

# High-Performance Electrocatalysts for Oxygen Reduction and Cobalt

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Citation Report

#	ARTICLE	IF	CITATIONS
12	Electrochemical performance of annealed cobalt-benzotriazole/CNTs catalysts towards the oxygen reduction reaction. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 21600.	1.3	176
13	Titanium nitride catalyst cathode in a air fuel cell with an acidic aqueous solution. <i>Chemical Communications</i> , 2011, 47, 10701.	2.2	70
14	Unveiling N-Protonation and Anion-Binding Effects on Fe/N/C Catalysts for O <sub>2</sub> Reduction in Proton-Exchange-Membrane Fuel Cells. <i>Journal of Physical Chemistry C</i> , 2011, 115, 16087-16097.	1.5	300
15	Effect of an Ammonia Treatment on Structure, Composition, and Oxygen Reduction Reaction Activity of Fe-N-C Catalysts. <i>Journal of Physical Chemistry C</i> , 2011, 115, 23417-23427.	1.5	137
16	Highly Durable Graphene Nanosheet Supported Iron Catalyst for Oxygen Reduction Reaction in PEM Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2011, 159, B86-B89.	1.3	52
17	Nitrogen-doped graphene nanosheet-supported non-precious iron nitride nanoparticles as an efficient electrocatalyst for oxygen reduction. <i>RSC Advances</i> , 2011, 1, 1349.	1.7	91
18	Polyelectrolyte-Functionalized Graphene as Metal-Free Electrocatalysts for Oxygen Reduction. <i>ACS Nano</i> , 2011, 5, 6202-6209.	7.3	672
19	Three-Dimensional Nitrogen-Doped Carbon Nanotubes/Graphene Structure Used as a Metal-Free Electrocatalyst for the Oxygen Reduction Reaction. <i>Journal of Physical Chemistry C</i> , 2011, 115, 24592-24597.	1.5	167
20	Recent progress in synergistic catalysis over heterometallic nanoparticles. <i>Journal of Materials Chemistry</i> , 2011, 21, 13705.	6.7	395
21	Mechanistic Discussion of the Oxygen Reduction Reaction at Nitrogen-Doped Carbon Nanotubes. <i>Journal of Physical Chemistry C</i> , 2011, 115, 20002-20010.	1.5	197
22	Fe-N-modified multi-walled carbon nanotubes for oxygen reduction reaction in acid. <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 21437.	1.3	72
23	From 1D to 3D Single-Crystal-to-Single-Crystal Structural Transformations Based on Linear Polyanion [Mn <sub>4</sub> (H <sub>2</sub> O) <sub>18</sub> ZnMn <sub>2</sub> (H <sub>2</sub> O) <sub>2</sub> (ZnW <sub>9</sub> O <sub>34</sub> ) <sub>2</sub> ] <sup>4-</sup> . <i>Inorganic Chemistry</i> , 2011, 50, 12387-12389.	1.9	28
24	Synthesis-structure-performance correlation for polyaniline-Me-C non-precious metal cathode catalysts for oxygen reduction in fuel cells. <i>Journal of Materials Chemistry</i> , 2011, 21, 11392.	6.7	545
25	In situ ion exchange preparation of Pt/carbon nanotubes electrode: Effect of two-step oxidation of carbon nanotubes. <i>Journal of Power Sources</i> , 2011, 196, 9955-9960.	4.0	11
26	Catalytic Activity for Oxygen Reduction Reaction on Tantalum Oxide-Based Compounds (1) Effect of Preparation Conditions of Thin Film Model Catalysts Using Reactive Sputtering Method on Oxygen Reduction Activity. <i>Nippon Kinzoku Gakkaishi/Journal of the Japan Institute of Metals</i> , 2011, 75, 545-551.	0.2	2
27	One-pot hybrid physical-chemical vapor deposition for formation of carbonaceous thin film with catalytic activity for oxygen reduction. <i>Electrochemistry Communications</i> , 2011, 13, 1451-1454.	2.3	13
28	Study of spillover effects with the rotating disk electrode. <i>Electrochimica Acta</i> , 2011, 58, 691-698.	2.6	13
29	A review on non-precious metal electrocatalysts for PEM fuel cells. <i>Energy and Environmental Science</i> , 2011, 4, 3167.	15.6	1,651

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30	Recent advances in catalysts for direct methanol fuel cells. <i>Energy and Environmental Science</i> , 2011, 4, 2736.	15.6	868
31	Heat-Treated Nonprecious Catalyst Using Fe and Nitrogen-Rich 2,3,7,8-Tetra(pyridin-2-yl)pyrazino[2,3- <i>g</i> ]quinoxaline Coordinated Complex for Oxygen Reduction Reaction in PEM Fuel Cells. <i>Journal of Physical Chemistry C</i> , 2011, 115, 18856-18862.	1.5	44
32	Nanoporous Graphitic-C <sub>3</sub> N <sub>4</sub> @Carbon Metal-Free Electrocatalysts for Highly Efficient Oxygen Reduction. <i>Journal of the American Chemical Society</i> , 2011, 133, 20116-20119.	6.6	958
33	Iron-based cathode catalyst with enhanced power density in polymer electrolyte membrane fuel cells. <i>Nature Communications</i> , 2011, 2, 416.	5.8	1,262
34	Metal Nitride/Graphene Nanohybrids: General Synthesis and Multifunctional Titanium Nitride/Graphene Electrocatalyst. <i>Advanced Materials</i> , 2011, 23, 5445-5450.	11.1	171
36	Nonprecious Metal Catalysts for Low-Cost Fuel Cells. <i>Angewandte Chemie - International Edition</i> , 2011, 50, 11570-11572.	7.2	184
37	Synthesis of nitrogen-doped onion-like carbon and its use in carbon-based CoFe binary non-precious-metal catalysts for oxygen-reduction. <i>Carbon</i> , 2011, 49, 3972-3982.	5.4	225
38	One-step route to a hybrid TiO <sub>2</sub> /Ti <sub>x</sub> W <sub>1-x</sub> N nanocomposite by in situ selective carbothermal nitridation. <i>Science and Technology of Advanced Materials</i> , 2012, 13, 035001.	2.8	8
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41	Nitrogen doping of graphene nanoflakes by thermal plasma as catalyst for oxygen reduction in Proton Exchange Membrane fuel cells. , 2012, , .		3
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45	Double-pillared cobalt Pacman complexes: synthesis, structures and oxygen reduction catalysis. <i>Dalton Transactions</i> , 2012, 41, 65-72.	1.6	46
46	Oxygen Electroreduction on PtCo <sub>3</sub> , PtCo and Pt <sub>3</sub> Co Alloy Nanoparticles for Alkaline and Acidic PEM Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2012, 159, B394-B405.	1.3	148
47	Graphyne As a Promising Metal-Free Electrocatalyst for Oxygen Reduction Reactions in Acidic Fuel Cells: A DFT Study. <i>Journal of Physical Chemistry C</i> , 2012, 116, 20472-20479.	1.5	105
48	Ordered Mesoporous Carbon Nitrides with Graphitic Frameworks as Metal-Free, Highly Durable, Methanol-Tolerant Oxygen Reduction Catalysts in an Acidic Medium. <i>Langmuir</i> , 2012, 28, 991-996.	1.6	138
49	Determination of Iron Active Sites in Pyrolyzed Iron-Based Catalysts for the Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2012, 2, 2761-2768.	5.5	133

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53	Dissolution of Platinum: Limits for the Deployment of Electrochemical Energy Conversion?. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 12613-12615.	7.2	352
54	DNA-Directed Growth of Pd Nanocrystals on Carbon Nanotubes towards Efficient Oxygen Reduction Reactions. <i>Chemistry - A European Journal</i> , 2012, 18, 15693-15698.	1.7	51
55	Controlled Preparation and Reactive Silver-Ion Sorption of Electrically Conductive Poly( <i>N</i> -butylaniline)-Lignosulfonate Composite Nanospheres. <i>Chemistry - A European Journal</i> , 2012, 18, 16571-16579.	1.7	17
56	1D Coaxial Platinum/Titanium Nitride Nanotube Arrays with Enhanced Electrocatalytic Activity for the Oxygen Reduction Reaction: Towards Li-Air Batteries. <i>ChemSusChem</i> , 2012, 5, 1712-1715.	3.6	40
57	High Electrocatalytic Performance of NH <sub>3</sub> -Activated Iron-Adsorbed Polyaniline for Oxygen Reduction Reactions. <i>Catalysis Letters</i> , 2012, 142, 1244-1250.	1.4	14
58	Wet chemical synthesis of nitrogen-doped graphene towards oxygen reduction electrocatalysts without high-temperature pyrolysis. <i>Journal of Materials Chemistry</i> , 2012, 22, 6575.	6.7	274
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66	First Principles Tafel Kinetics for Resolving Key Parameters in Optimizing Oxygen Electrocatalytic Reduction Catalyst. <i>Journal of Physical Chemistry C</i> , 2012, 116, 12696-12705.	1.5	81
67	DFT Study of Polyaniline and Metal Composites as Nonprecious Metal Catalysts for Oxygen Reduction in Fuel Cells. <i>Journal of Physical Chemistry C</i> , 2012, 116, 22737-22742.	1.5	39
68	PtCu <sub>3</sub> , PtCu and Pt <sub>3</sub> Cu Alloy Nanoparticle Electrocatalysts for Oxygen Reduction Reaction in Alkaline and Acidic Media. <i>Journal of the Electrochemical Society</i> , 2012, 159, B444-B454.	1.3	215
69	Controllable Synthesis of Highly Conductive Polyaniline Coated Silica Nanoparticles Using Self-Stabilized Dispersion Polymerization. <i>ACS Applied Materials &amp; Interfaces</i> , 2012, 4, 4603-4609.	4.0	44

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71	Fe/N/C Composite in Li <sup>44</sup> O <sub>2</sub> Battery: Studies of Catalytic Structure and Activity toward Oxygen Evolution Reaction. Journal of the American Chemical Society, 2012, 134, 16654-16661.	6.6	258
72	Using pyridine as nitrogen-rich precursor to synthesize Co-N-S/C non-noble metal electrocatalysts for oxygen reduction reaction. Applied Catalysis B: Environmental, 2012, 125, 197-205.	10.8	50
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74	Oxygen reduction on Pd nanoparticle/multi-walled carbon nanotube composites. Journal of Electroanalytical Chemistry, 2012, 666, 67-75.	1.9	47
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76	A novel non-precious metal catalyst synthesized via pyrolysis of polyaniline-coated tungsten carbide particles for oxygen reduction reaction. Journal of Power Sources, 2012, 219, 249-252.	4.0	15
77	Electrocatalysis of oxygen reduction reaction on polyaniline-derived nitrogen-doped carbon nanoparticle surfaces in alkaline media. Journal of Power Sources, 2012, 220, 306-316.	4.0	105
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80	Improved electrocatalytic effect of carbon nanomaterials by covalently anchoring with CoTAPP via diazonium salt reactions. Electrochemistry Communications, 2012, 22, 141-144.	2.3	43
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87	Instantaneous one-pot synthesis of Fe-N-modified graphene as an efficient electrocatalyst for the oxygen reduction reaction in acidic solutions. Chemical Communications, 2012, 48, 10213.	2.2	106
89	Oxygen reduction reactions on pure and nitrogen-doped graphene: a first-principles modeling. Nanoscale, 2012, 4, 417-420.	2.8	103

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90	Fabrication of poly(N-ethylaniline)/lignosulfonate composites and their carbon microspheres. <i>International Journal of Biological Macromolecules</i> , 2012, 51, 946-952.	3.6	13
91	Preparation of non-precious metal catalysts for PEMFC cathode from pyrolyzed vitamin B12. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 13755-13762.	3.8	25
92	Catalyst loading for Pt-nanowire thin film electrodes in PEFCs. <i>International Journal of Hydrogen Energy</i> , 2012, 37, 17892-17898.	3.8	41
93	Templated non-PGM cathode catalysts derived from iron and poly(ethyleneimine) precursors. <i>Applied Catalysis B: Environmental</i> , 2012, 127, 300-306.	10.8	81
94	Study on the oxygen adsorption property of nitrogen-containing metal-free carbon-based cathode catalysts for oxygen reduction reaction. <i>Electrochimica Acta</i> , 2012, 82, 291-295.	2.6	17
95	Templated bi-metallic non-PGM catalysts for oxygen reduction. <i>Electrochimica Acta</i> , 2012, 80, 213-218.	2.6	75
96	N-doped graphene/carbon composite as non-precious metal electrocatalyst for oxygen reduction reaction. <i>Electrochimica Acta</i> , 2012, 81, 313-320.	2.6	97
97	Carbon catalyst codoped with boron and nitrogen for oxygen reduction reaction in acid media. <i>Electrochimica Acta</i> , 2012, 85, 399-410.	2.6	23
98	The road from animal electricity to green energy: combining experiment and theory in electrocatalysis. <i>Energy and Environmental Science</i> , 2012, 5, 9246.	15.6	224
99	Iron phthalocyanine coated on single-walled carbon nanotubes composite for the oxygen reduction reaction in alkaline media. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 2557.	1.3	93
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102	Nitrogen-Doped Graphene/ZnSe Nanocomposites: Hydrothermal Synthesis and Their Enhanced Electrochemical and Photocatalytic Activities. <i>ACS Nano</i> , 2012, 6, 712-719.	7.3	260
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108	Reduction Reaction by Porphyrin-Based Catalysts for Fuel Cells. <i>Electrocatalysis</i> , 2012, 3, 238-251.	1.5	40

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110	Synthesis and Characterization of Palladium@Platinum Core@Shell Electrocatalysts for Oxygen Reduction. <i>Electrocatalysis</i> , 2012, 3, 298-303.	1.5	22
111	Self-Supporting Oxygen Reduction Electrocatalysts Made from a Nitrogen-Rich Network Polymer. <i>Journal of the American Chemical Society</i> , 2012, 134, 19528-19531.	6.6	370
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119	3D Nitrogen-Doped Graphene Aerogel-Supported Fe <sub>3</sub> O <sub>4</sub> Nanoparticles as Efficient Electrocatalysts for the Oxygen Reduction Reaction. <i>Journal of the American Chemical Society</i> , 2012, 134, 9082-9085.	6.6	1,967
120	An oxygen reduction electrocatalyst based on carbon nanotube@graphene complexes. <i>Nature Nanotechnology</i> , 2012, 7, 394-400.	15.6	1,533
121	Electrocatalyst approaches and challenges for automotive fuel cells. <i>Nature</i> , 2012, 486, 43-51.	13.7	4,828
122	Pyrolyzed Cobalt Corrole as a Potential Non-Precious Catalyst for Fuel Cells. <i>Advanced Functional Materials</i> , 2012, 22, 3500-3508.	7.8	97
123	Facile Synthesis of Manganese@Oxide@Containing Mesoporous Nitrogen-Doped Carbon for Efficient Oxygen Reduction. <i>Advanced Functional Materials</i> , 2012, 22, 4584-4591.	7.8	306
124	Recent Progress in Non-Precious Catalysts for Metal-Air Batteries. <i>Advanced Energy Materials</i> , 2012, 2, 816-829.	10.2	652
126	Edge@Plane@Rich Nitrogen@Doped Carbon Nanoneedles and Efficient Metal-Free Electrocatalysts. <i>Angewandte Chemie - International Edition</i> , 2012, 51, 7171-7175.	7.2	83
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129	Preparation of nitrogen-doped carbon nanotube arrays and their catalysis towards cathodic oxygen reduction in acidic and alkaline media. <i>Carbon</i> , 2012, 50, 2620-2627.	5.4	167
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131	N-doped carbon prepared by pyrolysis of dicyandiamide with various MeCl <sub>2</sub> ·xH <sub>2</sub> O (Me=Co, Fe, and Ni) composites: Effect of type and amount of metal seed on oxygen reduction reactions. <i>Applied Catalysis B: Environmental</i> , 2012, 119-120, 123-131.	10.8	71
132	Facile synthesis of highly dispersed palladium/polypyrrole nanocapsules for catalytic reduction of p-nitrophenol. <i>Journal of Colloid and Interface Science</i> , 2012, 379, 89-93.	5.0	84
133	A powerful approach to fabricate nitrogen-doped graphene sheets with high specific surface area. <i>Electrochemistry Communications</i> , 2012, 14, 39-42.	2.3	93
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140	A terracotta bio-battery. <i>Bioresource Technology</i> , 2012, 116, 86-91.	4.8	66
141	Stainless steel mesh supported nitrogen-doped carbon nanofibers for binder-free cathode in microbial fuel cells. <i>Biosensors and Bioelectronics</i> , 2012, 34, 282-285.	5.3	53
142	Carbon supported cobalt oxide nanoparticles-iron phthalocyanine as alternative cathode catalyst for oxygen reduction in microbial fuel cells. <i>Journal of Power Sources</i> , 2012, 208, 170-175.	4.0	108
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145	Spectroscopic characterization of Cobalt-Phthalocyanine electrocatalysts for fuel cell applications. <i>Solid State Ionics</i> , 2012, 216, 78-82.	1.3	29



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147	Brennstoffzellen ohne Edelmetallkatalysator. <i>Chemie in Unserer Zeit</i> , 2012, 46, 8-8.	0.1	0
148	Nitrogen-Enriched Core-Shell Structured Fe/Fe <sub>3</sub> C Nanorods as Advanced Electrocatalysts for Oxygen Reduction Reaction. <i>Advanced Materials</i> , 2012, 24, 1399-1404.	11.1	517
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151	Boron-doped electrocatalysts derived from carbon dioxide. <i>Journal of Materials Chemistry A</i> , 2013, 1, 8665.	5.2	38
152	One-step chemical reduction of graphene oxide with oligothiophene for improved electrocatalytic oxygen reduction reactions. <i>Carbon</i> , 2013, 61, 164-172.	5.4	70
153	Can Boron and Nitrogen Co-doping Improve Oxygen Reduction Reaction Activity of Carbon Nanotubes?. <i>Journal of the American Chemical Society</i> , 2013, 135, 1201-1204.	6.6	855
154	Nitrogen-Doped Carbon with Mesopore Confinement Efficiently Enhances the Tolerance, Sensitivity, and Stability of a Pt Catalyst for the Oxygen Reduction Reaction. <i>Particle and Particle Systems Characterization</i> , 2013, 30, 864-872.	1.2	27
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157	Fluorine-Doped Carbon Blacks: Highly Efficient Metal-Free Electrocatalysts for Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2013, 3, 1726-1729.	5.5	337
158	Recent progress in non-precious metal catalysts for PEM fuel cell applications. <i>Canadian Journal of Chemical Engineering</i> , 2013, 91, 1881-1895.	0.9	71
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162	Enhancement of electrocatalytic activity for oxygen reduction reaction in alkaline and acid media from electrospun nitrogen-doped carbon nanofibers by surface modification. <i>RSC Advances</i> , 2013, 3, 15655.	1.7	32
163	Edge-Selectively Sulfurized Graphene Nanoplatelets as Efficient Metal-Free Electrocatalysts for Oxygen Reduction Reaction: The Electron Spin Effect. <i>Advanced Materials</i> , 2013, 25, 6138-6145.	11.1	537

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166	Interconnected Pt-Nanodendrite/DNA/Reduced-Graphene-Oxide Hybrid Showing Remarkable Oxygen Reduction Activity and Stability. <i>ACS Nano</i> , 2013, 7, 9223-9231.	7.3	79
167	A density functional theory study of oxygen reduction reaction on Me <sup>+</sup> N <sub>4</sub> (Me = Fe, Co, or Ni) clusters between graphitic pores. <i>Journal of Materials Chemistry A</i> , 2013, 1, 10790.	5.2	253
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169	In situ study of the catalytic mechanism for the oxygen reduction reaction on a polypyrrole modified carbon supported cobalt hydroxide cathode in direct borohydride fuel cells. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 9070-9074.	1.3	8
170	Fe <sup>+</sup> N <sup>+</sup> -carbon black for the oxygen reduction reaction in sulfuric acid. <i>Carbon</i> , 2013, 57, 443-451.	5.4	92
171	Hierarchical interconnected macro-/mesoporous Co-containing N-doped carbon for efficient oxygen reduction reactions. <i>Journal of Materials Chemistry A</i> , 2013, 1, 12074.	5.2	59
172	Phosphorus-doped porous carbons as efficient electrocatalysts for oxygen reduction. <i>Journal of Materials Chemistry A</i> , 2013, 1, 9889.	5.2	223
173	A Class of High Performance Metal-Free Oxygen Reduction Electrocatalysts based on Cheap Carbon Blacks. <i>Scientific Reports</i> , 2013, 3, 2505.	1.6	160
174	Enhanced electrochemical catalytic activity by copper oxide grown on nitrogen-doped reduced graphene oxide. <i>Journal of Materials Chemistry A</i> , 2013, 1, 13179.	5.2	105
175	Noncovalent hybrid of CoMn <sub>2</sub> O <sub>4</sub> spinel nanocrystals and poly (diallyldimethylammonium chloride) functionalized carbon nanotubes as efficient electrocatalysts for oxygen reduction reaction. <i>Carbon</i> , 2013, 65, 277-286.	5.4	80
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178	Porous nitrogen-doped carbon nanofibers as highly efficient metal-free electrocatalyst for oxygen reduction reaction. <i>Journal of Electroanalytical Chemistry</i> , 2013, 702, 56-59.	1.9	30
179	The impact of chloride ions and the catalyst loading on the reduction of H <sub>2</sub> O <sub>2</sub> on high-surface-area platinum catalysts. <i>Electrochimica Acta</i> , 2013, 110, 790-795.	2.6	34
180	Ordered mesoporous porphyrinic carbons with very high electrocatalytic activity for the oxygen reduction reaction. <i>Scientific Reports</i> , 2013, 3, 2715.	1.6	282
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186	Doped-carbon electrocatalysts with trimodal porosity from a homogeneous polypeptide gel. <i>Journal of Materials Chemistry A</i> , 2013, 1, 13576.	5.2	51
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188	Theoretical predictions for hexagonal BN based nanomaterials as electrocatalysts for the oxygen reduction reaction. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 2809.	1.3	95
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206	A class of carbon supported transition metal@nitrogen complex catalysts for dye-sensitized solar cells. <i>Journal of Materials Chemistry A</i> , 2013, 1, 1475-1480.	5.2	17
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208	Graphene sheets fabricated from disposable paper cups as a catalyst support material for fuel cells. <i>Journal of Materials Chemistry A</i> , 2013, 1, 183-187.	5.2	49
209	Probing carbon edge exposure of iron phthalocyanine-based oxygen reduction catalysts by soft X-ray absorption spectroscopy. <i>Journal of Power Sources</i> , 2013, 223, 30-35.	4.0	18
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215	Physical Chemistry Research Toward Proton Exchange Membrane Fuel Cell Advancement. <i>Journal of Physical Chemistry Letters</i> , 2013, 4, 393-401.	2.1	36
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225	A Highly Efficient Electrocatalyst for the Oxygen Reduction Reaction: N <sup>o</sup> -Doped Ketjenblack Incorporated into Fe/Fe <sub>3</sub> C <sup>o</sup> -Functionalized Melamine Foam. Angewandte Chemie - International Edition, 2013, 52, 1026-1030.	7.2	324
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240	Stability of iron species in heat-treated polyaniline-iron-carbon polymer electrolyte fuel cell cathode catalysts. <i>Electrochimica Acta</i> , 2013, 110, 282-291.	2.6	138
241	An all cis-polyaniline nanotube film: Facile synthesis and applications. <i>Electrochimica Acta</i> , 2013, 99, 38-45.	2.6	16
242	Carbonaceous thin film coated on nanoparticle as fuel cell catalyst formed by one-pot hybrid physical-chemical vapor deposition of iron phthalocyanine. <i>Electrochimica Acta</i> , 2013, 90, 366-374.	2.6	10
243	Tri-metallic transition metal-nitrogen-carbon catalysts derived by sacrificial support method synthesis. <i>Electrochimica Acta</i> , 2013, 109, 433-439.	2.6	71
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245	Cobalt selenide electrocatalyst supported by nitrogen-doped carbon and its stable activity toward oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2013, 38, 5655-5664.	3.8	36
246	Nitrogen-Doped Fullerene as a Potential Catalyst for Hydrogen Fuel Cells. <i>Journal of the American Chemical Society</i> , 2013, 135, 3315-3318.	6.6	167
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278	Metal-Free Electrocatalysts for Oxygen Reduction. <i>Lecture Notes in Energy</i> , 2013, , 375-389.	0.2	3
279	Non-Pt Cathode Electrocatalysts for Anion-Exchange-Membrane Fuel Cells. <i>Lecture Notes in Energy</i> , 2013, , 437-481.	0.2	2
280	Dealloyed Pt-Based Core-Shell Catalysts for Oxygen Reduction. <i>Lecture Notes in Energy</i> , 2013, , 533-560.	0.2	6
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302	Evaluating the interfacial reaction kinetics of the bipolar membrane interface in the bipolar membrane fuel cell. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 11217.	1.3	15
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309	A solid-state NMR study of the carbonization of polyaniline. <i>Carbon</i> , 2013, 55, 160-167.	5.4	36
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455	Electrodeposited Ultrafine TaOx/CB Catalysts for PEFC Cathode Application: Their Oxygen Reduction Reaction Kinetics. <i>Electrochimica Acta</i> , 2014, 149, 76-85.	2.6	17
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468	Hollow nitrogen-doped carbon spheres as efficient and durable electrocatalysts for oxygen reduction. <i>Chemical Communications</i> , 2014, 50, 9473-9476.	2.2	88
469	Fe-N/C catalysts synthesized by heat-treatment of iron triazine carboxylic acid derivative complex for oxygen reduction reaction. <i>RSC Advances</i> , 2014, 4, 12168.	1.7	38
470	A high-performance electrocatalytic air cathode derived from aniline and iron for use in microbial fuel cells. <i>RSC Advances</i> , 2014, 4, 12789-12794.	1.7	11
471	Particle size dependence on oxygen reduction reaction activity of electrodeposited TaO <sub>x</sub> catalysts in acidic media. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 895-898.	1.3	39
472	Bioinspired copper catalyst effective for both reduction and evolution of oxygen. <i>Nature Communications</i> , 2014, 5, 5285.	5.8	202
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474	DFT study of the oxygen reduction reaction on iron, cobalt and manganese macrocycle active sites. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 21538-21546.	3.8	28
475	Non-precious metal electrocatalysts with high activity for hydrogen oxidation reaction in alkaline electrolytes. <i>Energy and Environmental Science</i> , 2014, 7, 1719-1724.	15.6	276
476	Well-defined carbon polyhedrons prepared from nano metal-organic frameworks for oxygen reduction. <i>Journal of Materials Chemistry A</i> , 2014, 2, 11606-11613.	5.2	461
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479	Ionic liquid derived carbons as highly efficient oxygen reduction catalysts: first elucidation of pore size distribution dependent kinetics. <i>Chemical Communications</i> , 2014, 50, 1469-1471.	2.2	49
480	Synthesis and oxygen reduction properties of three-dimensional sulfur-doped graphene networks. <i>Chemical Communications</i> , 2014, 50, 6382.	2.2	126
481	An animal liver derived non-precious metal catalyst for oxygen reduction with high activity and stability. <i>RSC Advances</i> , 2014, 4, 32811.	1.7	37
482	Cobalt and nitrogen co-embedded onion-like mesoporous carbon vesicles as efficient catalysts for oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2014, 2, 11672.	5.2	112
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488	Fabrication of iron-doped cobalt oxide nanocomposite films by electrodeposition and application as electrocatalyst for oxygen reduction reaction. <i>Applied Surface Science</i> , 2014, 320, 73-82.	3.1	30
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491	Electrocatalysis of oxygen reduction on carbon nanotubes with different surface functional groups in acid and alkaline solutions. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 16964-16975.	3.8	29
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501	Small palladium islands embedded in palladium-tungsten bimetallic nanoparticles form catalytic hotspots for oxygen reduction. <i>Nature Communications</i> , 2014, 5, 5253.	5.8	77
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509	Phosphate-Tolerant Oxygen Reduction Catalysts. <i>ACS Catalysis</i> , 2014, 4, 3193-3200.	5.5	116
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527	CNTs@Fe <sup>x</sup> /N-C core-shell nanostructures as active electrocatalyst for oxygen reduction. <i>Journal of Materials Chemistry A</i> , 2014, 2, 11768.	5.2	47
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530	Recent advances of doped carbon as non-precious catalysts for oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2014, 2, 15704-15716.	5.2	107
531	Polyaniline nanosheet derived B/N co-doped carbon nanosheets as efficient metal-free catalysts for oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2014, 2, 7742.	5.2	124
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566	Highâ€Rate Oxygen Electroreduction over Graphiticâ€N Species Exposed on 3D Hierarchically Porous Nitrogenâ€Doped Carbons. Angewandte Chemie - International Edition, 2014, 53, 9503-9507.	7.2	355
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601	A density functional theory study of oxygen reduction reaction on non-PGM Fe-N-C electrocatalysts. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 13800.	1.3	170
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786	Oxygen Reduction Nanocomposite Electrocatalysts Based on Polyindole, Cobalt, and Acetylene Black. <i>Theoretical and Experimental Chemistry</i> , 2015, 50, 371-377.	0.2	3
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789	Effect of Doping with Nickel Ions on the Electrical Properties of Poly(aniline-co-o-anthranilic acid) and Doped Copolymer as Precursor of NiO Nanoparticles. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , 2015, 25, 955-963.	1.9	27
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792	Doped Nanostructured Carbon Materials as Catalysts. <i>RSC Catalysis Series</i> , 2015, , 268-311.	0.1	3
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837	Highly efficient oxygen reduction on porous nitrogen-doped nanocarbons directly synthesized from cellulose nanocrystals and urea. <i>Electrochimica Acta</i> , 2015, 170, 234-241.	2.6	34
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1201	Optimization of a Fe-N-C electrocatalyst supported on mesoporous carbon functionalized with polypyrrole for oxygen reduction reaction under both alkaline and acidic conditions. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 19610-19628.	3.8	34
1202	Evidences of the presence of different types of active sites for the oxygen reduction reaction with Fe/N/C based catalysts. <i>Journal of Power Sources</i> , 2016, 327, 204-211.	4.0	28
1203	Non-precious Mn <sub>1.5</sub> Co <sub>1.5</sub> O <sub>4</sub> ·xFeN <sub>x</sub> /C nanocomposite as a synergistic catalyst for oxygen reduction in alkaline media. <i>RSC Advances</i> , 2016, 6, 69167-69176.	1.7	4
1204	Reactive Multifunctional Template-Induced Preparation of Fe-N-Doped Mesoporous Carbon Microspheres Towards Highly Efficient Electrocatalysts for Oxygen Reduction. <i>Advanced Materials</i> , 2016, 28, 7948-7955.	11.1	342
1205	Electrospun Nitrogen-Doped Carbon Nanofibers Encapsulating Cobalt Nanoparticles as Efficient Oxygen Reduction Reaction Catalysts. <i>ChemElectroChem</i> , 2016, 3, 1437-1445.	1.7	35
1206	A high performance non-noble metal electrocatalyst for the oxygen reduction reaction derived from a metal organic framework. <i>Chinese Journal of Catalysis</i> , 2016, 37, 1127-1133.	6.9	17

