

# Understanding Catalytic Activity Trends in the Oxygen

Chemical Reviews

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Citation Report

#	ARTICLE	IF	CITATIONS
5	Single Metal Atoms Anchored in Two-Dimensional Materials: Bifunctional Catalysts for Fuel Cell Applications. <i>ChemCatChem</i> , 2018, 10, 3034-3039.	3.7	50
6	First-Principles Investigation of the Formation of Pt Nanorrafts on a Mo <sub>2</sub> C Support and Their Catalytic Activity for Oxygen Reduction Reaction. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 2229-2234.	4.6	29
7	Ultrathin Cobalt Oxide Overlayer Promotes Catalytic Activity of Cobalt Nitride for the Oxygen Reduction Reaction. <i>Journal of Physical Chemistry C</i> , 2018, 122, 4783-4791.	3.1	46
8	Computational predictive design for metal-decorated-graphene size-specific subnanometer to nanometer ORR catalysts. <i>Catalysis Today</i> , 2018, 312, 105-117.	4.4	13
9	Simple preparation of carbon-bimetal oxide nanospinels for high-performance bifunctional oxygen electrocatalysts. <i>New Journal of Chemistry</i> , 2018, 42, 20156-20162.	2.8	8
10	Synergistic effect of well-defined dual sites boosting the oxygen reduction reaction. <i>Energy and Environmental Science</i> , 2018, 11, 3375-3379.	30.8	528
12	Combining Experiment and Theory To Unravel the Mechanism of Two-Electron Oxygen Reduction at a Selective and Active Co-catalyst. <i>ACS Catalysis</i> , 2018, 8, 11940-11951.	11.2	45
13	Exploring the Effect of Gold Support on the Oxygen Reduction Reaction Activity of Metal Porphycenes. <i>ChemCatChem</i> , 2018, 10, 5505-5510.	3.7	6
14	Silicon-Doped Nitrogen-Coordinated Graphene as Electrocatalyst for Oxygen Reduction Reaction. <i>Journal of Physical Chemistry C</i> , 2018, 122, 27233-27240.	3.1	59
15	First-principles computational approach for innovative design of highly functional electrocatalysts in fuel cells. <i>Current Opinion in Electrochemistry</i> , 2018, 12, 225-232.	4.8	4
16	Electrostatic-Driven Activity, Loading, Dynamics, and Stability of a Redox Enzyme on Functionalized-Gold Electrodes for Bioelectrocatalysis. <i>ACS Catalysis</i> , 2018, 8, 12004-12014.	11.2	42
17	Favorable Core/Shell Interface within Co <sub>2</sub> P/Pt Nanorods for Oxygen Reduction Electrocatalysis. <i>Nano Letters</i> , 2018, 18, 7870-7875.	9.1	68
18	Theoretical Approaches to Describing the Oxygen Reduction Reaction Activity of Single-Atom Catalysts. <i>Journal of Physical Chemistry C</i> , 2018, 122, 29307-29318.	3.1	68
19	DFT Study of the Oxygen Reduction Reaction on Carbon-Coated Iron and Iron Carbide. <i>ACS Catalysis</i> , 2018, 8, 10521-10529.	11.2	46
20	Origins of high onset overpotential of oxygen reduction reaction at Pt-based electrocatalysts: A mini review. <i>Electrochemistry Communications</i> , 2018, 96, 71-76.	4.7	50
21	Engineering the Interface of Carbon Electrocatalysts at the Triple Point for Enhanced Oxygen Reduction Reaction. <i>Chemistry - A European Journal</i> , 2018, 24, 18374-18384.	3.3	45
22	Recent Advances on Electrocatalysts for PEM and AEM Fuel Cells. , 2018, , 51-89.		1
23	Trimetallic (Co/Ni/Cu) Hydroxyphosphate Nanosheet Array as Efficient and Durable Electrocatalyst for Oxygen Evolution Reaction. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 16859-16866.	6.7	22

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24	Zoom in Catalyst/Ionomer Interface in Polymer Electrolyte Membrane Fuel Cell Electrodes: Impact of Catalyst/Ionomer Dispersion Media/Solvent. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 38125-38133.	8.0	47
25	Atomically dispersed manganese catalysts for oxygen reduction in proton-exchange membrane fuel cells. <i>Nature Catalysis</i> , 2018, 1, 935-945.	34.4	1,075
