Research</i> , 2018, 11, 6260-6269.	5.8	118
219	Hierarchical micro/mesoporous nitrogen-doped carbons derived from hypercrosslinked polymers for highly efficient oxygen reduction reaction. <i>Carbon</i> , 2018, 138, 348-356.	5.4	27
220	Magnesium and Nitrogen Co-Doped Mesoporous Carbon with Enhanced Microporosity for CO ₂ Adsorption. <i>Nanomaterials</i> , 2018, 8, 275.	1.9	14
221	Monolithic Solid Based on Single-Walled Carbon Nanohorns: Preparation, Characterization, and Practical Evaluation as a Sorbent. <i>Nanomaterials</i> , 2018, 8, 370.	1.9	8
222	Emerging Pt-based electrocatalysts with highly open nanoarchitectures for boosting oxygen reduction reaction. <i>Nano Today</i> , 2018, 21, 91-105.	6.2	285
223	Heteroatom-doped nanoporous carbon from recyclable <i>Pueraria lobata</i> and its dual activities for oxygen reduction and hydrogen evolution reactions. <i>RSC Advances</i> , 2018, 8, 24392-24398.	1.7	0
224	Paper-derived cobalt and nitrogen co-doped carbon nanotube@porous carbon as a nonprecious metal electrocatalyst for the oxygen reduction reaction. <i>Chinese Journal of Catalysis</i> , 2018, 39, 790-799.	6.9	27
225	Ultrafast microwave-assisted synthesis of nitrogen-doped carbons as electrocatalysts for oxygen reduction reaction. <i>Nanotechnology</i> , 2018, 29, 305708.	1.3	8
226	From Metal-Organic Frameworks to Single-Atom Fe Implanted N-Doped Porous Carbons: Efficient Oxygen Reduction in Both Alkaline and Acidic Media. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 8525-8529.	7.2	669
227	From Metal-Organic Frameworks to Single-Atom Fe Implanted N-Doped Porous Carbons: Efficient Oxygen Reduction in Both Alkaline and Acidic Media. <i>Angewandte Chemie</i> , 2018, 130, 8661-8665.	1.6	104
228	Highly porous defective carbons derived from seaweed biomass as efficient electrocatalysts for oxygen reduction in both alkaline and acidic media. <i>Carbon</i> , 2018, 137, 93-103.	5.4	64
229	Cobalt-Nitrogen-Doped Helical Carbonaceous Nanotubes as a Class of Efficient Electrocatalysts for the Oxygen Reduction Reaction. <i>Angewandte Chemie</i> , 2018, 130, 13371-13375.	1.6	19
230	Carbon-Supported Single Atom Catalysts for Electrochemical Energy Conversion and Storage. <i>Advanced Materials</i> , 2018, 30, e1801995.	11.1	479
231	Activating Transition Metal Dichalcogenides by Substitutional Nitrogen-Doping for Potential ORR Electrocatalysts. <i>ChemElectroChem</i> , 2018, 5, 4029-4035.	1.7	27
232	Heteroatom-doped carbon nanospheres derived from cuttlefish ink: A bifunctional electrocatalyst for oxygen reduction and evolution. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 17708-17717.	3.8	27
233	A facile synthesis of porous N-doped carbon with hybridization of Fe ₃ C nanoparticle-encased CNTs for an advanced oxygen reduction reaction electrocatalyst. <i>Inorganic Chemistry Frontiers</i> , 2018, 5, 2546-2553.	3.0	12
234	Electrocatalysts based on metal@carbon core-shell nanocomposites: An overview. <i>Green Energy and Environment</i> , 2018, 3, 335-351.	4.7	75
235	Integrated Hierarchical Carbon Flake Arrays with Hollow P-Doped CoSe ₂ Nanoclusters as an Advanced Bifunctional Catalyst for Zn-Air Batteries. <i>Advanced Functional Materials</i> , 2018, 28, 1804846.	7.8	192

#	ARTICLE	IF	CITATIONS
236	Cobalt- and Nitrogen-Doped Helical Carbonaceous Nanotubes as a Class of Efficient Electrocatalysts for the Oxygen Reduction Reaction. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 13187-13191.	7.2	112
237	Fe/N Codoped Carbon Nanocages with Single-Atom Feature as Efficient Oxygen Reduction Reaction Electrocatalyst. <i>ACS Applied Energy Materials</i> , 2018, 1, 4982-4990.	2.5	38
238	Tailoring the Structure of Carbon Nanomaterials toward High-End Energy Applications. <i>Advanced Materials</i> , 2018, 30, e1802104.	11.1	92
239	Three-dimensional-networked Ni ₂ P/Ni ₃ S ₂ heteronanoflake arrays for highly enhanced electrochemical overall-water-splitting activity. <i>Nano Energy</i> , 2018, 51, 26-36.	8.2	378
240	The effect of oxygen content of carbon nanotubes on the catalytic activity of carbon-based iron phthalocyanine for oxygen reduction reaction. <i>Electrochimica Acta</i> , 2018, 281, 562-570.	2.6	43
241	Selective Etching Induced Synthesis of Hollow Rh Nanospheres Electrocatalyst for Alcohol Oxidation Reactions. <i>Small</i> , 2018, 14, e1801239.	5.2	82
242	Ultrathin, highly branched carbon nanotube cluster with outstanding oxygen electrocatalytic performance. <i>Electrochimica Acta</i> , 2018, 282, 224-232.	2.6	30
243	Lewis-Basic Lanthanide Metal-Organic Framework-Derived Versatile Multi-Active-Site Synergistic Catalysts for Oxygen Reduction Reaction. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 22023-22030.	4.0	39
244	Secondary-Component Incorporated Hollow MOFs and Derivatives for Catalytic and Energy-Related Applications. <i>Advanced Materials</i> , 2019, 31, e1800743.	11.1	129
245	In-situ generated Mn ₃ O ₄ -reduced graphene oxide nanocomposite for oxygen reduction reaction and isolated reduced graphene oxide for supercapacitor applications. <i>Carbon</i> , 2019, 154, 285-291.	5.4	38
246	Recent Advances in Oxygen Electrocatalysts Based on Perovskite Oxides. <i>Nanomaterials</i> , 2019, 9, 1161.	1.9	58
247	High durability fuel cell cathodes obtained from cobalt metal organic frameworks. <i>Electrochimica Acta</i> , 2019, 320, 134623.	2.6	8
248	Investigation of performance of aluminum doped carbon nanotube (8, 0) as adequate catalyst to oxygen reduction reaction. <i>Journal of Molecular Graphics and Modelling</i> , 2019, 92, 123-130.	1.3	3
249	Dual-active-sites design of Co _x anchored on nitrogen-doped carbon with tunable mesopore enables efficient Bi-Functional oxygen catalysis for ultra-stable zinc-air batteries. <i>Journal of Power Sources</i> , 2019, 438, 226953.	4.0	24
250	Soybean milk derived carbon intercalated with reduced graphene oxide as high efficient electrocatalysts for oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 21790-21802.	3.8	14
251	Examination of potential of B-CNT (6, 0), Al-CNT (6, 0) and Ga-CNT (6, 0) as novel catalysts to oxygen reduction reaction: A DFT study. <i>Journal of Molecular Liquids</i> , 2019, 290, 111366.	2.3	4
252	Atomically dispersed metal catalysts for the oxygen reduction reaction: synthesis, characterization, reaction mechanisms and electrochemical energy applications. <i>Energy and Environmental Science</i> , 2019, 12, 2890-2923.	15.6	317
253	Nanostructured Co-based bifunctional electrocatalysts for energy conversion and storage: current status and perspectives. <i>Journal of Materials Chemistry A</i> , 2019, 7, 18674-18707.	5.2	277