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1208	Investigation of the durability of a poly-p-phenylenediamine/carbon black composite for the oxygen reduction reaction. <i>Chinese Journal of Catalysis</i> , 2016, 37, 1096-1102.	6.9	7
1209	Key Structural Kinetics for Carbon Effects on the Performance and Durability of Pt/Carbon Cathode Catalysts in Polymer Electrolyte Fuel Cells Characterized by In Situ Time-Resolved X-ray Absorption Fine Structure. <i>Journal of Physical Chemistry C</i> , 2016, 120, 24250-24264.	1.5	21
1210	Cu <sub>2</sub> ZnSnS <sub>4</sub> Nanocrystals as Highly Active and Stable Electrocatalysts for the Oxygen Reduction Reaction. <i>Journal of Physical Chemistry C</i> , 2016, 120, 24265-24270.	1.5	17
1211	Highly doped and exposed Cu(i) N active sites within graphene towards efficient oxygen reduction for zinc-air batteries. <i>Energy and Environmental Science</i> , 2016, 9, 3736-3745.	15.6	374
1212	Optimization of the Pd-Fe-Mo Catalysts for Oxygen Reduction Reaction in Proton-Exchange Membrane Fuel Cells. <i>Electrochimica Acta</i> , 2016, 220, 29-35.	2.6	22
1213	Charting the Outer Helmholtz Plane and the Role of Nitrogen Doping in the Oxygen Reduction Reaction Conducted in Alkaline Media Using Nonprecious Metal Catalysts. <i>Journal of Physical Chemistry C</i> , 2016, 120, 24511-24520.	1.5	5
1214	A metal-organic framework-derived bifunctional oxygen electrocatalyst. <i>Nature Energy</i> , 2016, 1, .	19.8	1,974
1215	Performance of Fe-N/C Oxygen Reduction Electrocatalysts toward NO <sub>2</sub> <sup>+</sup> , NO, and NH <sub>2</sub> OH Electroreduction: From Fundamental Insights into the Active Center to a New Method for Environmental Nitrite Destruction. <i>Journal of the American Chemical Society</i> , 2016, 138, 16056-16068.	6.6	111
1216	Heat treated carbon supported iron(ii)phthalocyanine oxygen reduction catalysts: elucidation of the structure-activity relationship using X-ray absorption spectroscopy. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 33142-33151.	1.3	39
1217	Co-generation of hydrogen and power/current pulses from supercapacitive MFCs using novel HER iron-based catalysts. <i>Electrochimica Acta</i> , 2016, 220, 672-682.	2.6	31
1218	In situ integration of CoFe alloy nanoparticles with nitrogen-doped carbon nanotubes as advanced bifunctional cathode catalysts for Zn-air batteries. <i>Nanoscale</i> , 2016, 8, 20048-20055.	2.8	122
1219	A comparative DFT study of oxygen reduction reaction on mononuclear and binuclear cobalt and iron phthalocyanines. <i>Russian Journal of Physical Chemistry A</i> , 2016, 90, 2413-2417.	0.1	14
1220	An advanced electrocatalyst of Pt decorated SnO <sub>2</sub> /C nanofibers for oxygen reduction reaction. <i>Journal of Electroanalytical Chemistry</i> , 2016, 781, 198-203.	1.9	19
1221	Resolving Electrode Morphology's Impact on Platinum Group Metal-Free Cathode Performance Using Nano-CT of 3D Hierarchical Pore and Ionomer Distribution. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 32764-32777.	4.0	99
1222	Probing the electro-catalytic ORR activity of cobalt-incorporated nitrogen-doped CNTs. <i>Journal of Catalysis</i> , 2016, 344, 455-464.	3.1	36
1223	Dynamic Fluctuation in Heat Treatment Time Dependence of Activity and Reaction Kinetics of Active Centers in Fe/N/C Oxygen Reduction Reaction Catalyst. <i>ChemistrySelect</i> , 2016, 1, 5440-5444.	0.7	2
1224	Identification of catalytic sites for oxygen reduction and oxygen evolution in N-doped graphene materials: Development of highly efficient metal-free bifunctional electrocatalyst. <i>Science Advances</i> , 2016, 2, e1501122.	4.7	1,078

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1226	A nitrogen-doped ordered mesoporous carbon/graphene framework as bifunctional electrocatalyst for oxygen reduction and evolution reactions. <i>Nano Energy</i> , 2016, 30, 503-510.	8.2	140
1227	Critical role of intercalated water for electrocatalytically active nitrogen-doped graphitic systems. <i>Science Advances</i> , 2016, 2, e1501178.	4.7	36
1228	A General Approach to Preferential Formation of Active Feâ€‘N <sub>x</sub> Sites in Feâ€‘N/C Electrocatalysts for Efficient Oxygen Reduction Reaction. <i>Journal of the American Chemical Society</i> , 2016, 138, 15046-15056.	6.6	663
1229	Heteroatom Polymer-Derived 3D High-Surface-Area and Mesoporous Graphene Sheet-Like Carbon for Supercapacitors. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 30212-30224.	4.0	61
1230	Identification of carbon-encapsulated iron nanoparticles as active species in non-precious metal oxygen reduction catalysts. <i>Nature Communications</i> , 2016, 7, 12582.	5.8	261
1231	Rational design of common transition metal-nitrogen-carbon catalysts for oxygen reduction reaction in fuel cells. <i>Nano Energy</i> , 2016, 30, 443-449.	8.2	114
1232	High-performance oxygen reduction catalyst derived from porous, nitrogen-doped carbon nanosheets. <i>Nanotechnology</i> , 2016, 27, 405401.	1.3	9
1233	Insight into the different ORR catalytic activity of Fe/N/C between acidic and alkaline media: Protonation of pyridinic nitrogen. <i>Electrochemistry Communications</i> , 2016, 73, 71-74.	2.3	116
1234	In situ electrochemical quantification of active sites in Feâ€‘N/C non-precious metal catalysts. <i>Nature Communications</i> , 2016, 7, 13285.	5.8	349
1235	Nanoporous Graphene Enriched with Fe/Coâ€‘N Active Sites as a Promising Oxygen Reduction Electrocatalyst for Anion Exchange Membrane Fuel Cells. <i>Advanced Functional Materials</i> , 2016, 26, 2150-2162.	7.8	305
1236	Recent Progress in Cobaltâ€‘Based Heterogeneous Catalysts for Electrochemical Water Splitting. <i>Advanced Materials</i> , 2016, 28, 215-230.	11.1	2,083
1237	Directed Growth of Metalâ€‘Organic Frameworks and Their Derived Carbonâ€‘Based Network for Efficient Electrocatalytic Oxygen Reduction. <i>Advanced Materials</i> , 2016, 28, 2337-2344.	11.1	448
1238	A Highly Efficient Metalâ€‘Free Oxygen Reduction Electrocatalyst Assembled from Carbon Nanotubes and Graphene. <i>Advanced Materials</i> , 2016, 28, 4606-4613.	11.1	216
1239	Interacting Carbon Nitride and Titanium Carbide Nanosheets for Highâ€‘Performance Oxygen Evolution. <i>Angewandte Chemie</i> , 2016, 128, 1150-1154.	1.6	96
1240	Pomegranateâ€‘Inspired Design of Highly Active and Durable Bifunctional Electrocatalysts for Rechargeable Metalâ€‘Air Batteries. <i>Angewandte Chemie</i> , 2016, 128, 5061-5066.	1.6	20
1241	Cobaltâ€‘Nanocrystalâ€‘Assembled Hollow Nanoparticles for Electrocatalytic Hydrogen Generation from Neutralâ€‘pH Water. <i>Angewandte Chemie</i> , 2016, 128, 6837-6841.	1.6	14
1242	Pyrolysis of Animal Bones with Vitamin B12: A Facile Route to Efficient Transition Metalâ€‘Nitrogenâ€‘Carbon (TMâ€‘Nâ€‘C) Electrocatalysts for Oxygen Reduction. <i>Chemistry - A European Journal</i> , 2016, 22, 2896-2901.	1.7	45



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1245	Catalytic Transfer Hydrogenation of Furfural to Furfuryl Alcohol over Nitrogenâ€Doped Carbonâ€Supported Iron Catalysts. ChemSusChem, 2016, 9, 1339-1347.	3.6	144
1246	Nitrogenâ€Doped Porous Carbon Nanosheets Templated from gâ€C<sub>3</sub>N<sub>4</sub> as Metalâ€Free Electrocatalysts for Efficient Oxygen Reduction Reaction. Advanced Materials, 2016, 28, 5080-5086.	11.1	718
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1248	Engineering Multimetallic Nanocrystals for Highly Efficient Oxygen Reduction Catalysts. Advanced Energy Materials, 2016, 6, 1600236.	10.2	108
1249	Interacting Carbon Nitride and Titanium Carbide Nanosheets for Highâ€Performance Oxygen Evolution. Angewandte Chemie - International Edition, 2016, 55, 1138-1142.	7.2	597
1250	Investigation of Oxygen Reduction Activity of Catalysts Derived from Co and Co/Zn Methylâ€imidazolate Frameworks in Proton Exchange Membrane Fuel Cells. ChemElectroChem, 2016, 3, 1541-1545.	1.7	47
1251	Determination of the Electron Transfer Number for the Oxygen Reduction Reaction: From Theory to Experiment. ACS Catalysis, 2016, 6, 4720-4728.	5.5	513
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1253	Structural and mechanistic basis for the high activity of Feâ€Nâ€C catalysts toward oxygen reduction. Energy and Environmental Science, 2016, 9, 2418-2432.	15.6	472
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1256	Vanadium carbide nanoparticles encapsulated in graphitic carbon network nanosheets: A high-efficiency electrocatalyst for hydrogen evolution reaction. Nano Energy, 2016, 26, 603-609.	8.2	120
1257	Manganous oxide nanoparticles encapsulated in few-layer carbon as an efficient electrocatalyst for oxygen reduction in alkaline media. Journal of Materials Chemistry A, 2016, 4, 11775-11781.	5.2	27
1258	A low cost, disposable cable-shaped Alâ€air battery for portable biosensors. Journal of Micromechanics and Microengineering, 2016, 26, 055011.	1.5	19
1259	An Feâ€Nâ€C hybrid electrocatalyst derived from a bimetalâ€organic framework for efficient oxygen reduction. Journal of Materials Chemistry A, 2016, 4, 11357-11364.	5.2	142
1260	Covalent versus Charge Transfer Modification of Graphene/Carbon-Nanotubes with Vitamin B1: Co/N/Sâ€C Catalyst toward Excellent Oxygen Reduction. ACS Applied Materials & Interfaces, 2016, 8, 16045-16052.	4.0	31

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1262	A Fe-N-C catalyst with highly dispersed iron in carbon for oxygen reduction reaction and its application in direct methanol fuel cells. <i>Chinese Journal of Catalysis</i> , 2016, 37, 539-548.	6.9	36
1263	Fe/N/C catalyst with high activity for oxygen reduction reaction derived from surfactant modified porous carbon-supported melamine-formaldehyde resin. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 11090-11098.	3.8	20
1264	Ultra-small Fe <sub>2</sub> N nanocrystals embedded into mesoporous nitrogen-doped graphitic carbon spheres as a highly active, stable, and methanol-tolerant electrocatalyst for the oxygen reduction reaction. <i>Nano Energy</i> , 2016, 24, 121-129.	8.2	131
1265	Metal-organic framework-derived hybrid of Fe <sub>3</sub> C nanorod-encapsulated, N-doped CNTs on porous carbon sheets for highly efficient oxygen reduction and water oxidation. <i>Catalysis Science and Technology</i> , 2016, 6, 6365-6371.	2.1	63
1266	Effect of External Electric Fields on the Multifunctional Applications of Graphene. , 2016, , 253-272.		0
1267	Nitrogen-doped activated graphene/SWCNT hybrid for oxygen reduction reaction. <i>Current Applied Physics</i> , 2016, 16, 1242-1249.	1.1	17
1268	A reactive-template strategy for high yield synthesis of N-doped graphene and its modification by introduction of cobalt species for significantly enhanced oxygen reduction reaction. <i>Electrochimica Acta</i> , 2016, 210, 328-336.	2.6	32
1269	Facile synthesis of N-doped carbon nanosheet-encased cobalt nanoparticles as efficient oxygen reduction catalysts in alkaline and acidic media. <i>Ionics</i> , 2016, 22, 2203-2212.	1.2	14
1270	Nonprecious Bimetallic (Fe,Mo)-N/C Catalyst for Efficient Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2016, 6, 4449-4454.	5.5	127
1271	Facile electrochemical polymerization of polypyrrole film applied as cathode material in dual rotating disk photo fuel cell. <i>Journal of Power Sources</i> , 2016, 324, 368-377.	4.0	22
1272	A Bonded Double-Doped Graphene Nanoribbon Framework for Advanced Electrocatalysis. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 16649-16655.	4.0	13
1273	Recent advances in Pt-based octahedral nanocrystals as high performance fuel cell catalysts. <i>Journal of Materials Chemistry A</i> , 2016, 4, 11559-11581.	5.2	54
1274	The particle size effect of N-doped mesoporous carbons as oxygen reduction reaction catalysts for PEMFC. <i>Korean Journal of Chemical Engineering</i> , 2016, 33, 1831-1836.	1.2	9
1275	Tolerance of non-platinum group metals cathodes proton exchange membrane fuel cells to air contaminants. <i>Journal of Power Sources</i> , 2016, 324, 556-571.	4.0	34
1276	Emerging new generation electrocatalysts for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2016, 4, 11156-11178.	5.2	174
1277	Synthesis of hollow porous ZnCo <sub>2</sub> O <sub>4</sub> microspheres as high-performance oxygen reduction reaction electrocatalyst. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 13024-13031.	3.8	28
1278	Single-atom dispersed Co-N-C catalyst: structure identification and performance for hydrogenative coupling of nitroarenes. <i>Chemical Science</i> , 2016, 7, 5758-5764.	3.7	571

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1280	Catalytic properties of graphitic and pyridinic nitrogen doped on carbon black for oxygen reduction reaction. <i>Chinese Journal of Catalysis</i> , 2016, 37, 1119-1126.	6.9	68
1281	Phosphorus and cobalt co-doped reduced graphene oxide bifunctional electrocatalyst for oxygen reduction and evolution reactions. <i>RSC Advances</i> , 2016, 6, 64155-64164.	1.7	18
1282	Monodisperse cobalt sulfides embedded within nitrogen-doped carbon nanoflakes: an efficient and stable electrocatalyst for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2016, 4, 11342-11350.	5.2	85
1283	Performance analysis of Fe-N-C catalyst for DMFC cathodes: Effect of water saturation in the cathodic catalyst layer. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 22605-22618.	3.8	42
1284	Bimodal Porous Iron/Nitrogen-Doped Highly Crystalline Carbon Nanostructure as a Cathode Catalyst for the Oxygen Reduction Reaction in an Acid Medium. <i>ACS Catalysis</i> , 2016, 6, 5095-5102.	5.5	70
1285	Graphitic Nanoshell/Mesoporous Carbon Nanohybrids as Highly Efficient and Stable Bifunctional Oxygen Electrocatalysts for Rechargeable Aqueous Na-Air Batteries. <i>Advanced Energy Materials</i> , 2016, 6, 1501794.	10.2	120
1286	A Versatile Iron-Tannin Framework Ink Coating Strategy to Fabricate Biomass-Derived Iron Carbide/Fe-N-Carbon Catalysts for Efficient Oxygen Reduction. <i>Angewandte Chemie - International Edition</i> , 2016, 55, 1355-1359.	7.2	216
1287	Porous Core-Shell Fe <sub>3</sub> C Embedded N-doped Carbon Nanofibers as an Effective Electrocatalysts for Oxygen Reduction Reaction. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 4118-4125.	4.0	256
1288	The influence of pore size distribution on the oxygen reduction reaction performance in nitrogen doped carbon microspheres. <i>Journal of Materials Chemistry A</i> , 2016, 4, 2581-2589.	5.2	195
1289	Nitrogen-doped graphene/CoNi alloy encased within bamboo-like carbon nanotube hybrids as cathode catalysts in microbial fuel cells. <i>Journal of Power Sources</i> , 2016, 307, 561-568.	4.0	128
1290	Efficient oxygen electroreduction over ordered mesoporous Co-N-doped carbon derived from cobalt porphyrin. <i>RSC Advances</i> , 2016, 6, 15167-15174.	1.7	28
1291	Synergistic effect between strongly coupled CoAl layered double hydroxides and graphene for the electrocatalytic reduction of oxygen. <i>Electrochimica Acta</i> , 2016, 192, 196-204.	2.6	28
1292	Microscale measurements of oxygen concentration across the thickness of diffusion media in operating polymer electrolyte fuel cells. <i>Journal of Power Sources</i> , 2016, 306, 674-684.	4.0	17
1293	Carbon nanocomposite catalysts for oxygen reduction and evolution reactions: From nitrogen doping to transition-metal addition. <i>Nano Energy</i> , 2016, 29, 83-110.	8.2	650
1294	Synergistic incorporation of hybrid heterobimetal-nitrogen atoms into carbon structures for superior oxygen electroreduction performance. <i>Catalysis Science and Technology</i> , 2016, 6, 2085-2091.	2.1	12
1295	Mesoporous NiCo <sub>2</sub> O <sub>4</sub> Nanoplates on Three-Dimensional Graphene Foam as an Efficient Electrocatalyst for the Oxygen Reduction Reaction. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 28274-28282.	4.0	100
1296	N-Co-O Triply Doped Highly Crystalline Porous Carbon: An Acid-Proof Nonprecious Metal Oxygen Evolution Catalyst. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 3535-3542.	4.0	16

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1298	Three-dimensional (3D) interconnected networks fabricated via in-situ growth of N-doped graphene/carbon nanotubes on Co-containing carbon nanofibers for enhanced oxygen reduction. <i>Nano Research</i> , 2016, 9, 317-328.	5.8	70
1299	Towards Effective Utilization of Nitrogen-Containing Active Sites: Nitrogen-doped Carbon Layers Wrapped CNTs Electrocatalysts for Superior Oxygen Reduction. <i>Electrochimica Acta</i> , 2016, 187, 153-160.	2.6	56
1300	Highly efficient nonprecious metal catalysts towards oxygen reduction reaction based on three-dimensional porous carbon nanostructures. <i>Chemical Society Reviews</i> , 2016, 45, 517-531.	18.7	800
1301	Oxygen-reduction reaction strongly electrocatalyzed by Pt electrodeposited onto graphene or graphene nanoribbons. <i>Journal of Power Sources</i> , 2016, 302, 247-258.	4.0	53
1302	A hybrid-assembly approach towards nitrogen-doped graphene aerogel supported cobalt nanoparticles as high performance oxygen reduction electrocatalysts. <i>Journal of Colloid and Interface Science</i> , 2016, 464, 83-88.	5.0	27
1303	High-performance non-spinel cobalt-manganese mixed oxide-based bifunctional electrocatalysts for rechargeable zinc-air batteries. <i>Nano Energy</i> , 2016, 20, 315-325.	8.2	187
1304	Recovery of Polymer Electrolyte Fuel Cell exposed to sulphur dioxide. <i>International Journal of Hydrogen Energy</i> , 2016, 41, 5598-5604.	3.8	17
1305	Iron oxide/oxyhydroxide decorated graphene oxides for oxygen reduction reaction catalysis: a comparison study. <i>RSC Advances</i> , 2016, 6, 29848-29854.	1.7	38
1306	Manganese oxide-induced strategy to high-performance iron/nitrogen/carbon electrocatalysts with highly exposed active sites. <i>Nanoscale</i> , 2016, 8, 8480-8485.	2.8	33
1307	Rational design of three-dimensional nitrogen and phosphorus co-doped graphene nanoribbons/CNTs composite for the oxygen reduction. <i>Chinese Chemical Letters</i> , 2016, 27, 597-601.	4.8	51
1308	Co-supported catalysts on nitrogen and sulfur co-doped vertically-aligned carbon nanotubes for oxygen reduction reaction. <i>RSC Advances</i> , 2016, 6, 32676-32684.	1.7	7
1309	The Active Site Structure of Transition Metal Ion-Chelating Ordered Mesoporous Carbon Fuel Cell Catalysts. <i>Fuel Cells</i> , 2016, 16, 23-31.	1.5	10
1310	Carbon-Supported Zirconium Oxide as a Cathode for Microbial Fuel Cell Applications. <i>ChemPlusChem</i> , 2016, 81, 80-85.	1.3	47
1311	Highly Active and Durable Non-Precious Metal Catalyst for the Oxygen Reduction Reaction in Acidic Medium. <i>Journal of the Electrochemical Society</i> , 2016, 163, F539-F547.	1.3	32
1312	Iron polyphthalocyanine sheathed multiwalled carbon nanotubes: A high-performance electrocatalyst for oxygen reduction reaction. <i>Nano Research</i> , 2016, 9, 1497-1506.	5.8	112
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1316	Synthesis of highly monodispersed PtCuNi nanocrystals with high electro-catalytic activities towards oxygen reduction reaction. Catalysis Today, 2016, 278, 247-254.	2.2	26
1317	Recent Advances in Electrocatalysts for Oxygen Reduction Reaction. Chemical Reviews, 2016, 116, 3594-3657.	23.0	3,233
1318	Electrochemical Oxygen Reduction Activity of Cobalt-Nitrogen-Carbon Composite Catalyst Prepared by Single Precursor Pyrolysis under Autogenic Pressure. Journal of the Electrochemical Society, 2016, 163, F428-F436.	1.3	13
1319	Facile electrospinning preparation of phosphorus and nitrogen dual-doped cobalt-based carbon nanofibers as bifunctional electrocatalyst. Journal of Power Sources, 2016, 311, 68-80.	4.0	67
1320	One-pot synthesis of triazine-framework derived catalysts with high performance for polymer electrolyte membrane fuel cells. RSC Advances, 2016, 6, 21617-21623.	1.7	2
1321	MoS <sub>2</sub> nanosheets grown on amorphous carbon nanotubes for enhanced sodium storage. Journal of Materials Chemistry A, 2016, 4, 4375-4379.	5.2	78
1322	Mesoporous Hybrid Shells of Carbonized Polyaniline/Mn <sub>2</sub> O <sub>3</sub> as Non-Precious Efficient Oxygen Reduction Reaction Catalyst. ACS Applied Materials & Interfaces, 2016, 8, 6040-6050.	4.0	103
1323	Facile synthesis of cobalt and nitrogen co-doped graphene networks from polyaniline for oxygen reduction reaction in acidic solutions. Journal of Materials Chemistry A, 2016, 4, 3678-3682.	5.2	34
1324	Nitrogen and Sulfur Dual-Doped Carbon Microtubes with Enhanced Performances for Oxygen Reduction Reaction. Journal of the Electrochemical Society, 2016, 163, H343-H349.	1.3	17
1325	Electrocatalysis enhancement of iron-based catalysts induced by synergy of methanol and oxygen-containing groups. Nano Energy, 2016, 21, 265-275.	8.2	12
1326	Treatment of Biogas for Feeding High Temperature Fuel Cells. Green Energy and Technology, 2016, , .	0.4	19
1327	Conducting Polymer-Based Catalysts. Journal of the American Chemical Society, 2016, 138, 2868-2876.	6.6	165
1328	A facile synthesis of Fe <sub>3</sub> C@mesoporous carbon nitride nanospheres with superior electrocatalytic activity. Nanoscale, 2016, 8, 5441-5445.	2.8	53
1329	Porous Fe-Nx/C hybrid derived from bi-metal organic frameworks as high efficient electrocatalyst for oxygen reduction reaction. Journal of Power Sources, 2016, 311, 137-143.	4.0	71
1330	Sulfur-doping achieves efficient oxygen reduction in pyrolyzed zeolitic imidazolate frameworks. Journal of Materials Chemistry A, 2016, 4, 4457-4463.	5.2	65
1331	Optimization of cobalt/nitrogen embedded carbon nanotubes as an efficient bifunctional oxygen electrode for rechargeable zinc-air batteries. Journal of Materials Chemistry A, 2016, 4, 4864-4870.	5.2	72
1332	Mechanism for Forming B,C,N,O Rings from NH <sub>3</sub> BH <sub>3</sub> and CO <sub>2</sub> via Reaction Discovery Computations. Journal of Physical Chemistry A, 2016, 120, 1135-1144.	1.1	15