26	Design of a Three-Dimensional Interconnected Hierarchical Micro-Mesoporous Structure of Graphene as Support Material for Spinel $\text{NiCo}_2\text{O}_4$ Electrocatalysts toward Oxygen Reduction Reaction. <i>Journal of Physical Chemistry C</i> , 2018, 122, 27469-27476.	3.1	51
27	One-Nanometer-Thick PtNiRh Trimetallic Nanowires with Enhanced Oxygen Reduction Electrocatalysis in Acid Media: Integrating Multiple Advantages into One Catalyst. <i>Journal of the American Chemical Society</i> , 2018, 140, 16159-16167.	13.7	160
28	Interplay between Covalent and Noncovalent Interactions in Electrocatalysis. <i>Journal of Physical Chemistry C</i> , 2018, 122, 26910-26921.	3.1	21
29	ZIF-derived carbons as highly efficient and stable ORR catalyst. <i>Nanotechnology</i> , 2018, 29, 485402.	2.6	16
30	Emerging Materials in Heterogeneous Electrocatalysis Involving Oxygen for Energy Harvesting. <i>ACS Applied Materials &amp; Interfaces</i> , 2018, 10, 33737-33767.	8.0	52
31	Towards <i>operando</i> computational modeling in heterogeneous catalysis. <i>Chemical Society Reviews</i> , 2018, 47, 8307-8348.	38.1	169
32	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.	6.7	105
33	Active-Phase Formation and Stability of Gd/Pt(111) Electrocatalysts for Oxygen Reduction: An In Situ Grazing Incidence X-Ray Diffraction Study. <i>Chemistry - A European Journal</i> , 2018, 24, 12280-12290.	3.3	17
34	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.	12.9	104
35	Defect and pyridinic nitrogen engineering of carbon-based metal-free nanomaterial toward oxygen reduction. <i>Nano Energy</i> , 2018, 52, 307-314.	16.0	176
36	Molten-Salt-Assisted Synthesis of 3D Holey N-Doped Graphene as Bifunctional Electrocatalysts for Rechargeable Zn-Air Batteries. <i>Small Methods</i> , 2018, 2, 1800144.	8.6	77
37	PtNi Alloy Nanoparticles Prepared by Nanocapsule Method for ORR Catalysts in Alkaline Media. <i>Bulletin of the Chemical Society of Japan</i> , 2018, 91, 1495-1497.	3.2	4
38	Core-Shell Polydopamine@Zr-Hemin MOFs Derived Fe-N-Doped Porous Carbon Nanospheres Electrocatalysts for the Oxygen Reduction. <i>Journal of the Electrochemical Society</i> , 2018, 165, H673-H679.	2.9	12
39	Kinetics of Lifetime Changes in Bimetallic Nanocatalysts Revealed by Quick X-Ray Absorption Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 12430-12434.	13.8	15
40	Microscopic Electrode Processes in the Four-Electron Oxygen Reduction on Highly Active Carbon-Based Electrocatalysts. <i>ACS Catalysis</i> , 2018, 8, 8162-8176.	11.2	54
41	Transition metal oxide nanocatalysts for oxygen reduction reaction. <i>Materials Science for Energy Technologies</i> , 2018, 1, 117-128.	1.8	101

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42	Effects of dielectric barrier discharge plasma on the catalytic activity of Pt/CeO <sub>2</sub> catalysts. Applied Catalysis B: Environmental, 2018, 238, 328-338.	20.2	112
43	Kinetics of Lifetime Changes in Bimetallic Nanocatalysts Revealed by Quick X-ray Absorption Spectroscopy. Angewandte Chemie, 2018, 130, 12610-12614.	2.0	2
44	Recent Approaches to Design Electrocatalysts Based on Metal-Organic Frameworks and Their Derivatives. Chemistry - an Asian Journal, 2019, 14, 3474-3501.	3.3	34
45	Synthesis of low- and high-index faceted metal (Pt, Pd, Ru, Ir, Rh) nanoparticles for improved activity and stability in electrocatalysis. Nanoscale, 2019, 11, 18995-19011.	5.6	110
46	Co/Co <sub>9</sub> S <sub>8</sub> nanoparticles coupled with N,S-doped graphene-based mixed-dimensional heterostructures as bifunctional electrocatalysts for the overall oxygen electrode. Inorganic Chemistry Frontiers, 2019, 6, 2558-2565.	6.0	13
47	Functionalization of 2D materials for enhancing OER/ORR catalytic activity in Li-oxygen batteries. Communications Chemistry, 2019, 2, .	4.5	61