#	ARTICLE	IF	CITATIONS
254	Iron Carbides: Control Synthesis and Catalytic Applications in CO _x Hydrogenation and Electrochemical HER. <i>Advanced Materials</i> , 2019, 31, e1901796.	11.1	69
255	Role of boron doped silicon nanocage (B-Si ₄₈) as catalyst for oxygen reduction reaction in fuel cells. <i>Chemical Physics Letters</i> , 2019, 731, 136629.	1.2	5
256	Oxygen Reduction Reaction Mechanisms on Heteroatom-Doped Single-Walled Carbon Nanotube Catalysts: Insights from a Theoretical Study. <i>Journal of the Electrochemical Society</i> , 2019, 166, F670-F678.	1.3	15
257	2D Metal-Organic Framework Derived CuCo Alloy Nanoparticles Encapsulated by Nitrogen-Doped Carbonaceous Nanoleaves for Efficient Bifunctional Oxygen Electrocatalyst and Zinc-Air Batteries. <i>Chemistry - A European Journal</i> , 2019, 25, 12780-12788.	1.7	38
258	Improving biomass-derived carbon with cobalt/cobalt oxide doping for oxygen reduction reaction. <i>Journal of Solid State Electrochemistry</i> , 2019, 23, 2291-2299.	1.2	6
259	Single Fe atoms anchored by short-range ordered nanographene boost oxygen reduction reaction in acidic media. <i>Nano Energy</i> , 2019, 66, 104164.	8.2	68
260	Reduced graphene oxide-based materials for electrochemical energy conversion reactions. , 2019, 1, 85-108.		108
261	Measurement of SSC in processing tomatoes (<i>Lycopersicon esculentum</i> Mill.) by applying Vis-NIR hyperspectral transmittance imaging and multi-parameter compensation models. <i>Journal of Food Process Engineering</i> , 2019, 42, e13100.	1.5	19
262	Direct synthesis of L10-FePt nanoparticles from single-source bimetallic complex and their electrocatalytic applications in oxygen reduction and hydrogen evolution reactions. <i>Nano Research</i> , 2019, 12, 2954-2959.	5.8	54
263	Laser-Induced Pyridinic-Nitrogen-Rich Defective Carbon Nanotubes for Efficient Oxygen Electrocatalysis. <i>ChemCatChem</i> , 2019, 11, 6131-6138.	1.8	9
264	Anion-Free Catalysis on Carbon Nanotubes. <i>Angewandte Chemie</i> , 2019, 131, 16243-16246.	1.6	12
265	Anion-Free Catalysis on Carbon Nanotubes. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 16097-16100.	7.2	27
266	Enhanced Oxygen Reduction and Methanol Oxidation Electrocatalysis over Bifunctional PtPdIr Mesoporous Hollow Nanospheres. <i>Chemistry - an Asian Journal</i> , 2019, 14, 3868-3874.	1.7	15
267	Cu,N-Codoped Carbon Nanodisks with Biomimic Stomata-Like Interconnected Hierarchical Porous Topology as Efficient Electrocatalyst for Oxygen Reduction Reaction. <i>Small</i> , 2019, 15, e1902410.	5.2	66
268	Modulating the Electronic Structure of Porous Nanocubes Derived from Trimetallic Metal-Organic Frameworks to Boost Oxygen Evolution Reaction Performance. <i>Chemistry - an Asian Journal</i> , 2019, 14, 3357-3362.	1.7	7
269	Highly Nanoporous Nitrogen-Doped Carbon Microfiber Derived from Bioresource as a New Kind of ORR Electrocatalyst. <i>Nanoscale Research Letters</i> , 2019, 14, 22.	3.1	17
270	Highly dispersed PtPd on graphitic nanofibers and its heavy d-effect. <i>Applied Catalysis B: Environmental</i> , 2019, 259, 118080.	10.8	46
271	Ultrafine Co@nitrogen-doped carbon core-shell nanostructures anchored on carbon nanotubes for highly efficient oxygen reduction. <i>Applied Surface Science</i> , 2019, 494, 691-699.	3.1	24

#	ARTICLE	IF	CITATIONS
272	Cobalt encapsulated within porous MOF-derived nitrogen-doped carbon as an efficient bifunctional electrocatalyst for aprotic lithium-oxygen battery. <i>Journal of Alloys and Compounds</i> , 2019, 810, 151877.	2.8	20
273	In Situ ZnO-Activated Hierarchical Porous Carbon Nanofibers as Self-Standing Electrodes for Flexible Zn-Air Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 17817-17824.	3.2	22
274	Rational design and construction of nanoporous iron- and nitrogen-doped carbon electrocatalysts for oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 1380-1393.	5.2	159
275	Nucleobase-mediated synthesis of nitrogen-doped carbon nanozymes as efficient peroxidase mimics. <i>Dalton Transactions</i> , 2019, 48, 1993-1999.	1.6	44
276	Catalytic synthesis and simultaneous co-doping of hierarchically porous carbon with in-situ coated graphene from biomass tar as efficient catalyst for ORR. <i>Electrochemistry Communications</i> , 2019, 100, 52-59.	2.3	23
277	Facile synthesis of N, P-doped hierarchical porous carbon framework catalysts based on gelatin/phytic acid supermolecules for electrocatalytic oxygen reduction. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 5890-5898.	3.8	36
278	Mesoporous nickel selenide N-doped carbon as a robust electrocatalyst for overall water splitting. <i>Electrochimica Acta</i> , 2019, 300, 93-101.	2.6	70
279	Type I photodynamic therapy by organic-inorganic hybrid materials: From strategies to applications. <i>Coordination Chemistry Reviews</i> , 2019, 395, 46-62.	9.5	187
280	Increased charge and mass transfer derived-sheet-like Fe _{0.67} Ni _{0.33} OOH-Fe ₂ O ₃ @NF array for robust oxygen evolution reaction. <i>Applied Surface Science</i> , 2019, 493, 351-358.	3.1	19
281	Exploring the charge reactions in a O_2 system with lithium oxide cathodes and nonaqueous electrolytes. <i>Journal of Materials Chemistry A</i> , 2019, 7, 15615-15620.	5.2	6
282	Applications of carbon nanotubes and graphene for third-generation solar cells and fuel cells. <i>Nano Materials Science</i> , 2019, 1, 77-90.	3.9	38
283	Nanocrystal supracrystal-derived atomically dispersed Mn-Fe catalysts with enhanced oxygen reduction activity. <i>Nano Energy</i> , 2019, 63, 103851.	8.2	85
284	Proving the existence of Mn porphyrin-like complexes hosted in reduced graphene oxide with outstanding performance as oxygen reduction reaction catalysts. <i>2D Materials</i> , 2019, 6, 045001.	2.0	19
285	Highly Efficient Oxygen Reduction Reaction Catalyst Derived from Fe/Ni Mixed-Metal-Organic Frameworks for Application of Fuel Cell Cathode. <i>Industrial & Engineering Chemistry Research</i> , 2019, 58, 10224-10237.	1.8	25
286	Recent progress in Co ₉ S ₈ -based materials for hydrogen and oxygen electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2019, 7, 16068-16088.	5.2	95
287	Iron-nitrogen-carbon species for oxygen electro-reduction and Zn-air battery: Surface engineering and experimental probe into active sites. <i>Applied Catalysis B: Environmental</i> , 2019, 254, 601-611.	10.8	78
288	Facile Synthesis of Cobalt and Nitrogen Coordinated Carbon Nanotube as a High-Performance Electrocatalyst for Oxygen Reduction Reaction in Both Acidic and Alkaline Media. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 10951-10961.	3.2	21
289	Anion exchange of a cationic Cd(ii)-based metal-organic framework with potassium ferricyanide towards highly active Fe ₃ C-containing Fe/N/C catalysts for oxygen reduction. <i>Chemical Communications</i> , 2019, 55, 6930-6933.	2.2	20

#	ARTICLE	IF	CITATIONS
290	FeCo Alloy Nanoparticles Coated by an Ultrathin N-Doped Carbon Layer and Encapsulated in Carbon Nanotubes as a Highly Efficient Bifunctional Air Electrode for Rechargeable Zn-Air Batteries. ACS Sustainable Chemistry and Engineering, 2019, 7, 8530-8541.	3.2	140
291	Sustainable Salt Template-Assisted Chemical Activation for the Production of Porous Carbons with Enhanced Power Handling Ability in Supercapacitors. Batteries and Supercaps, 2019, 2, 701-711.	2.4	41
292	In situ self-template synthesis of cobalt/nitrogen-doped nanocarbons with controllable shapes for oxygen reduction reaction and supercapacitors. International Journal of Energy Research, 2019, 43, 4217-4228.	2.2	15
293	Role of Ultrathin Carbon Shell in Enhancing the Performance of PtZn Intermetallic Nanoparticles as an Anode Electrocatalyst for Direct Formic Acid Fuel Cells. ChemElectroChem, 2019, 6, 2316-2323.	1.7	16
294	In situ doped CoCO ₃ /ZIF-67 derived Co-N-C/CoO _x catalysts for oxygen reduction reaction. Applied Surface Science, 2019, 481, 313-318.	3.1	25
295	Bifunctional mechanism of N, P co-doped graphene for catalyzing oxygen reduction and evolution reactions. Journal of Chemical Physics, 2019, 150, 104701.	1.2	29
296	Insights on the superior performance of nanostructured nitrogen-doped reduced graphene oxide in comparison with commercial Pt/C as cathode electrocatalyst layer of passive direct methanol fuel cell. Electrochimica Acta, 2019, 306, 220-228.	2.6	32
297	Transition metal coordinated framework porphyrin for electrocatalytic oxygen reduction. Chinese Chemical Letters, 2019, 30, 911-914.	4.8	54
298	Freestanding 1D Hierarchical Porous Fe-N-Doped Carbon Nanofibers as Efficient Oxygen Reduction Catalysts for Zn-Air Batteries. Energy Technology, 2019, 7, 1800790.	1.8	27
299	The Hydrogen Oxidation Reaction in Alkaline Medium: An Overview. Electrochemical Energy Reviews, 2019, 2, 312-331.	13.1	56
300	Mesoporous cobalt selenide/nitrogen-doped carbon hybrid as bifunctional electrocatalyst for hydrogen evolution and oxygen reduction reactions. Journal of Power Sources, 2019, 423, 1-8.	4.0	38
301	Hollow Loofah-Like N, O-Co-Doped Carbon Tube for Electrocatalysis of Oxygen Reduction. Advanced Functional Materials, 2019, 29, 1900015.	7.8	68
302	Fe ₂ O ₃ Nanoparticles Modified 2D N-Doped Porous Graphene-Like Carbon as an Efficient and Robust Electrocatalyst for Oxygen Reduction Reaction. ChemistrySelect, 2019, 4, 4131-4139.	0.7	9
303	Enhanced HOR catalytic activity of PGM-free catalysts in alkaline media: the electronic effect induced by different heteroatom doped carbon supports. Journal of Materials Chemistry A, 2019, 7, 10936-10941.	5.2	84
304	Mass-loading independent electrocatalyst with high performance for oxygen reduction reaction and Zn-air battery based on Co-N-codoped carbon nanotube assembled microspheres. Chemical Engineering Journal, 2019, 373, 734-743.	6.6	40
305	Ternary metal sulfides for electrocatalytic energy conversion. Journal of Materials Chemistry A, 2019, 7, 9386-9405.	5.2	225
306	Highly reactive N,N'-carbonyldiimidazole-tailored bifunctional electrocatalyst for oxygen reduction and oxygen evolution. Electrochimica Acta, 2019, 307, 375-384.	2.6	13
307	Application of the Electrochemical Oxygen Reduction Reaction (ORR) in Organic Synthesis. Advanced Synthesis and Catalysis, 2019, 361, 2804-2824.	2.1	45

