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## Single Cobalt Atoms with Precise N-Coordination as Superior Oxygen Reduction Reaction Catalysts

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1643	Surface-exposed Pd nanoparticles supported over nanoporous carbon hollow tubes as an efficient heterogeneous catalyst for the C-C bond formation and hydrogenation reactions. <b>2016</b> , 425, 147-156		32
1642	Transition metal-nitrogen-carbon nanostructured catalysts for the oxygen reduction reaction: From mechanistic insights to structural optimization. <b>2017</b> , 10, 1449-1470		122
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1487	Fe Isolated Single Atoms on S, N Codoped Carbon by Copolymer Pyrolysis Strategy for Highly Efficient Oxygen Reduction Reaction. <b>2018</b> , 30, e1800588	338
1486	Graphene Supported Single Atom Transition Metal Catalysts for Methane Activation. <b>2018</b> , 10, 3229-3235	27
1485	Functionalization of multi-walled carbon nanotubes with iron phthalocyanine via a liquid chemical reaction for oxygen reduction in alkaline media. <b>2018</b> , 389, 260-266	40
1484	A universal principle for a rational design of single-atom electrocatalysts. <b>2018</b> , 1, 339-348	739
1483	B, N Codoped and Defect-Rich Nanocarbon Material as a Metal-Free Bifunctional Electrocatalyst for Oxygen Reduction and Evolution Reactions. <b>2018</b> , 5, 1800036	126

1482	Postsynthetic modification of single Pd sites into uncoordinated polypyridine groups of a MOF as the highly efficient catalyst for Heck and Suzuki reactions. <b>2018</b> , 42, 9317-9323	24
1481	Isolated Fe and Co dual active sites on nitrogen-doped carbon for a highly efficient oxygen reduction reaction. <b>2018</b> , 54, 4274-4277	128
1480	Metal-Organic Framework Derived Core-Shell Co/CoO@N-C Nanocomposites as High Performance Anode Materials for Lithium Ion Batteries. <b>2018</b> , 57, 4620-4628	64
1479	Atomically Dispersed Iron-Nitrogen Active Sites within Porphyrinic Triazine-Based Frameworks for Oxygen Reduction Reaction in Both Alkaline and Acidic Media. <b>2018</b> , 3, 883-889	195
1478	Electrochemical CO <sub>2</sub> Reduction with Atomic Iron-Dispersed on Nitrogen-Doped Graphene. <b>2018</b> , 8, 1703487	277
1477	MOF-derived nitrogen doped carbon modified g-C <sub>3</sub> N <sub>4</sub> heterostructure composite with enhanced photocatalytic activity for bisphenol A degradation with peroxymonosulfate under visible light irradiation. <b>2018</b> , 233, 35-45	210
1476	MOF-derived nanohybrids for electrocatalysis and energy storage: current status and perspectives. <b>2018</b> , 54, 5268-5288	177
1475	A single palladium site catalyst as a bridge for converting homogeneous to heterogeneous in dimerization of terminal aryl acetylenes. <b>2018</b> , 2, 1317-1322	20
1474	Preparation of bacterial cellulose based nitrogen-doped carbon nanofibers and their applications in the oxygen reduction reaction and sodium-ion battery. <b>2018</b> , 42, 7407-7415	9
1473	Coordinatively unsaturated nickel-nitrogen sites towards selective and high-rate CO <sub>2</sub> electroreduction. <b>2018</b> , 11, 1204-1210	433
1472	Three-Dimensional Networks of S-Doped Fe/N/C with Hierarchical Porosity for Efficient Oxygen Reduction in Polymer Electrolyte Membrane Fuel Cells. <b>2018</b> , 10, 14602-14613	40
1471	Graphene-templated synthesis of sandwich-like porous carbon nanosheets for efficient oxygen reduction reaction in both alkaline and acidic media. <b>2018</b> , 61, 915-925	14
1470	Metal-organic framework assisted synthesis of single-atom catalysts for energy applications. <b>2018</b> , 5, 626-627	38
1469	Emerging Two-Dimensional Nanomaterials for Electrocatalysis. <b>2018</b> , 118, 6337-6408	1057
1468	A Co-N <sub>4</sub> moiety embedded into graphene as an efficient single-atom-catalyst for NO electrochemical reduction: a computational study. <b>2018</b> , 6, 7547-7556	50
1467	Metal-organic framework-derived, Zn-doped porous carbon polyhedra with enhanced activity as bifunctional catalysts for rechargeable zinc-air batteries. <b>2018</b> , 11, 163-173	74
1466	In situ trapped high-density single metal atoms within graphene: Iron-containing hybrids as representatives for efficient oxygen reduction. <b>2018</b> , 11, 2217-2228	74
1465	A systematic theoretical study on FeO <sub>x</sub> -supported single-atom catalysts: M <sub>1</sub> /FeO <sub>x</sub> for CO oxidation. <b>2018</b> , 11, 1599-1611	56