48	Intermetallic Pd <sub>3</sub> Pb ultrathin nanoplate-constructed flowers with low-coordinated edge sites boost oxygen reduction performance. Nanoscale, 2019, 11, 17301-17307.	5.6	16
49	Trimetallic Synergy in Intermetallic PtSnBi Nanoplates Boosts Formic Acid Oxidation. Advanced Materials, 2019, 31, e1903683.	21.0	112
50	Electrocatalytic Production of H <sub>2</sub> O <sub>2</sub> by Selective Oxygen Reduction Using Earth-Abundant Cobalt Pyrite (CoS <sub>2</sub> ). ACS Catalysis, 2019, 9, 8433-8442.	11.2	167
51	Carbonaceous materials for efficient electrocatalysis. , 2019, , 375-394.		2
52	High Pt Single-Atom Density for High-Rate Generation of H <sub>2</sub> O <sub>2</sub> . Chem, 2019, 5, 1927-1928.	11.7	21
53	The Chemical Bond between Transition Metals and Oxygen: Electronegativity, d-Orbital Effects, and Oxophilicity as Descriptors of Metal-Oxygen Interactions. Journal of Physical Chemistry C, 2019, 123, 18432-18444.	3.1	92
54	A highly durable carbon-nanofiber-supported Pt-C core-shell cathode catalyst for ultra-low Pt loading proton exchange membrane fuel cells: facile carbon encapsulation. Energy and Environmental Science, 2019, 12, 2820-2829.	30.8	158
55	Ligand Identity-Induced Generation of Enhanced Oxidative Hydrogen Atom Transfer Reactivity for a CuII(O <sub>2</sub> â€•) Complex Driven by Formation of a CuII(â€•OOH) Compound with a Strong O-H Bond. Journal of the American Chemical Society, 2019, 141, 12682-12696.	13.7	28
56	Evaluating the Catalytic Efficiency of Paired, Single-Atom Catalysts for the Oxygen Reduction Reaction. ACS Catalysis, 2019, 9, 7660-7667.	11.2	128
57	Enhancement of PGM-free oxygen reduction electrocatalyst performance for conventional and enzymatic fuel cells: The influence of an external magnetic field. Applied Catalysis B: Environmental, 2019, 258, 117955.	20.2	25
58	Scaling Relation of Oxygen Reduction Reaction Intermediates at Defective TiO <sub>2</sub> Surfaces. Journal of Physical Chemistry C, 2019, 123, 19486-19492.	3.1	20
59	Tuning Li <sub>2</sub> O <sub>2</sub> Formation Routes by Facet Engineering of MnO <sub>2</sub> Cathode Catalysts. Journal of the American Chemical Society, 2019, 141, 12832-12838.	13.7	107

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60	In Situ Deposition of Pd during Oxygen Reduction Yields Highly Selective and Active Electrocatalysts for Direct $\text{H}_2\text{O}$ Production. ACS Catalysis, 2019, 9, 8453-8463.	11.2	60
61	Recent advancements in Pt-nanostructure-based electrocatalysts for the oxygen reduction reaction. Catalysis Science and Technology, 2019, 9, 4835-4863.	4.1	73
62	Oxygen Reduction Reaction Mechanisms on Heteroatom-Doped Single-Walled Carbon Nanotube Catalysts: Insights from a Theoretical Study. Journal of the Electrochemical Society, 2019, 166, F670-F678.	2.9	15
63	The influence of mesopore size distributions on the electrochemical activity and two-electron selectivity of the oxygen reduction reaction in nitrogen-doped and CoOx-loaded activated carbon. Journal of Electroanalytical Chemistry, 2019, 847, 113258.	3.8	3
64	Potential-Dependent Volcano Plot for Oxygen Reduction: Mathematical Origin and Implications for Catalyst Design. Journal of Physical Chemistry Letters, 2019, 10, 7037-7043.	4.6	40
65	Improved Oxygen Reduction Reaction Activity of Nanostructured $\text{CoS}_2$ through Electrochemical Tuning. ACS Applied Energy Materials, 2019, 2, 8605-8614.	5.1	42
66	Anomalous hydrogen evolution behavior in high-pH environment induced by locally generated hydronium ions. Nature Communications, 2019, 10, 4876.	12.8	220
67	Electrocatalytic Oxygen Reduction Reaction over the $\text{Au}_{22}(\text{L}^8)_{6}$ Nanocluster with Promising Activity: A DFT Study. Journal of Physical Chemistry C, 2019, 123, 27116-27123.	3.1	19