#	ARTICLE	IF	CITATIONS
308	In situ nanoarchitecturing and active-site engineering toward highly efficient carbonaceous electrocatalysts. <i>Nano Energy</i> , 2019, 59, 207-215.	8.2	54
309	Well-Defined Boron/Nitrogen-Doped Polycyclic Aromatic Hydrocarbons Are Active Electrocatalysts for the Oxygen Reduction Reaction. <i>Chemistry of Materials</i> , 2019, 31, 1891-1898.	3.2	42
310	Polymerization-dissolution strategy to prepare Fe, N, S tri-doped carbon nanostructures for Zn-Air batteries. <i>Carbon</i> , 2019, 147, 83-89.	5.4	31
311	Core@Shelled Co/CoO Embedded Nitrogen-Doped Carbon Nanosheets Coupled Graphene as Efficient Cathode Catalysts for Enhanced Oxygen Reduction Reaction in Microbial Fuel Cells. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 6335-6344.	3.2	41
312	PtFe Alloy Nanoparticles Confined on Carbon Nanotube Networks as Air Cathodes for Flexible and Wearable Energy Devices. <i>ACS Applied Nano Materials</i> , 2019, 2, 7870-7879.	2.4	22
313	Carbon materials for traffic power battery. <i>ETransportation</i> , 2019, 2, 100033.	6.8	37
314	Improved ORR Activity and Long-Term Durability of Pt Nanoparticles Deposited on TiO ₂ -Decorated Multiwall Carbon Nanotubes. <i>Journal of the Electrochemical Society</i> , 2019, 166, F1284-F1291.	1.3	22
315	Effect of particle size of carbon catalyst on oxygen reduction activity for fuel cell applications. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 504, 012025.	0.3	0
316	Theoretical investigation of the ORR on boron-silicon nanotubes (BSiNTs) as acceptable catalysts in fuel cells. <i>RSC Advances</i> , 2019, 9, 31572-31582.	1.7	4
317	Multiple modulations of pyrite nickel sulfides via metal heteroatom doping engineering for boosting alkaline and neutral hydrogen evolution. <i>Journal of Materials Chemistry A</i> , 2019, 7, 25628-25640.	5.2	69
318	Copper-promoted nitrogen-doped carbon derived from zeolitic imidazole frameworks for oxygen reduction reaction. <i>Applied Surface Science</i> , 2019, 464, 344-350.	3.1	38
319	Designing iron carbide embedded isolated boron (B) and nitrogen (N) atoms co-doped porous carbon fibers networks with tiny amount of B N bonds as high-efficiency oxygen reduction reaction catalysts. <i>Journal of Colloid and Interface Science</i> , 2019, 533, 709-722.	5.0	31
320	Non-covalent pre-organization of molecular precursors: A facile approach for engineering structures and activities of pyrolyzed Co-N electrocatalysts. <i>Carbon</i> , 2019, 144, 312-320.	5.4	28
321	Biomass derived hierarchical porous carbon materials as oxygen reduction reaction electrocatalysts in fuel cells. <i>Progress in Materials Science</i> , 2019, 102, 1-71.	16.0	129
322	A 2D MOF derived core-shell structured nanocomposite as effective electrocatalyst for oxygen reduction reaction. <i>Journal of Electroanalytical Chemistry</i> , 2019, 833, 454-461.	1.9	8
323	MOF-derived Co nanoparticles embedded in N,S-codoped carbon layer/MWCNTs for efficient oxygen reduction in alkaline media. <i>Ionics</i> , 2019, 25, 785-796.	1.2	23
324	Wet-chemistry grafted active pyridinic nitrogen sites on holey graphene edges as high performance ORR electrocatalyst for Zn-Air Batteries. <i>Materials Today Energy</i> , 2019, 11, 24-29.	2.5	23
325	Nitrogen-doped CoOx/carbon nanotubes derived by plasma-enhanced atomic layer deposition: Efficient bifunctional electrocatalyst for oxygen reduction and evolution reactions. <i>Electrochimica Acta</i> , 2019, 296, 964-971.	2.6	30

#	ARTICLE	IF	CITATIONS
326	Mesoporous CoS/N-doped Carbon as HER and ORR Bifunctional Electrocatalyst for Water Electrolyzers and Zinc-Air Batteries. <i>ChemCatChem</i> , 2019, 11, 1026-1032.	1.8	43
327	Cost-effective preparation of metal-free electrocatalysts by phosphoric acid activation of lignocellulosic materials for oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 2811-2822.	3.8	14
328	Deriving Efficient Porous Heteroatom-Doped Carbon Electrocatalysts for Hydrazine Oxidation from Transition Metal Ions-Coordinated Casein. <i>Advanced Functional Materials</i> , 2019, 29, 1808486.	7.8	31
329	B-doped Fe/N/C Porous Catalyst for High-Performance Oxygen Reduction in Anion-Exchange Membrane Fuel Cells. <i>ChemElectroChem</i> , 2019, 6, 1754-1760.	1.7	18
330	Protein hydrogel networks: A unique approach to heteroatom self-doped hierarchically porous carbon structures as an efficient ORR electrocatalyst in both basic and acidic conditions. <i>Applied Catalysis B: Environmental</i> , 2019, 246, 89-99.	10.8	90
331	N-Doped 3D Porous Ni/C Bifunctional Electrocatalysts for Alkaline Water Electrolysis. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 3974-3981.	3.2	59
332	Co ₃ O ₄ nanoparticles on porous bio-carbon substrate as catalyst for oxygen reduction reaction. <i>Microporous and Mesoporous Materials</i> , 2019, 277, 45-51.	2.2	53
333	Cobalt ferrite on honeycomb-like algae-derived nitrogen-doped carbon for electrocatalytic oxygen reduction and ultra-cycle-stable lithium storage. <i>Electrochimica Acta</i> , 2019, 295, 461-471.	2.6	23
334	Low-Cost and Highly Efficient Metal-Free Electrocatalysts for Oxygen Reduction Reaction: Environment-Friendly Three-Dimensional B, N Co-doped Graphene Aerogels. <i>Electrocatalysis</i> , 2019, 10, 56-62.	1.5	12
335	Remarkable influence of the local symmetry of substituted 3d metal ion on bifunctional electrocatalyst performance of δ -MnO ₂ nanowire. <i>Journal of Solid State Chemistry</i> , 2019, 269, 354-360.	1.4	16
336	Porous Organic Polymer Gel Derived Electrocatalysts for Efficient Oxygen Reduction. <i>ChemElectroChem</i> , 2019, 6, 485-492.	1.7	19
337	MnO/N-doped Mesoporous Carbon as Advanced Oxygen Reduction Reaction Electrocatalyst for Zinc-Air Batteries. <i>Chemistry - A European Journal</i> , 2019, 25, 2868-2876.	1.7	29
338	Adsorption properties of O ₂ on the unequal amounts of binary co-doped graphene by B/N and P/N: A density functional theory study. <i>Applied Surface Science</i> , 2019, 471, 445-454.	3.1	18
339	The Vital Balance of Graphitization and Defect Engineering for Efficient Bifunctional Oxygen Electrocatalyst Based on N-doping Carbon/CNT Frameworks. <i>ChemCatChem</i> , 2019, 11, 861-867.	1.8	34
340	Synthesis of nitrogen-doped mesoporous carbon nanosheets for oxygen reduction electrocatalytic activity enhancement in acid and alkaline media. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 4423-4431.	3.8	16
341	Increased activity of nitrogen-doped graphene-like carbon sheets modified by iron doping for oxygen reduction. <i>Journal of Colloid and Interface Science</i> , 2019, 536, 42-52.	5.0	32
342	Al-zigzag-SiNT (9, 0), Al-armchair-SiNT (5, 5) and Al-chiral-SiNT (9, 3) as catalysts with high efficiency to oxygen reduction reaction in fuel cells. <i>Journal of Physics and Chemistry of Solids</i> , 2020, 136, 109149.	1.9	0
343	A Theory/Experience Description of Support Effects in Carbon-Supported Catalysts. <i>Chemical Reviews</i> , 2020, 120, 1250-1349.	23.0	436