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1335	Electrocatalytic hydrogen peroxide formation on mesoporous non-metal nitrogen-doped carbon catalyst. <i>Journal of Energy Chemistry</i> , 2016, 25, 251-257.	7.1	107
1336	Efficient oxygen reduction reaction electrocatalysts synthesized from an iron-coordinated aromatic polymer framework. <i>Journal of Materials Chemistry A</i> , 2016, 4, 3858-3864.	5.2	20
1337	Synthesis of hollow carbon nanostructures as a non-precious catalyst for oxygen reduction reaction. <i>Electrochimica Acta</i> , 2016, 191, 805-812.	2.6	30
1338	Formation of square prism-shaped poly(o-phenylenediamine) fibers triggered by high ionic strength. <i>RSC Advances</i> , 2016, 6, 21895-21899.	1.7	5
1339	Can metal-free nitrogen-carbon catalysts satisfy oxygen electrochemistry?. <i>Journal of Materials Chemistry A</i> , 2016, 4, 4998-5001.	5.2	72
1340	Metallic Cobalt Encapsulated in Bamboo-Like and Nitrogen-Rich Carbonitride Nanotubes for Hydrogen Evolution Reaction. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 6439-6448.	4.0	110
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1342	One-pot synthesis of boron-doped ordered mesoporous carbons as efficient electrocatalysts for the oxygen reduction reaction. <i>RSC Advances</i> , 2016, 6, 24728-24737.	1.7	26
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1344	Highly Functional Bioinspired Fe/N/C Oxygen Reduction Reaction Catalysts: Structure-Regulating Oxygen Sorption. <i>ACS Applied Materials &amp; Interfaces</i> , 2016, 8, 6464-6471.	4.0	46
1345	Noble-metal-free Co <sub>3</sub> S <sub>4</sub> -S/G porous hybrids as an efficient electrocatalyst for oxygen reduction reaction. <i>Chemical Science</i> , 2016, 7, 4167-4173.	3.7	98
1346	Study of Co-electrospun Nafion and Polyaniline Nanofibers as Potential Catalyst Support for Fuel Cell Electrodes. <i>Electrochimica Acta</i> , 2016, 198, 156-164.	2.6	20
1347	Carbon dioxide activated carbon nanofibers with hierarchical micro-/mesoporosity towards electrocatalytic oxygen reduction. <i>Journal of Materials Chemistry A</i> , 2016, 4, 5553-5560.	5.2	35
1348	PEM fuel cell electrocatalysts based on transition metal macrocyclic compounds. <i>Coordination Chemistry Reviews</i> , 2016, 315, 153-177.	9.5	110
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1352	Nitrogen-doped carbon nanofibers on expanded graphite as oxygen reduction electrocatalysts. <i>Carbon</i> , 2016, 101, 191-202.	5.4	62
1353	Further Understanding of Nitrogen-Doped Carbon Catalytic Property towards Oxygen Reduction Reaction (ORR). <i>Materials Today: Proceedings</i> , 2016, 3, 691-695.	0.9	11
1354	The Priority and Challenge of High-Power Performance of Low-Platinum Proton-Exchange Membrane Fuel Cells. <i>Journal of Physical Chemistry Letters</i> , 2016, 7, 1127-1137.	2.1	908
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1357	Simultaneous doping of nitrogen and fluorine into reduced graphene oxide: A highly active metal-free electrocatalyst for oxygen reduction. <i>Carbon</i> , 2016, 99, 272-279.	5.4	65
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1360	Graphene decorated with multiple nanosized active species as dual function electrocatalysts for lithium-oxygen batteries. <i>Electrochimica Acta</i> , 2016, 188, 718-726.	2.6	14
1361	Using nitrogen-rich polymeric network and iron(II) acetate as precursors to synthesize highly efficient electrocatalyst for oxygen reduction reaction in alkaline media. <i>Journal of Power Sources</i> , 2016, 307, 152-159.	4.0	29
1362	Catalytic performance and mechanism of N-CoTi@CoTiO <sub>3</sub> catalysts for oxygen reduction reaction. <i>Nano Energy</i> , 2016, 20, 134-143.	8.2	33
1363	Iron/Polyindole-based Electrocatalysts to Enhance Oxygen Reduction in Microbial Fuel Cells. <i>Electrochimica Acta</i> , 2016, 190, 388-395.	2.6	101
1364	Catalytic Activity for Oxygen Reduction Reaction on CoN <sub>2</sub> -Graphene: A Density Functional Theory Study. <i>Journal of the Electrochemical Society</i> , 2016, 163, F160-F165.	1.3	15
1365	Cobalt and Nitrogen Co-Doped Tungsten Carbide Catalyst for Oxygen Reduction and Hydrogen Evolution Reactions. <i>Electrochimica Acta</i> , 2016, 190, 1113-1123.	2.6	56
1366	Transition metals (Fe, Co, and Ni) encapsulated in nitrogen-doped carbon nanotubes as bi-functional catalysts for oxygen electrode reactions. <i>Journal of Materials Chemistry A</i> , 2016, 4, 1694-1701.	5.2	460
1367	Electrochemical and Computational Study of Oxygen Reduction Reaction on Nonprecious Transition Metal/Nitrogen Doped Carbon Nanofibers in Acid Medium. <i>Journal of Physical Chemistry C</i> , 2016, 120, 1586-1596.	1.5	148
1368	A large-scale synthesis of heteroatom (N and S) co-doped hierarchically porous carbon (HPC) derived from polyquaternium for superior oxygen reduction reactivity. <i>Green Chemistry</i> , 2016, 18, 2699-2709.	4.6	70

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1370	Design of a layered nanoreactor to produce nitrogen doped carbon nanosheets as highly efficient material for supercapacitors. <i>Materials and Design</i> , 2016, 89, 708-714.	3.3	27
1371	Metal-organic-framework-engaged formation of Co nanoparticle-embedded carbon@Co <sub>9</sub> S <sub>8</sub> double-shelled nanocages for efficient oxygen reduction. <i>Energy and Environmental Science</i> , 2016, 9, 107-111.	15.6	499
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1382	Oxygen reduction on chemically heterogeneous iron-containing nanoporous carbon: The effects of specific surface functionalities. <i>Microporous and Mesoporous Materials</i> , 2016, 221, 137-149.	2.2	13
1383	Synthesis-structure-performance correlation for poly(phenylenediamine)s/iron/carbon non-precious metal catalysts for oxygen reduction reaction. <i>Catalysis Today</i> , 2016, 260, 112-118.	2.2	16
1384	Nanocarbon-intercalated and Fe-N-codoped graphene as a highly active noble-metal-free bifunctional electrocatalyst for oxygen reduction and evolution. <i>Journal of Materials Chemistry A</i> , 2017, 5, 1930-1934.	5.2	88
1385	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
1386	Metal-Organic-Framework-Derived Fe-N/C Electrocatalyst with Five-Coordinated Fe-N Sites for Advanced Oxygen Reduction in Acid Media. <i>ACS Catalysis</i> , 2017, 7, 1655-1663.	5.5	483

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1388	Lamellar Metal Organic Framework-Derived Fe-N-C Non-Noble Electrocatalysts with Bimodal Porosity for Efficient Oxygen Reduction. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 5272-5278.	4.0	95
1389	Bottom-up fabrication of nitrogen-doped mesoporous carbon nanosheets as high performance oxygen reduction catalysts. <i>Journal of Colloid and Interface Science</i> , 2017, 492, 8-14.	5.0	10
1390	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
1391	Co/N-C nanotubes with increased coupling sites by space-confined pyrolysis for high electrocatalytic activity. <i>Green Energy and Environment</i> , 2017, 2, 23-29.	4.7	10
1392	Self-Templated Synthesis of Co- and N-Doped Carbon Microtubes Composed of Hollow Nanospheres and Nanotubes for Efficient Oxygen Reduction Reaction. <i>Small</i> , 2017, 13, 1603437.	5.2	57
1393	Structure-activity relationship of doped-nitrogen (N)-based metal-free active sites on carbon for oxygen reduction reaction. <i>Carbon</i> , 2017, 115, 763-772.	5.4	119
1394	Urchin-Shaped Hollow Iron-Nitrogen-Doped Carbon Microspheres as High-Performance Electrocatalysts for Oxygen Reduction. <i>Journal of the Electrochemical Society</i> , 2017, 164, F224-F228.	1.3	11
1395	Microwave and electrochemical assisted synthesis of chlorinated iron phthalocyanine nanoparticles. <i>Pigment and Resin Technology</i> , 2017, 46, 156-160.	0.5	5
1396	Potential application of Ni and Co stabilized zirconia as oxygen reduction reaction catalyst. <i>Catalysis Communications</i> , 2017, 93, 37-42.	1.6	5
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1398	Uniformly distributed and in situ iron-nitrogen co-doped porous carbon derived from pork liver for rapid and simultaneous detection of dopamine, uric acid, and paracetamol in human blood serum. <i>New Journal of Chemistry</i> , 2017, 41, 2081-2089.	1.4	17
1399	Selective Hydrodeoxygenation of 5-Hydroxymethylfurfural to 2,5-Dimethylfuran over Heterogeneous Iron Catalysts. <i>ChemSusChem</i> , 2017, 10, 1436-1447.	3.6	57
1400	Advances in Production and Applications of Carbon Nanotubes. <i>Topics in Current Chemistry</i> , 2017, 375, 18.	3.0	64
1401	Electrocatalysis of oxygen reduction by iron-containing nitrogen-doped carbon aerogels in alkaline solution. <i>Electrochimica Acta</i> , 2017, 230, 81-88.	2.6	51
1402	Soluble and electrically conductive polyaniline-modified polymers: Incorporation of biocompatible polymeric chains through ATRP technique. <i>Journal of Applied Polymer Science</i> , 2017, 134, .	1.3	13
1403	Iron-chelated hydrogel-derived bifunctional oxygen electrocatalyst for high-performance rechargeable Zn-air batteries. <i>Nano Research</i> , 2017, 10, 4436-4447.	5.8	98
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1406	Thermally Converted CoO Nanoparticles Embedded into N-Doped Carbon Layers as Highly Efficient Bifunctional Electrocatalysts for Oxygen Reduction and Oxygen Evolution Reactions. <i>ChemCatChem</i> , 2017, 9, 1503-1510.	1.8	31
1407	Density Functional Theory (DFT) Calculations for Oxygen Reduction Reaction Mechanisms on Metal-, Nitrogen- co-doped Graphene (M-N <sub>2</sub> -G (M = Ti, Cu, Mo, Nb and Ru)) Electrocatalysts. <i>Electrochimica Acta</i> , 2017, 228, 619-627.	2.6	29
1408	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
1409	Fe <sub>9</sub> S <sub>10</sub> -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
1410	La <sub>0.7</sub> (Sr <sub>0.3-x</sub> Pdx)MnO <sub>3</sub> as a highly efficient electrocatalyst for oxygen reduction reaction in aluminum air battery. <i>Electrochimica Acta</i> , 2017, 230, 418-427.	2.6	32
1411	Supramolecular gel-assisted synthesis Co <sub>2</sub> P particles anchored in multielement co-doped graphene as efficient bifunctional electrocatalysts for oxygen reduction and evolution. <i>Electrochimica Acta</i> , 2017, 231, 344-353.	2.6	60
1412	Electrocatalysts for low temperature fuel cells. <i>Catalysis Today</i> , 2017, 285, 3-12.	2.2	50
1413	Surface and Interface Engineering of Noble-Metal-Free Electrocatalysts for Efficient Energy Conversion Processes. <i>Accounts of Chemical Research</i> , 2017, 50, 915-923.	7.6	824
1414	Topochemical Reaction of Exfoliated Layered Cobalt(II) Hydroxide for the Synthesis of Ultrapure Co <sub>3</sub> O <sub>4</sub> as an Oxygen Reduction Catalyst. <i>European Journal of Inorganic Chemistry</i> , 2017, 2017, 2184-2189.	1.0	12
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1416	H <sub>2</sub> O-Assisted Synthesis of Porous N-Doped Graphene/Molybdenum Nitride Composites with Boosted Oxygen Reduction Reaction. <i>Advanced Materials Interfaces</i> , 2017, 4, 1601227.	1.9	35
1417	pudding-typed cobalt sulfides/nitrogen and sulfur dual-doped hollow carbon spheres as a highly efficient and stable oxygen reduction electrocatalyst. <i>Journal of Power Sources</i> , 2017, 348, 183-192.	4.0	62
1418	Using aminopyrine as a nitrogen-enriched small molecule precursor to synthesize high-performing nitrogen doped mesoporous carbon for catalyzing oxygen reduction reaction. <i>RSC Advances</i> , 2017, 7, 669-677.	1.7	7
1419	In situ Fe <sub>2</sub> N@N-doped porous carbon hybrids as superior catalysts for oxygen reduction reaction. <i>Nanoscale</i> , 2017, 9, 8102-8106.	2.8	80
1420	Fe <sub>3</sub> C@Fe/N Doped Graphene-Like Carbon Sheets as a Highly Efficient Catalyst in Al-Air Batteries. <i>Journal of the Electrochemical Society</i> , 2017, 164, F475-F483.	1.3	34
1421	2D nitrogen-doped hierarchically porous carbon: Key role of low dimensional structure in favoring electrocatalysis and mass transfer for oxygen reduction reaction. <i>Applied Catalysis B: Environmental</i> , 2017, 209, 447-454.	10.8	94
1422	Tuning the Adsorption Properties of Layered Double Hydroxides to Tailor Highly Active Oxygen Bifunctional Electrocatalysts. <i>Journal of the Electrochemical Society</i> , 2017, 164, F491-F498.	1.3	8

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1424	Roles of Fe <sup>N</sup> and Fe <sub>3</sub> C@C Species in Fe <sup>N</sup> /C Electrocatalysts for Oxygen Reduction Reaction. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 9567-9575.	4.0	151
1425	A Facile Synthesis of Nitrogen-Doped Highly Porous Carbon Nanoplatelets: Efficient Catalysts for Oxygen Electroreduction. <i>Scientific Reports</i> , 2017, 7, 43366.	1.6	31
1426	Zn-MOF-74 Derived N-Doped Mesoporous Carbon as pH-Universal Electrocatalyst for Oxygen Reduction Reaction. <i>Advanced Functional Materials</i> , 2017, 27, 1606190.	7.8	231
1427	Unraveling the Oxygen-Reduction Sites in Graphitic-Carbon Co-N-C-Type Electrocatalysts Prepared by Single-Precursor Pyrolysis. <i>ChemCatChem</i> , 2017, 9, 1969-1978.	1.8	18
1428	Heterogeneous iron-containing carbon gels as catalysts for oxygen electroreduction: Multifunctional role of sulfur in the formation of efficient systems. <i>Carbon</i> , 2017, 116, 655-669.	5.4	31
1429	Cu <sub>2</sub> ZnSnS <sub>4</sub> -AuAg Heterodimers and Their Enhanced Catalysis for Oxygen Reduction Reaction. <i>Journal of Physical Chemistry C</i> , 2017, 121, 6712-6720.	1.5	12
1430	In situ coupling of Co <sub>0.85</sub> Se and N-doped carbon via one-step selenization of metal-organic frameworks as a trifunctional catalyst for overall water splitting and Zn-air batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 7001-7014.	5.2	211
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1432	Oxygen-induced doping on reduced PEDOT. <i>Journal of Materials Chemistry A</i> , 2017, 5, 4404-4412.	5.2	97
1433	The role of pre-defined microporosity in catalytic site formation for the oxygen reduction reaction in iron- and nitrogen-doped carbon materials. <i>Journal of Materials Chemistry A</i> , 2017, 5, 4199-4206.	5.2	30
1434	Design and Application of Foams for Electrocatalysis. <i>ChemCatChem</i> , 2017, 9, 1721-1743.	1.8	245
1435	Hollow Nitrogen-Doped Carbon Spheres with Fe <sub>3</sub> O <sub>4</sub> Nanoparticles Encapsulated as a Highly Active Oxygen-Reduction Catalyst. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 10610-10617.	4.0	128
1436	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
1437	Cobalt nanoparticle decorated graphene aerogel for efficient oxygen reduction reaction electrocatalysis. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 5930-5937.	3.8	28
1438	Soluble conjugated polymer enriched with pyridinic nitrogen atoms and its application as high-performance catalyst for oxygen reduction. <i>Journal of Solid State Electrochemistry</i> , 2017, 21, 1639-1651.	1.2	9
1439	Hollow-structured conjugated porous polymer derived Iron/Nitrogen-codoped hierarchical porous carbons as highly efficient electrocatalysts. <i>Journal of Colloid and Interface Science</i> , 2017, 497, 108-116.	5.0	28
1440	Nitrogen-doped graphene-wrapped iron nanofragments for high-performance oxygen reduction electrocatalysts. <i>Journal of Nanoparticle Research</i> , 2017, 19, 1.	0.8	36

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1442	Facile Integration of Hierarchical Pores and N,P-Codoping in Carbon Networks Enables Efficient Oxygen Reduction Reaction. <i>Electrochimica Acta</i> , 2017, 238, 375-383.	2.6	34
1443	Ni@Pd core-shell nanoparticles with Pt-like oxygen reduction electrocatalytic performance in both acidic and alkaline electrolytes. <i>Journal of Materials Chemistry A</i> , 2017, 5, 9233-9240.	5.2	61
1444	Heteroatom-Doped Carbon Materials for Electrocatalysis. <i>Chemistry - A European Journal</i> , 2017, 23, 10703-10713.	1.7	64
1445	Preparation and characterization of Cu-N-C electrocatalysts for oxygen reduction reaction in alkaline anion exchange membrane fuel cells. <i>Journal of Industrial and Engineering Chemistry</i> , 2017, 52, 35-41.	2.9	18
1446	Cobalt-zinc nitride on nitrogen doped carbon black nano hybrids as a non-noble metal electrocatalyst for oxygen reduction reaction. <i>Nanoscale</i> , 2017, 9, 6259-6263.	2.8	55
1447	Doped porous carbon nanostructures as non-precious metal catalysts prepared by amino acid glycine for oxygen reduction reaction. <i>Applied Catalysis B: Environmental</i> , 2017, 211, 235-244.	10.8	51
1448	In Situ Growth of Ceria on Cerium-Nitrogen-Carbon as Promoter for Oxygen Evolution Reaction. <i>Advanced Materials Interfaces</i> , 2017, 4, 1700272.	1.9	17
1449	Co-Wiring-Fe-N Embedded Porous Carbon Framework onto 1D Nanotubes for Efficient Oxygen Reduction Reaction in Alkaline and Acidic Media. <i>Advanced Materials</i> , 2017, 29, 1606534.	11.1	342
1450	In Situ Formation of Hierarchical Porous Fe,Co-N-Doped Carbon as a Highly Efficient Electrocatalyst for Oxygen Reduction. <i>ChemElectroChem</i> , 2017, 4, 2005-2011.	1.7	8
1451	Pyrolysis-induced synthesis of iron and nitrogen-containing carbon nanolayers modified graphdiyne nanostructure as a promising core-shell electrocatalyst for oxygen reduction reaction. <i>Carbon</i> , 2017, 119, 201-210.	5.4	99
1452	Interconnected Hierarchically Porous Fe, N-Codoped Carbon Nanofibers as Efficient Oxygen Reduction Catalysts for Zn-Air Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 16178-16186.	4.0	94
1453	Nitrogen-doped porous carbon derived from Fe-MIL nanocrystals as an electrocatalyst for efficient oxygen reduction. <i>RSC Advances</i> , 2017, 7, 22610-22618.	1.7	26
1454	Hierarchical nitrogen-enriched porous carbon materials derived from Schiff-base networks supported FeCo <sub>2</sub> O <sub>4</sub> nanoparticles for efficient water oxidation. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 10802-10812.	3.8	35
1455	Nitrogen-rich Fe-N-C materials derived from polyacrylonitrile as highly active and durable catalysts for the oxygen reduction reaction in both acidic and alkaline electrolytes. <i>Journal of Colloid and Interface Science</i> , 2017, 502, 44-51.	5.0	34
1456	Rational design of N-doped carbon nanobox-supported Fe/Fe <sub>2</sub> N/Fe <sub>3</sub> C nanoparticles as efficient oxygen reduction catalysts for Zn-air batteries. <i>Journal of Materials Chemistry A</i> , 2017, 5, 11340-11347.	5.2	63
1457	Architecture of CoN single clusters on nanocarbon as excellent oxygen reduction catalysts with high-efficient atomic utilization. <i>Nanoscale</i> , 2017, 9, 8341-8348.	2.8	47
1458	Electrochemical Oxygen Reduction Activity of Metal Embedded Nitrogen Doped Carbon Nanostructures Derived from Pyrolysis of Nitrogen-Rich Guanidinium Salt. <i>Journal of the Electrochemical Society</i> , 2017, 164, F781-F789.	1.3	8



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1460	Carbon nanofibers as parent materials for a graphene-based Fe-N-C catalyst for the oxygen reduction reaction. <i>Catalysis Today</i> , 2017, 295, 125-131.	2.2	19
1461	Hierarchically porous nitrogen-doped carbon nanotubes derived from core-shell ZnO@zeolitic imidazolate framework nanorods for highly efficient oxygen reduction reactions. <i>Journal of Materials Chemistry A</i> , 2017, 5, 12322-12329.	5.2	93
1462	Defect Chemistry of Nonprecious-Metal Electrocatalysts for Oxygen Reactions. <i>Advanced Materials</i> , 2017, 29, 1606459.	11.1	1,260
1463	Metal-Organic Framework-Derived Non-Precious Metal Nanocatalysts for Oxygen Reduction Reaction. <i>Advanced Energy Materials</i> , 2017, 7, 1700363.	10.2	297
1464	One-pot synthesis of transition metal ion-chelating ordered mesoporous carbon/carbon nanotube composites for active and durable fuel cell catalysts. <i>Journal of Power Sources</i> , 2017, 357, 87-96.	4.0	14
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1466	The synthesis and electro-catalytic activity for ORR of the structured electrode material: CP/Fe-N-CNFs. <i>Journal of Solid State Electrochemistry</i> , 2017, 21, 2909-2920.	1.2	6
1467	Directed synthesis of carbon nanotube arrays based on layered double hydroxides toward highly-efficient bifunctional oxygen electrocatalysis. <i>Nano Energy</i> , 2017, 37, 98-107.	8.2	129
1468	Well-Defined 2D Covalent Organic Polymers for Energy Electrocatalysis. <i>ACS Energy Letters</i> , 2017, 2, 1308-1314.	8.8	109
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1472	Preparation of poly(o-ethoxyaniline)-nano SiC composite and evaluation of its corrosion resistance properties. <i>Journal of Alloys and Compounds</i> , 2017, 717, 98-107.	2.8	20
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1474	Recent advances in metal-nitrogen-carbon catalysts for electrochemical water splitting. <i>Materials Chemistry Frontiers</i> , 2017, 1, 2155-2173.	3.2	109
1475	Binary Fe, Cu-doped bamboo-like carbon nanotubes as efficient catalyst for the oxygen reduction reaction. <i>Nano Energy</i> , 2017, 37, 187-194.	8.2	125
1476	Best Practices and Testing Protocols for Benchmarking ORR Activities of Fuel Cell Electrocatalysts Using Rotating Disk Electrode. <i>Electrocatalysis</i> , 2017, 8, 366-374.	1.5	121

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1478	Space-Confined Pyrolysis for the Fabrication of Fe/N/C Nanoparticles as a High Performance Oxygen Reduction Reaction Electrocatalyst. <i>Electrochimica Acta</i> , 2017, 244, 47-53.	2.6	40
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1480	A direct four-electron process on Fe <sup>3+</sup> doped graphene for the oxygen reduction reaction: a theoretical perspective. <i>RSC Advances</i> , 2017, 7, 23812-23819.	1.7	33
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1488	Is iron nitride or carbide highly active for oxygen reduction reaction in acidic medium?. <i>Catalysis Science and Technology</i> , 2017, 7, 51-55.	2.1	50
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1491	Electrochemical catalytic contribution of transition metals at the center of porphyrin macrocycle structures as catalysts for oxygen reduction reaction. <i>Journal of Industrial and Engineering Chemistry</i> , 2017, 54, 200-204.	2.9	9
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1499	Hierarchical porous carbon materials prepared by direct carbonization of Al-PCP as a Pt-catalyst support for the oxygen reduction reaction. <i>New Journal of Chemistry</i> , 2017, 41, 7432-7437.	1.4	3
1500	A bottom-up, template-free route to mesoporous N-doped carbons for efficient oxygen electroreduction. <i>Journal of Materials Science</i> , 2017, 52, 9794-9805.	1.7	7
1501	Highly active and durable nitrogen doped-reduced graphene oxide/double perovskite bifunctional hybrid catalysts. <i>Journal of Materials Chemistry A</i> , 2017, 5, 13019-13031.	5.2	45
1502	Tri-Functional OER, HER and ORR Electrocatalyst Electrodes from In Situ Metal-Nitrogen Co-Doped Oxidized Graphite Rods. <i>Bulletin of the Chemical Society of Japan</i> , 2017, 90, 950-954.	2.0	21
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1511	Origin of the high oxygen reduction reaction of nitrogen and sulfur co-doped MOF-derived nanocarbon electrocatalysts. <i>Materials Horizons</i> , 2017, 4, 900-907.	6.4	95
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1514	Lithium manganese phosphate-carbon composite as a highly active and durable electrocatalyst for oxygen reduction reaction. <i>Electrochimica Acta</i> , 2017, 245, 219-226.	2.6	10
1515	Nanosized-Fe <sub>3</sub> PtN supported on nitrogen-doped carbon as electro-catalyst for oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2017, 42, 15761-15769.	3.8	2
1516	Iron (II) phthalocyanine nanoclusters - Graphene sandwich composite for oxygen reduction reaction catalysts. <i>Materials and Design</i> , 2017, 130, 366-372.	3.3	15
1517	Unprecedented Activity of Bifunctional Electrocatalyst for High Power Density Aqueous Zinc-Air Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 21216-21224.	4.0	64
1518	Fe-N-C Catalyst Graphitic Layer Structure and Fuel Cell Performance. <i>ACS Energy Letters</i> , 2017, 2, 1489-1493.	8.8	104
1519	Preparation and characterization of click-driven N-vinylcarbazole-based anion exchange membranes with improved water uptake for fuel cells. <i>RSC Advances</i> , 2017, 7, 29794-29805.	1.7	18
1520	Design Strategies toward Advanced MOF-Derived Electrocatalysts for Energy Conversion Reactions. <i>Advanced Energy Materials</i> , 2017, 7, 1700518.	10.2	539
1521	Fe/N/S-composited hierarchically porous carbons with optimized surface functionality, composition and nanoarchitecture as electrocatalysts for oxygen reduction reaction. <i>Journal of Catalysis</i> , 2017, 352, 208-217.	3.1	44
1522	A simple method for preparing a binder-free paper-based air cathode for microbial fuel cells. <i>Bioresource Technology</i> , 2017, 241, 325-331.	4.8	32
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1529	Facile fabrication of N/S-doped carbon nanotubes with Fe <sub>3</sub> O <sub>4</sub> nanocrystals enshased for lasting synergy as efficient oxygen reduction catalysts. <i>Journal of Materials Chemistry A</i> , 2017, 5, 13189-13195.	5.2	50
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1532	Key factors improving oxygen reduction reaction activity in cobalt nanoparticles modified carbon nanotubes. <i>Applied Catalysis B: Environmental</i> , 2017, 217, 303-312.	10.8	58
1533	Novel highly active and selective Fe-N-C oxygen reduction electrocatalysts derived from in-situ polymerization pyrolysis. <i>Nano Energy</i> , 2017, 38, 201-209.	8.2	84
1534	Resolving the Iron Phthalocyanine Redox Transitions for ORR Catalysis in Aqueous Media. <i>Journal of Physical Chemistry Letters</i> , 2017, 8, 2881-2886.	2.1	89
1535	One-pot synthesis of La 0.7 Sr 0.3 MnO 3 supported on flower-like CeO 2 as electrocatalyst for oxygen reduction reaction in aluminum-air batteries. <i>Journal of Power Sources</i> , 2017, 358, 50-60.	4.0	38
1536	From melamine sponge towards 3D sulfur-doping carbon nitride as metal-free electrocatalysts for oxygen reduction reaction. <i>Materials Research Express</i> , 2017, 4, 076305.	0.8	5
1537	Zn Single Atom Catalyst for Highly Efficient Oxygen Reduction Reaction. <i>Advanced Functional Materials</i> , 2017, 27, 1700802.	7.8	296
1538	Two-Electron Oxygen Reduction on Carbon Materials Catalysts: Mechanisms and Active Sites. <i>Journal of Physical Chemistry C</i> , 2017, 121, 14524-14533.	1.5	89
1539	Three-dimensional nanoarchitectures of Co nanoparticles inlayed on N-doped macroporous carbon as bifunctional electrocatalysts for glucose fuel cells. <i>Journal of Materials Chemistry A</i> , 2017, 5, 14763-14774.	5.2	41
1540	Anodically-grown TiO 2 nanotubes: Effect of the crystallization on the catalytic activity toward the oxygen reduction reaction. <i>Applied Surface Science</i> , 2017, 412, 447-454.	3.1	18
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1544	Fe/N co-doped carbon materials with controllable structure as highly efficient electrocatalysts for oxygen reduction reaction in Al-air batteries. <i>Energy Storage Materials</i> , 2017, 8, 49-58.	9.5	70
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1546	3D interconnected hierarchically porous N-doped carbon with NH3 activation for efficient oxygen reduction reaction. <i>Applied Catalysis B: Environmental</i> , 2017, 210, 57-66.	10.8	131
1547	Protein-enriched fish â€œbiowasteâ€ converted to three-dimensional porous carbon nano-network for advanced oxygen reduction electrocatalysis. <i>Electrochimica Acta</i> , 2017, 236, 228-238.	2.6	70
1548	Liquidâ€Crystalâ€Mediated 3D Macrostructured Composite of Co/Co<sub>3</sub>O<sub>4</sub> Embedded in Graphene: Freeâ€Standing Electrode for Efficient Water Splitting. <i>Particle and Particle Systems Characterization</i> , 2017, 34, 1600386.	1.2	14