68	Single Fe atoms anchored by short-range ordered nanographene boost oxygen reduction reaction in acidic media. Nano Energy, 2019, 66, 104164.	16.0	68
69	Unraveling Polymorphic Pyrrhotite Electrochemical Oxidation by Underlying Electronic Structures. Journal of Physical Chemistry C, 2019, 123, 26442-26449.	3.1	9
70	Programmable Exposure of Pt Active Facets for Efficient Oxygen Reduction. Angewandte Chemie, 2019, 131, 15995-16001.	2.0	14
71	A Mesoporous Nanorattle-Structured Pd@PtRu Electrocatalyst. Chemistry - an Asian Journal, 2019, 14, 3397-3403.	3.3	4
72	A facile one-pot method to prepare nitrogen and fluorine co-doped three-dimensional graphene-like materials for supercapacitors. Journal of Materials Science: Materials in Electronics, 2019, 30, 19505-19512.	2.2	5
73	Structural and Physical Parameters Controlling the Oxygen Reduction Reaction Selectivity with Carboxylic Acid-Substituted Cobalt Corroles Incorporated in a Porous Carbon Support. Journal of Physical Chemistry C, 2019, 123, 26351-26357.	3.1	23
74	Enhanced Electrocatalysis of the Oxygen Reduction Reaction Using Cobalt and Iron Porphyrin/Ionic Liquid Systems. Energy Technology, 2019, 7, 1900698.	3.8	4
75	Metal-organic frameworks: a promising platform for constructing non-noble electrocatalysts for the oxygen-reduction reaction. Journal of Materials Chemistry A, 2019, 7, 1964-1988.	10.3	165
76	Interfacial synthesis of ultrathin two-dimensional $2\text{PbCO}_3 \cdot \text{Pb}(\text{OH})_2$ nanosheets with high enzyme mimic catalytic activity. Inorganic Chemistry Frontiers, 2019, 6, 498-503.	6.0	1
77	The Effect of Anions and pH on the Activity and Selectivity of an Annealed Polycrystalline Au Film Electrode in the Oxygen Reduction Reaction—Revisited. ChemPhysChem, 2019, 20, 3276-3288.	2.1	22

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78	Enhanced cycling stability of capacitive deionization via effectively inhibiting H <sub>2</sub> O <sub>2</sub> formation: The role of nitrogen dopants. <i>Journal of Electroanalytical Chemistry</i> , 2019, 855, 113488.	3.8	15
79	Size, Composition, and Support-Doping Effects on Oxygen Reduction Activity of Platinum-Alloy and on Non-platinum Metal-Decorated-Graphene Nanocatalysts. <i>Frontiers in Chemistry</i> , 2019, 7, 610.	3.6	3
80	Contrasting Oxygen Reduction Reactions on Zero- and One-Dimensional Defects of MoS <sub>2</sub> for Versatile Applications. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 46327-46336.	8.0	22
81	Engineering bunched Pt-Ni alloy nanocages for efficient oxygen reduction in practical fuel cells. <i>Science</i> , 2019, 366, 850-856.	12.6	1,005
82	Simultaneously enhancing interfacial adhesion and pervaporation separation performance of PDMS/ceramic composite membrane via a facile substrate surface grafting approach. <i>AIChE Journal</i> , 2019, 65, e16773.	3.6	21
83	Programmable Exposure of Pt Active Facets for Efficient Oxygen Reduction. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 15848-15854.	13.8	81
84	Electrocatalyst Derived from Abundant Biomass and its Excellent Activity for In Situ H <sub>2</sub> O <sub>2</sub> Production. <i>ChemElectroChem</i> , 2019, 6, 4877-4884.	3.4	14
85	Electrocatalytically Active Silver Organic Framework: Ag(I)â€Complex Incorporated in Activated Carbon. <i>ChemCatChem</i> , 2019, 11, 6124-6130.	3.7	13
86	Fully Quantum Embedding with Density Functional Theory for Full Configuration Interaction Quantum Monte Carlo. <i>Journal of Chemical Theory and Computation</i> , 2019, 15, 5332-5342.	5.3	13
87	Construction of a sp <sup>3</sup> /sp <sup>2</sup> Carbon Interface in 3D Nâ€Doped Nanocarbons for the Oxygen Reduction Reaction. <i>Angewandte Chemie</i> , 2019, 131, 15233-15241.	2.0	49