#	ARTICLE	IF	CITATIONS
344	Synergistically enhanced oxygen reduction electrocatalysis by atomically dispersed and nanoscaled Co species in three-dimensional mesoporous Co, N-codoped carbon nanosheets network. <i>Applied Catalysis B: Environmental</i> , 2020, 260, 118207.	10.8	74
345	Charge Transfer Modulated Activity of Carbon-Based Electrocatalysts. <i>Advanced Energy Materials</i> , 2020, 10, 1901227.	10.2	156
346	Boosting oxygen reduction catalysis with Fe-N@ZnO codoped highly graphitized carbon derived from N,N'-carbonyldiimidazole-Induced bimetallic coordinated polymer. <i>Applied Surface Science</i> , 2020, 505, 144605.	3.1	6
347	Nanocarbon Catalysts: Recent Understanding Regarding the Active Sites. <i>Advanced Science</i> , 2020, 7, 1902126.	5.6	94
348	Oxygen reduction using a metal-free naphthalene diimide-based covalent organic framework electrocatalyst. <i>Chemical Communications</i> , 2020, 56, 1267-1270.	2.2	56
349	Recent Progress of Metal Carbides Encapsulated in Carbon-Based Materials for Electrocatalysis of Oxygen Reduction Reaction. <i>Small Methods</i> , 2020, 4, 1900575.	4.6	59
350	Hybrid shells of N-doped carbon encapsulated by MnO nanoparticles as oxygen reduction reaction electrocatalysts. <i>New Journal of Chemistry</i> , 2020, 44, 580-585.	1.4	15
351	One-step construction of multi-doped nanoporous carbon-based nanoarchitecture as an advanced bifunctional oxygen electrode for Zn-Air batteries. <i>Applied Catalysis B: Environmental</i> , 2020, 265, 118594.	10.8	45
352	Facile synthesis of the porous FeCo@nitrogen-doped carbon nanosheets as bifunctional oxygen electrocatalysts. <i>Electrochimica Acta</i> , 2020, 335, 135647.	2.6	31
353	Microporous Solids En Route to Heterogeneous Electrocatalysis: The Oxygen Reduction Reaction. <i>Energy Technology</i> , 2020, 8, 1900964.	1.8	3
354	A review on WO ₃ based gas sensors: Morphology control and enhanced sensing properties. <i>Journal of Alloys and Compounds</i> , 2020, 820, 153194.	2.8	200
355	Guarding active sites and electron transfer engineering of core-shell nanosheet as robust bifunctional applications for overall water splitting and capacitors. <i>Electrochimica Acta</i> , 2020, 331, 135372.	2.6	3
356	Correlation between Precursor Properties and Performance in the Oxygen Reduction Reaction of Pt and Co Core-shell Carbon Nitride-Based Electrocatalysts. <i>Electrocatalysis</i> , 2020, 11, 143-159.	1.5	13
357	3D Carbon Materials for Efficient Oxygen and Hydrogen Electrocatalysis. <i>Advanced Energy Materials</i> , 2020, 10, 1902494.	10.2	97
358	Hollow PtFe Alloy Nanoparticles Derived from PtFe ₃ O ₄ Dimers through a Silica Protection Reduction Strategy as Efficient Oxygen Reduction Electrocatalysts. <i>Chemistry - A European Journal</i> , 2020, 26, 4090-4096.	1.7	49
359	Cobalt-gluconate-derived high-density cobalt sulfides nanocrystals encapsulated within nitrogen and sulfur dual-doped micro/mesoporous carbon spheres for efficient electrocatalysis of oxygen reduction. <i>Journal of Colloid and Interface Science</i> , 2020, 561, 829-837.	5.0	31
360	Advanced electrocatalysts based on two-dimensional transition metal hydroxides and their composites for alkaline oxygen reduction reaction. <i>Nanoscale</i> , 2020, 12, 21479-21496.	2.8	39
361	Conductive MOFs as bifunctional oxygen electrocatalysts for all-solid-state Zn-air batteries. <i>Chemical Communications</i> , 2020, 56, 13615-13618.	2.2	33

#	ARTICLE	IF	CITATIONS
362	Recent Advances in Catalyst Development for Transesterification of Dialkyl Carbonates with Phenol. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 20630-20645.	1.8	3
363	Plane Animation Simulation of the Interaction between Carbon Nanomaterials and Cell Lysosomes. <i>Journal of Chemistry</i> , 2020, 2020, 1-9.	0.9	0
364	S-Doped hierarchical graphene decorated with Co-porphyrins as an efficient electrocatalyst for zinc-air batteries. <i>New Journal of Chemistry</i> , 2020, 44, 14343-14349.	1.4	7
365	Tuning the electrocatalytic 2- and 4-electron reduction of oxygen by electrodeposited hybrid graphene-Co/Mn porphyrin coatings. <i>Electrochimica Acta</i> , 2020, 356, 136792.	2.6	6
366	Rational design of sustainable transition metal-based bifunctional electrocatalysts for oxygen reduction and evolution reactions. <i>Sustainable Materials and Technologies</i> , 2020, 25, e00204.	1.7	17
367	Three-dimensional layered Fe-N/C catalysts built by electrospinning and the comparison of different active species on oxygen reduction reaction performance. <i>Journal of Alloys and Compounds</i> , 2020, 848, 156605.	2.8	9
368	A multi-shelled CeO ₂ /Co@N-doped hollow carbon microsphere as a trifunctional electrocatalyst for a rechargeable zinc-air battery and overall water splitting. <i>Sustainable Energy and Fuels</i> , 2020, 4, 5156-5164.	2.5	12
369	2-Methylimidazole as a nitrogen source assisted synthesis of a nano-rod-shaped Fe/FeN@N-C catalyst with plentiful FeN active sites and enhanced ORR activity. <i>Applied Surface Science</i> , 2020, 533, 147481.	3.1	54
370	Electrospun Inorganic Nanofibers for Oxygen Electrocatalysis: Design, Fabrication, and Progress. <i>Advanced Energy Materials</i> , 2020, 10, 1902115.	10.2	111
371	Nanoribbon Superstructures of Graphene Nanocages for Efficient Electrocatalytic Hydrogen Evolution. <i>Nano Letters</i> , 2020, 20, 7342-7349.	4.5	30
372	Palladium/Stannic Oxide Interfacial Chemistry Promotes Hydrogen Oxidation Reactions in Alkaline Medium. <i>ChemElectroChem</i> , 2020, 7, 4562-4571.	1.7	19
373	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
374	Recent advances in nanostructured transition metal nitrides for fuel cells. <i>Journal of Materials Chemistry A</i> , 2020, 8, 20803-20818.	5.2	45
375	Enhancing the water splitting performance <i>via</i> decorating Co ₃ O ₄ nanoarrays with ruthenium doping and phosphorization. <i>RSC Advances</i> , 2020, 10, 27235-27241.	1.7	9
376	Phenazine Radical Cations as Efficient Homogeneous and Heterogeneous Catalysts for the Cross-dehydrogenative Aza-Henry Reaction. <i>Helvetica Chimica Acta</i> , 2020, 103, e2000184.	1.0	7
377	Engineering the surface active sites of actinia-like hierarchical Fe ₃ O ₄ /Co ₃ O ₄ nanoheterojunction for efficient oxygen reduction reaction. <i>Dyes and Pigments</i> , 2020, 180, 108439.	2.0	7
378	Rational Design of Spinel Oxide Nanocomposites with Tailored Electrochemical Oxygen Evolution and Reduction Reactions for ZincAir Batteries. <i>Applied Sciences (Switzerland)</i> , 2020, 10, 3165.	1.3	35
379	Ni@Ni/CNT as an Efficient Hydrogen Electrode Catalyst for a Unitized Regenerative Alkaline Microfluidic Cell. <i>ACS Applied Energy Materials</i> , 2020, 3, 4746-4755.	2.5	18