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1551	Metal-organic polydopamine frameworks and their transformation to hollow metal/N-doped carbon particles. <i>Nanoscale</i> , 2017, 9, 5323-5328.	2.8	140
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1554	Low-Temperature and Gram-Scale Synthesis of Two-Dimensional Fe-N-C Carbon Sheets for Robust Electrochemical Oxygen Reduction Reaction. <i>Chemistry of Materials</i> , 2017, 29, 2890-2898.	3.2	55
1555	A metal-organic framework derived Co-N doped carbon microsphere/nanofiber hybrid as a free-standing 3D oxygen catalyst. <i>Chemical Communications</i> , 2017, 53, 4034-4037.	2.2	65
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1557	Mechanism of Cathodic Performance Enhancement by a Few-Nanometer-Thick Oxide Overcoat on Porous Pt Cathodes of Solid Oxide Fuel Cells. <i>ACS Omega</i> , 2017, 2, 806-813.	1.6	19
1558	Water Oxidation on Oxygen-Deficient Barium Titanate: A First-Principles Study. <i>Journal of Physical Chemistry C</i> , 2017, 121, 8378-8389.	1.5	34
1559	Novel Iron/Cobalt-Containing Polypyrrole Hydrogel-Derived Trifunctional Electrocatalyst for Self-Powered Overall Water Splitting. <i>Advanced Functional Materials</i> , 2017, 27, 1606497.	7.8	320
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1563	Pyrolysis of Self-Assembled Iron Porphyrin on Carbon Black as Core/Shell Structured Electrocatalysts for Highly Efficient Oxygen Reduction in Both Alkaline and Acidic Medium. <i>Advanced Functional Materials</i> , 2017, 27, 1604356.	7.8	106
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1569	Organic-acid-assisted synthesis of a 3D lasagna-like Fe-N-doped CNTs-G framework: An efficient and stable electrocatalyst for oxygen reduction reactions. <i>Nano Research</i> , 2017, 10, 1258-1267.	5.8	28
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1571	Red-blood-cell like nitrogen-doped carbons with highly catalytic activity towards oxygen reduction reaction. <i>Chinese Chemical Letters</i> , 2017, 28, 748-754.	4.8	20
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1574	Fe/N decorated mulberry-like hollow mesoporous carbon fibers as efficient electrocatalysts for oxygen reduction reaction. <i>Carbon</i> , 2017, 114, 706-716.	5.4	40
1575	Uniform nitrogen and sulphur co-doped hollow carbon nanospheres as efficient metal-free electrocatalysts for oxygen reduction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 1742-1748.	5.2	51
1576	Engineering Favorable Morphology and Structure of Fe-N-C Oxygen Reduction Catalysts through Tuning of Nitrogen/Carbon Precursors. <i>ChemSusChem</i> , 2017, 10, 774-785.	3.6	124
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1578	Nitrogen Dopants in Carbon Nanomaterials: Defects or a New Opportunity?. <i>Small Methods</i> , 2017, 1, 1600014.	4.6	179
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1581	Atomic interpretation of high activity on transition metal and nitrogen-doped carbon nanofibers for catalyzing oxygen reduction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 3336-3345.	5.2	88
1582	Texturing in situ: N,S-enriched hierarchically porous carbon as a highly active reversible oxygen electrocatalyst. <i>Energy and Environmental Science</i> , 2017, 10, 742-749.	15.6	451
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1584	Molybdenum-Doped PdPt@Pt Core-Shell Octahedra Supported by Ionic Block Copolymer-Functionalized Graphene as a Highly Active and Durable Oxygen Reduction Electrocatalyst. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 1524-1535.	4.0	49

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1586	Efficient electrocatalytic O <sub>2</sub> reduction at copper complexes grafted onto polyvinylimidazole coated carbon nanotubes. <i>Chemical Communications</i> , 2017, 53, 1514-1517.	2.2	37
1587	An Aza-Fused $\mu$ -Conjugated Microporous Framework Catalyzes the Production of Hydrogen Peroxide. <i>ACS Catalysis</i> , 2017, 7, 1015-1024.	5.5	83
1588	Ultrafine Co-based Nanoparticle@Mesoporous Carbon Nanospheres toward High-Performance Supercapacitors. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 1746-1758.	4.0	69
1589	Nanoporous carbon derived from a functionalized metal-organic framework as a highly efficient oxygen reduction electrocatalyst. <i>Nanoscale</i> , 2017, 9, 862-868.	2.8	56
1590	Non-noble bimetallic alloy encased in nitrogen-doped nanotubes as a highly active and durable electrocatalyst for oxygen reduction reaction. <i>Carbon</i> , 2017, 114, 347-355.	5.4	110
1591	Novel dual templating approach for preparation of highly active Fe-N-C electrocatalyst for oxygen reduction. <i>Electrochimica Acta</i> , 2017, 224, 49-55.	2.6	60
1592	Unique $\pi$ - $\sigma$ Surface Bonding States Constructed on $\text{g-C}_3\text{N}_4$ Nanosheets for Drastically Enhanced Photocatalytic Activity of H <sub>2</sub> Evolution. <i>Advanced Functional Materials</i> , 2017, 27, 1604328.	7.8	329
1593	In Situ Polymer Graphenization Ingrained with Nanoporosity in a Nitrogenous Electrocatalyst Boosting the Performance of Polymer-Electrolyte-Membrane Fuel Cells. <i>Advanced Materials</i> , 2017, 29, 1604456.	11.1	192
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1595	A review of electrocatalyst characterization by transmission electron microscopy. <i>Journal of Energy Chemistry</i> , 2017, 26, 1117-1135.	7.1	32
1596	Influence of Aliovalent Substitutions on Oxygen Reduction on Tantalum Oxynitrides. <i>Journal of the Electrochemical Society</i> , 2017, 164, F645-F650.	1.3	7
1597	Quaternary FeCoNiMn-Based Nanocarbon Electrocatalysts for Bifunctional Oxygen Reduction and Evolution: Promotional Role of Mn Doping in Stabilizing Carbon. <i>ACS Catalysis</i> , 2017, 7, 8386-8393.	5.5	131
1598	Different active sites in a bifunctional Co@N-doped graphene shells based catalyst for the oxidative dehydrogenation and hydrogenation reactions. <i>Journal of Catalysis</i> , 2017, 355, 53-62.	3.1	110
1599	Scalable preparation of sized-controlled Co-N-C electrocatalyst for efficient oxygen reduction reaction. <i>Journal of Power Sources</i> , 2017, 368, 46-56.	4.0	74
1600	Influence of Precursor Functional Groups on the Formation and Performance of Iron-Coordinating Ordered Mesoporous Carbons as Fuel Cell Catalysts. <i>Journal of Physical Chemistry C</i> , 2017, 121, 21827-21835.	1.5	5
1601	Building three-dimensional porous nano-network for the improvement of iron and nitrogen-doped carbon oxygen reduction electrocatalyst. <i>Carbon</i> , 2017, 125, 640-648.	5.4	47
1602	Rupturing Cotton Microfibers into Mesoporous Nitrogen-Doped Carbon Nanosheets as Metal-Free Catalysts for Efficient Oxygen Electroreduction. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 9709-9717.	3.2	27

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1604	Relevance of the Interaction between the M-Phthalocyanines and Carbon Nanotubes in the Electroactivity toward ORR. <i>Langmuir</i> , 2017, 33, 11945-11955.	1.6	27
1605	Nitrogen-doped carbon nanotubes with encapsulated Fe nanoparticles as efficient oxygen reduction catalyst for alkaline membrane direct ethanol fuel cells. <i>Carbon</i> , 2017, 125, 605-613.	5.4	36
1606	Synthesis of Nitrogen-Doped Porous Carbon Spheres with Improved Porosity toward the Electrocatalytic Oxygen Reduction. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 11105-11116.	3.2	61
1607	High-performance oxygen reduction catalysts in both alkaline and acidic fuel cells based on pre-treating carbon material and iron precursor. <i>Science Bulletin</i> , 2017, 62, 1602-1608.	4.3	7
1608	Coffee Waste-Derived Hierarchical Porous Carbon as a Highly Active and Durable Electrocatalyst for Electrochemical Energy Applications. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 41303-41313.	4.0	74
1609	Sandwich-type Bimetal-Organic Frameworks/Graphene Oxide Derived Porous Nanosheets doped Fe/Co-N Active Sites for Oxygen Reduction Reaction. <i>Electrochimica Acta</i> , 2017, 255, 72-82.	2.6	43
1610	3D Porous Fe/N/C Spherical Nanostructures As High-Performance Electrocatalysts for Oxygen Reduction in Both Alkaline and Acidic Media. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 36944-36954.	4.0	83
1611	Investigation of Chloride Poisoning Resistance for Nitrogen-Doped Carbon Nanostructures as Oxygen Depolarized Cathode Catalysts in Acidic Media. <i>Catalysis Letters</i> , 2017, 147, 2903-2909.	1.4	32
1612	Carbon-Based Electrocatalysts for Hydrogen and Oxygen Evolution Reactions. <i>ACS Catalysis</i> , 2017, 7, 7855-7865.	5.5	406
1613	Encapsulated MnO in N-doping carbon nanofibers as efficient ORR electrocatalysts. <i>Science China Materials</i> , 2017, 60, 937-946.	3.5	27
1614	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
1615	Air-Breathing Aqueous Sulfur Flow Battery for Ultralow-Cost Long-Duration Electrical Storage. <i>Joule</i> , 2017, 1, 306-327.	11.7	151
1616	Two-Dimensional Mesoporous Carbon Doped with Fe-N Active Sites for Efficient Oxygen Reduction. <i>ACS Catalysis</i> , 2017, 7, 7638-7646.	5.5	90
1617	Active Fe-N Sites in Carbon Nanosheets as Oxygen Reduction Electrocatalyst for Flexible All-Solid-State Zinc-Air Batteries. <i>Advanced Sustainable Systems</i> , 2017, 1, 1700085.	2.7	43
1618	Two-Dimensional N,S-Codoped Carbon/Co <sub>9</sub> S <sub>8</sub> Catalysts Derived from Co(OH) <sub>2</sub> Nanosheets for Oxygen Reduction Reaction. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 36755-36761.	4.0	45
1619	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
1620	Ionically dispersed Fe-N and Zn-N in porous carbon for acidic oxygen reduction reactions. <i>Chemical Communications</i> , 2017, 53, 11453-11456.	2.2	22

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1622	Indirect Four-Electron Oxygen Reduction Reaction on Carbon Materials Catalysts in Acidic Solutions. <i>ACS Catalysis</i> , 2017, 7, 7908-7916.	5.5	42
1623	Hierarchically Porous Co <sub>3</sub> C/Co-N-C/G Modified Graphitic Carbon: A Trifunctional Corrosion-Resistant Electrode for Oxygen Reduction, Hydrogen Evolution and Oxygen Evolution Reactions. <i>Electrochimica Acta</i> , 2017, 257, 40-48.	2.6	58
1624	Understanding activity and selectivity of metal-nitrogen-doped carbon catalysts for electrochemical reduction of CO <sub>2</sub> . <i>Nature Communications</i> , 2017, 8, 944.	5.8	890
1625	Identification of catalytic sites in cobalt-nitrogen-carbon materials for the oxygen reduction reaction. <i>Nature Communications</i> , 2017, 8, 957.	5.8	443
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1627	Coupling cobalt-iron bimetallic nitrides and N-doped multi-walled carbon nanotubes as high-performance bifunctional catalysts for oxygen evolution and reduction reaction. <i>Electrochimica Acta</i> , 2017, 258, 51-60.	2.6	61
1628	Co Nanoparticles Encapsulated in N-Doped Carbon Nanosheets: Enhancing Oxygen Reduction Catalysis without Metal-Nitrogen Bonding. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 38499-38506.	4.0	42
1629	A high-performance mesoporous carbon supported nitrogen-doped carbon electrocatalyst for oxygen reduction reaction. <i>Nanotechnology</i> , 2017, 28, 485701.	1.3	13
1630	Efficient electrocatalysis of hydrogen evolution by ultralow-Pt-loading bamboo-like nitrogen-doped carbon nanotubes. <i>Materials Today Energy</i> , 2017, 6, 173-180.	2.5	18
1631	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
1632	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
1633	Cobalt-Doped Ceria/Reduced Graphene Oxide Nanocomposite as an Efficient Oxygen Reduction Reaction Catalyst and Supercapacitor Material. <i>Journal of Physical Chemistry C</i> , 2017, 121, 20165-20176.	1.5	81
1634	Best Practices in Pursuit of Topics in Heterogeneous Electrocatalysis. <i>ACS Catalysis</i> , 2017, 7, 6392-6393.	5.5	126
1635	Counter electrodes in dye-sensitized solar cells. <i>Chemical Society Reviews</i> , 2017, 46, 5975-6023.	18.7	609
1636	Hollow Co <sub>2</sub> P nanoflowers assembled from nanorods for ultralong cycle-life supercapacitors. <i>Nanoscale</i> , 2017, 9, 14162-14171.	2.8	89
1637	Effect of a sulfur and nitrogen dual-doped Fe-N-S electrocatalyst for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 19790-19799.	5.2	54
1638	Nanostructuring Noble Metals as Unsupported Electrocatalysts for Polymer Electrolyte Fuel Cells. <i>Advanced Energy Materials</i> , 2017, 7, 1700548.	10.2	76

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1639	From <i>Chlorella</i> to Nestlike Framework Constructed with Doped Carbon Nanotubes: A Biomass-Derived, High-Performance, Bifunctional Oxygen Reduction/Evolution Catalyst. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 32168-32178.	4.0	63
1640	Single Cobalt Atom and N Codoped Carbon Nanofibers as Highly Durable Electrocatalyst for Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2017, 7, 6864-6871.	5.5	256
1641	<i>Alfalfa</i> Leaf-Derived Porous Heteroatom-Doped Carbon Materials as Efficient Cathodic Catalysts in Microbial Fuel Cells. <i>ACS Sustainable Chemistry and Engineering</i> , 2017, 5, 9766-9773.	3.2	66
1642	Fabrication of a mesoporous Ba <sub>0.5</sub> Sr <sub>0.5</sub> Co <sub>0.8</sub> Fe <sub>0.2</sub> O <sub>3-<math>\delta</math></sub> perovskite as a low-cost and efficient catalyst for oxygen reduction. <i>Dalton Transactions</i> , 2017, 46, 13903-13911.	1.6	18
1643	Cobalt boride modified with N-doped carbon nanotubes as a high-performance bifunctional oxygen electrocatalyst. <i>Journal of Materials Chemistry A</i> , 2017, 5, 21122-21129.	5.2	73
1644	Combined Effect of Porosity and Surface Chemistry on the Electrochemical Reduction of Oxygen on Cellular Vitreous Carbon Foam Catalyst. <i>ACS Catalysis</i> , 2017, 7, 7466-7478.	5.5	42
1645	Selectively doping pyridinic and pyrrolic nitrogen into a 3D porous carbon matrix through template-induced edge engineering: enhanced catalytic activity towards the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 21709-21714.	5.2	76
1646	Theoretical insights on the reaction pathways of the oxygen reduction reaction on yttrium doped graphene as a catalyst in fuel cells. <i>Synthetic Metals</i> , 2017, 232, 131-137.	2.1	1
1647	Active sites and factors influencing them for efficient oxygen reduction reaction in metal-N coordinated pyrolyzed and non-pyrolyzed catalysts: a review. <i>Journal of Materials Chemistry A</i> , 2017, 5, 20095-20119.	5.2	108
1648	Catalysts Encapsulated in Nanostructured Carbon Systems. , 2017, , 71-122.		1
1649	Metal-Free Carbon Materials for CO <sub>2</sub> Electrochemical Reduction. <i>Advanced Materials</i> , 2017, 29, 1701784.	11.1	558
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1652	Ag-enhanced Catalytic Performance of Ordered Mesoporous Fe-N-Graphitic Carbons for Oxygen Electroreduction. <i>Catalysis Letters</i> , 2017, 147, 2745-2754.	1.4	9
1653	Protonated g-C <sub>3</sub> N <sub>4</sub> @polypyrrole derived N-doped porous carbon for supercapacitors and oxygen electrocatalysis. <i>Carbon</i> , 2017, 124, 599-610.	5.4	94
1654	Construction of a porous nitrogen-doped carbon nanotube with open-ended channels to effectively utilize the active sites for excellent oxygen reduction reaction activity. <i>Chemical Communications</i> , 2017, 53, 11426-11429.	2.2	32
1655	Exploration of significant influences of the operating conditions on the local O <sub>2</sub> transport in proton exchange membrane fuel cells (PEMFCs). <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 26221-26229.	1.3	43
1656	Robust Catalysis on 2D Materials Encapsulating Metals: Concept, Application, and Perspective. <i>Advanced Materials</i> , 2017, 29, 1606967.	11.1	334

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1658	Enhanced electrocatalytic performance of Pt nanoparticles on triazine-functionalized graphene nanoplatelets for both oxygen and iodine reduction reactions. <i>Journal of Materials Chemistry A</i> , 2017, 5, 21936-21946.	5.2	10
1659	Enhanced X-Band Electromagnetic-Interference Shielding Performance of Layer-Structured Fabric-Supported Polyaniline/Cobalt–Nickel Coatings. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 33059-33070.	4.0	117
1660	Conjugated polymer-mediated synthesis of nitrogen-doped carbon nanoribbons for oxygen reduction reaction. <i>Carbon</i> , 2017, 124, 630-636.	5.4	44
1661	Catalytic activation of O <sub>2</sub> molecule by transition metal atoms deposited on the outer surface of BN nanocluster. <i>Journal of Molecular Graphics and Modelling</i> , 2017, 77, 218-224.	1.3	27
1662	Electrostatic Self-Assembly of the Composite La <sub>0.7</sub> Sr <sub>0.3</sub> MnO <sub>3</sub> @Ce <sub>0.75</sub> Zr <sub>0.25</sub> O <sub>2</sub> as Electrocatalyst for the Oxygen Reduction Reaction in Aluminum–Air Batteries. <i>Energy Technology</i> , 2017, 5, 2226-2233.	1.8	6
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1664	Design and preparation of porous carbons from conjugated polymer precursors. <i>Materials Today</i> , 2017, 20, 629-656.	8.3	133
1665	Advances in Electrocatalysis for Energy Conversion and Synthesis of Organic Molecules. <i>ChemPhysChem</i> , 2017, 18, 2573-2605.	1.0	51
1666	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
1667	Correction to – Estimation of the Inherent Kinetic Parameters for Oxygen Reduction over a Pt-Free Cathode Catalyst by Resolving the Quasi-Four-Electron Reduction –. <i>Journal of Physical Chemistry C</i> , 2017, 121, 15490-15490.	1.5	0
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1669	Composite of FeCo alloy embedded in biocarbon derived from eggshell membrane with high performance for oxygen reduction reaction and supercapacitor. <i>Electrochimica Acta</i> , 2017, 248, 388-396.	2.6	29
1670	High performance platinum single atom electrocatalyst for oxygen reduction reaction. <i>Nature Communications</i> , 2017, 8, 15938.	5.8	569
1671	Fuel Cell Power Systems and Applications. <i>Proceedings of the IEEE</i> , 2017, 105, 2166-2190.	16.4	79
1672	Recent advances in air electrodes for Zn–air batteries: electrocatalysis and structural design. <i>Materials Horizons</i> , 2017, 4, 945-976.	6.4	263
1673	Metal–Organic Framework-Derived FeCo-N-Doped Hollow Porous Carbon Nanocubes for Electrocatalysis in Acidic and Alkaline Media. <i>ChemSusChem</i> , 2017, 10, 3019-3024.	3.6	96
1674	A facile synthetic strategy for iron, aniline-based non-precious metal catalysts for polymer electrolyte membrane fuel cells. <i>Scientific Reports</i> , 2017, 7, 5396.	1.6	30



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1676	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 <sub>x</sub> Active Sites for Oxygen Reduction Catalysis. <i>Small Methods</i> , 2017, 1, 1700167.	4.6	85
1677	Computational screening of two-dimensional coordination polymers as efficient catalysts for oxygen evolution and reduction reaction. <i>Journal of Catalysis</i> , 2017, 352, 579-585.	3.1	130
1678	Design of Efficient Bifunctional Oxygen Reduction/Evolution Electrocatalyst: Recent Advances and Perspectives. <i>Advanced Energy Materials</i> , 2017, 7, 1700544.	10.2	593
1679	Ball-milling synthesis of Co <sub>2</sub> P nanoparticles encapsulated in nitrogen doped hollow carbon rods as efficient electrocatalysts. <i>Journal of Materials Chemistry A</i> , 2017, 5, 17563-17569.	5.2	57
1680	Kinetics of Oxygen Electroreduction on Me-N <sub>x</sub> C (Me = Fe, Co, Cu) Catalysts in Acidic Medium: Insights on the Effect of the Transition Metal. <i>Journal of Physical Chemistry C</i> , 2017, 121, 17796-17817.	1.5	128
1681	Dual-Functional Electrocatalyst Derived from Iron-Porphyrin-Encapsulated Metal-Organic Frameworks. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 28758-28765.	4.0	49
1682	Synthesis of ordered carbonaceous frameworks from organic crystals. <i>Nature Communications</i> , 2017, 8, 109.	5.8	60
1683	The Oxygen Reduction Reaction Rate of Metallic Nanoparticles during Catalyzed Oxidation. <i>Scientific Reports</i> , 2017, 7, 7017.	1.6	7
1684	Temperature-directed growth of highly pyridinic nitrogen doped, graphitized, ultra-hollow carbon frameworks as an efficient electrocatalyst for the oxygen reduction reaction. <i>Journal of Materials Chemistry A</i> , 2017, 5, 18064-18070.	5.2	43
1685	3D polymer hydrogel for high-performance atomic iron-rich catalysts for oxygen reduction in acidic media. <i>Applied Catalysis B: Environmental</i> , 2017, 219, 629-639.	10.8	111
1686	Effects of MEA Fabrication and Ionomer Composition on Fuel Cell Performance of PGM-Free ORR Catalyst. <i>ECS Transactions</i> , 0, , .	0.3	15
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1688	Active sites of the functionalized coals and carbons for oxygen reduction reaction in a fuel cell. <i>Kinetics and Catalysis</i> , 2017, 58, 455-462.	0.3	2
1689	Atomic-scaled cobalt encapsulated in P,N-doped carbon sheaths over carbon nanotubes for enhanced oxygen reduction electrocatalysis under acidic and alkaline media. <i>Chemical Communications</i> , 2017, 53, 9862-9865.	2.2	87
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1691	Effect of Carbon Supports on Enhancing Mass Kinetic Current Density of Fe-N/C Electrocatalysts. <i>Chemistry - A European Journal</i> , 2017, 23, 14597-14603.	1.7	18
1692	Well-Defined Metal-O <sub>6</sub> in Metal-Catecholates as a Novel Active Site for Oxygen Electroreduction. <i>ACS Applied Materials &amp; Interfaces</i> , 2017, 9, 28473-28477.	4.0	63

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1695	Two-dimensional iron-porphyrin sheet as a promising catalyst for oxygen reduction reaction: a computational study. Science Bulletin, 2017, 62, 1337-1343.	4.3	56
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1712	Engineered architecture of nitrogenous graphene encapsulating porous carbon with nano-channel reactors enhancing the PEM fuel cell performance. <i>Nano Energy</i> , 2017, 42, 249-256.	8.2	41
1713	Dissociation of O <sub>2</sub> molecule on Fe/N <sub>x</sub> clusters embedded in C <sub>60</sub> fullerene, carbon nanotube and graphene. <i>Synthetic Metals</i> , 2017, 234, 38-46.	2.1	28
1714	High performance ORR electrocatalysts prepared via one-step pyrolysis of riboflavin. <i>Chinese Journal of Catalysis</i> , 2017, 38, 1668-1679.	6.9	10
1715	Potential- and Rate-Determining Step for Oxygen Reduction on Pt(111). <i>Journal of Physical Chemistry C</i> , 2017, 121, 26785-26793.	1.5	56
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1718	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
1719	Co <sup>9+</sup> S <sup>8+</sup> activated N/S co-doped carbon tubes in situ grown on carbon nanofibers for efficient oxygen reduction. <i>RSC Advances</i> , 2017, 7, 34763-34769.	1.7	11
1720	Nonprecious Electrocatalysts for Li-Air and Zn-Air batteries: Fundamentals and recent advances. <i>IEEE Nanotechnology Magazine</i> , 2017, 11, 29-55.	0.9	16
1721	Highly Efficient Oxygen Reduction Reaction Electrocatalysts Synthesized under Nanospace Confinement of Metal-Organic Framework. <i>ACS Nano</i> , 2017, 11, 8379-8386.	7.3	100
1722	Nitrogen-Mediated Graphene Oxide Enables Highly Efficient Proton Transfer. <i>Scientific Reports</i> , 2017, 7, 5213.	1.6	4
1723	Metal-organic-frameworks derived cobalt embedded in various carbon structures as bifunctional electrocatalysts for oxygen reduction and evolution reactions. <i>Scientific Reports</i> , 2017, 7, 5266.	1.6	68
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1731	Enhancement of catalytic activity of a programmed gold nanoparticle superstructure modulated by supramolecular protein assembly. <i>Catalysis Today</i> , 2017, 295, 95-101.	2.2	4
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1734	Single-Atomic Ruthenium Catalytic Sites on Nitrogen-Doped Graphene for Oxygen Reduction Reaction in Acidic Medium. <i>ACS Nano</i> , 2017, 11, 6930-6941.	7.3	435
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1736	Super-hydrophobic multilayer coatings with layer number tuned swapping in surface wettability and redox catalytic anti-corrosion application. <i>Scientific Reports</i> , 2017, 7, 4403.	1.6	72
1737	Carbon paper-free membrane electrode assembly fabricated from a Pt electrocatalyst supported on multi-walled carbon nanotubes. <i>Journal of Materials Science</i> , 2017, 52, 8412-8420.	1.7	4
1738	Fe/N/S-doped mesoporous carbon nanostructures as electrocatalysts for oxygen reduction reaction in acid medium. <i>Applied Catalysis B: Environmental</i> , 2017, 203, 889-898.	10.8	172
1739	Transition metal-phosphorus-based materials for electrocatalytic energy conversion reactions. <i>Catalysis Science and Technology</i> , 2017, 7, 330-347.	2.1	132
1740	Advancements in rationally designed PGM-free fuel cell catalysts derived from metal-organic frameworks. <i>Materials Horizons</i> , 2017, 4, 20-37.	6.4	139
1741	Co-N-Doped Mesoporous Carbon Hollow Spheres as Highly Efficient Electrocatalysts for Oxygen Reduction Reaction. <i>Small</i> , 2017, 13, 1602507.	5.2	143
1742	Nitrogen-Doped Carbon Vesicles with Dual Iron-Based Sites for Efficient Oxygen Reduction. <i>ChemSusChem</i> , 2017, 10, 499-505.	3.6	24
1743	Stable and accessible metal catalysts confined by mesoporous carbon structures derived from multicomponent colloidal spheres. <i>Journal of Materials Chemistry A</i> , 2017, 5, 3136-3139.	5.2	8
1744	Modeling Fe/N/C Catalysts in Monolayer Graphene. <i>ACS Catalysis</i> , 2017, 7, 139-145.	5.5	100
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1746	Networking Pyrolyzed Zeolitic Imidazolate Frameworks by Carbon Nanotubes Improves Conductivity and Enhances Oxygen-Reduction Performance in Polymer-Electrolyte-Membrane Fuel Cells. <i>Advanced Materials</i> , 2017, 29, 1604556.	11.1	131