88	Construction of a sp <sup>3</sup> /sp <sup>2</sup> Carbon Interface in 3D Nâ€Doped Nanocarbons for the Oxygen Reduction Reaction. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 15089-15097.	13.8	215
89	DFT calculations: A powerful tool for better understanding of electrocatalytic oxygen reduction reactions on Pt-based metallic catalysts. <i>Computational Materials Science</i> , 2019, 170, 109202.	3.0	59
90	Highly selective oxygen reduction to hydrogen peroxide on transition metal single atom coordination. <i>Nature Communications</i> , 2019, 10, 3997.	12.8	528
91	Revelation of the Nature of the Ligandâ€PbS Bond and Its Implication on Chemical Functionalization of PbS. <i>Journal of Physical Chemistry C</i> , 2019, 123, 22981-22988.	3.1	2
92	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.	8.0	38
93	Synthesis and characterization of Mn(II) complexes of 4-phenyl(phenyl-acetyl)-3-thiosemicarbazide, 4-amino-5-phenyl-1,2,4-triazole-3-thiolate, and their application towards electrochemical oxygen reduction reaction. <i>Polyhedron</i> , 2019, 173, 114125.	2.2	16
94	Simultaneously Achieving High Activity and Selectivity toward Two-Electron O <sub>2</sub> Electroreduction: The Power of Single-Atom Catalysts. <i>ACS Catalysis</i> , 2019, 9, 11042-11054.	11.2	314
95	Fe(CN) <sub>5</sub> @PIL-derived N-doped porous carbon with FeC <sub>x</sub> N <sub>y</sub> active sites as a robust electrocatalyst for the oxygen reduction reaction. <i>Catalysis Science and Technology</i> , 2019, 9, 97-105.	4.1	10

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97	Noble metal supported hexagonal boron nitride for the oxygen reduction reaction: a DFT study. <i>Nanoscale Advances</i> , 2019, 1, 132-139.	4.6	29
98	The Effect of Gold Nanoparticle Concentration and Laser Fluence on the Laser-Induced Water Decomposition. <i>Journal of Physical Chemistry B</i> , 2019, 123, 1869-1880.	2.6	51
99	Metal-“nonmetal nanoarchitectures: quaternary PtPdNiP mesoporous nanospheres for enhanced oxygen reduction electrocatalysis. <i>Journal of Materials Chemistry A</i> , 2019, 7, 3910-3916.	10.3	38
100	Modeling the oxygen reduction reaction at platinum-based catalysts: A brief review of recent developments. <i>Current Opinion in Electrochemistry</i> , 2019, 13, 157-165.	4.8	28
101	One-pot aqueous synthesis of two-dimensional porous bimetallic PtPd alloyed nanosheets as highly active and durable electrocatalyst for boosting oxygen reduction and hydrogen evolution. <i>Journal of Colloid and Interface Science</i> , 2019, 543, 1-8.	9.4	115
102	Insights Into the Effect of Nickel Doping on ZIF-6R Derived Oxygen Reduction Catalysts for Zinc-Air Batteries. <i>ChemElectroChem</i> , 2019, 6, 1213-1224.	3.4	11
103	The design of a novel and resistant Zn(PZDC)(ATZ) MOF catalyst for the chemical fixation of CO <sub>2</sub> under solvent-free conditions. <i>Inorganic Chemistry Frontiers</i> , 2019, 6, 317-325.	6.0	41
104	N-H bond activation in ammonia by TM-SSZ-13 (Fe, Co, Ni and Cu) zeolites: a first-principles calculation. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 1506-1513.	2.8	8
105	Oxygen Reduction Reaction Catalyzed by Black-Phosphorus-Supported Metal Nanoparticles: Impacts of Interfacial Charge Transfer. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 24707-24714.	8.0	33
106	Ligand-Effect-Induced Oxygen Reduction Reaction Activity Enhancement for Pt/Zr/Pt(111) Surfaces with Tensile Strain Relieved by Stacking Faults. <i>ACS Applied Energy Materials</i> , 2019, 2, 4597-4601.	5.1	13
107	Alloyed Pt <sub>3</sub> M (M = Co, Ni) nanoparticles supported on S- and N-doped carbon nanotubes for the oxygen reduction reaction. <i>Beilstein Journal of Nanotechnology</i> , 2019, 10, 1251-1269.	2.8	6