#	ARTICLE	IF	CITATIONS
380	Bulk COFs and COF nanosheets for electrochemical energy storage and conversion. <i>Chemical Society Reviews</i> , 2020, 49, 3565-3604.	18.7	617
381	Cathode Catalysts Based on Cobalt- and Nitrogen-Doped Nanocarbon Composites for Anion Exchange Membrane Fuel Cells. <i>ACS Applied Energy Materials</i> , 2020, 3, 5375-5384.	2.5	61
382	Fabrication of Fe ₃ C caged in N doped carbon nanotube as a desirable ORR electrocatalyst by a facile method. <i>Journal of Electroanalytical Chemistry</i> , 2020, 871, 114316.	1.9	10
383	Iron-Catalyzed Selective Denitrification over N-Doped Mesoporous Carbon. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 28091-28099.	4.0	29
384	Self-assembly of block copolymers towards mesoporous materials for energy storage and conversion systems. <i>Chemical Society Reviews</i> , 2020, 49, 4681-4736.	18.7	311
385	TiN nanoparticles hybridized with Fe, N co-doped carbon nanosheets composites as highly efficient electrocatalyst for oxygen reduction reaction. <i>Chemical Engineering Journal</i> , 2020, 400, 125968.	6.6	24
386	Ionic liquid derived active atomic iron sites anchored on hollow carbon nanospheres for bifunctional oxygen electrocatalysis. <i>Chemical Engineering Journal</i> , 2020, 399, 125656.	6.6	24
387	Recent achievements in CO ₂ -assisted and CO ₂ -catalyzed biomass conversion reactions. <i>Green Chemistry</i> , 2020, 22, 2628-2642.	4.6	46
388	Advances in Solar Power Generation and Energy Harvesting. <i>Springer Proceedings in Energy</i> , 2020, , .	0.2	2
389	Nature-inspired electrocatalysts and devices for energy conversion. <i>Chemical Society Reviews</i> , 2020, 49, 3107-3141.	18.7	84
390	Defect Engineering for Fuel-Cell Electrocatalysts. <i>Advanced Materials</i> , 2020, 32, e1907879.	11.1	338
391	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
392	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
393	High efficient oxygen reduced reaction electrodes by constructing vertical graphene sheets on separated papillary granules formed nanocrystalline diamond films. <i>Carbon</i> , 2020, 168, 536-545.	5.4	10
394	Versatile Synthesis of Ultrafine Ternary Spinel Oxides/Carbon Nanohybrids toward the Oxygen Reduction Reaction. <i>Energy & Fuels</i> , 2020, 34, 9069-9075.	2.5	7
395	Porous carbons embedded with nitrogen-coordinated cobalt as an exceptional electrochemical catalyst for high-performance Zn-air batteries. <i>New Journal of Chemistry</i> , 2020, 44, 12850-12856.	1.4	8
396	Self-Supported Fe-N-C Electrocatalyst via Pyrolysis of EDTAFeNa Adsorbed on SBA-15 for the Oxygen Reduction Reaction. <i>Industrial & Engineering Chemistry Research</i> , 2020, 59, 3016-3023.	1.8	4
397	N-doped porous carbon hollow microspheres encapsulated with iron-based nanocomposites as advanced bifunctional catalysts for rechargeable Zn-air battery. <i>Journal of Energy Chemistry</i> , 2020, 49, 14-21.	7.1	59

#	ARTICLE	IF	CITATIONS
398	Stabilizing Single-Atom Iron Electrocatalysts for Oxygen Reduction via Ceria Confining and Trapping. <i>ACS Catalysis</i> , 2020, 10, 2452-2458.	5.5	103
399	Sulfonated cobalt phthalocyanine-derived Co-N-S tridoped carbon nanotubes as platinum catalyst supports for highly efficient methanol electrooxidation. <i>Applied Surface Science</i> , 2020, 511, 145519.	3.1	16
400	Nitrogen-doped carbide-derived carbon/carbon nanotube composites as cathode catalysts for anion exchange membrane fuel cell application. <i>Applied Catalysis B: Environmental</i> , 2020, 272, 119012.	10.8	72
401	Core-shell motif construction: Highly graphitic nitrogen-doped porous carbon electrocatalysts using MOF-derived carbon@COF heterostructures as sacrificial templates. <i>Chemical Engineering Journal</i> , 2020, 396, 125154.	6.6	223
402	Facile preparation of Fe ₃ C decorated three-dimensional N-doped porous carbon for efficient oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 13272-13281.	3.8	10
403	Recent Advances in Non-Noble Bifunctional Oxygen Electrocatalysts toward Large-Scale Production. <i>Advanced Functional Materials</i> , 2020, 30, 2000503.	7.8	226
404	A new strategy to access Co/N co-doped carbon nanotubes as oxygen reduction reaction catalysts. <i>Chinese Chemical Letters</i> , 2021, 32, 535-538.	4.8	17
405	Surface/interface engineering of high-efficiency noble metal-free electrocatalysts for energy-related electrochemical reactions. <i>Journal of Energy Chemistry</i> , 2021, 54, 89-104.	7.1	65
406	Interface engineering in transition metal-based heterostructures for oxygen electrocatalysis. <i>Materials Chemistry Frontiers</i> , 2021, 5, 1033-1059.	3.2	64
407	One-dimensional metal-organic nanowires-derived catalyst of carbon nanobamboos with encapsulated cobalt nanoparticles for oxygen reduction. <i>Journal of Catalysis</i> , 2021, 394, 366-375.	3.1	19
408	Scalable fabrication and active site identification of MOF shell-derived nitrogen-doped carbon hollow frameworks for oxygen reduction. <i>Journal of Materials Science and Technology</i> , 2021, 66, 186-192.	5.6	23
409	Insights into efficient transition metal-nitrogen/carbon oxygen reduction electrocatalysts. <i>Journal of Energy Chemistry</i> , 2021, 56, 470-485.	7.1	56
410	Defects enriched hollow porous Co-N-doped carbons embedded with ultrafine CoFe/Co nanoparticles as bifunctional oxygen electrocatalyst for rechargeable flexible solid zinc-air batteries. <i>Nano Research</i> , 2021, 14, 868-878.	5.8	102
411	The fluorine-doped and defects engineered carbon nanosheets as advanced electrocatalysts for oxygen electroreduction. <i>Applied Catalysis B: Environmental</i> , 2021, 284, 119721.	10.8	68
412	Self-templating construction of N, P-co-doped carbon nanosheets for efficient electrocatalytic oxygen reduction reaction. <i>Chemical Engineering Journal</i> , 2021, 410, 128015.	6.6	33
413	Recent Progress of Vacancy Engineering for Electrochemical Energy Conversion Related Applications. <i>Advanced Functional Materials</i> , 2021, 31, 2009070.	7.8	166
414	An Efficient Bio-Inspired Oxygen Reduction Reaction Catalyst: MnO _x Nanosheets Incorporated Iron Phthalocyanine Functionalized Graphene. <i>Energy and Environmental Materials</i> , 2021, 4, 474-480.	7.3	11
415	Overcoming undesired fuel crossover: Goals of methanol-resistant modification of polymer electrolyte membranes. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 138, 110660.	8.2	26