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1749	Ultrafine WC nanoparticles anchored on co-encased, N-doped carbon nanotubes for efficient hydrogen evolution. <i>Energy Storage Materials</i> , 2017, 6, 104-111.	9.5	48
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1752	A Prussian blue route to nitrogen-doped graphene aerogels as efficient electrocatalysts for oxygen reduction with enhanced active site accessibility. <i>Nano Research</i> , 2017, 10, 1213-1222.	5.8	73
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1759	Co-embedded N-doped carbon fibers as highly efficient and binder-free cathode for Na-O <sub>2</sub> batteries. <i>Energy Storage Materials</i> , 2017, 6, 1-8.	9.5	57
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1761	Dioxygen activation chemistry by synthetic mononuclear nonheme iron, copper and chromium complexes. <i>Coordination Chemistry Reviews</i> , 2017, 334, 25-42.	9.5	136
1762	Engineering nanostructures of PGM-free oxygen-reduction catalysts using metal-organic frameworks. <i>Nano Energy</i> , 2017, 31, 331-350.	8.2	317
1763	Polyaniline-based electrocatalysts through emulsion polymerization: Electrochemical and electrocatalytic performances. <i>Journal of Energy Chemistry</i> , 2017, 26, 182-192.	7.1	13
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1766	An optimised synthesis of high performance radiation-grafted anion-exchange membranes. <i>Green Chemistry</i> , 2017, 19, 831-843.	4.6	141
1767	Structure models and nano energy system design for proton exchange membrane fuel cells in electric energy vehicles. <i>Renewable and Sustainable Energy Reviews</i> , 2017, 67, 160-172.	8.2	43
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1781	High-Performance N-doped Bifunctional Carbon Electrocatalysts Derived from Polymer Waste for Oxygen Reduction and Evolution Reaction. <i>International Journal of Electrochemical Science</i> , 2017, , 10471-10483.	0.5	10
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1786	Nanocarbon-Based Electrocatalysts for Rechargeable Aqueous Li/Zn-Air Batteries. <i>ChemElectroChem</i> , 2018, 5, 1745-1763.	1.7	34
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1791	A Polycarboxylate-Decorated Fe <sup>III</sup> -Based Xerogel-Derived Multifunctional Composite (Fe <sub>3</sub> O <sub>4</sub> /Fe/C) as an Efficient Electrode Material towards Oxygen Reduction Reaction and Supercapacitor Application. <i>Chemistry - A European Journal</i> , 2018, 24, 6586-6594.	1.7	12
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1828	Electrochemical Evidence for Two Subfamilies of FeN <sub>x</sub> C <sub>y</sub> Moieties with Concentration-Dependent Cyanide Poisoning. <i>ChemElectroChem</i> , 2018, 5, 1880-1885.	1.7	24
1829	DFT study of stabilization effects on N-doped graphene for ORR catalysis. <i>Catalysis Today</i> , 2018, 312, 118-125.	2.2	81
1830	Biomass-derived FeNi alloy and nitrogen-codoped porous carbons as highly efficient oxygen reduction and evolution bifunctional electrocatalysts for rechargeable Zn-air battery. <i>Energy Storage Materials</i> , 2018, 12, 277-283.	9.5	176
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1842	Recent Progress of Carbon-Based Materials in Oxygen Reduction Reaction Catalysis. <i>ChemElectroChem</i> , 2018, 5, 1764-1774.	1.7	66
1843	Nonprecious Metal Catalysts for Oxygen Reduction in Heterogeneous Aqueous Systems. <i>Chemical Reviews</i> , 2018, 118, 2313-2339.	23.0	642
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1856	Coupled s-p-d Exchange in Facet-Controlled Pd3Pb Tripods Enhances Oxygen Reduction Catalysis. <i>CheM</i> , 2018, 4, 359-371.	5.8	100
1857	Plasma-Assisted Synthesis and Surface Modification of Electrode Materials for Renewable Energy. <i>Advanced Materials</i> , 2018, 30, e1705850.	11.1	476
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1861	Iron Single Clusters Anchored on N-Doped Porous Carbon as Superior Trace-Metal Catalysts toward Oxygen Reduction. <i>Advanced Materials Interfaces</i> , 2018, 5, 1701345.	1.9	19
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1864	Deconvolution of Utilization, Site Density, and Turnover Frequency of Fe-Nitrogen-Carbon Oxygen Reduction Reaction Catalysts Prepared with Secondary N-Precursors. <i>ACS Catalysis</i> , 2018, 8, 1640-1647.	5.5	126
1865	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
1866	Multifunctional electrocatalysts derived from conducting polymer and metal organic framework complexes. <i>Nano Energy</i> , 2018, 45, 127-135.	8.2	166
1867	Design and Synthesis of Cobalt-Based Electrocatalysts for Oxygen Reduction Reaction. <i>Chemical Record</i> , 2018, 18, 840-848.	2.9	11
1868	Nitrogen-doped, oxygen-functionalized, edge- and defect-rich vertically aligned graphene for highly enhanced oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2018, 6, 2176-2183.	5.2	64
1869	Facile Metal Coordination of Active Site Imprinted Nitrogen Doped Carbons for the Conservative Preparation of Non-Noble Metal Oxygen Reduction Electrocatalysts. <i>Advanced Energy Materials</i> , 2018, 8, 1701771.	10.2	73
1870	Graphene Layers-Wrapped Fe <sub>5</sub> C <sub>2</sub> Nanoparticles Supported on N-doped Graphene Nanosheets for Highly Efficient Oxygen Reduction. <i>Advanced Energy Materials</i> , 2018, 8, 1702476.	10.2	205
1871	Theoretical insights on the oxygen-reduction reaction mechanism of LaN <sub>4</sub> -embedded graphene. <i>Journal of Molecular Modeling</i> , 2018, 24, 14.	0.8	5
1872	Morphology and dispersion of nanostructured manganese-cobalt spinel on various carbon supports: the effect on the oxygen reduction reaction in alkaline media. <i>Catalysis Science and Technology</i> , 2018, 8, 642-655.	2.1	28
1873	Mechanisms of the oxygen reduction reaction on B- and/or N-doped carbon nanomaterials with curvature and edge effects. <i>Nanoscale</i> , 2018, 10, 1129-1134.	2.8	81
1874	Controlled synthesis of porous nitrogen-doped carbon nanoshells for highly efficient oxygen reduction. <i>Reaction Chemistry and Engineering</i> , 2018, 3, 238-243.	1.9	4
1875	Nanosheets/Mesopore Structured Co <sub>3</sub> O <sub>4</sub> @CMK-3 Composite as an Electrocatalyst for the Oxygen Reduction Reaction. <i>ChemCatChem</i> , 2018, 10, 1321-1329.	1.8	15
1876	Bimetallic M/N/C catalysts prepared from $\gamma$ -expanded metal salen precursors toward an efficient oxygen reduction reaction. <i>RSC Advances</i> , 2018, 8, 2892-2899.	1.7	15

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1878	N-doped carbon nanotubes containing a high concentration of single iron atoms for efficient oxygen reduction. <i>NPG Asia Materials</i> , 2018, 10, e461-e461.	3.8	103
1879	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
1880	N, P-dual doped carbon with trace Co and rich edge sites as highly efficient electrocatalyst for oxygen reduction reaction. <i>Science China Materials</i> , 2018, 61, 679-685.	3.5	54
1881	Selective reduction of nitrobenzene to aniline over electrocatalysts based on nitrogen-doped carbons containing non-noble metals. <i>Applied Catalysis B: Environmental</i> , 2018, 226, 509-522.	10.8	83
1882	Nitrogen-doped graphene supported Cu-Ag <sub>2.9</sub> nanoparticles as efficient methanol tolerant cathode for oxygen reduction. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 1781-1789.	3.8	5
1883	General synthesis and definitive structural identification of MN <sub>4</sub> C <sub>4</sub> single-atom catalysts with tunable electrocatalytic activities. <i>Nature Catalysis</i> , 2018, 1, 63-72.	16.1	1,476
1884	DMF-Coordination Assisted Electrodeposition of Highly Active PtCo Alloy Catalysts for the Oxygen Reduction Reaction. <i>Journal of the Electrochemical Society</i> , 2018, 165, D43-D49.	1.3	9
1885	Porous Iron-Cobalt Alloy/Nitrogen-Doped Carbon Cages Synthesized via Pyrolysis of Complex Metal-Organic Framework Hybrids for Oxygen Reduction. <i>Advanced Functional Materials</i> , 2018, 28, 1706738.	7.8	227
1886	Patterning Graphene Surfaces with Iron-Oxide-Embedded Mesoporous Polypyrrole and Derived N-Doped Carbon of Tunable Pore Size. <i>Small</i> , 2018, 14, 1702755.	5.2	73
1887	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
1888	Carbon Nanodots as Electrocatalysts towards the Oxygen Reduction Reaction. <i>Electroanalysis</i> , 2018, 30, 436-444.	1.5	26
1889	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
1890	Fe-N-Doped Mesoporous Carbon with Dual Active Sites Loaded on Reduced Graphene Oxides for Efficient Oxygen Reduction Catalysts. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 2423-2429.	4.0	95
1891	Bifunctional Co <sub>Nx</sub> embedded graphene electrocatalysts for OER and ORR: A theoretical evaluation. <i>Carbon</i> , 2018, 130, 112-119.	5.4	209
1892	CoFe nanoalloy particles encapsulated in nitrogen-doped carbon layers as bifunctional oxygen catalyst derived from a Prussian blue analogue. <i>Journal of Alloys and Compounds</i> , 2018, 740, 743-753.	2.8	43
1893	Preparation of an efficient Fe/N/C electrocatalyst and its application for oxygen reduction reaction in alkaline media. <i>Journal of Electroanalytical Chemistry</i> , 2018, 810, 62-68.	1.9	23
1894	Influence of sulfur in the precursor mixture on the structural composition of Fe-N-C catalysts. <i>Hyperfine Interactions</i> , 2018, 239, 1.	0.2	13



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1896	Steamed cake-derived 3D carbon foam with surface anchored carbon nanoparticles as freestanding anodes for high-performance microbial fuel cells. <i>Science of the Total Environment</i> , 2018, 636, 1081-1088.	3.9	33
1897	Polyformamidine <sup>+</sup> Derived Non <sup>+</sup> Noble Metal Electrocatalysts for Efficient Oxygen Reduction Reaction. <i>Advanced Functional Materials</i> , 2018, 28, 1707551.	7.8	49
1898	Effect of N-doped carbon coatings on the durability of highly loaded platinum and alloy catalysts with different carbon supports for polymer electrolyte membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 10070-10081.	3.8	17
1899	The chemical identity, state and structure of catalytically active centers during the electrochemical CO <sub>2</sub> reduction on porous Fe <sup>+</sup> nitrogen <sup>+</sup> carbon (Fe <sup>+</sup> N <sup>+</sup> C) materials. <i>Chemical Science</i> , 2018, 9, 5064-5073.	3.7	128
1900	Oxygen Reduction on Fe <sup>+</sup> and Co <sup>+</sup> Containing Nitrogen <sup>+</sup> Doped Nanocarbons. <i>ChemElectroChem</i> , 2018, 5, 2002-2009.	1.7	20
1901	Cobalt Boron Imidazolate Framework Derived Cobalt Nanoparticles Encapsulated in B/N Codoped Nanocarbon as Efficient Bifunctional Electrocatalysts for Overall Water Splitting. <i>Advanced Functional Materials</i> , 2018, 28, 1801136.	7.8	155
1902	N-doped and N/Fe-codoped porous carbon spheres derived from tetrazine-based polypyrrole as efficient electrocatalysts for the oxygen reduction reaction. <i>Applied Catalysis A: General</i> , 2018, 559, 102-111.	2.2	18
1903	Durability challenges and perspective in the development of PGM-free electrocatalysts for the oxygen reduction reaction. <i>Current Opinion in Electrochemistry</i> , 2018, 9, 224-232.	2.5	145
1904	A universal principle for a rational design of single-atom electrocatalysts. <i>Nature Catalysis</i> , 2018, 1, 339-348.	16.1	1,214
1905	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
1906	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
1907	Bimetallic carbide of Co <sub>3</sub> W <sub>3</sub> C enhanced non-noble-metal catalysts with high activity and stability for acidic oxygen reduction reaction. <i>RSC Advances</i> , 2018, 8, 12292-12299.	1.7	10
1908	Three-Dimensional Printing of Polyaniline/Reduced Graphene Oxide Composite for High-Performance Planar Supercapacitor. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 10437-10444.	4.0	175
1909	Nitrogen-doped carbon-modified titanium oxides supported Pd catalyst for the electrooxidation of formic acid. <i>Journal of Solid State Electrochemistry</i> , 2018, 22, 2623-2628.	1.2	5
1910	Biomass based iron and nitrogen co-doped 3D porous carbon as an efficient oxygen reduction catalyst. <i>Journal of Colloid and Interface Science</i> , 2018, 523, 144-150.	5.0	44
1911	Facile preparation of efficient electrocatalysts for oxygen reduction reaction: One-dimensional meso/macroporous cobalt and nitrogen Co-doped carbon nanofibers. <i>Journal of Power Sources</i> , 2018, 380, 174-184.	4.0	48
1912	Toward the Decentralized Electrochemical Production of H <sub>2</sub> O <sub>2</sub> : A Focus on the Catalysis. <i>ACS Catalysis</i> , 2018, 8, 4064-4081.	5.5	663

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1914	A Synthetic Route for the Preparation of Core-Shell Nanoparticles Using a Protective Carbon Layer and Ozone Treatment. <i>Journal of the Electrochemical Society</i> , 2018, 165, F285-F290.	1.3	4
1915	Critical advancements in achieving high power and stable nonprecious metal catalyst-based MEAs for real-world proton exchange membrane fuel cell applications. <i>Science Advances</i> , 2018, 4, eaar7180.	4.7	189
1916	Hydrothermal Synthesis of a New Kind of N-Doped Graphene Gel-like Hybrid As an Enhanced ORR Electrocatalyst. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 10842-10850.	4.0	87
1917	Rational Design and Synthesis of Low-Temperature Fuel Cell Electrocatalysts. <i>Electrochemical Energy Reviews</i> , 2018, 1, 54-83.	13.1	87
1918	Understanding PGM-free catalysts by linking density functional theory calculations and structural analysis: Perspectives and challenges. <i>Current Opinion in Electrochemistry</i> , 2018, 9, 137-144.	2.5	85
1919	Identifying the Active Site of N-Doped Graphene for Oxygen Reduction by Selective Chemical Modification. <i>ACS Energy Letters</i> , 2018, 3, 986-991.	8.8	102
1920	Understanding Selective Reduction of CO <sub>2</sub> to CO on Modified Carbon Electrocatalysts. <i>ChemElectroChem</i> , 2018, 5, 1615-1621.	1.7	16
1921	Defect-rich, boron-nitrogen bonds-free and dual-doped graphenes for highly efficient oxygen reduction reaction. <i>Journal of Colloid and Interface Science</i> , 2018, 521, 11-16.	5.0	13
1922	Incorporation of Fe <sub>3</sub> C and Pyridinic N Active Sites with a Moderate N/C Ratio in Fe@N Mesoporous Carbon Materials for Enhanced Oxygen Reduction Reaction Activity. <i>ACS Applied Nano Materials</i> , 2018, 1, 1801-1810.	2.4	48
1923	Improved electrochemical performance of Fe-N-C catalysts through ionic liquid modification in alkaline media. <i>Journal of Power Sources</i> , 2018, 375, 222-232.	4.0	66
1924	Synthesis of M (Fe <sub>3</sub> C, Co, Ni)-porous carbon frameworks as high-efficient ORR catalysts. <i>Energy Storage Materials</i> , 2018, 11, 112-117.	9.5	71
1925	Non-noble metal catalyst on carbon ribbon for fuel cell cathode. <i>Journal of Solid State Electrochemistry</i> , 2018, 22, 761-771.	1.2	5
1926	A Highly Efficient Electrocatalyst Derived from Polyaniline@CNTs@SPS for the Oxygen Reduction Reaction. <i>ChemElectroChem</i> , 2018, 5, 195-200.	1.7	4
1927	Soft-template synthesis of mesoporous non-precious metal catalyst with Fe-N <sub>x</sub> /C active sites for oxygen reduction reaction in fuel cells. <i>Applied Catalysis B: Environmental</i> , 2018, 222, 191-199.	10.8	115
1928	Continuous Flow Synthesis of Platinum Nanoparticles in Porous Carbon as Durable and Methanol-tolerant Electrocatalysts for the Oxygen Reduction Reaction. <i>ChemElectroChem</i> , 2018, 5, 62-70.	1.7	18
1929	Influence of the Composition and Preparation of the Rotating Disk Electrode on the Performance of Mesoporous Electrocatalysts in the Alkaline Oxygen Reduction Reaction. <i>ChemElectroChem</i> , 2018, 5, 119-128.	1.7	17
1930	Highly efficient transition metal and nitrogen co-doped carbide-derived carbon electrocatalysts for anion exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2018, 375, 233-243.	4.0	74

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1932	Metal-free black phosphorus nanosheets-decorated graphitic carbon nitride nanosheets with C P bonds for excellent photocatalytic nitrogen fixation. <i>Applied Catalysis B: Environmental</i> , 2018, 221, 27-35.	10.8	236
1933	Improving the Electrochemical Oxygen Reduction Activity of Manganese Oxide Nanosheets with Sulfurization-Induced Nanopores. <i>ChemCatChem</i> , 2018, 10, 422-429.	1.8	23
1934	Nanocarbon/oxide composite catalysts for bifunctional oxygen reduction and evolution in reversible alkaline fuel cells: A mini review. <i>Journal of Power Sources</i> , 2018, 375, 277-290.	4.0	127
1935	The key roles of trace iron for nitrogen, sulfur dual-doped carbon nanospheres as high efficient oxygen reduction catalyst. <i>Journal of Materials Science</i> , 2018, 53, 1404-1413.	1.7	13
1936	<sup>57</sup> Fe-Mössbauer spectroscopy and electrochemical activities of graphitic layer encapsulated iron electrocatalysts for the oxygen reduction reaction. <i>Applied Catalysis B: Environmental</i> , 2018, 221, 406-412.	10.8	61
1937	Investigation of activity and stability of carbon supported oxynitrides with ultra-low Pt concentration as ORR catalyst for PEM fuel cells. <i>Journal of Electroanalytical Chemistry</i> , 2018, 819, 312-321.	1.9	24
1938	Engineering beneficial structures and morphologies of M-N-C oxygen-reduction catalysts derived from different metal-containing precursors. <i>Ionics</i> , 2018, 24, 1733-1744.	1.2	5
1939	Self-terminated activation for high-yield production of N,P-codoped nanoporous carbon as an efficient metal-free electrocatalyst for Zn-air battery. <i>Carbon</i> , 2018, 128, 97-105.	5.4	69
1940	Novel Co <sub>3</sub> O <sub>4</sub> Nanoparticles/Nitrogen-Doped Carbon Composites with Extraordinary Catalytic Activity for Oxygen Evolution Reaction (OER). <i>Nano-Micro Letters</i> , 2018, 10, 15.	14.4	124
1941	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
1942	Construction of a hierarchical 3D Co/N-carbon electrocatalyst for efficient oxygen reduction and overall water splitting. <i>Journal of Materials Chemistry A</i> , 2018, 6, 489-497.	5.2	111
1943	Surface Fluorination to Boost the Stability of the Fe/N/C Cathode in Proton Exchange Membrane Fuel Cells. <i>ChemElectroChem</i> , 2018, 5, 1914-1921.	1.7	61
1944	Electrochemically Inert $\text{Co}_3\text{N}_4$ Promotes Water Oxidation Catalysis. <i>Advanced Functional Materials</i> , 2018, 28, 1705583.	7.8	84
1945	DUT-58 (Co) Derived Synthesis of Co Clusters as Efficient Oxygen Reduction Electrocatalyst for Zinc-Air Battery. <i>Global Challenges</i> , 2018, 2, 1700086.	1.8	13
1946	Facile synthesis of efficient core-shell structured iron-based carbon catalyst for oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 1386-1395.	3.8	7
1947	Development of non-platinum oxygen reduction catalysts prepared from metal-organic framework using 4,4'-bipyridine as a bridging ligand. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2018, 228, 190-197.	1.7	2
1948	From biological enzyme to single atomic Fe-N-C electrocatalyst for efficient oxygen reduction. <i>Chemical Communications</i> , 2018, 54, 1307-1310.	2.2	50

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1950	Litchi-like porous Fe/N/C spheres with atomically dispersed Fe <sub>x</sub> promoted by sulfur as highly efficient oxygen electrocatalysts for Zn-air batteries. Journal of Materials Chemistry A, 2018, 6, 4605-4610.	5.2	54
1951	ELECTROCATALYTIC PROCESSES IN ENERGY TECHNOLOGIES. , 2018, , 291-341.		0
1952	Conductive Porous Network of Metal-Organic Frameworks Derived Cobalt-Nitrogen-doped Carbon with the Assistance of Carbon Nanohorns as Electrocatalysts for Zinc-Air Batteries. ChemCatChem, 2018, 10, 1336-1343.	1.8	14
1953	Well-Defined Cobalt Catalyst with N-Doped Carbon Layers Enwrapping: The Correlation between Surface Atomic Structure and Electrocatalytic Property. Small, 2018, 14, 1702074.	5.2	56
1954	NiCo Alloy Nanoparticles Decorated on N-Doped Carbon Nanofibers as Highly Active and Durable Oxygen Electrocatalyst. Advanced Functional Materials, 2018, 28, 1705094.	7.8	405
1955	MIL-100-Fe derived N-doped Fe/Fe <sub>3</sub> C@C electrocatalysts for efficient oxygen reduction reaction. Applied Surface Science, 2018, 434, 1266-1273.	3.1	59
1956	Fe/Fe <sub>3</sub> C Nanoparticles Embedded in Nitrogen-Doped Carbon Nanotubes as Multifunctional Electrocatalysts for Oxygen Catalysis and CO <sub>2</sub> Reduction. ChemElectroChem, 2018, 5, 471-477.	1.7	38
1957	The Solid-Phase Synthesis of an Fe-N-C Electrocatalyst for High-Power Proton-Exchange Membrane Fuel Cells. Angewandte Chemie - International Edition, 2018, 57, 1204-1208.	7.2	293
1958	Electrocatalysis of oxygen reduction on heteroatom-doped nanocarbons and transition metal-nitrogen-carbon catalysts for alkaline membrane fuel cells. Journal of Materials Chemistry A, 2018, 6, 776-804.	5.2	357
1959	Enhancement of oxygen reduction reaction performance: The characteristic role of Fe N coordinations. Electrochimica Acta, 2018, 260, 264-273.	2.6	27
1960	Enhanced Fe dispersion via $\pi$ -pinning-effect of thiocyanate ion on ferric ion in Fe-N-S-doped catalyst as an excellent oxygen reduction reaction electrode. Journal of Power Sources, 2018, 376, 161-167.	4.0	30
1961	Fe@C <sub>2</sub> N: A highly-efficient indirect-contact oxygen reduction catalyst. Nano Energy, 2018, 44, 304-310.	8.2	118
1962	Hierarchical Core-Shell Nickel Cobaltite Chestnut-like Structures as Bifunctional Electrocatalyst for Rechargeable Metal-Air Batteries. ChemSusChem, 2018, 11, 406-414.	3.6	30
1963	Nonprecious-metal Fe/N/C Catalysts Prepared from $\gamma$ -Expanded Fe Salen Precursors toward an Efficient Oxygen Reduction Reaction. ChemCatChem, 2018, 10, 743-750.	1.8	17
1964	Oxygen reduction reaction of (C-PCTNB@CNTs): A nitrogen and phosphorus dual-doped carbon electro-catalyst derived from polyphosphazenes. Journal of Power Sources, 2018, 373, 61-69.	4.0	40
1965	A multifunctional separator modified with cobalt and nitrogen co-doped porous carbon nanofibers for Li-S batteries. Journal of Membrane Science, 2018, 548, 247-253.	4.1	78
1966	Bulk Production of Non-Precious Metal Catalysts with High Surface Area and Excellent Activity in the Oxygen Reduction Reaction. ChemElectroChem, 2018, 5, 1854-1861.	1.7	6

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1968	Nest-like assembly of the doped single-walled carbon nanotubes with unique mesopores as ultrastable catalysts for high power density Zn-air battery. <i>Carbon</i> , 2018, 128, 46-53.	5.4	18
1969	Fe-polyaniline composite nanofiber catalyst for chemoselective hydrolysis of oxime. <i>Journal of Colloid and Interface Science</i> , 2018, 513, 592-601.	5.0	11
1970	Iron Oxide Nanoclusters Incorporated into Iron Phthalocyanine as Highly Active Electrocatalysts for the Oxygen Reduction Reaction. <i>ChemCatChem</i> , 2018, 10, 475-483.	1.8	18
1971	Mechanisms of Two-Electron versus Four-Electron Reduction of Dioxygen Catalyzed by Earth-Abundant Metal Complexes. <i>ChemCatChem</i> , 2018, 10, 9-28.	1.8	82
1972	Synthesis and characterization of high performing Fe-N-C catalyst for oxygen reduction reaction (ORR) in Alkaline Exchange Membrane Fuel Cells. <i>Journal of Power Sources</i> , 2018, 375, 214-221.	4.0	206
1973	Reduced graphene oxide modified activated carbon for improving power generation of air-cathode microbial fuel cells. <i>Journal of Materials Research</i> , 2018, 33, 1279-1287.	1.2	8
1974	A Comprehensive Review on Controlling Surface Composition of Pt-Based Bimetallic Electrocatalysts. <i>Advanced Energy Materials</i> , 2018, 8, 1703597.	10.2	123
1975	Oxygen Reduction Catalysts on Nanoparticle Electrodes. , 2018, , 796-811.		5
1976	Thermal Stability and Potential Cycling Durability of Nitrogen-Doped Graphene Modified by Metal-Organic Framework for Oxygen Reduction Reactions. <i>Catalysts</i> , 2018, 8, 607.	1.6	20
1977	Enhancement of Fe-N-C carbon catalyst activity for the oxygen reduction reaction: effective increment of active sites by a short and repeated heating process. <i>RSC Advances</i> , 2018, 8, 37600-37605.	1.7	13
1978	On the role of hydroxide species in sulphur- and nitrogen-doped cobalt-based carbon catalysts for the oxygen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2018, 6, 22310-22319.	5.2	12
1979	Metal-organic frameworks-derived core-shell Fe <sub>3</sub> O <sub>4</sub> /Fe <sub>3</sub> N@graphite carbon nanocomposites as excellent non-precious metal electrocatalyst for oxygen reduction. <i>Dalton Transactions</i> , 2018, 47, 16567-16577.	1.6	29
1980	The Achilles' heel of iron-based catalysts during oxygen reduction in an acidic medium. <i>Energy and Environmental Science</i> , 2018, 11, 3176-3182.	15.6	332
1981	A MOF-derived coral-like NiSe@NC nanohybrid: an efficient electrocatalyst for the hydrogen evolution reaction at all pH values. <i>Nanoscale</i> , 2018, 10, 22758-22765.	2.8	78
1982	Robust FeCo nanoparticles embedded in a N-doped porous carbon framework for high oxygen conversion catalytic activity in alkaline and acidic media. <i>Journal of Materials Chemistry A</i> , 2018, 6, 23445-23456.	5.2	43
1983	Reduced graphene oxide intercalated ZnS nanoparticles as an efficient and durable electrocatalyst for the oxygen reduction reaction. <i>New Journal of Chemistry</i> , 2018, 42, 19285-19293.	1.4	12
1984	Synergistic effect of well-defined dual sites boosting the oxygen reduction reaction. <i>Energy and Environmental Science</i> , 2018, 11, 3375-3379.	15.6	528

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1987	Highly Active and Stable Fe-N-C Oxygen Reduction Electrocatalysts Derived from Electrospinning and In Situ Pyrolysis. <i>Nanoscale Research Letters</i> , 2018, 13, 218.	3.1	18
1988	Ultralow-loading platinum-cobalt fuel cell catalysts derived from imidazolate frameworks. <i>Science</i> , 2018, 362, 1276-1281.	6.0	735
1989	Exploring the Effect of Gold Support on the Oxygen Reduction Reaction Activity of Metal Porphycenes. <i>ChemCatChem</i> , 2018, 10, 5505-5510.	1.8	6
1990	Fe-Doped Metal-Organic Frameworks-Derived Electrocatalysts for Oxygen Reduction Reaction in Alkaline Media. <i>Journal of the Electrochemical Society</i> , 2018, 165, F1278-F1285.	1.3	12
1991	Oxygen Electroreduction Catalysts Based on Polymer Complexes of Nickel with Schiff Bases. <i>Russian Journal of Electrochemistry</i> , 2018, 54, 769-774.	0.3	5
1992	Novel multi walled carbon nanotube based nitrogen impregnated Co and Fe cathode catalysts for improved microbial fuel cell performance. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 23027-23035.	3.8	58
1993	Recent Advances of Cobalt-Based Electrocatalysts for Oxygen Electrode Reactions and Hydrogen Evolution Reaction. <i>Catalysts</i> , 2018, 8, 559.	1.6	107
1994	Enhanced Oxygen Reduction Reaction Activity on Pt-Monolayer-Shell PdIr/Ni-Core Catalysts. <i>Journal of the Electrochemical Society</i> , 2018, 165, J3288-J3294.	1.3	11
1995	Applications of Porous Metal-Organic Framework MIL-100(M) (M = Cr, Fe, Sc, Al, V). <i>Crystal Growth and Design</i> , 2018, 18, 7730-7744.	1.4	51
1996	Efficient Electrochemical Reduction of Oxygen Catalyzed by Porous Carbon Containing Trace Amount of Metal Residues. <i>Electroanalysis</i> , 2018, 30, 2768-2773.	1.5	2
1997	Iron-Nitrogen-Doped Dendritic Carbon Nanostructures for an Efficient Oxygen Reduction Reaction. <i>ACS Applied Energy Materials</i> , 2018, 1, 6560-6568.	2.5	16
1998	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
1999	Pd Nanoparticles Anchored on N-rich Graphdiyne Surface for Enhanced Catalysis for Alkaline Electrolyte Oxygen Reduction. <i>International Journal of Electrochemical Science</i> , 2018, 13, 12226-12237.	0.5	8
2000	Single-Atom to Single-Atom Grafting of Pt <sub>1</sub> onto Fe <sub>4</sub> N <sub>4</sub> Center: Pt <sub>1</sub> @Fe <sub>4</sub> N <sub>4</sub> C Multifunctional Electrocatalyst with Significantly Enhanced Properties. <i>Advanced Energy Materials</i> , 2018, 8, 1701345.	10.2	371
2001	Recent advances in electrocatalysts toward the oxygen reduction reaction: the case of PtNi octahedra. <i>Nanoscale</i> , 2018, 10, 20073-20088.	2.8	60
2002	Recent Advance on Polyaniline or Polypyrrole-Derived Electrocatalysts for Oxygen Reduction Reaction. <i>Polymers</i> , 2018, 10, 1397.	2.0	32
2003	Fe-Co-Ni/Nitrogen-Doped Mesoporous Carbon Materials for Electrochemical Oxygen Reduction. <i>ChemistrySelect</i> , 2018, 3, 12960-12966.	0.7	2