108	Promotion of hydrogen peroxide production on graphene-supported atomically dispersed platinum: Effects of size on oxygen reduction reaction pathway. <i>Journal of Power Sources</i> , 2019, 435, 226771.	7.8	40
109	High-level nitrogen-doped, micro/mesoporous carbon as an efficient metal-free electrocatalyst for the oxygen reduction reaction: optimizing the reaction surface area by a solvent-free mechanochemical method. <i>New Journal of Chemistry</i> , 2019, 43, 10878-10886.	2.8	26
110	Catalysis of Oxygen Reduction Reaction on Atomically Dispersed Copper- and Nitrogen-Codoped Graphene. <i>ACS Applied Energy Materials</i> , 2019, 2, 4755-4762.	5.1	33
111	Fe <sub>3</sub> O <sub>4</sub> Nanoparticles Supported on Arc-Synthesized Carbon Nanotubes as Advanced Electrocatalyst for Oxygen Reduction Reaction. <i>ChemistrySelect</i> , 2019, 4, 6227-6232.	1.5	3
112	Carbon nanotube-linked hollow carbon nanospheres doped with iron and nitrogen as single-atom catalysts for the oxygen reduction reaction in acidic solutions. <i>Journal of Materials Chemistry A</i> , 2019, 7, 14478-14482.	10.3	56
113	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.	6.7	85



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114	Highly stable nitrogen-doped carbon nanotubes derived from carbon dots and metal-organic frameworks toward excellent efficient electrocatalyst for oxygen reduction reaction. Nano Energy, 2019, 63, 103788.	16.0	74
115	Building Up a Picture of the Electrocatalytic Nitrogen Reduction Activity of Transition Metal Single-Atom Catalysts. Journal of the American Chemical Society, 2019, 141, 9664-9672.	13.7	642
116	Direct Oxidation of Methane to Methanol Enabled by Electronic Atomic Monolayerâ€“Metal Support Interaction. ACS Catalysis, 2019, 9, 6073-6079.	11.2	36
117	Dual-Site Cascade Oxygen Reduction Mechanism on SnO <sub>2</sub> /Ptâ€“Cuâ€“Ni for Promoting Reaction Kinetics. Journal of the American Chemical Society, 2019, 141, 9463-9467.	13.7	70
118	Fe <sub>3</sub> O <sub>4</sub> -Encapsulating N-doped porous carbon materials as efficient oxygen reduction reaction electrocatalysts for Znâ€“air batteries. Chemical Communications, 2019, 55, 7538-7541.	4.1	33
119	Beyond dealloying: development of nanoporous gold via metal-induced crystallization and its electrochemical properties. Nanotechnology, 2019, 30, 375601.	2.6	12
120	A Phthalocyanineâ€“Based Layered Twoâ€“Dimensional Conjugated Metalâ€“Organic Framework as a Highly Efficient Electrocatalyst for the Oxygen Reduction Reaction. Angewandte Chemie, 2019, 131, 10787-10792.	2.0	58
121	A Phthalocyanineâ€“Based Layered Twoâ€“Dimensional Conjugated Metalâ€“Organic Framework as a Highly Efficient Electrocatalyst for the Oxygen Reduction Reaction. Angewandte Chemie - International Edition, 2019, 58, 10677-10682.	13.8	278
122	Trends in Oxygen Electrocatalysis of 3d-Layered (Oxy)(Hydro)Oxides. ChemCatChem, 2019, 11, 3423-3431.	3.7	33
123	Homogenous Meets Heterogenous and Electroâ€“Catalysis: Ironâ€“Nitrogen Molecular Complexes within Carbon Materials for Catalytic Applications. ChemCatChem, 2019, 11, 3602-3625.	3.7	22
124	Optimal coordination-site exposure engineering in porous platinum for outstanding oxygen reduction performance. Chemical Science, 2019, 10, 5589-5595.	7.4	20
125	MnIII-enriched Î±-MnO <sub>2</sub> nanowires as efficient bifunctional oxygen catalysts for rechargeable Zn-air batteries. Energy Storage Materials, 2019, 23, 252-260.	18.0	80
126	Breaking the volcano-plot limits for Pt-based electrocatalysts by selective tuning adsorption of multiple intermediates. Journal of Materials Chemistry A, 2019, 7, 13635-13640.	10.3	24