#	ARTICLE	IF	CITATIONS
416	Sweet potato derived three-dimensional carbon aerogels with a hierarchical meso-“macroporous and branching nanostructure for electroanalysis. <i>Analyst, The</i> , 2021, 146, 1216-1223.	1.7	1
417	Two-Dimensional Metal-Organic Frameworks-Based Electrocatalysts for Oxygen Evolution and Oxygen Reduction Reactions. <i>Advanced Energy and Sustainability Research</i> , 2021, 2, 2000067.	2.8	29
418	Biomass-derived nitrogen self-doped porous activation carbon as an effective bifunctional electrocatalysts. <i>Chinese Chemical Letters</i> , 2021, 32, 92-98.	4.8	25
419	Applications of Atomically Dispersed Oxygen Reduction Catalysts in Fuel Cells and Zinc-Air Batteries. <i>Energy and Environmental Materials</i> , 2021, 4, 307-335.	7.3	58
420	Construction of Nitrogen-Doped Carbon Nanosheets for Efficient and Stable Oxygen Reduction Electrocatalysis. <i>Journal of Electronic Materials</i> , 2021, 50, 1349-1357.	1.0	4
421	Scalable nanoporous carbon films allow line-of-sight 3D atomic layer deposition of Pt: towards a new generation catalyst layer for PEM fuel cells. <i>Materials Horizons</i> , 2021, 8, 2451-2462.	6.4	20
422	Templating synthesis of hierarchically meso/macroporous N-doped microalgae derived biocarbon as oxygen reduction reaction catalyst for microbial fuel cells. <i>International Journal of Hydrogen Energy</i> , 2021, 46, 2530-2542.	3.8	22
423	N,S-Codoped Mesoporous Carbons Derived from Polymer Micelle-Based Assemblies for the Oxygen Reduction Reaction. <i>ACS Applied Energy Materials</i> , 2021, 4, 1954-1961.	2.5	15
424	NMR analysis of phosphoric acid distribution in porous fuel cell catalysts. <i>Chemical Communications</i> , 2021, 57, 2547-2550.	2.2	4
425	N- and O-doped hollow carbons constructed by self- and extrinsic activation for the oxygen reduction reaction and flexible zinc-air Batteries. <i>Nanoscale</i> , 2021, 13, 16296-16306.	2.8	13
426	Controllable synthesis of porous tubular carbon by a Ag ⁺ -ligand-assisted Stober-silica/carbon assembly process. <i>Nanoscale</i> , 2021, 13, 2534-2541.	2.8	2
427	O,N-Codoped 3D graphene hollow sphere derived from metal-organic frameworks as oxygen reduction reaction electrocatalysts for Zn-air batteries. <i>Nanoscale</i> , 2021, 13, 6174-6183.	2.8	17
428	Nitrogenated-carbon nanoelectrocatalyst advertently processed from bio-waste of <i>Allium sativum</i> for oxygen reduction reaction. <i>Journal of Nanostructure in Chemistry</i> , 2021, 11, 343-352.	5.3	13
429	Active site engineering of atomically dispersed transition metal-heteroatom-carbon catalysts for oxygen reduction. <i>Chemical Communications</i> , 2021, 57, 7869-7881.	2.2	37
430	N-doped porous carbon spheres as metal-free electrocatalyst for oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2021, 9, 5751-5758.	5.2	46
431	Nanostructured multifunctional electrocatalysts for efficient energy conversion systems: Recent perspectives. <i>Nanotechnology Reviews</i> , 2021, 10, 137-157.	2.6	28
432	Mechanistic study on nitrogen-doped graphitic carbon-reinforced chromium nitride as a durable electrocatalyst for oxygen reduction. <i>Journal of Materials Chemistry A</i> , 2021, 9, 16575-16584.	5.2	14
433	Mono-Doped Carbon Nanofiber Aerogel as a High-Performance Electrode Material for Rechargeable Zinc-Air Batteries. <i>ChemElectroChem</i> , 2021, 8, 829-838.	1.7	7

#	ARTICLE	IF	CITATIONS
434	Anisotropic Magnetism in Gradient Porous Carbon Composite Aerogels. <i>Journal of Carbon Research</i> , 2021, 7, 22.	1.4	2
435	Cobalt porphyrins supported on carbon nanotubes as model catalysts of metal-N ₄ /C sites for oxygen electrocatalysis. <i>Journal of Energy Chemistry</i> , 2021, 53, 77-81.	7.1	77
436	A Novel Carbon Support: Few-Layered Graphdiyne-Decorated Carbon Nanotubes Capture Metal Clusters as Effective Metal-Supported Catalysts. <i>Small</i> , 2021, 17, e2006442.	5.2	32
437	Regulating the Catalytically Active Sites in Low-Cost and Earth-Abundant 3d Transition-Metal-Based Electrode Materials for High-Performance Zinc-Air Batteries. <i>Energy & Fuels</i> , 2021, 35, 6483-6503.	2.5	26
438	Enhanced mass transfer and proton conduction of cathode catalyst layer for proton exchange membrane fuel cell through filling polyhedral oligomeric silsesquioxane. <i>Journal of Power Sources</i> , 2021, 487, 229413.	4.0	14
439	Sulfur and nitrogen co-doped rGO sheets as efficient electrocatalyst for oxygen reduction reaction in alkaline medium. <i>Diamond and Related Materials</i> , 2021, 114, 108338.	1.8	15
440	Silicon carbide-derived carbon electrocatalysts dual doped with nitrogen and phosphorus for the oxygen reduction reaction in an alkaline medium. <i>Electrochemistry Communications</i> , 2021, 125, 106976.	2.3	24
441	Atmospheric-Pressure Plasma Jet-Induced Ultrafast Construction of an Ultrathin Nonstoichiometric Nickel Oxide Layer with Mixed Ni ³⁺ /Ni ²⁺ Ions and Rich Oxygen Defects as an Efficient Electrocatalyst for Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2021, 4, 5059-5069.	2.5	19
442	Electronic Optimization by Coupling FeCo Nanoclusters and Pt Nanoparticles to Carbon Nanotubes for Efficient Hydrogen Evolution. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 5895-5901.	3.2	9
443	2021 Roadmap: electrocatalysts for green catalytic processes. <i>JPhys Materials</i> , 2021, 4, 022004.	1.8	57
444	The Development of a Highly Durable Fe-N-C Electrocatalyst With Favorable Carbon Nanotube Structures for the Oxygen Reduction in PEMFCs. <i>Journal of Electrochemical Energy Conversion and Storage</i> , 2022, 19, .	1.1	3
445	Zinc-Air Batteries Catalyzed Using Co ₃ O ₄ Nanorod-Supported N-Doped Entangled Graphene for Oxygen Reduction Reaction. <i>ACS Applied Energy Materials</i> , 2021, 4, 4570-4580.	2.5	14
446	N, S-codoped porous carbon as metal-free electrocatalyst for oxygen reduction reaction. <i>Journal of Solid State Electrochemistry</i> , 2021, 25, 1765-1773.	1.2	10
447	Enhancing the electrocatalytic activity via hybridization of Cu(I/II) oxides with Co ₃ O ₄ towards oxygen electrode reactions. <i>Journal of Power Sources</i> , 2021, 490, 229511.	4.0	12
448	2D Metal-Free Nanomaterials Beyond Graphene and Its Analogues toward Electrocatalysis Applications. <i>Advanced Energy Materials</i> , 2021, 11, 2101202.	10.2	24
449	A Strategy of Bifunctional Nanoscale Melamine-Resin Sphere Template to Fabricate Porous Carbons. <i>Advanced Materials Interfaces</i> , 2021, 8, 2100244.	1.9	11
450	Insight on the active sites of CoNi alloy embedded in N-doped carbon nanotubes for oxygen reduction reaction. <i>Science China Materials</i> , 2021, 64, 2719-2728.	3.5	16
451	Advanced Nanocarbons for Enhanced Performance and Durability of Platinum Catalysts in Proton Exchange Membrane Fuel Cells. <i>Small</i> , 2021, 17, e2006805.	5.2	54

#	ARTICLE	IF	CITATIONS
452	Boosting the Activity and Stability with Dual-Metal Couplings for O_2 Battery. <i>Energy and Environmental Materials</i> , 2022, 5, 918-927.	7.3	11
453	Ab initio study of graphitic-N and pyridinic-N doped graphene for catalytic oxygen reduction reactions. <i>Computational and Theoretical Chemistry</i> , 2021, 1201, 113292.	1.1	15
454	Mesoporous Fe _x Sub-Microspheres for Highly Efficient Electrocatalytic Oxygen Reduction Reaction. <i>ChemCatChem</i> , 2021, 13, 4047-4054.	1.8	5
455	Mesoporous N-doped carbon with atomically dispersed Zn-N _x active sites as high-performance cathode in lithium-oxygen batteries. <i>Ionics</i> , 2021, 27, 4695-4704.	1.2	2
456	Interface engineering of N-doped Ni ₃ S ₂ /CoS ₂ heterostructures as efficient bifunctional catalysts for overall water splitting. <i>Journal of Electroanalytical Chemistry</i> , 2021, 895, 115516.	1.9	20
457	Improved the specificity of peroxidase-like carbonized polydopamine nanotubes with high nitrogen doping for glutathione detection. <i>Sensors and Actuators B: Chemical</i> , 2021, 341, 129987.	4.0	24
458	Recent advances in carbon-supported iron group electrocatalysts for the oxygen reduction reaction. <i>New Carbon Materials</i> , 2021, 36, 665-682.	2.9	9
459	Self-templated poly schiff base-Fe derived Fe-N co-doped porous carbon nanosheets for efficient electrocatalysis. <i>Chemical Engineering Journal</i> , 2022, 430, 132315.	6.6	7
460	First principles investigation on cobalt-tetracyanoquinodimethane monolayer for efficient Bi-functional single atom electrocatalyst. <i>Journal of Electroanalytical Chemistry</i> , 2021, 897, 115602.	1.9	3
461	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
462	In-situ construction of C-S-Zn structures on Enteromorpha-based porous carbon for efficient oxygen reduction reaction. <i>Electrochimica Acta</i> , 2021, 391, 138918.	2.6	0
463	Porous metal-organic framework (MOF)-based and MOF-derived electrocatalytic materials for energy conversion. <i>Materials Today Energy</i> , 2021, 21, 100816.	2.5	45
464	Insights into oxygen reduction reaction on pristine carbon nanoparticles synthesized by the plasma-in-liquid process. <i>Electrochimica Acta</i> , 2021, 390, 138882.	2.6	1
465	Atomic-Scale Design of High-Performance Pt-Based Electrocatalysts for Oxygen Reduction Reaction. <i>Frontiers in Chemistry</i> , 2021, 9, 753604.	1.8	11
466	Engineering iron single atomic sites with adjacent ZrO ₂ nanoclusters via ligand-assisted strategy for effective oxygen reduction reaction and high-performance Zn-air batteries. <i>Chemical Engineering Journal</i> , 2021, 420, 129938.	6.6	33
467	Carbon nanomaterials: Synthesis, properties and applications in electrochemical sensors and energy conversion systems. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2021, 272, 115341.	1.7	40
468	Graphitization of low-density amorphous carbon for electrocatalysis electrodes from ReaxFF reactive dynamics. <i>Carbon</i> , 2021, 183, 940-947.	5.4	20
469	Biomass-derived Ta,N,S co-doped CNTs enriched carbon catalyst for efficient electrochemical oxygen reduction. <i>Journal of Alloys and Compounds</i> , 2021, 888, 161479.	2.8	12