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2005	Oxygen reduction reaction of Fe <sub>4</sub> center embedded in graphene and carbon nanotube: Density functional calculations. <i>AIP Advances</i> , 2018, 8, .	0.6	17
2006	Atomic approaches towards stability. <i>Nature Catalysis</i> , 2018, 1, 900-902.	16.1	10
2007	Fe-N <sub>x</sub> Sites Enriched Carbon Micropolyhedrons Derived from Fe-Doped Zeolitic Imidazolate Frameworks with Reinforced Fe-N Coordination for Efficient Oxygen Reduction Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 15624-15633.	3.2	57
2008	Rationally Armoring PtCu Alloy with Metal-Organic Frameworks as Highly Selective Nonenzyme Electrochemical Sensor. <i>Advanced Materials Interfaces</i> , 2018, 5, 1801168.	1.9	19
2009	Nitrogen and Sulfur Dual Self-Doped Graphitic Carbon with Highly Catalytic Activity for Oxygen Reduction Reaction. <i>ACS Applied Energy Materials</i> , 0, , .	2.5	5
2010	Single crystalline thallium rhodium oxide pyrochlore for highly improved round trip efficiency of hybrid Na-air batteries. <i>Dalton Transactions</i> , 2018, 47, 15217-15225.	1.6	9
2011	Low-Cost Sulfonated Phthalocyanines-Derived Hierarchical Porous Co-Cu-N-S-Doped Carbons for Efficient Oxygen Electroreduction. <i>Journal of the Electrochemical Society</i> , 2018, 165, H658-H666.	1.3	4
2012	Ternary hybrid PtM@polyaniline (M = Ni, FeNi) counter electrodes for dye-sensitized solar cells. <i>Electrochimica Acta</i> , 2018, 291, 114-123.	2.6	11
2013	Development, Challenges, and Prospects of Carbon-Based Electrode for Lithium-Air Batteries. , 2018, , 115-152.		12
2014	Polyaniline-derived metal-free hollow nitrogen-doped carbon microspheres as an efficient electrocatalyst for supercapacitors and oxygen reduction. <i>Journal of Electroanalytical Chemistry</i> , 2018, 829, 157-167.	1.9	33
2015	Tuning the Performance of Single-Atom Electrocatalysts: Support-Induced Structural Reconstruction. <i>Chemistry of Materials</i> , 2018, 30, 7494-7502.	3.2	24
2016	DFT Study of the Oxygen Reduction Reaction on Carbon-Coated Iron and Iron Carbide. <i>ACS Catalysis</i> , 2018, 8, 10521-10529.	5.5	46
2017	Stabilization of Iron-Based Fuel Cell Catalysts by Non-Catalytic Platinum. <i>Journal of the Electrochemical Society</i> , 2018, 165, F1084-F1091.	1.3	33
2018	Electrochemical Energy Conversion and Storage with Zeolitic Imidazolate Framework Derived Materials: A Perspective. <i>ChemElectroChem</i> , 2018, 5, 3571-3588.	1.7	46
2019	Defects on carbons for electrocatalytic oxygen reduction. <i>Chemical Society Reviews</i> , 2018, 47, 7628-7658.	18.7	432
2020	Nitrogen-Doped Carbon Nanotubes Encapsulated Cobalt Nanoparticles Hybrids for Highly Efficient Catalysis of Oxygen Reduction Reaction. <i>Journal of the Electrochemical Society</i> , 2018, 165, J3052-J3058.	1.3	12
2021	Turning Carbon Atoms into Highly Active Oxygen Reduction Reaction Electrocatalytic Sites in Nitrogen-Doped Graphene-Coated Co@Ag. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 14033-14041.	3.2	10

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2023	Platinum-free electrocatalysts for oxygen reduction reaction: Fe-N <sub>x</sub> modified mesoporous carbon prepared from biosources. <i>Journal of Power Sources</i> , 2018, 402, 434-446.	4.0	36
2024	Co <sub>2</sub> B and Co Nanoparticles Immobilized on the N-B-Doped Carbon Derived from Nano-B <sub>4</sub> C for Efficient Catalysis of Oxygen Evolution, Hydrogen Evolution, and Oxygen Reduction Reactions. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 37067-37078.	4.0	47
2025	Density Functional Study of Hydrogen Evolution on Cobalt-Embedded Carbon Nanotubes: Effects of Doping and Surface Curvature. <i>ACS Applied Nano Materials</i> , 2018, 1, 6258-6268.	2.4	34
2026	Nitrogen-Doped Defect-Rich Graphitic Carbon Nanorings with CoO Nanoparticles as Highly Efficient Electrocatalyst for Oxygen Electrochemistry. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 15811-15821.	3.2	35
2027	Nitrogen and sulfur co-doped porous carbon sheets for energy storage and pH-universal oxygen reduction reaction. <i>Nano Energy</i> , 2018, 54, 192-199.	8.2	83
2028	Quinone-Mediated Electrochemical O <sub>2</sub> Reduction Accessing High Power Density with an Off-Electrode Co-N/C Catalyst. <i>Joule</i> , 2018, 2, 2722-2731.	11.7	38
2029	Electrocatalytic Oxygen Reduction Activities of Thiol-Protected Nanomolecules Ranging in Size from Au <sub>28</sub> (SR) <sub>20</sub> to Au <sub>279</sub> (SR) <sub>84</sub> . <i>Journal of Physical Chemistry C</i> , 2018, 122, 24809-24817.	1.5	50
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2031	Stacked and Core-Shell Pt:Ni/WC Nanorod Array Electrocatalyst for Enhanced Oxygen Reduction Reaction in Polymer Electrolyte Membrane Fuel Cells. <i>ACS Applied Energy Materials</i> , 2018, 1, 6115-6122.	2.5	11
2032	Graphitic Carbon Nitride for Electrochemical Energy Conversion and Storage. <i>ACS Energy Letters</i> , 2018, 3, 2796-2815.	8.8	149
2033	Self-Assembled 3D Hierarchical Porous Hybrid as Platinum-Like Bifunctional Nonprecious Metal Catalyst toward Oxygen Reduction Reaction and Hydrogen Evolution Reaction. <i>Advanced Materials Interfaces</i> , 2018, 5, 1801296.	1.9	5
2034	Atomically dispersed manganese catalysts for oxygen reduction in proton-exchange membrane fuel cells. <i>Nature Catalysis</i> , 2018, 1, 935-945.	16.1	1,075
2035	Non-precious nanostructured materials by electrospinning and their applications for oxygen reduction in polymer electrolyte membrane fuel cells. <i>Journal of Power Sources</i> , 2018, 408, 17-27.	4.0	45
2036	Ultra-high surface area graphitic Fe-N-C nanospheres with single-atom iron sites as highly efficient non-precious metal bifunctional catalysts towards oxygen redox reactions. <i>Journal of Catalysis</i> , 2018, 368, 279-290.	3.1	105
2037	A Self-Templating Redox-Mediated Synthesis of Hollow Phosphated Manganese Oxide Nanospheres as Noble-Metal-like Oxygen Electrocatalysts. <i>Chemistry of Materials</i> , 2018, 30, 8270-8279.	3.2	31
2038	Physical and Chemical Considerations for Improving Catalytic Activity and Stability of Non-Precious-Metal Oxygen Reduction Reaction Catalysts. <i>ACS Catalysis</i> , 2018, 8, 11264-11276.	5.5	101
2039	A Ternary Ni <sub>46</sub> Co <sub>40</sub> Fe <sub>14</sub> Nanoalloy-Based Oxygen Electrocatalyst for Highly Efficient Rechargeable Zinc-Air Batteries. <i>Advanced Materials</i> , 2018, 30, e1803372.	11.1	73

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2041	Mesoporous CoO/Co-N-C nanofibers as efficient cathode catalysts for Li-O <sub>2</sub> batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 19075-19084.	5.2	45
2042	Investigation of Earth-Abundant Oxygen Reduction Electrocatalysts for the Cathode of Passive Air-Breathing Direct Formate Fuel Cells. <i>Catalysts</i> , 2018, 8, 320.	1.6	1
2043	High-Density Ultra-small Clusters and Single-Atom Fe Sites Embedded in Graphitic Carbon Nitride (g-C <sub>3</sub> N <sub>4</sub> ) for Highly Efficient Catalytic Advanced Oxidation Processes. <i>ACS Nano</i> , 2018, 12, 9441-9450.	7.3	455
2044	A study of FeN/C catalysts for the selective oxidation of unsaturated alcohols by molecular oxygen. <i>Journal of Catalysis</i> , 2018, 367, 16-26.	3.1	29
2049	Oxygen reduction reaction activity and the microbial community in response to magnetite coordinating nitrogen-doped carbon catalysts in bioelectrochemical systems. <i>Biosensors and Bioelectronics</i> , 2018, 122, 113-120.	5.3	18
2050	Porous graphene doped with Fe/N/S and incorporating Fe <sub>3</sub> O <sub>4</sub> nanoparticles for efficient oxygen reduction. <i>Catalysis Science and Technology</i> , 2018, 8, 5325-5333.	2.1	33
2051	Preparation of Co-N carbon nanosheet oxygen electrode catalyst by controlled crystallization of cobalt salt precursors for all-solid-state Al-air battery. <i>RSC Advances</i> , 2018, 8, 22193-22198.	1.7	11
2052	Morphology-Controlled Nitrogen-Containing Polymers as Synthetic Precursors for Electrochemical Oxygen Reduction Fe/N/C Cathode Catalysts. <i>Catalysts</i> , 2018, 8, 324.	1.6	8
2053	High-density active sites porous Fe/N/C electrocatalyst boosting the performance of proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2018, 401, 287-295.	4.0	44
2054	Promoting Oxygen Reduction Reaction Activity of Fe-N/C Electrocatalysts by Silica-Coating-Mediated Synthesis for Anion-Exchange Membrane Fuel Cells. <i>Chemistry of Materials</i> , 2018, 30, 6684-6701.	3.2	105
2055	Lithium Electrochemical Tuning for Electrocatalysis. <i>Advanced Materials</i> , 2018, 30, e1800978.	11.1	51
2056	The Marriage of the Fe <sub>4</sub> Moiety and MXene Boosts Oxygen Reduction Catalysis: Fe 3d Electron Delocalization Matters. <i>Advanced Materials</i> , 2018, 30, e1803220.	11.1	289
2057	Coordination-Assisted Polymerization of Mesoporous Cobalt Sulfide/Heteroatom (N,S)-Doped Double-Layered Carbon Tubes as an Efficient Bifunctional Oxygen Electrocatalyst. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 33124-33134.	4.0	66
2058	Synergistic Effects of Active Sites' Nature and Hydrophilicity on the Oxygen Reduction Reaction Activity of Pt-Free Catalysts. <i>Nanomaterials</i> , 2018, 8, 643.	1.9	11
2059	Pt alloy nanoparticles decorated on large-size nitrogen-doped graphene tubes for highly stable oxygen-reduction catalysts. <i>Nanoscale</i> , 2018, 10, 17318-17326.	2.8	45
2060	Investigation of the durability of Fe/N-doped mesoporous carbon nanostructure as a non-precious metal catalyst for oxygen reduction reaction in acid medium. <i>Carbon</i> , 2018, 140, 189-200.	5.4	24
2061	Tunable Electronic and Magnetic Properties of Graphene-Embedded Transition Metal <sub>4</sub> Complexes: Insight From First-Principles Calculations. <i>Chemistry - an Asian Journal</i> , 2018, 13, 3239-3245.	1.7	18

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2063	Simple synthesis of nitrogen-doped carbon spheres as a highly efficient metal-free electrocatalyst for the oxygen reduction reaction. <i>Chinese Journal of Catalysis</i> , 2018, 39, 1138-1145.	6.9	11
2064	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
2065	A family of platinum group metal-free catalysts for oxygen reduction in alkaline media. <i>Journal of Power Sources</i> , 2018, 395, 148-157.	4.0	19
2066	SiO <sub>2</sub> -protected shell mediated templating synthesis of Fe–N-doped carbon nanofibers and their enhanced oxygen reduction reaction performance. <i>Energy and Environmental Science</i> , 2018, 11, 2208-2215.	15.6	196
2067	Thermal Evolution of the Structure and Activity of Non-Doped Graphene as Metal-Free Oxygen Reduction Electrocatalysts. <i>Journal of the Electrochemical Society</i> , 2018, 165, F526-F532.	1.3	2
2068	Pore-scale study of effects of macroscopic pores and their distributions on reactive transport in hierarchical porous media. <i>Chemical Engineering Journal</i> , 2018, 349, 428-437.	6.6	70
2069	Rational design of cobalt and nitrogen co-doped carbon hollow frameworks for efficient photocatalytic degradation of gaseous toluene. <i>Journal of Colloid and Interface Science</i> , 2018, 528, 45-52.	5.0	49
2070	Structural Engineering of 3D Carbon Materials from Transition Metal Ion-Exchanged Y Zeolite Templates. <i>Chemistry of Materials</i> , 2018, 30, 3779-3788.	3.2	28
2071	Effect of carbon precursor and initial pH on cobalt-doped carbon xerogel for oxygen reduction. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 11047-11055.	3.8	17
2072	Atomic Iron Catalysis of Polysulfide Conversion in Lithium–Sulfur Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 19311-19317.	4.0	152
2073	An active and robust Si-Fe/N/C catalyst derived from waste reed for oxygen reduction. <i>Applied Catalysis B: Environmental</i> , 2018, 237, 85-93.	10.8	78
2074	Suppression Effect of Small Organic Molecules on Oxygen Reduction Activity of Fe/N/C Catalysts. <i>ACS Energy Letters</i> , 2018, 3, 1396-1401.	8.8	31
2075	Critical role of iron carbide nanodots on 3D graphene based nonprecious metal catalysts for enhancing oxygen reduction reaction. <i>Electrochimica Acta</i> , 2018, 281, 502-509.	2.6	17
2076	Direct Ethanol Fuel Cells with Superior Ethanol-Tolerant Nonprecious Metal Cathode Catalysts for Oxygen Reduction Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 7609-7618.	3.2	28
2077	O <sub>2</sub> , N <sub>2</sub> -Coordinated Mn Cofactors within a Graphene Framework as Bioinspired Oxygen Reduction Reaction Electrocatalysts. <i>Advanced Materials</i> , 2018, 30, e1801732.	11.1	239
2078	Synthesis of highly-active Fe–N–C catalysts for PEMFC with carbide-derived carbons. <i>Journal of Materials Chemistry A</i> , 2018, 6, 14663-14674.	5.2	94
2079	Doped Nanocarbons Derived from Conducting Polymers toward ORR Electrocatalysts. <i>Advanced Sustainable Systems</i> , 2018, 2, 1800033.	2.7	5

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2082	Well-dispersed ultrasmall VC nanoparticles embedded in N-doped carbon nanotubes as highly efficient electrocatalysts for hydrogen evolution reaction. <i>Nanoscale</i> , 2018, 10, 14272-14279.	2.8	58
2083	Recent advancements in the development of bifunctional electrocatalysts for oxygen electrodes in unitized regenerative fuel cells (URFCs). <i>Progress in Materials Science</i> , 2018, 98, 108-167.	16.0	37
2084	Host-guest electrocatalyst with cage-confined cuprous sulfide nanoparticles in etched chalcogenide semiconductor zeolite for highly efficient oxygen reduction reaction. <i>Electrochimica Acta</i> , 2018, 282, 877-885.	2.6	15
2085	Fe Vacancies Induced Surface FeO <sub>6</sub> in Nanoarchitectures of N-Doped Graphene Protected FeOOH: Effective Active Sites for pH-Universal Electrocatalytic Oxygen Reduction. <i>Advanced Functional Materials</i> , 2018, 28, 1803330.	7.8	51
2086	Highly Efficient Oxygen Reduction Reaction Activity of Graphitic Tube Encapsulating Nitrided Co <sub>x</sub> Fe <sub>y</sub> Alloy. <i>Advanced Energy Materials</i> , 2018, 8, 1801002.	10.2	117
2087	Novel Nanomaterials as Electrocatalysts for Fuel Cells. , 2018, , 169-204.		5
2088	Application of Nanomaterials Prepared by Thermolysis of Metal Chelates. <i>Springer Series on Polymer and Composite Materials</i> , 2018, , 459-541.	0.5	1
2089	Correlating Fe source with Fe-N-C active site construction: Guidance for rational design of high-performance ORR catalyst. <i>Journal of Energy Chemistry</i> , 2018, 27, 1668-1673.	7.1	104
2090	Melamine-sponge-derived non-precious fuel cell electrocatalyst with hierarchical pores and tunable nitrogen chemical states for exceptional oxygen reduction reaction activity. <i>Materials Today Energy</i> , 2018, 9, 271-278.	2.5	12
2091	Bulky <i>t</i> -Butyl Thiolated Gold Nanomolecular Series: Synthesis, Characterization, Optical Properties, and Electrocatalysis. <i>Journal of Physical Chemistry C</i> , 2018, 122, 17726-17737.	1.5	36
2092	Catalyst Support in Oxygen Electrocatalysis: A Case Study with CoFe Alloy Electrocatalyst. <i>Journal of Physical Chemistry C</i> , 2018, 122, 15843-15852.	1.5	43
2093	N-Doped Hierarchical Porous Carbon Nanomeshes as Oxygen Reduction in pH-Universal Media and Oxygen Evolution Electrocatalysts. <i>ChemElectroChem</i> , 2018, 5, 3279-3286.	1.7	14
2094	Cobalt and nitrogen-codoped ordered mesoporous carbon as highly efficient bifunctional catalysts for oxygen reduction and hydrogen evolution reactions. <i>Journal of Materials Chemistry A</i> , 2018, 6, 17067-17074.	5.2	41
2095	Synthesis of Fe, Co Incorporated in P-Doped Porous Carbon Using a Metal-Organic Framework (MOF) Precursor as Stable Catalysts for Oxygen Reduction Reaction. <i>Journal of the Electrochemical Society</i> , 2018, 165, G3080-G3086.	1.3	14
2096	Fe, Cu-Coordinated ZIF-Derived Carbon Framework for Efficient Oxygen Reduction Reaction and Zinc-Air Batteries. <i>Advanced Functional Materials</i> , 2018, 28, 1802596.	7.8	340
2097	Hybridization of Binary Non-Precious Metal Nanoparticles with d <sub>3</sub> C <sub>2</sub> MXene for Catalyzing the Oxygen Reduction Reaction. <i>ChemElectroChem</i> , 2018, 5, 3307-3314.	1.7	32

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2103	Transition metal-assisted carbonization of small organic molecules toward functional carbon materials. Science Advances, 2018, 4, eaat0788.	4.7	172
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2106	Sulfur-Doped Rhenium Selenide Vertical Nanosheets: A High-Performance Electrocatalyst for Hydrogen Evolution. ChemCatChem, 2018, 10, 4424-4430.	1.8	28
2107	Influence of Air Impurities on the Performance of Nanostructured PEMFC Catalysts. , 2018, , 407-441.		4
2108	N-doped mesoporous carbon embedded Co nanoparticles for highly efficient and stable H <sub>2</sub> generation from hydrolysis of ammonia borane. Journal of Power Sources, 2018, 399, 89-97.	4.0	27
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2110	Low-cost biochar derived from corncob as oxygen reduction catalyst in air cathode microbial fuel cells. Electrochimica Acta, 2018, 283, 780-788.	2.6	111
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2112	(Invited) Kinetic Models for the Degradation Mechanisms of PGM-Free ORR Catalysts. ECS Transactions, 2018, 85, 1239-1250.	0.3	61
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2114	Polyaniline globules as a catalyst for WO <sub>3</sub> nanoparticles for supercapacitor application. Materials Research Express, 2018, 5, 085036.	0.8	24
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2118	Single-Atom Catalysts: Synthetic Strategies and Electrochemical Applications. <i>Joule</i> , 2018, 2, 1242-1264.	11.7	1,618
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2121	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
2122	High-resolution electron microscopy for heterogeneous catalysis research. <i>Chinese Physics B</i> , 2018, 27, 056804.	0.7	6
2123	Aligned N-doped carbon nanotube bundles with interconnected hierarchical structure as an efficient bi-functional oxygen electrocatalyst. <i>RSC Advances</i> , 2018, 8, 26004-26010.	1.7	11
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2125	Directly Anchoring Highly Dispersed Copper Sites on Nitrogen-Doped Carbon for Enhanced Oxygen Reduction Electrocatalysis. <i>ChemElectroChem</i> , 2018, 5, 1822-1826.	1.7	21
2126	Ultrafast microwave-assisted synthesis of nitrogen-doped carbons as electrocatalysts for oxygen reduction reaction. <i>Nanotechnology</i> , 2018, 29, 305708.	1.3	8
2127	Sub-50 nm Iron-Nitrogen-Doped Hollow Carbon Sphere-Encapsulated Iron Carbide Nanoparticles as Efficient Oxygen Reduction Catalysts. <i>Advanced Science</i> , 2018, 5, 1800120.	5.6	187
2128	Surfactant-Assisted Fabrication of Cubic Cobalt Oxide Hybrid Hollow Spheres as Catalysts for the Oxygen Reduction Reaction. <i>ChemElectroChem</i> , 2018, 5, 2192-2198.	1.7	8
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2130	In situ formation of iron-cobalt sulfides embedded in N,S-doped mesoporous carbon as efficient electrocatalysts for oxygen reduction reaction. <i>Microporous and Mesoporous Materials</i> , 2018, 270, 1-9.	2.2	43
2131	Enhanced catalytic performance of cobalt nanoparticles coated with a N,P-codoped carbon shell derived from biomass for transfer hydrogenation of functionalized nitroarenes. <i>Green Chemistry</i> , 2018, 20, 2821-2828.	4.6	104
2132	Co@C Nanoparticle Embedded Hierarchically Porous N-Doped Hollow Carbon for Efficient Oxygen Reduction. <i>Chemistry - A European Journal</i> , 2018, 24, 10178-10185.	1.7	40
2133	NiCo-doped C-N nano-composites for cathodic catalysts of Zn-air batteries in neutral media. <i>Electrochimica Acta</i> , 2018, 279, 1-9.	2.6	78

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2136	CoFe Nanoalloys Encapsulated in N-Doped Graphene Layers as a Pt-Free Multifunctional Robust Catalyst: Elucidating the Role of Co-Alloying and N-Doping. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 12736-12745.	3.2	50
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2138	Coral-like cobaltous sulfide/N,S-codoped carbon with hierarchical pores as highly efficient noble metal-free electrocatalyst for oxygen reduction reactions. <i>Journal of Alloys and Compounds</i> , 2018, 769, 801-807.	2.8	10
2139	Highly Dispersed Co <sup>B/N</sup> Codoped Carbon Nanospheres on Graphene for Synergistic Effects as Bifunctional Oxygen Electrocatalysts. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 30460-30469.	4.0	32
2140	Synthesis of self-assembled PtPdAg nanostructures with a high catalytic activity for oxygen reduction reactions. <i>Nanoscale</i> , 2018, 10, 17140-17147.	2.8	11
2141	Tuning Cobalt and Nitrogen Co <sup>D</sup> oped Carbon to Maximize Catalytic Sites on a Superabsorbent Resin for Efficient Oxygen Reduction. <i>ChemSusChem</i> , 2018, 11, 3631-3639.	3.6	20
2142	The effect of carbon support on the oxygen reduction activity and durability of single-atom iron catalysts. <i>MRS Communications</i> , 2018, 8, 1158-1166.	0.8	27
2143	Boosting electrocatalysis of oxygen reduction reaction through photovoltaic-driven potential manipulation strategy. <i>Materials Today Energy</i> , 2018, 10, 34-39.	2.5	1
2144	A facile synthesis of porous N-doped carbon with hybridization of Fe <sub>3</sub> C nanoparticle-encased CNTs for an advanced oxygen reduction reaction electrocatalyst. <i>Inorganic Chemistry Frontiers</i> , 2018, 5, 2546-2553.	3.0	12
2145	Hierarchically Porous M <sup>N</sup> -C (M = Co and Fe) Single-Atom Electrocatalysts with Robust MN <sub>x</sub> Active Moieties Enable Enhanced ORR Performance. <i>Advanced Energy Materials</i> , 2018, 8, 1801956.	10.2	540
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2147	Surface Modification of Carbon Fibres for Interface Improvement in Textile Composites. <i>Applied Composite Materials</i> , 2018, 25, 853-860.	1.3	16
2148	Generating more Mn <sup>4+</sup> ions on surface of nonstoichiometric MnO <sub>2</sub> nanorods via microwave heating for improved oxygen electroreduction. <i>Applied Surface Science</i> , 2018, 459, 782-787.	3.1	9
2149	Iron-decorated nitrogen-rich carbons as efficient oxygen reduction electrocatalysts for Zn <sup>air</sup> batteries. <i>Nanoscale</i> , 2018, 10, 16996-17001.	2.8	25
2150	Co nanoparticle embedded in atomically-dispersed Co-N-C nanofibers for oxygen reduction with high activity and remarkable durability. <i>Nano Energy</i> , 2018, 52, 485-493.	8.2	188
2151	Understanding Oxygen Activation on Metal- and Nitrogen-Codoped Carbon Catalysts. <i>ACS Catalysis</i> , 2018, 8, 8618-8629.	5.5	34

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2153	Ni-Co-N doped honeycomb carbon nano-composites as cathodic catalysts of membrane-less direct alcohol fuel cell. <i>Carbon</i> , 2018, 140, 557-568.	5.4	24
2154	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
2155	Tris(2-benzimidazolylmethyl)amine-Directed Synthesis of Single-Atom Nickel Catalysts for Electrochemical CO Production from CO <sub>2</sub> . <i>Chemistry - A European Journal</i> , 2018, 24, 18444-18454.	1.7	50
2156	Resolving Challenges of Mass Transport in Non Pt-Group Metal Catalysts for Oxygen Reduction in Proton Exchange Membrane Fuel Cells. <i>Journal of the Electrochemical Society</i> , 2018, 165, F589-F596.	1.3	12
2157	Insight into water oxidation activity enhancement of Ni-based electrocatalysts interacting with modified carbon supports. <i>Electrochimica Acta</i> , 2018, 281, 684-691.	2.6	8
2158	Boosting the oxygen reduction activity of a three-dimensional network Co-N-C electrocatalyst via space-confined control of nitrogen-doping efficiency and the molecular-level coordination effect. <i>Journal of Materials Chemistry A</i> , 2018, 6, 13050-13061.	5.2	74
2159	Boosting oxygen reduction catalysis with abundant copper single atom active sites. <i>Energy and Environmental Science</i> , 2018, 11, 2263-2269.	15.6	405
2160	Facile preparation of biomass-derived bifunctional electrocatalysts for oxygen reduction and evolution reactions. <i>International Journal of Hydrogen Energy</i> , 2018, 43, 8611-8622.	3.8	64
2161	Nanocomposites of Chalcogenide and their Applications. <i>Nano Hybrids and Composites</i> , 0, 20, 46-64.	0.8	5
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2163	Unveiling the high-activity origin of single-atom iron catalysts for oxygen reduction reaction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018, 115, 6626-6631.	3.3	500
2164	Efficient Oxygen Reduction Reaction (ORR) Catalysts Based on Single Iron Atoms Dispersed on a Hierarchically Structured Porous Carbon Framework. <i>Angewandte Chemie</i> , 2018, 130, 9176-9181.	1.6	105
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2166	In situ anchoring of metal nanoparticles in the N-doped carbon framework derived from conjugated microporous polymers towards an efficient oxygen reduction reaction. <i>Catalysis Science and Technology</i> , 2018, 8, 3572-3579.	2.1	28
2167	Hollow cobalt oxide nanoparticles embedded in nitrogen-doped carbon nanosheets as an efficient bifunctional catalyst for Zn-air battery. <i>Journal of Energy Chemistry</i> , 2019, 33, 59-66.	7.1	68
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2169	Hierarchical Nickel Clusters Encapsulated in Ultrathin N-doped Graphitic Nanocarbon Hybrids for Effective Hydrogen Evolution Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 15127-15136.	3.2	20