127	Performance characteristics of a passive direct ethylene glycol fuel cell with hydrogen peroxide as oxidant. Applied Energy, 2019, 250, 846-854.	10.1	51
128	Activation of Oxygen Reduction Reaction on Well-Defined Pt Electrocatalysts in Alkaline Media Containing Hydrophobic Organic Cations. ACS Applied Energy Materials, 2019, 2, 3904-3909.	5.1	14
129	Fabrication of nanoporous gold-islands via hydrogen bubble template: An efficient electrocatalyst for oxygen reduction and hydrogen evolution reactions. International Journal of Hydrogen Energy, 2019, 44, 15001-15008.	7.1	26
130	Fe <sub>3</sub> Câ€“Co Nanoparticles Encapsulated in a Hierarchical Structure of Nâ€“Doped Carbon as a Multifunctional Electrocatalyst for ORR, OER, and HER. Advanced Functional Materials, 2019, 29, 1901949.	14.9	297
131	Stability of Pd clusters supported on pristine, B-doped, and defective graphene quantum dots, and their reactivity toward oxygen adsorption: A DFT analysis. Solid State Sciences, 2019, 93, 55-61.	3.2	20



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132	Recent Studies on Bifunctional Perovskite Electrocatalysts in Oxygen Evolution, Oxygen Reduction, and Hydrogen Evolution Reactions under Alkaline Electrolyte. Israel Journal of Chemistry, 2019, 59, 708-719.	2.3	12
133	Electrocatalyst derived from fungal hyphae and its excellent activity for electrochemical production of hydrogen peroxide. Electrochimica Acta, 2019, 308, 74-82.	5.2	33
134	An Integrated Single-Electrode Method Reveals the Template Roles of Atomic Steps: Disturb Interfacial Water Networks and Thus Affect the Reactivity of Electrocatalysts. Journal of the American Chemical Society, 2019, 141, 8516-8526.	13.7	20
135	MOF-Derived Carbon Networks with Atomically Dispersed Fe-N Sites for Oxygen Reduction Reaction Catalysis in Acidic Media. , 2019, 1, 37-43.		40
136	In situ embedding Co <sub>9</sub> S <sub>8</sub> into nitrogen and sulfur codoped hollow porous carbon as a bifunctional electrocatalyst for oxygen reduction and hydrogen evolution reactions. Applied Catalysis B: Environmental, 2019, 254, 186-193.	20.2	135
137	Effective surface termination with Au on PtCo@Pt core-shell nanoparticle: Microstructural investigations and oxygen reduction reaction properties. Journal of Electroanalytical Chemistry, 2019, 842, 1-7.	3.8	14
138	Changes in the oxidation state of Pt single-atom catalysts upon removal of chloride ligands and their effect for electrochemical reactions. Chemical Communications, 2019, 55, 6389-6392.	4.1	44
139	Advances in Sustainable Catalysis: A Computational Perspective. Frontiers in Chemistry, 2019, 7, 182.	3.6	36
140	Metallic Ni <sub>3</sub> N Quantum Dots as a Synergistic Promoter for NiO Nanosheet toward Efficient Oxygen Reduction Electrocatalysis. Journal of Physical Chemistry C, 2019, 123, 8633-8639.	3.1	19
141	Hierarchically Porous Carbon Plates Derived from Wood as Bifunctional ORR/OER Electrodes. Advanced Materials, 2019, 31, e1900341.	21.0	320
142	Identification of active sites in nitrogen and sulfur co-doped carbon-based oxygen reduction catalysts. Carbon, 2019, 147, 303-311.	10.3	44
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1187	Mass Production of Sulfur-Tuned Single-Atom Catalysts for Zn-Air Batteries. <i>Advanced Materials</i> , 0, , 2209948.	21.0	23
1188	First-principles screening of transition metal doped anatase TiO <sub>2</sub> (101) surfaces for the electrocatalytic nitrogen reduction. <i>Physical Chemistry Chemical Physics</i> , 2023, 25, 5827-5835.	2.8	2
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1190	Tailoring Metal-Oxygen Bonds Boosts Oxygen Reaction Kinetics for High-Performance Zinc-Air Batteries. <i>Nano Letters</i> , 2023, 23, 1573-1581.	9.1	24

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