#	ARTICLE	IF	CITATIONS
470	Enhanced photocatalytic H ₂ /H ₂ O ₂ production and tetracycline degradation performance of CdSe quantum dots supported on K, P, N-co-doped hollow carbon polyhedrons. <i>Chemical Engineering Journal</i> , 2021, 426, 130808.	6.6	22
471	COF-confined catalysts: from nanoparticles and nanoclusters to single atoms. <i>Journal of Materials Chemistry A</i> , 2021, 9, 24148-24174.	5.2	37
472	A "micropores & active species protection" strategy for the preparation of a high-performance Fe/S/N-composited porous carbon catalyst for efficient oxygen reduction reaction and zinc-air batteries. <i>Sustainable Energy and Fuels</i> , 2021, 5, 5184-5192.	2.5	6
473	High-performance electrocatalyst based on polyazine derived mesoporous nitrogen-doped carbon for oxygen reduction reaction. <i>RSC Advances</i> , 2021, 11, 29555-29563.	1.7	1
474	Heteroatoms doped C ₃ N ₄ as high performance catalysts for the oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 20579-20588.	3.8	35
475	Positive and negative regulation of carbon nanotube catalysts through encapsulation within macrocycles. <i>Nature Communications</i> , 2018, 9, 2671.	5.8	38
476	Contribution of Carbon Dot Nanoparticles in Electrocatalysis: Development in Energy Conversion Process. <i>Journal of Electrochemical Science and Technology</i> , 2020, 11, 220-237.	0.9	16
477	Construction of two-dimensional CoPS ₃ @defective N-doped carbon composites for enhanced oxygen evolution reaction. <i>International Journal of Hydrogen Energy</i> , 2021, , .	3.8	10
478	Carbon Nanostructured Catalysts as High Efficient Materials for Low Temperature Fuel Cells. , 2019, , 1139-1166.		0
479	Surface-engineered N-doped carbon nanotubes with B-doped graphene quantum dots: Strategies to develop highly-efficient noble metal-free electrocatalyst for online-monitoring dissolved oxygen biosensor. <i>Carbon</i> , 2022, 186, 406-415.	5.4	36
480	Role of Nanostructures in Development of Energy-Efficient Electrochemical Non-enzymatic Glucose Sensors. <i>Springer Proceedings in Energy</i> , 2020, , 199-207.	0.2	0
481	Highly dispersed PtNi nanoparticles modified carbon black as high-performed electrocatalyst for oxygen reduction in acidic medium. <i>Journal of Electroanalytical Chemistry</i> , 2022, 904, 115908.	1.9	7
482	Doping-Modulated Strain Enhancing the Phosphate Tolerance on PtFe Alloys for High-Temperature Proton Exchange Membrane Fuel Cells. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	45
483	Pt/C Decorated with N-Doped Carbon Layers as a Highly Durable Electrocatalyst for the Oxygen Reduction Reaction. <i>Energy & Fuels</i> , 2021, 35, 20300-20308.	2.5	14
484	Hierarchically porous carbons fabricated by dual pore-forming approach for the oxygen reduction reaction. <i>Carbon</i> , 2022, 189, 634-641.	5.4	14
485	Defect stabilized Fe atom on porous BN sheet as a potential electrocatalyst for oxygen reduction reaction: A first-principles investigation. <i>Applied Surface Science</i> , 2022, 580, 152271.	3.1	6
486	The effect of temperature on ionic liquid modified Fe-N-C catalysts for alkaline oxygen reduction reaction. <i>Journal of Energy Chemistry</i> , 2022, 68, 324-329.	7.1	14
487	Atomic Co ₄ and Co nanoparticles confined in COF@ZIF-67 derived core-shell carbon frameworks: bifunctional non-precious metal catalysts toward the ORR and HER. <i>Journal of Materials Chemistry A</i> , 2021, 10, 228-233.	5.2	61

#	ARTICLE	IF	CITATIONS
488	Two-Dimensional Conjugated Metal-Organic Frameworks for Electrocatalysis: Opportunities and Challenges. <i>ACS Nano</i> , 2022, 16, 1759-1780.	7.3	94
489	Revealing the intrinsic relation between heteroatom dopants and graphene quantum dots as a bi-functional ORR/OER catalyst. <i>Molecular Catalysis</i> , 2022, 518, 112109.	1.0	4
490	Iridium-based electrocatalysts toward sustainable energy conversion. <i>EcoMat</i> , 2022, 4, .	6.8	16
491	Ti ₄ O ₇ /g-C ₃ N ₄ Nanocomposites as an Excellently Durable and Active Electrocatalyst for Oxygen Reduction Reaction. <i>Advanced Materials Interfaces</i> , 0, , 2101831.	1.9	1
492	Heteroatom-doped nanomaterials/core-shell nanostructure based electrocatalysts for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2022, 10, 987-1021.	5.2	24
493	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
494	Substituent effects of symmetric cobalt porphyrins using graphene oxide as substrate on catalytic oxygen reduction reactions. <i>Colloids and Surfaces A: Physicochemical and Engineering Aspects</i> , 2022, 640, 128499.	2.3	6
495	Synthetic strategies of single-atoms catalysts and applications in electrocatalysis. <i>Electrochimica Acta</i> , 2022, 409, 139835.	2.6	8
496	Complex-derived Fe ₂ N Anchored on Conductive Few-layer Graphene for Electrocatalytic Oxygen Reduction Reaction. <i>ChemNanoMat</i> , 0, , .	1.5	0
497	Comparative investigation of bioflavonoid electrocatalysis in 1D, 2D, and 3D carbon nanomaterials for simultaneous detection of naringin and hesperidin in fruits. <i>RSC Advances</i> , 2022, 12, 6409-6415.	1.7	7
498	Spray-Pyrolysis-Derived Hollow Cofe-Nc@Cnt Electrocatalyst with Excellent Durability and Activity for Oxygen Reduction Reaction. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
499	Heteroatom Doping in Nanocarbon and Its Applications. <i>Advances in Material Research and Technology</i> , 2022, , 61-81.	0.3	2
500	Templating synthesis of porous carbons for energy-related applications: A review. <i>New Carbon Materials</i> , 2022, 37, 25-45.	2.9	25
501	Electrospinning research and products: The road and the way forward. <i>Applied Physics Reviews</i> , 2022, 9, .	5.5	50
502	Co/Ni dual-metal embedded in heteroatom doped porous carbon core-shell bifunctional electrocatalyst for rechargeable Zn-air batteries. <i>Materials Reports Energy</i> , 2022, 2, 100090.	1.7	0
503	Manganese Oxide/Iron Carbide Encapsulated in Nitrogen and Boron Codoped Carbon Nanowire Networks as Accelerated Alkaline Hydrogen Evolution and Oxygen Reduction Bifunctional Electrocatalysts. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 13280-13294.	4.0	22
505	Recent trends on electrochemical carbon-based nanosensors for sensitive assay of pesticides. <i>Trends in Environmental Analytical Chemistry</i> , 2022, 34, e00158.	5.3	25
506	An investigation of photoelectrocatalytic disinfection of water using titania nanotube photoanodes with carbon cathodes and determination of the radicals produced. <i>Applied Catalysis B: Environmental</i> , 2022, 311, 121339.	10.8	7