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2171	Coordination-Engineered Cu <sup>N</sup> Single-Site Catalyst for Enhancing Oxygen Reduction Reaction. <i>ACS Applied Energy Materials</i> , 2019, 2, 6497-6504.	2.5	58
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2174	Iron phosphide anchored nanoporous carbon as an efficient electrode for supercapacitors and the oxygen reduction reaction. <i>RSC Advances</i> , 2019, 9, 25240-25247.	1.7	16
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2176	Atomically dispersed Fe-N-C derived from dual metal-organic frameworks as efficient oxygen reduction electrocatalysts in direct methanol fuel cells. <i>Applied Catalysis B: Environmental</i> , 2019, 259, 118042.	10.8	89
2177	Synthesis of NiCo Alloy Nanoparticle-Decorated B,N-Doped Carbon Nanosheet Networks via a Self-Template Strategy for Bifunctional Oxygen-Involving Reactions. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 14394-14399.	3.2	21
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2181	A pyrolysis-free path toward superiorly catalytic nitrogen-coordinated single atom. <i>Science Advances</i> , 2019, 5, eaaw2322.	4.7	290
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2183	Graphitic carbon nitride nanostructures: Catalysis. <i>Applied Materials Today</i> , 2019, 16, 388-424.	2.3	58
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2185	Monodisperse nanoparticles for catalysis and nanomedicine. <i>Nanoscale</i> , 2019, 11, 18946-18967.	2.8	61
2186	Fe, N, S-codoped carbon frameworks derived from nanocrystal superlattices towards enhanced oxygen reduction activity. <i>Nano Convergence</i> , 2019, 6, 4.	6.3	20
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2192	Achievements, challenges and perspectives on cathode catalysts in proton exchange membrane fuel cells for transportation. <i>Nature Catalysis</i> , 2019, 2, 578-589.	16.1	760
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2197	NaCl protected synthesis of 3D hierarchical metal-free porous nitrogen-doped carbon catalysts for the oxygen reduction reaction in acidic electrolyte. <i>Chemical Communications</i> , 2019, 55, 9023-9026.	2.2	48
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2199	Preserved in a Shell: High-Performance Graphene-Confined Ruthenium Nanoparticles in Acetylene Hydrochlorination. <i>Angewandte Chemie</i> , 2019, 131, 12425-12432.	1.6	5
2200	Single-Atom Cr <sup>IV</sup> Sites Designed for Durable Oxygen Reduction Catalysis in Acid Media. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 12469-12475.	7.2	307
2201	Atomically dispersed manganese-based catalysts for efficient catalysis of oxygen reduction reaction. <i>Applied Catalysis B: Environmental</i> , 2019, 257, 117930.	10.8	113
2202	High loading accessible active sites via designable 3D-printed metal architecture towards promoting electrocatalytic performance. <i>Journal of Materials Chemistry A</i> , 2019, 7, 18338-18347.	5.2	35
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2204	Platinum group metal-free catalysts boost cost competitiveness of fuel cell vehicles. <i>Nature Catalysis</i> , 2019, 2, 558-561.	16.1	154
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2214	Oxygen reduction reaction mechanism on a phosphorus-doped pyrolyzed graphitic Fe/N/C catalyst. <i>New Journal of Chemistry</i> , 2019, 43, 11408-11418.	1.4	19
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2216	Genuine four-electron oxygen reduction over precious-metal-free catalyst in alkaline media. <i>Electrochimica Acta</i> , 2019, 319, 382-389.	2.6	18
2217	ZIF 67 Based Highly Active Electrocatalysts as Oxygen Electrodes in Water Electrolyzer. <i>ACS Applied Energy Materials</i> , 2019, 2, 5568-5576.	2.5	35
2218	Non-PGM electrocatalysts for PEM fuel cells: effect of fluorination on the activity and stability of a highly active NC <sub>Ar</sub> + NH <sub>3</sub> catalyst. <i>Energy and Environmental Science</i> , 2019, 12, 3015-3037.	15.6	66
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2221	Preserved in a Shell: High-Performance Graphene-Confined Ruthenium Nanoparticles in Acetylene Hydrochlorination. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 12297-12304.	7.2	53
2222	Electrochemical Oxygen-Reduction Activity and Carbon Monoxide Tolerance of Iron Phthalocyanine Functionalized with Graphene Quantum Dots: A Density Functional Theory Approach. <i>Journal of Physical Chemistry C</i> , 2019, 123, 27483-27491.	1.5	10
2223	Improved Oxygen Reduction Reaction Activity of Nanostructured CoS <sub>2</sub> through Electrochemical Tuning. <i>ACS Applied Energy Materials</i> , 2019, 2, 8605-8614.	2.5	42
2224	In situ synthesis of Fe-N-C catalysts from cellulose for hydrogenation of nitrobenzene to aniline. <i>Chinese Journal of Catalysis</i> , 2019, 40, 1557-1565.	6.9	16



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2226	Thermally Driven Structure and Performance Evolution of Atomically Dispersed FeN <sub>4</sub> Sites for Oxygen Reduction. <i>Angewandte Chemie</i> , 2019, 131, 19147-19156.	1.6	57
2227	Thermally Driven Structure and Performance Evolution of Atomically Dispersed FeN <sub>4</sub> Sites for Oxygen Reduction. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 18971-18980.	7.2	362
2228	A Facile Route for Constructing Effective Cu <sup>N</sup> Active Sites for Oxygen Reduction Reaction. <i>Chemistry - A European Journal</i> , 2020, 26, 4070-4079.	1.7	29
2229	Bifunctional atomic iron-based catalyst for oxygen electrode reactions. <i>Journal of Catalysis</i> , 2019, 378, 353-362.	3.1	41
2230	Engineering of Nitrogen Coordinated Single Cobalt Atom Moieties for Oxygen Electroreduction. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 41258-41266.	4.0	50
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2236	Alkaline Anion-Exchange Membrane Fuel Cells: Challenges in Electrocatalysis and Interfacial Charge Transfer. <i>Chemical Reviews</i> , 2019, 119, 11945-11979.	23.0	273
2237	Atomic- and Molecular-Level Design of Functional Metal-Organic Frameworks (MOFs) and Derivatives for Energy and Environmental Applications. <i>Advanced Science</i> , 2019, 6, 1901129.	5.6	121
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2239	Nitrogen-doped graphene layers for electrochemical oxygen reduction reaction boosted by lattice strain. <i>Journal of Catalysis</i> , 2019, 378, 113-120.	3.1	19
2240	Editorial: Significance of Peri-implant Keratinized Mucosa Width and Soft Tissue Thickness. <i>International Journal of Periodontics and Restorative Dentistry</i> , 2019, 39, 767-768.	0.4	2
2241	Pb-Ag Alloy Anode Modified with Polyaniline Film and its Electrochemical Performance in Sulfuric Acid Electrolyte. <i>International Journal of Electrochemical Science</i> , 2019, , 6722-6736.	0.5	0
2242	Recent Progress in Precious Metal-Free Carbon-Based Materials towards the Oxygen Reduction Reaction: Activity, Stability, and Anti-Poisoning. <i>Chemistry - A European Journal</i> , 2020, 26, 3973-3990.	1.7	36
2243	Synthetic control of Prussian blue derived nano-materials for energy storage and conversion application. <i>Materials Today Energy</i> , 2019, 14, 100332.	2.5	28

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2245	Fe/Co-based nanoparticles encapsulated in heteroatom-doped carbon electrocatalysts for oxygen reduction reaction. <i>Science China Materials</i> , 2019, 62, 1626-1641.	3.5	20
2246	Renewable chitosan-derived cobalt@N-doped porous carbon for efficient aerobic esterification of alcohols under air. <i>Nanoscale</i> , 2019, 11, 17736-17745.	2.8	26
2247	Ultrafine Fe <sub>3</sub> C nanoparticles embedded in N-doped graphitic carbon sheets for simultaneous determination of ascorbic acid, dopamine, uric acid and xanthine. <i>Mikrochimica Acta</i> , 2019, 186, 660.	2.5	41
2248	Highly selective oxygen reduction to hydrogen peroxide on transition metal single atom coordination. <i>Nature Communications</i> , 2019, 10, 3997.	5.8	528
2249	Novel Non-Precious Metal Electrocatalysts for Oxygen Electrode Reactions. <i>Catalysts</i> , 2019, 9, 731.	1.6	7
2250	UiO66-NH <sub>2</sub> as self-sacrificing template for Fe/N-doped hierarchically porous carbon with high electrochemical performance for oxygen reduction in microbial fuel cells. <i>Electrochimica Acta</i> , 2019, 323, 134777.	2.6	25
2251	Synthesis of Fe-C-N Hybrid via Direct Pyrolysis of EDTA Ferric Sodium as Effective Electrocatalyst for Oxygen Reduction Reaction. <i>International Journal of Electrochemical Science</i> , 2019, , 6938-6947.	0.5	4
2252	Operando Characterization of Iron Phthalocyanine Deactivation during Oxygen Reduction Reaction Using Electrochemical Tip-Enhanced Raman Spectroscopy. <i>Journal of the American Chemical Society</i> , 2019, 141, 15684-15692.	6.6	102
2253	Electrically conductive biomaterials based on natural polysaccharides: Challenges and applications in tissue engineering. <i>International Journal of Biological Macromolecules</i> , 2019, 141, 636-662.	3.6	63
2254	Improving the Oxygen Reduction Reaction Activity of FeN <sub>4</sub> @Graphene via Tuning Electronic Characteristics. <i>ACS Applied Energy Materials</i> , 2019, 2, 6634-6641.	2.5	37
2255	Intermediate Structures of Pt@Ni Nanoparticles during Selective Chemical and Electrochemical Etching. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 6090-6096.	2.1	25
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2257	Boosting Oxygen Reduction Performance of Manganese Oxide in Alkaline Media by Three-Dimensional Highly Ordered Conductive Porous Framework. <i>Frontiers in Materials</i> , 2019, 6, .	1.2	5
2258	An assembly of carbon dots and carbon sheets from plant biomass for excellent oxygen reduction reaction. <i>Sustainable Energy and Fuels</i> , 2019, 3, 3172-3181.	2.5	9
2259	Carbon-pore-sheathed cobalt nanoseeds: An exceptional and durable bifunctional catalyst for zinc-air batteries. <i>Nano Energy</i> , 2019, 65, 104051.	8.2	43
2260	Fe and N Codoped Mesoporous Carbon Nanofiber as a Nonprecious Metal Catalyst for Oxygen Reduction Reaction and a Durable Support for Pt Nanoparticles. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 17544-17552.	3.2	14
2261	Hofmann-like metal-organic-framework-derived Pt <sub>x</sub> Fe/C/N-GC composites as efficient electrocatalysts for methanol oxidation. <i>RSC Advances</i> , 2019, 9, 26450-26455.	1.7	6

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2263	Nitrogen-doped hollow carbon spheres as highly effective multifunctional electrocatalysts for fuel cells, Zn-air batteries, and water-splitting electrolyzers. <i>Journal of Power Sources</i> , 2019, 441, 227166.	4.0	42
2264	Interfacial metal-nitrogen units of NiCo/nitrogen-doped carbon for robust oxygen reduction reaction. <i>Carbon</i> , 2019, 155, 545-552.	5.4	32
2265	Recent Insights into the Oxygen-Reduction Electrocatalysis of Fe/N/C Materials. <i>ACS Catalysis</i> , 2019, 9, 10126-10141.	5.5	295
2266	Scalable Synthesis of Micromesoporous Iron-Nitrogen-Doped Carbon as Highly Active and Stable Oxygen Reduction Electrocatalyst. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 39263-39273.	4.0	38
2267	Atomically Isolated Iron Atom Anchored on Carbon Nanotubes for Oxygen Reduction Reaction. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 39820-39826.	4.0	49
2268	Precisely Tuning the Number of Fe Atoms in Clusters on N-Doped Carbon toward Acidic Oxygen Reduction Reaction. <i>CheM</i> , 2019, 5, 2865-2878.	5.8	346
2269	Co-N-C electrocatalysts derived from nitrogen containing conjugated polymers for hydrogen evolution. <i>Materials Today: Proceedings</i> , 2019, 6, 73-78.	0.9	2
2270	Anchoring a Co/2-methylimidazole complex on ion-exchange resin and its transformation to Co/N-doped carbon as an electrocatalyst for the ORR. <i>Catalysis Science and Technology</i> , 2019, 9, 578-582.	2.1	12
2271	Electronic synergism of pyridinic- and graphitic-nitrogen on N-doped carbons for the oxygen reduction reaction. <i>Chemical Science</i> , 2019, 10, 1589-1596.	3.7	170
2272	Effect of nanoparticle composition on oxygen reduction reaction activity of Fe/N-C catalysts: a comparative study. <i>Catalysis Science and Technology</i> , 2019, 9, 711-717.	2.1	23
2273	Tailoring FeN <sub>4</sub> Sites with Edge Enrichment for Boosted Oxygen Reduction Performance in Proton Exchange Membrane Fuel Cell. <i>Advanced Energy Materials</i> , 2019, 9, 1803737.	10.2	148
2274	Iron-Free Cathode Catalysts for Proton-Exchange Membrane Fuel Cells: Cobalt Catalysts and the Peroxide Mitigation Approach. <i>Advanced Materials</i> , 2019, 31, e1805126.	11.1	208
2275	Xerogel based catalyst for improved cathode performance in microbial fuel cells. <i>Enzyme and Microbial Technology</i> , 2019, 124, 1-8.	1.6	15
2276	Advances in constructing polymeric carbon-nitride-based nanocomposites and their applications in energy chemistry. <i>Sustainable Energy and Fuels</i> , 2019, 3, 611-655.	2.5	47
2277	Facile in situ fabrication of Co nanoparticles embedded in 3D N-enriched mesoporous carbon foam electrocatalyst with enhanced activity and stability toward oxygen reduction reaction. <i>Journal of Materials Science</i> , 2019, 54, 5412-5423.	1.7	47
2278	Nitrogen-Doped Graphene Oxide Electrocatalysts for the Oxygen Reduction Reaction. <i>ACS Applied Nano Materials</i> , 2019, 2, 1675-1682.	2.4	69
2279	Low-temperature catalytic hydrogenation of bio-based furfural and relevant aldehydes using cesium carbonate and hydrosiloxane. <i>RSC Advances</i> , 2019, 9, 3063-3071.	1.7	15

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2281	High-Density Cobalt Nanoparticles Encapsulated with Nitrogen-Doped Carbon Nanoshells as a Bifunctional Catalyst for Rechargeable Zinc-Air Battery. <i>Materials</i> , 2019, 12, 243.	1.3	10
2282	N,P-Doped carbon with encapsulated Co nanoparticles as efficient electrocatalysts for oxygen reduction reactions. <i>Dalton Transactions</i> , 2019, 48, 2352-2358.	1.6	22
2283	Efficient CO <sub>2</sub> to CO electrolysis on solid Ni <sup>0</sup> -Ni <sup>2+</sup> C catalysts at industrial current densities. <i>Energy and Environmental Science</i> , 2019, 12, 640-647.	15.6	357
2284	Highly active atomically dispersed CoN <sub>4</sub> fuel cell cathode catalysts derived from surfactant-assisted MOFs: carbon-shell confinement strategy. <i>Energy and Environmental Science</i> , 2019, 12, 250-260.	15.6	691
2285	Bandgap-controlled hollow polyaniline nanostructures synthesized by Mn-dependent nano-confined polymerization. <i>Nanoscale</i> , 2019, 11, 2434-2438.	2.8	7
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2289	A Single-Atom Iridium Heterogeneous Catalyst in Oxygen Reduction Reaction. <i>Angewandte Chemie</i> , 2019, 131, 9742-9747.	1.6	59
2290	La <sub>1.5</sub> Sr <sub>0.5</sub> NiMn <sub>0.5</sub> Ru <sub>0.5</sub> O <sub>6</sub> Double Perovskite with Enhanced ORR/OER Bifunctional Catalytic Activity. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 21454-21464.	4.0	129
2291	Promotion effects of CeO <sub>2</sub> with different morphologies to Pt catalyst toward methanol electrooxidation reaction. <i>Journal of Alloys and Compounds</i> , 2019, 798, 706-713.	2.8	39
2292	Optimizing the synthesis of Co/Co <sup>0</sup> -Fe nanoparticles/N-doped carbon composite materials as bifunctional oxygen electrocatalysts. <i>Electrochimica Acta</i> , 2019, 318, 281-289.	2.6	17
2293	Unraveling Mechanistic Reaction Pathways of the Electrochemical CO <sub>2</sub> Reduction on Fe <sup>0</sup> -Ni <sup>0</sup> C Single-Site Catalysts. <i>ACS Energy Letters</i> , 2019, 4, 1663-1671.	8.8	138
2294	Interfacial Ni <sup>0</sup> -Cu <sup>0</sup> S coordination mode of CuSCN/C <sub>3</sub> N <sub>4</sub> with enhanced electrocatalytic activity for hydrogen evolution. <i>Nanoscale</i> , 2019, 11, 12938-12945.	2.8	13
2295	Fabrication of CoFe/N-doped mesoporous carbon hybrids from Prussian blue analogous as high performance cathodes for lithium-sulfur batteries. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 20257-20266.	3.8	20
2296	Galvanic exchange carving growth of Co <sup>0</sup> -Fe LDHs with enhanced water oxidation. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 20085-20092.	3.8	12
2297	The application of CeO <sub>2</sub> -based materials in electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2019, 7, 17675-17702.	5.2	128

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2299	Tunable Synthesis of Hollow Metal-Organic Framework-Derived Nitrogen-Carbon Capsules for Efficient Oxygen Reduction Catalysis in Proton Exchange Membrane Fuel Cells. <i>ACS Nano</i> , 2019, 13, 8087-8098.	7.3	106
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2301	Co and CeO <sub>2</sub> co-decorated N-doping carbon nanofibers for rechargeable Zn-air batteries. <i>Nanotechnology</i> , 2019, 30, 395401.	1.3	37
2302	Selective Cellulose Hydrogenolysis to Ethanol Using Ni@C Combined with Phosphoric Acid Catalysts. <i>ChemSusChem</i> , 2019, 12, 3977-3987.	3.6	49
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2306	Room-temperature photocatalytic methanol fuel cell based on one-dimension semiconductor photoanode: Intrinsic mechanism of photogenerated charge separation. <i>Electrochimica Acta</i> , 2019, 318, 413-421.	2.6	17
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2310	Catalysis of Oxygen Reduction Reaction on Atomically Dispersed Copper- and Nitrogen-Codoped Graphene. <i>ACS Applied Energy Materials</i> , 2019, 2, 4755-4762.	2.5	33
2311	Atomically Dispersed Metal Catalysts for Oxygen Reduction. <i>ACS Energy Letters</i> , 2019, 4, 1619-1633.	8.8	251
2312	Thermodynamic stability of nitrogen functionalities and defects in graphene and graphene nanoribbons from first principles. <i>Carbon</i> , 2019, 152, 715-726.	5.4	22
2313	Floating robotic insects to obtain electric energy from water surface for realizing some self-powered functions. <i>Nano Energy</i> , 2019, 63, 103810.	8.2	23
2314	Efficient oxygen reduction on sandwich-like metal@N-C composites with ultrafine Fe nanoparticles embedded in N-doped carbon nanotubes grafted on graphene sheets. <i>Nanoscale</i> , 2019, 11, 12610-12618.	2.8	26
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2317	Carbon Defect Characterization of Nitrogen-Doped Reduced Graphene Oxide Electrocatalysts for the Two-Electron Oxygen Reduction Reaction. <i>Chemistry of Materials</i> , 2019, 31, 3967-3973.	3.2	85
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2320	Metallic cobalt nanoparticles embedded in sulfur and nitrogen co-doped rambutan-like nanocarbons for the oxygen reduction reaction under both acidic and alkaline conditions. <i>Journal of Materials Chemistry A</i> , 2019, 7, 14291-14301.	5.2	37
2321	Recent progress on MOF-derived electrocatalysts for hydrogen evolution reaction. <i>Applied Materials Today</i> , 2019, 16, 146-168.	2.3	100
2322	A Comparative Study of Plasma-Treated Oxygen-Doped Single-Walled and Multiwalled Carbon Nanotubes as Electrocatalyst for Efficient Oxygen Reduction Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 11396-11406.	3.2	35
2323	In-situ electrode fabrication from polyaniline derived N-doped carbon nanofibers for metal-free electro-Fenton degradation of organic contaminants. <i>Applied Catalysis B: Environmental</i> , 2019, 256, 117774.	10.8	129
2324	Heterocyclization Strategy for Construction of Linear Conjugated Polymers: Efficient Metal-Free Electrocatalysts for Oxygen Reduction. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 11369-11373.	7.2	67
2325	Insights into the role of active site density in the fuel cell performance of Co-N-C catalysts. <i>Applied Catalysis B: Environmental</i> , 2019, 256, 117849.	10.8	104
2326	Leaf-like 2D nanosheet as efficient oxygen reduction reaction catalyst for Zn-air battery. <i>Journal of Power Sources</i> , 2019, 434, 226717.	4.0	30
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2329	Porous N-doped C catalyst synthesized by pyrolyzing g-C <sub>3</sub> N <sub>4</sub> embedded in carbon as highly efficient oxygen reduction electrocatalysts for primary Zn-air battery. <i>Carbon</i> , 2019, 150, 475-484.	5.4	59
2330	Experimental and Density Functional Theory Corroborated Optimization of Durable Metal Embedded Carbon Nanofiber for Oxygen Electrocatalysis. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 3109-3114.	2.1	16
2331	A Single-Atom Iridium Heterogeneous Catalyst in Oxygen Reduction Reaction. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 9640-9645.	7.2	312
2332	Electrospun Carbon Nanofiber Sprinkled with Co <sub>3</sub> O <sub>4</sub> as an Efficient Electrocatalyst for Oxygen Reduction Reaction in Alkaline Medium. <i>ChemistrySelect</i> , 2019, 4, 5160-5167.	0.7	7
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2336	Switching Co/N/C Catalysts for Heterogeneous Catalysis and Electrocatalysis by Controllable Pyrolysis of Cobalt Porphyrin. <i>IScience</i> , 2019, 15, 282-290.	1.9	20
2337	Ag/ZrO <sub>2</sub> /MWCNT Nanocomposite as Non-Platinum Electrocatalysts for Enhanced Oxygen Reduction Reaction. <i>ChemCatChem</i> , 2019, 11, 2900-2908.	1.8	11
2338	Medium Modulated Oxygen Reduction Activity of Fe/Co Active Centre-Engrafted Electrocatalysts. <i>ChemElectroChem</i> , 2019, 6, 2956-2964.	1.7	4
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2340	Design strategies for developing non-precious metal based bi-functional catalysts for alkaline electrolyte based zinc-air batteries. <i>Materials Horizons</i> , 2019, 6, 1812-1827.	6.4	79
2341	Fine Co nanoparticles encapsulated in N-doped porous carbon for efficient oxygen reduction. <i>New Journal of Chemistry</i> , 2019, 43, 9666-9672.	1.4	5
2342	Metal-organic frameworks (MOFs) and their composites as electrodes for lithium battery applications: Novel means for alternative energy storage. <i>Coordination Chemistry Reviews</i> , 2019, 393, 48-78.	9.5	198
2343	Glucose-derived carbon supported well-dispersed CrN as competitive oxygen reduction catalysts in acidic medium. <i>Electrochimica Acta</i> , 2019, 314, 202-211.	2.6	12
2344	Templated growth of Fe/N/C catalyst on hierarchically porous carbon for oxygen reduction reaction in proton exchange membrane fuel cells. <i>Journal of Power Sources</i> , 2019, 431, 31-39.	4.0	41
2345	Pd/PANI/C Nanocomposites as Electrocatalysts for Oxygen Reduction Reaction in Alkaline Media. <i>Electrocatalysis</i> , 2019, 10, 436-444.	1.5	16
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2348	Metal-free electrocatalysts for oxygen reduction reaction based on trioxotriangulene. <i>Communications Chemistry</i> , 2019, 2, .	2.0	43
2349	Ultrafine Fe/Fe <sub>3</sub> C nanoparticles on nitrogen-doped mesoporous carbon by low-temperature synthesis for highly efficient oxygen reduction. <i>Electrochimica Acta</i> , 2019, 313, 255-260.	2.6	14
2350	Transition Metal (Fe, Co, Ni) Nanoparticles on Selective Amino-N-Doped Carbon as High-Performance Oxygen Reduction Reaction Electrocatalyst. <i>Nanomaterials</i> , 2019, 9, 742.	1.9	29
2351	Recent progress in theoretical and computational investigations of structural stability and activity of single-atom electrocatalysts. <i>Progress in Natural Science: Materials International</i> , 2019, 29, 256-264.	1.8	27

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2353	Understanding the Role of Interfaces for Water Management in Platinum Group Metal-Free Electrodes in Polymer Electrolyte Fuel Cells. <i>ACS Applied Energy Materials</i> , 2019, 2, 3542-3553.	2.5	31
2354	Experimental and Theoretical Trends of PGM-Free Electrocatalysts for the Oxygen Reduction Reaction with Different Transition Metals. <i>Journal of the Electrochemical Society</i> , 2019, 166, F3136-F3142.	1.3	42
2355	Nitrogen/Cobalt Co-doped Mesoporous Carbon Microspheres Derived from Amorphous Metal-Organic Frameworks as a Catalyst for the Oxygen Reduction Reaction in Both Alkaline and Acidic Electrolytes. <i>ChemElectroChem</i> , 2019, 6, 2546-2552.	1.7	15
2356	FeCo-N-C oxygen reduction electrocatalysts: Activity of the different compounds produced during the synthesis via pyrolysis. <i>Applied Catalysis B: Environmental</i> , 2019, 253, 300-308.	10.8	52
2357	Confining ultrasmall bimetallic alloys in porous "carbon for use as scalable and sustainable electrocatalysts for rechargeable Zn-air batteries. <i>Journal of Materials Chemistry A</i> , 2019, 7, 12451-12456.	5.2	128
2358	Nickel doped cobalt - hollow nanoparticles as an efficient electrocatalyst for hydrogen evolution from neutral water. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 14869-14876.	3.8	16
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2362	Accurate Evaluation of Active-Site Density (SD) and Turnover Frequency (TOF) of PGM-Free Metal-Nitrogen-Doped Carbon (MNC) Electrocatalysts using CO Cryo Adsorption. <i>ACS Catalysis</i> , 2019, 9, 4841-4852.	5.5	79
2363	Complexing-Coprecipitation Method to Synthesize Catalysts of Cobalt, Nitrogen-Doped Carbon, and CeO <sub>2</sub> Nanosheets for Highly Efficient Oxygen Reduction. <i>ChemNanoMat</i> , 2019, 5, 831-837.	1.5	12
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2365	A copper single-atom catalyst towards efficient and durable oxygen reduction for fuel cells. <i>Journal of Materials Chemistry A</i> , 2019, 7, 16690-16695.	5.2	140
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2367	Synthesis of cobalt and nitrogen co-doped carbon nanotubes and its ORR activity as the catalyst used in hydrogen fuel cells. <i>International Journal of Hydrogen Energy</i> , 2019, 44, 25180-25187.	3.8	57
2368	Cascade anchoring strategy for general mass production of high-loading single-atomic metal-nitrogen catalysts. <i>Nature Communications</i> , 2019, 10, 1278.	5.8	591
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2371	N, S-doped nanocarbon derived from ZIF-8 as a highly efficient and durable electro-catalyst for oxygen reduction reaction. <i>Journal of Solid State Chemistry</i> , 2019, 274, 237-242.	1.4	39
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2373	Oxygen Reduction Reactions of Fe-N-C Catalysts: Current Status and the Way Forward. <i>Electrochemical Energy Reviews</i> , 2019, 2, 252-276.	13.1	119
2374	Cobalt based metal-organic frameworks and their derivatives for electrochemical energy conversion and storage. <i>Chemical Engineering Journal</i> , 2019, 370, 37-59.	6.6	96
2375	Tailoring 2D MoS <sub>2</sub> heterointerfaces for promising oxygen reduction reaction electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2019, 7, 8785-8789.	5.2	57
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2381	Design of high efficient oxygen reduction catalyst from the transition metal dimer phthalocyanine monolayer. <i>Applied Surface Science</i> , 2019, 480, 905-911.	3.1	12
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2387	Investigation on Template Etching Process of SBA-15 Derived Ordered Mesoporous Carbon on Electrocatalytic Oxygen Reduction Reaction. <i>ChemistrySelect</i> , 2019, 4, 2463-2474.	0.7	10
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2390	Electronic Structure Engineering of LiCoO <sub>2</sub> toward Enhanced Oxygen Electrocatalysis. <i>Advanced Energy Materials</i> , 2019, 9, 1803482.	10.2	85
2391	Chemical state of surrounding iron species affects the activity of Fe-N <sub>x</sub> for electrocatalytic oxygen reduction. <i>Applied Catalysis B: Environmental</i> , 2019, 251, 240-246.	10.8	101
2392	Co <sub>2</sub> Ni alloy/N-doped CNTs composite as efficient hydrogen evolution reaction catalyst in alkaline medium. <i>Journal of Alloys and Compounds</i> , 2019, 791, 779-785.	2.8	32
2393	Ultrafine iron-cobalt nanoparticles embedded in nitrogen-doped porous carbon matrix for oxygen reduction reaction and zinc-air batteries. <i>Journal of Colloid and Interface Science</i> , 2019, 546, 113-121.	5.0	40
2394	Coordination-controlled single-atom tungsten as a non-3d-metal oxygen reduction reaction electrocatalyst with ultrahigh mass activity. <i>Nano Energy</i> , 2019, 60, 394-403.	8.2	119
2395	Recent Progress in Defective Carbon-Based Oxygen Electrode Materials for Rechargeable Zinc-Air Batteries. <i>Batteries and Supercaps</i> , 2019, 2, 509-523.	2.4	41
2396	Versatile Strategy for Tuning ORR Activity of a Single Fe-N <sub>4</sub> Site by Controlling Electron-Withdrawing/Donating Properties of a Carbon Plane. <i>Journal of the American Chemical Society</i> , 2019, 141, 6254-6262.	6.6	509
2397	Group VB transition metal dichalcogenides for oxygen reduction reaction and strain-enhanced activity governed by p-orbital electrons of chalcogen. <i>Nano Research</i> , 2019, 12, 925-930.	5.8	39
2398	Metal-Nitrogen-Carbon Catalysts for Oxygen Reduction in PEM Fuel Cells: Self-Template Synthesis Approach to Enhancing Catalytic Activity and Stability. <i>Electrochemical Energy Reviews</i> , 2019, 2, 231-251.	13.1	128
2399	Iron Single Atoms on Graphene as Nonprecious Metal Catalysts for High-Temperature Polymer Electrolyte Membrane Fuel Cells. <i>Advanced Science</i> , 2019, 6, 1802066.	5.6	164
2400	The ORR kinetics of ZIF-derived Fe N C electrocatalysts. <i>Journal of Catalysis</i> , 2019, 372, 174-181.	3.1	54
2401	MOF/CC-derivatives with trace amount of cobalt oxides as efficient electrocatalysts for oxygen reduction reaction. <i>Chinese Chemical Letters</i> , 2019, 30, 989-994.	4.8	12
2402	Poly(aryl piperidinium) membranes and ionomers for hydroxide exchange membrane fuel cells. <i>Nature Energy</i> , 2019, 4, 392-398.	19.8	570
2403	Electrosynthesis of Hydrogen Peroxide Synergistically Catalyzed by Atomic Co <sup>N<sub>x</sub></sup> Sites and Oxygen Functional Groups in Noble-Metal-Free Electrocatalysts. <i>Advanced Materials</i> , 2019, 31, e1808173.	11.1	252
2404	Silica-Templated Covalent Organic Framework-Derived Fe <sup>N</sup> -Doped Mesoporous Carbon as Oxygen Reduction Electrocatalyst. <i>Chemistry of Materials</i> , 2019, 31, 3274-3280.	3.2	108
2405	Stepwise Fabrication of Co-Embedded Porous Multichannel Carbon Nanofibers for High-Efficiency Oxygen Reduction. <i>Nano-Micro Letters</i> , 2019, 11, 33.	14.4	12
2406	Temperature-directed synthesis of N-doped carbon-based nanotubes and nanosheets decorated with Fe <sub>3</sub> O <sub>4</sub> , Fe <sub>3</sub> C nanomaterials. <i>Nanoscale</i> , 2019, 11, 9155-9162.	2.8	37