#	ARTICLE	IF	CITATIONS
507	Confinement Effects in Individual Carbon Encapsulated Nonprecious Metal-Based Electrocatalysts. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	35
508	Designing Self-Supported Electrocatalysts for Electrochemical Water Splitting: Surface/Interface Engineering toward Enhanced Electrocatalytic Performance. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 59593-59617.	4.0	58
509	Engineering single-atom catalysts toward biomedical applications. <i>Chemical Society Reviews</i> , 2022, 51, 3688-3734.	18.7	43
510	Carbon-based metal-free oxygen reduction reaction electrocatalysts: past, present and future. <i>New Carbon Materials</i> , 2022, 37, 338-354.	2.9	14
511	Carbon dots bridge NiO and Mn ₂ O ₃ as highly efficient bifunctional oxygen electrocatalysts for rechargeable zinc-air batteries. <i>Applied Surface Science</i> , 2022, 596, 153642.	3.1	8
512	Mechanism of oxygen reduction reaction on Ni/CNTs and Ni/X-CNTs (X=B, N, O) catalysts: a theoretical study. <i>Theoretical Chemistry Accounts</i> , 2022, 141, .	0.5	0
513	Role of activated carbons as metal-free catalysts. , 2022, , 245-265.		0
514	Tiny Ni Nanoparticles Embedded in Boron- and Nitrogen-Codoped Porous Carbon Nanowires for High-Efficiency Water Splitting. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 24447-24461.	4.0	24
515	Cobalt-embedded in ultrahigh boron and nitrogen codoped hierarchically porous carbon nanowires as excellent catalysts toward water splitting. <i>Chemical Engineering Journal</i> , 2022, 446, 137111.	6.6	21
516	Recent progresses of metal-organic framework-based materials in electrochemical energy storage. <i>Materials Today Sustainability</i> , 2022, 19, 100174.	1.9	4
517	Empirical analysis and recent advances in metal-organic framework-derived electrocatalysts for oxygen reduction, hydrogen and oxygen evolution reactions. <i>Materials Chemistry and Physics</i> , 2022, 289, 126438.	2.0	7
518	Direct Observation of Solvent Donor Number Effect on Lithium-Oxygen Battery Capacity via a Nanoarray Cathode Model. <i>Journal of Physical Chemistry C</i> , 0, , .	1.5	1
519	Circularly Polarized Luminescence Active Supramolecular Nanotubes Based on Pt(II) Complexes that Undergo Dynamic Morphological Transformation and Helicity Inversion. <i>Angewandte Chemie</i> , 0, , .	1.6	0
520	Circularly Polarized Luminescence Active Supramolecular Nanotubes Based on Pt ^{II} Complexes That Undergo Dynamic Morphological Transformation and Helicity Inversion. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	13
522	Exploring the structural dependence of metal-free carbon electrocatalysts on zinc-based metal-organic framework types. <i>Dalton Transactions</i> , 2022, 51, 11363-11371.	1.6	4
523	Electric Field Polarized Fe ^N Functionalized Graphene Oxide Nanosheet Catalyst for Efficient Oxygen Reduction Reaction. <i>ChemistrySelect</i> , 2022, 7, .	0.7	0
524	Metal-organic framework nanocrystal-derived hollow porous materials: Synthetic strategies and emerging applications. <i>Innovation(China)</i> , 2022, 3, 100281.	5.2	96
525	Synergetic Pt Atoms and Nanoparticles Anchored in Standing Carbon-Derived from Covalent Organic Frameworks for Catalyzing ORR. <i>Advanced Materials Interfaces</i> , 0, , 2201263.	1.9	4

#	ARTICLE	IF	CITATIONS
526	Graphdiyne supported single-atom cobalt catalyst for oxygen reduction reaction: The role of the co-adsorbates. <i>Chemical Physics Letters</i> , 2022, 804, 139805.	1.2	2
527	Non-precious transition metal single-atom catalysts for the oxygen reduction reaction: progress and prospects. <i>Nanoscale</i> , 2022, 14, 14322-14340.	2.8	29
528	Carbothermal redox reaction in constructing defective carbon as superior oxygen reduction catalysts. <i>Nanoscale</i> , 2022, 14, 14248-14254.	2.8	6
529	Fe _x Co _{3x} O ₄ Nanohybrids Anchored on a Carbon Matrix for High-Performance Oxygen Electrocatalysis in Alkaline Media. <i>ChemElectroChem</i> , 2022, 9, .	1.7	4
530	Co ₂ FeO ₄ @rGO composite: Towards trifunctional water splitting in alkaline media. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 33919-33937.	3.8	35
531	Transformation of postsynthesized F-MOF to Fe/N/F-tridoped carbon nanotubes as oxygen reduction catalysts for high power density Zn-air batteries. <i>Chinese Chemical Letters</i> , 2023, 34, 107860.	4.8	6
532	Covalent Organic Frameworks Based Single-site Electrocatalysts for Oxygen Reduction Reaction. <i>Chemical Research in Chinese Universities</i> , 0, , .	1.3	1
533	Carbon Surface Chemistry: New Insight into the Old Story. <i>Advanced Materials</i> , 2022, 34, .	11.1	43
534	Highly Efficient and Stable Bifunctional Electrocatalyst with Alloy/Oxide Heterostructures for a Rechargeable Zinc-Air Battery. <i>Energy & Fuels</i> , 2022, 36, 12816-12825.	2.5	5
535	Metal-organic frameworks derived Co/N-doped carbon nanonecklaces as high-efficient oxygen reduction reaction electrocatalysts. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 39133-39145.	3.8	7
536	The cathode catalysts of hydrogen fuel cell: From laboratory toward practical application. <i>Nano Research</i> , 2023, 16, 4365-4380.	5.8	10
537	Activated Single-Phase Ti ₄ O ₇ Nanosheets with Efficient Use of Precious Metal for Inspired Oxygen Reduction Reaction. <i>Chemistry - A European Journal</i> , 2022, 28, .	1.7	18
538	General Doping Chemistry of Carbon Materials. <i>ChemNanoMat</i> , 2023, 9, .	1.5	4
539	Exploring the underlying oxygen reduction reaction electrocatalytic activities of pyridinic-N and pyrrolic-N doped graphene quantum dots. <i>Molecular Catalysis</i> , 2023, 535, 112880.	1.0	3
540	Advances and challenges of methanol-tolerant oxygen reduction reaction electrocatalysts for the direct methanol fuel cell. <i>Journal of Energy Chemistry</i> , 2023, 77, 499-513.	7.1	28
541	Isometric Covalent Triazine Framework-Derived Porous Carbons as Metal-Free Electrocatalysts for the Oxygen Reduction Reaction. <i>ChemSusChem</i> , 2023, 16, .	3.6	6
542	Application of HTS in Green Hydrogen and Fuel Cells. <i>Nanostructure Science and Technology</i> , 2023, , 13-54.	0.1	0
543	Graphene used for energy conversion and storage by electrochemistry: A brief global overview. <i>Current Nanoscience</i> , 2022, 19, .	0.7	0

#	ARTICLE	IF	CITATIONS
544	Highly active conversion of CO ₂ to CO on AuCuB materials. Green Chemistry, 2023, 25, 1339-1344.	4.6	3
545	Synergistic effect on the improved lithium ion storage performance in the porous Fe ₂ O ₃ @Fe ₃ C@C composite. Materials Research Bulletin, 2023, 164, 112287.	2.7	4
546	Fe/N/S Co-doped Porous Carbon from the Co-processing Residue of Coal and Heavy Oil for an Efficient Oxygen Reduction Reaction. Industrial & Engineering Chemistry Research, 2023, 62, 2536-2547.	1.8	2
547	Size and structure tuning of FePt nanoparticles on hollow mesoporous carbon spheres as efficient catalysts for oxygen reduction reaction. Rare Metals, 2023, 42, 1865-1876.	3.6	7
548	Hypoxic tumor therapy based on free radicals. Materials Chemistry Frontiers, 0, , .	3.2	0
552	Catalytic Applications of Cerium-based Materials. , 2023, , 30-69.		0
555	Recent progress in the synthesis of transition metal nitride catalysts and their applications in electrocatalysis. Nanoscale, 2023, 15, 11777-11800.	2.8	21
560	Understanding the mechanism and synergistic interaction of cobalt-based electrocatalysts containing nitrogen-doped carbon for 4 e ⁻ ORR. Journal of Materials Chemistry A, 2023, 11, 10095-10124.	5.2	13
561	Self-supported transition metal chalcogenides for oxygen evolution. Nano Research, 2023, 16, 8684-8711.	5.8	19
568	Engineering carbon nanomaterials toward high-efficiency bioelectrocatalysis for enzymatic biofuel cells: a review. Materials Chemistry Frontiers, 2023, 7, 5806-5825.	3.2	2
577	Recent progress of antipoisoning catalytic materials for high temperature proton exchange membrane fuel cells doped with phosphoric acid. , 0, , .		0
580	Metal Deposition on Carbon Nanostructures. , 2023, , 1-41.		0
585	Single-atom catalysts for electrocatalytic oxygen reduction. , 2024, , 91-118.		0