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2408	Deep Eutectic Solvent-Mediated Hierarchically Structured Fe-Based Organic-Inorganic Hybrid Catalyst for Oxygen Evolution Reaction. <i>ACS Applied Energy Materials</i> , 2019, 2, 3343-3351.	2.5	23
2409	Nitrogen-coordinated single iron atom catalysts derived from metal organic frameworks for oxygen reduction reaction. <i>Nano Energy</i> , 2019, 61, 60-68.	8.2	192
2410	Versatile electrocatalytic processes realized by Ni, Co and Fe alloyed core coordinated carbon shells. <i>Journal of Materials Chemistry A</i> , 2019, 7, 12154-12165.	5.2	34
2411	Fe-N-C combined with Fe <sub>100</sub> -P O N porous hollow spheres on a phosphoric acid group-rich N-doped carbon as an electrocatalyst for zinc-air battery. <i>Applied Surface Science</i> , 2019, 481, 498-504.	3.1	8
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2413	Facile synthesis of polyacrylonitrile-based N/S-codoped porous carbon as an efficient oxygen reduction electrocatalyst for zinc-air batteries. <i>Journal of Materials Chemistry A</i> , 2019, 7, 11223-11233.	5.2	39
2414	Three-dimensional layered double hydroxides on carbon nanofibers: The engineered mass transfer channels and active sites towards oxygen evolution reaction. <i>Applied Surface Science</i> , 2019, 485, 41-47.	3.1	22
2415	Review of Metal Catalysts for Oxygen Reduction Reaction: From Nanoscale Engineering to Atomic Design. <i>CheM</i> , 2019, 5, 1486-1511.	5.8	544
2416	Dual-nitrogen-source engineered Fe-N moieties as a booster for oxygen electroreduction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 11007-11015.	5.2	62
2417	Iron and nitrogen co-doped porous carbon derived from soybean dregs with enhanced catalytic performance for oxygen reduction. <i>Journal of Electroanalytical Chemistry</i> , 2019, 839, 141-148.	1.9	19
2418	In situ construction of hollow carbon spheres with N, Co, and Fe co-doping as electrochemical sensors for simultaneous determination of dihydroxybenzene isomers. <i>Nanoscale</i> , 2019, 11, 8950-8958.	2.8	37
2419	Highly efficient nitrogen and carbon coordinated N-Co-C electrocatalysts on reduced graphene oxide derived from vitamin-B12 for the hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 7179-7185.	5.2	41
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2421	Probing the Active Sites of Carbon-Encapsulated Cobalt Nanoparticles for Oxygen Reduction. <i>Small Methods</i> , 2019, 3, 1800439.	4.6	33
2422	Covalent organic frameworks derived hollow structured N-doped noble carbon for asymmetric-electrolyte Zn-air battery. <i>Science China Chemistry</i> , 2019, 62, 385-392.	4.2	29
2423	Pyridinic-N Protected Synthesis of 3D Nitrogen-Doped Porous Carbon with Increased Mesoporous Defects for Oxygen Reduction. <i>Small</i> , 2019, 15, e1805325.	5.2	70
2424	Transition Metal-Nitrogen-Carbon (M-N-C) Catalysts for Oxygen Reduction Reaction. Insights on Synthesis and Performance in Polymer Electrolyte Fuel Cells. <i>ChemEngineering</i> , 2019, 3, 16.	1.0	75

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2431	Vertical-Space-Limit Synthesis of Bifunctional Fe, N-Codoped 2D Multilayer Graphene Electro-catalysts for Zn-Air Battery. Energy Technology, 2019, 7, 1900123.	1.8	44
2432	Bottom-Up Construction of Active Sites in a Cu <sub>4</sub> -C Catalyst for Highly Efficient Oxygen Reduction Reaction. ACS Nano, 2019, 13, 3177-3187.	7.3	117
2433	PGM-Free Cathode Catalysts for PEM Fuel Cells: A Mini-Review on Stability Challenges. Advanced Materials, 2019, 31, e1807615.	11.1	430
2434	Progress in the Development of Fe-Based PGM-Free Electro-catalysts for the Oxygen Reduction Reaction. Advanced Materials, 2019, 31, e1806545.	11.1	317
2435	Less active CeO <sub>2</sub> regulating bifunctional oxygen electrocatalytic activity of Co <sub>3</sub> O <sub>4</sub> @N-doped carbon for Zn-air batteries. Journal of Materials Chemistry A, 2019, 7, 6753-6765.	5.2	87
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2437	Cocatalysts for Selective Photoreduction of CO <sub>2</sub> into Solar Fuels. Chemical Reviews, 2019, 119, 3962-4179.	23.0	1,591
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2439	A review of recent progress on electro-catalysts toward efficient glycerol electrooxidation. Reviews in Chemical Engineering, 2021, 37, 779-811.	2.3	28
2440	2020 Roadmap on gas-involved photo- and electro- catalysis. Chinese Chemical Letters, 2019, 30, 2089-2109.	4.8	71
2441	Pore Engineering of 2D Mesoporous Nitrogen-Doped Carbon on Graphene through Block Copolymer Self-Assembly. Advanced Materials Interfaces, 2019, 6, 1901476.	1.9	23
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2444	An <i>in situ</i> coupling strategy for the preparation of heterometal-doped carbon frameworks as efficient bifunctional ORR/OER electrocatalysts. <i>New Journal of Chemistry</i> , 2019, 43, 17963-17973.	1.4	21
2445	Enhancing Oxygen Electroreduction Activity of Single-Site Feâ€“Nâ€“C Catalysts by a Metal Support. <i>Journal of Physical Chemistry C</i> , 2019, 123, 30335-30340.	1.5	6
2446	Strategies to Break the Scaling Relation toward Enhanced Oxygen Electrocatalysis. <i>Matter</i> , 2019, 1, 1494-1518.	5.0	316
2447	2020 roadmap on pore materials for energy and environmental applications. <i>Chinese Chemical Letters</i> , 2019, 30, 2110-2122.	4.8	75
2448	Engineering Energy Level of Metal Center: Ru Single-Atom Site for Efficient and Durable Oxygen Reduction Catalysis. <i>Journal of the American Chemical Society</i> , 2019, 141, 19800-19806.	6.6	288
2449	Activity Origin and Design Principles for Oxygen Reduction on Dual-Metal-Site Catalysts: A Combined Density Functional Theory and Machine Learning Study. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 7760-7766.	2.1	149
2450	Efficient bimetallic zeolitic imidazolate framework derived Coâ€“Nâ€“C oxygen reduction reaction electrocatalysts. <i>Materials Research Express</i> , 2019, 6, 126314.	0.8	3
2451	Controlled Surface Elemental Distribution Enhances Catalytic Activity and Stability. <i>Matter</i> , 2019, 1, 1447-1449.	5.0	7
2452	X-ray tracking of structural changes during a subnanosecond solid-solid phase transition in cobalt nanoparticles. <i>Physical Review B</i> , 2019, 100, .	1.1	2
2453	Tunable and convenient synthesis of highly dispersed Feâ€“N <sub>x</sub> catalysts from graphene-supported Znâ€“Fe-ZIF for efficient oxygen reduction in acidic media. <i>RSC Advances</i> , 2019, 9, 42236-42244.	1.7	10
2454	Synergistic catalysis on Feâ€“N <sub>x</sub> sites and Fe nanoparticles for efficient synthesis of quinolines and quinazolinones <i>via</i> oxidative coupling of amines and aldehydes. <i>Chemical Science</i> , 2019, 10, 10283-10289.	3.7	86
2456	N-, P-, and S-doped graphene-like carbon catalysts derived from onium salts with enhanced oxygen chemisorption for Zn-air battery cathodes. <i>Applied Catalysis B: Environmental</i> , 2019, 241, 442-451.	10.8	284
2457	A metal-organic framework-derived bifunctional catalyst for hybrid sodium-air batteries. <i>Applied Catalysis B: Environmental</i> , 2019, 241, 407-414.	10.8	92
2458	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
2459	Two-in-one solution using insect wings to produce graphene-graphite films for efficient electrocatalysis. <i>Nano Research</i> , 2019, 12, 33-39.	5.8	29
2460	Prussian blue analogues derived iron-cobalt alloy embedded in nitrogen-doped porous carbon nanofibers for efficient oxygen reduction reaction in both alkaline and acidic solutions. <i>Journal of Colloid and Interface Science</i> , 2019, 533, 578-587.	5.0	63
2461	Ultrathin Feâ€“Nâ€“C Nanosheets Coordinated Feâ€“Doped CoNi Alloy Nanoparticles for Electrochemical Water Splitting. <i>Particle and Particle Systems Characterization</i> , 2019, 36, 1800252.	1.2	21

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2463	Two-dimensional titanium carbide MXenes as efficient non-noble metal electrocatalysts for oxygen reduction reaction. <i>Science China Materials</i> , 2019, 62, 662-670.	3.5	74
2464	Integrating PGM-Free Catalysts into Catalyst Layers and Proton Exchange Membrane Fuel Cell Devices. <i>Advanced Materials</i> , 2019, 31, e1804846.	11.1	121
2465	UiO-66-NH <sub>2</sub> -Derived Mesoporous Carbon Catalyst Co-Doped with Fe/N/S as Highly Efficient Cathode Catalyst for PEMFCs. <i>Small</i> , 2019, 15, e1803520.	5.2	73
2466	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
2467	A highly efficient electrocatalyst for oxygen reduction reaction: Three-dimensionally ordered macroporous perovskite LaMnO <sub>3</sub> . <i>Journal of Power Sources</i> , 2019, 412, 701-709.	4.0	53
2468	Designed synthesis of cobalt nanoparticles embedded carbon nanocages as bifunctional electrocatalysts for oxygen evolution and reduction. <i>Carbon</i> , 2019, 144, 492-499.	5.4	31
2469	Fe and S co-doped N-enriched hierarchical porous carbon polyhedron as efficient non-noble-metal electrocatalyst toward oxygen reduction reaction in both alkaline and acidic medium. <i>Electrochimica Acta</i> , 2019, 298, 570-579.	2.6	54
2470	Shrunken hollow Mo-N/Mo-C nanosphere structure for efficient hydrogen evolution in a broad pH range. <i>Electrochimica Acta</i> , 2019, 298, 799-805.	2.6	38
2471	Nature of Carbon Materials Used as Nondoped Electrodes for Oxygen Reduction Reaction and Supercapacitor Applications. <i>Journal of the Electrochemical Society</i> , 2019, 166, F1-F8.	1.3	10
2472	Electrochemical Performance of Borate-Doped Nickel Sulfide: Enhancement of the Bifunctional Activity for Total Water Splitting. <i>ChemElectroChem</i> , 2019, 6, 1443-1449.	1.7	23
2473	X-Ray Absorption Spectroscopy Characterizations on PGM-Free Electrocatalysts: Justification, Advantages, and Limitations. <i>Advanced Materials</i> , 2019, 31, e1805157.	11.1	48
2474	Bimetallic metal-organic frameworks derived cobalt nanoparticles embedded in nitrogen-doped carbon nanotube nanopolyhedra as advanced electrocatalyst for high-performance of activated carbon air-cathode microbial fuel cell. <i>Biosensors and Bioelectronics</i> , 2019, 127, 181-187.	5.3	46
2475	Catalysis with Two-Dimensional Materials Confining Single Atoms: Concept, Design, and Applications. <i>Chemical Reviews</i> , 2019, 119, 1806-1854.	23.0	745
2476	Applications of 2D MXenes in energy conversion and storage systems. <i>Chemical Society Reviews</i> , 2019, 48, 72-133.	18.7	1,354
2477	Transition Metal-Nitrogen-Carbon Active Site for Oxygen Reduction Electrocatalysis: Beyond the Fascinations of TM-N <sub>4</sub> . <i>ChemCatChem</i> , 2019, 11, 655-668.	1.8	30
2478	Sp <sup>2</sup> -carbon dominant carbonaceous materials for energy conversion and storage. <i>Materials Science and Engineering Reports</i> , 2019, 137, 1-37.	14.8	25
2479	Oxygen Electroreduction on Nanoporous Carbons: Textural Features vs Nitrogen and Boron Catalytic Centers. <i>ChemCatChem</i> , 2019, 11, 851-860.	1.8	28

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2481	Sulfur, Nitrogen and Fluorine Triple-doped Metal-free Carbon Electrocatalysts for the Oxygen Reduction Reaction. <i>ChemElectroChem</i> , 2019, 6, 741-747.	1.7	33
2482	Porous nitrogen/halogen dual-doped nanocarbons derived from imidazolium functionalized cationic metal-organic frameworks for highly efficient oxygen reduction reaction. <i>Science China Materials</i> , 2019, 62, 671-680.	3.5	30
2484	Fe-N <sub>4</sub> complex embedded free-standing carbon fabric catalysts for higher performance ORR both in alkaline & acidic media. <i>Nano Energy</i> , 2019, 56, 524-530.	8.2	88
2485	Metal-free N-doped carbon blacks as excellent electrocatalysts for oxygen reduction reactions. <i>Carbon</i> , 2019, 145, 481-487.	5.4	33
2486	Well-dispersed Pt nanoparticles on borane-modified graphene oxide and their electrocatalytic performance for oxygen reduction reaction. <i>Journal of Solid State Chemistry</i> , 2019, 271, 168-174.	1.4	5
2487	Fe <sup>3+</sup> /C Active Catalytic Sites for the Oxygen Reduction Reaction Prepared with Molecular-Level Geometry Control through the Covalent Immobilization of an Iron-Terpyridine Motif onto Carbon. <i>ChemElectroChem</i> , 2019, 6, 1350-1358.	1.7	20
2488	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
2489	Design Principle of Fe-N-C Electrocatalysts: How to Optimize Multimodal Porous Structures?. <i>Journal of the American Chemical Society</i> , 2019, 141, 2035-2045.	6.6	383
2490	In situ formation of nitrogen doped mesoporous carbon via directly carbonizing polyaniline as an efficient electrocatalyst for determination of capsaicin. <i>Microporous and Mesoporous Materials</i> , 2019, 278, 327-339.	2.2	7
2491	A flexible non-precious metal Fe-N/C catalyst for highly efficient oxygen reduction reaction. <i>Nanotechnology</i> , 2019, 30, 144001.	1.3	9
2492	Biomorphic Co <sub>2</sub> Ni <sub>2</sub> C/CoO <sub>x</sub> Composite Derived from Natural Chloroplasts as Efficient Electrocatalyst for Oxygen Reduction Reaction. <i>Small</i> , 2019, 15, e1804855.	5.2	72
2493	Nanostructured Cementite/Ferrous Sulfide Encapsulated Carbon with Heteroatoms for Oxygen Reduction in Alkaline Environment. <i>ACS Sustainable Chemistry and Engineering</i> , 2019, 7, 3185-3194.	3.2	16
2494	Active Sites and Mechanism of Oxygen Reduction Reaction Electrocatalysis on Nitrogen-doped Carbon Materials. <i>Advanced Materials</i> , 2019, 31, e1804297.	11.1	459
2495	On an Easy Way to Prepare Fe, S, N Tri-Doped Mesoporous Carbon Materials as Efficient Electrocatalysts for Oxygen Reduction Reaction. <i>Electrocatalysis</i> , 2019, 10, 72-81.	1.5	15
2496	Zn <sub>3</sub> [Fe(CN) <sub>6</sub> ] <sub>2</sub> derived Fe/Fe <sub>5</sub> C <sub>2</sub> @N-doped carbon as a highly effective oxygen reduction reaction catalyst for zinc-air battery. <i>Applied Catalysis B: Environmental</i> , 2019, 244, 197-205.	10.8	98
2497	Controllable synthesis of nitrogen-doped carbon nanotubes derived from halloysite-templated polyaniline towards nonprecious ORR catalysts. <i>Applied Surface Science</i> , 2019, 469, 269-275.	3.1	35
2498	Heterogeneous atoms-doped titanium carbide as a precious metal-free electrocatalyst for oxygen reduction reaction. <i>Electrochimica Acta</i> , 2019, 295, 384-392.	2.6	19

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2501	Nitrogen-Doped Metal-Free Carbon Materials Derived from Cellulose as Electrocatalysts for the Oxygen Reduction Reaction. <i>ChemElectroChem</i> , 2019, 6, 514-521.	1.7	31
2502	Synthesis and Active Site Identification of Fe~N~C Single-Atom Catalysts for the Oxygen Reduction Reaction. <i>ChemElectroChem</i> , 2019, 6, 304-315.	1.7	65
2503	Nonpyrolyzed Fe~N Coordination-Based Iron Triazolate Framework: An Efficient and Stable Electrocatalyst for Oxygen Reduction Reaction. <i>ChemSusChem</i> , 2019, 12, 200-207.	3.6	26
2504	Long-Life Room-Temperature Sodium-Sulfur Batteries by Virtue of Transition-Metal-Nanocluster-Sulfur Interactions. <i>Angewandte Chemie</i> , 2019, 131, 1498-1502.	1.6	63
2505	Long-Life Room-Temperature Sodium-Sulfur Batteries by Virtue of Transition-Metal-Nanocluster-Sulfur Interactions. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 1484-1488.	7.2	165
2506	Highly active bimetallic CuFe~N~C electrocatalysts for oxygen reduction reaction in alkaline media. <i>Journal of Industrial and Engineering Chemistry</i> , 2019, 71, 234-241.	2.9	12
2507	Cobalt, Nitrogen-Doped Porous Carbon Nanosheet-Assembled Flowers from Metal-Coordinated Covalent Organic Polymers for Efficient Oxygen Reduction. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 1384-1393.	4.0	56
2508	Efficacious Electrochemical Oxygen Evolution from a Novel Co(II) Porphyrin/Pyrene-Based Conjugated Microporous Polymer. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 1520-1528.	4.0	75
2509	Iron/Nitrogen co-doped mesoporous carbon synthesized by an endo-templating approach as an efficient electrocatalyst for the oxygen reduction reaction. <i>Microporous and Mesoporous Materials</i> , 2019, 278, 280-288.	2.2	34
2510	Metal-Free Boron Nitride Nanoribbon Catalysts for Electrochemical CO <sub>2</sub> Reduction: Combining High Activity and Selectivity. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 906-915.	4.0	66
2511	The Electrocatalytic Stability Investigation of a Proton Manager MOF for the Oxygen Reduction Reaction in Acidic Media. <i>Journal of Inorganic and Organometallic Polymers and Materials</i> , 2019, 29, 528-534.	1.9	14
2512	Accelerating polysulfide redox conversion on bifunctional electrocatalytic electrode for stable Li-S batteries. <i>Energy Storage Materials</i> , 2019, 20, 98-107.	9.5	87
2513	Oxygen Reduction Reaction. <i>Interface Science and Technology</i> , 2019, 27, 203-252.	1.6	15
2514	Tailor-made metal-nitrogen-carbon bifunctional electrocatalysts for rechargeable Zn-air batteries via controllable MOF units. <i>Energy Storage Materials</i> , 2019, 17, 46-61.	9.5	70
2515	Fabricating hierarchically porous and Fe <sub>3</sub> C-embedded nitrogen-rich carbon nanofibers as exceptional electrocatalysts for oxygen reduction. <i>Carbon</i> , 2019, 142, 115-122.	5.4	57
2516	In-situ formation of hierarchical 1D-3D hybridized carbon nanostructure supported nonnoble transition metals for efficient electrocatalysis of oxygen reaction. <i>Applied Catalysis B: Environmental</i> , 2019, 243, 151-160.	10.8	66

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2517	Single crystalline Bi <sub>2</sub> Ru <sub>2</sub> O <sub>7</sub> pyrochlore oxide nanoparticles as efficient bifunctional oxygen electrocatalyst for hybrid Na-air batteries. <i>Chemical Engineering Journal</i> , 2019, 358, 11-19.	6.6	67
2518	Modulierung der elektronischen Strukturen anorganischer Nanomaterialien für eine effiziente elektrokatalytische Wasserspaltung. <i>Angewandte Chemie</i> , 2019, 131, 4532-4551.	1.6	34
2519	Modulating Electronic Structures of Inorganic Nanomaterials for Efficient Electrocatalytic Water Splitting. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 4484-4502.	7.2	340
2520	Developing an advanced electrocatalyst derived from Ce(TTA) <sub>3</sub> Phen embedded polyaniline for oxygen reduction reaction. <i>Applied Surface Science</i> , 2019, 465, 979-985.	3.1	11
2521	Cobalt and nitrogen codoped ultrathin porous carbon nanosheets as bifunctional electrocatalysts for oxygen reduction and evolution. <i>Carbon</i> , 2019, 141, 704-711.	5.4	53
2522	To pursue Fe <sub>x</sub> Co <sub>y</sub> -PANI/CNT catalysts for oxygen reduction reaction in acid medium with controlled molecular self-assembly method. <i>International Journal of Hydrogen Energy</i> , 2020, 45, 29655-29667.	3.8	4
2523	Active sites for the oxygen reduction reaction in nitrogen-doped carbon nanofibers. <i>Catalysis Today</i> , 2020, 357, 248-258.	2.2	28
2524	Efficient Oxygen Reduction Catalysts of Porous Carbon Nanostructures Decorated with Transition Metal Species. <i>Advanced Energy Materials</i> , 2020, 10, 1900375.	10.2	175
2525	Overwhelming electrochemical oxygen reduction reaction of zinc-nitrogen-carbon from biomass resource chitosan via a facile carbon bath method. <i>Chinese Chemical Letters</i> , 2020, 31, 1207-1212.	4.8	13
2526	State of the Art and Prospects in Metal-Organic Framework (MOF)-Based and MOF-Derived Nanocatalysis. <i>Chemical Reviews</i> , 2020, 120, 1438-1511.	23.0	1,505
2527	Metal-organic-framework-derived formation of Co-N-doped carbon materials for efficient oxygen reduction reaction. <i>Journal of Energy Chemistry</i> , 2020, 40, 137-143.	7.1	74
2528	Selective Hydrogenation over Supported Metal Catalysts: From Nanoparticles to Single Atoms. <i>Chemical Reviews</i> , 2020, 120, 683-733.	23.0	871
2529	Encapsulation of Co-based nanoparticle in N-doped graphitic carbon for efficient oxygen reduction reaction. <i>Carbon</i> , 2020, 156, 31-37.	5.4	27
2530	Co single-atom anchored on Co <sub>3</sub> O <sub>4</sub> and nitrogen-doped active carbon toward bifunctional catalyst for zinc-air batteries. <i>Applied Catalysis B: Environmental</i> , 2020, 260, 118188.	10.8	163
2531	A Theory/Experience Description of Support Effects in Carbon-Supported Catalysts. <i>Chemical Reviews</i> , 2020, 120, 1250-1349.	23.0	436
2532	Intrinsic properties of nitrogen-rich carbon nitride for oxygen reduction reaction. <i>Applied Surface Science</i> , 2020, 500, 144020.	3.1	21
2533	Cobalt sulfides nanoparticles encapsulated in N, S co-doped carbon substrate for highly efficient oxygen reduction. <i>Journal of Alloys and Compounds</i> , 2020, 815, 152457.	2.8	25
2534	Co <sub>3</sub> O <sub>4</sub> nanoparticles anchored in MnO <sub>2</sub> nanorods as efficient oxygen reduction reaction catalyst for metal-air batteries. <i>Journal of Alloys and Compounds</i> , 2020, 814, 152239.	2.8	28

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2536	Activity and degradation study of an Fe-N-C catalyst for ORR in Direct Methanol Fuel Cell (DMFC). <i>Applied Catalysis B: Environmental</i> , 2020, 262, 118217.	10.8	113
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3012	Metal organic framework derived iron-nitrogen doped porous carbon support decorated with cobalt and iron as efficient nanocatalyst toward oxygen reduction reaction. <i>Journal of Power Sources</i> , 2021, 499, 229956.	4.0	26
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3036	Intrinsic ORR Activity Enhancement of Pt Atomic Sites by Engineering the d-Band Center via Local Coordination Tuning. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 21911-21917.	7.2	132
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3039	N/B Co-doped carbon as metal-free cathode catalyst for high-performance asymmetric neutral-alkaline microbial fuel cell. <i>Electrochimica Acta</i> , 2021, 389, 138518.	2.6	10
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3043	Kinetic Effects of Temperature on Fe-N-C Catalysts for 2e- and 4e-Oxygen Reduction Reactions. <i>Journal of the Electrochemical Society</i> , 2021, 168, 096502.	1.3	7
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3055	Effect of coordination surroundings of isolated metal sites on electrocatalytic performances. <i>Journal of Power Sources</i> , 2021, 506, 230143.	4.0	15
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3073	Synthesis and application in oxygen reduction reaction of N-doping porous graphitic carbon from biomass waste. <i>Fuel Processing Technology</i> , 2021, 224, 107028.	3.7	15
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3209	Synthesis and electrocatalytic properties of M (Fe, Co),N co-doped porous carbon frameworks for efficient oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 9504-9516.	3.8	12
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3223	Iron-based sulfur and nitrogen dual doped porous carbon as durable electrocatalysts for oxygen reduction reaction. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 6078-6088.	3.8	21
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3225	Impact of Nickel Content on the Structure and Electrochemical CO <sub>2</sub> Reduction Performance of Nickelâ€“Nitrogenâ€“Carbon Catalysts Derived from Zeolitic Imidazolate Frameworks. <i>ACS Applied Energy Materials</i> , 2022, 5, 430-439.	2.5	11

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3227	N-Doped Carbon Electrocatalyst: Marked ORR Activity in Acidic Media without the Contribution from Metal Sites?. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	90
3228	N-Doped Carbon Electrocatalyst: Marked ORR Activity in Acidic Media without the Contribution from Metal Sites?. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	7
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3230	Aerobic oxidative cleavage and esterification of C C bonds catalyzed by iron-based nanocatalyst. <i>Molecular Catalysis</i> , 2022, 519, 112152.	1.0	5
3231	Synthetic strategies of single-atoms catalysts and applications in electrocatalysis. <i>Electrochimica Acta</i> , 2022, 409, 139835.	2.6	8
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3388	Science and engineering for non-noble-metal-based electrocatalysts to boost their ORR performance: A critical review. <i>Coordination Chemistry Reviews</i> , 2023, 474, 214854.	9.5	63
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