1464	Single-Atom Catalysts: Emerging Multifunctional Materials in Heterogeneous Catalysis. <b>2018</b> , 8, 1701343		485
1463	Vacancy-Rich Monolayer BiO <sub>2</sub> as a Highly Efficient UV, Visible, and Near-Infrared Responsive Photocatalyst. <b>2018</b> , 130, 500-504		42
1462	Vacancy-Rich Monolayer BiO as a Highly Efficient UV, Visible, and Near-Infrared Responsive Photocatalyst. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57, 491-495	16.4	284
1461	Sulphur and nitrogen dual-doped mesoporous carbon hybrid coupling with graphite coated cobalt and cobalt sulfide nanoparticles: Rational synthesis and advanced multifunctional electrochemical properties. <b>2018</b> , 509, 254-264		28
1460	Single-Atom Catalysts of Precious Metals for Electrochemical Reactions. <b>2018</b> , 11, 104-113		154
1459	Metal-Organic Frameworks as Platforms for Catalytic Applications. <b>2018</b> , 30, e1703663		833
1458	DUT-58 (Co) Derived Synthesis of Co Clusters as Efficient Oxygen Reduction Electrocatalyst for Zinc-Air Battery. <b>2018</b> , 2, 1700086		12
1457	Boosting visible light photocatalytic hydrogen evolution of graphitic carbon nitride via enhancing its interfacial redox activity with cobalt/nitrogen doped tubular graphitic carbon. <b>2018</b> , 225, 512-518		50
1456	From biological enzyme to single atomic Fe-N-C electrocatalyst for efficient oxygen reduction. <b>2018</b> , 54, 1307-1310		41
1455	Well-Defined Cobalt Catalyst with N-Doped Carbon Layers Enwrapping: The Correlation between Surface Atomic Structure and Electrocatalytic Property. <b>2018</b> , 14, 1702074		41
1454	2D Dual-Metal Zeolitic-Imidazolate-Framework-(ZIF)-Derived Bifunctional Air Electrodes with Ultrahigh Electrochemical Properties for Rechargeable Zinc-Air Batteries. <b>2018</b> , 28, 1705048		269
1453	Recent Progress on MOF-Derived Heteroatom-Doped Carbon-Based Electrocatalysts for Oxygen Reduction Reaction. <b>2018</b> , 5, 1700515		222
1452	The Solid-Phase Synthesis of an Fe-N-C Electrocatalyst for High-Power Proton-Exchange Membrane Fuel Cells. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57, 1204-1208	16.4	227
1451	Nanomaterials derived from metal-organic frameworks. <b>2018</b> , 3,		689
1450	Co/CoP embedded in a hairy nitrogen-doped carbon polyhedron as an advanced tri-functional electrocatalyst. <b>2018</b> , 5, 108-115		135
1449	Single cobalt sites in mesoporous N-doped carbon matrix for selective catalytic hydrogenation of nitroarenes. <b>2018</b> , 357, 20-28		156
1448	Die facettenreiche Reaktivität heterogener Einzelatom-Katalysatoren. <b>2018</b> , 130, 15538-15552		29
1447	An efficient multifunctional hybrid electrocatalyst: NiP nanoparticles on MOF-derived Co,N-doped porous carbon polyhedrons for oxygen reduction and water splitting. <b>2018</b> , 54, 12101-12104		77

1446	Palladium single atoms supported by interwoven carbon nanotube and manganese oxide nanowire networks for enhanced electrocatalysis. <b>2018</b> , 6, 23366-23377	45
1445	Mixed phthalocyanine-porphyrin-based conjugated microporous polymers towards unveiling the activity origin of Fe/N catalysts for the oxygen reduction reaction. <b>2018</b> , 6, 22851-22857	38
1444	Synergistic effect of well-defined dual sites boosting the oxygen reduction reaction. <b>2018</b> , 11, 3375-3379	276
1443	Incorporation of Cu-N cofactors into graphene encapsulated Co as biomimetic electrocatalysts for efficient oxygen reduction. <b>2018</b> , 10, 21076-21086	28
1442	Active Sites Derived from Heteroatom Doping in Carbon Materials for Oxygen Reduction Reaction. <b>2018</b> ,	1
1441	A Dynamically Stabilized Single-Nickel Electrocatalyst for Selective Reduction of Oxygen to Hydrogen Peroxide. <b>2018</b> , 24, 17011-17018	9
1440	Recent advances in energy chemistry of precious-metal-free catalysts for oxygen electrocatalysis. <b>2018</b> , 29, 1757-1767	37
1439	Preparation of Hollow Nitrogen Doped Carbon via Stresses Induced Orientation Contraction. <b>2018</b> , 14, e1804183	47
1438	Recent Advances of Cobalt-Based Electrocatalysts for Oxygen Electrode Reactions and Hydrogen Evolution Reaction. <b>2018</b> , 8, 559	66
1437	Theoretical Approaches to Describing the Oxygen Reduction Reaction Activity of Single-Atom Catalysts. <b>2018</b> , 122, 29307-29318	39
1436	Single-atomic cobalt sites embedded in hierarchically ordered porous nitrogen-doped carbon as a superior bifunctional electrocatalyst. <b>2018</b> , 115, 12692-12697	222
1435	Template-Free Synthesis of Two-Dimensional Fe/N Codoped Carbon Networks as Efficient Oxygen Reduction Reaction Electrocatalysts. <b>2018</b> , 10, 37079-37086	12
1434	Direct transformation of bulk copper into copper single sites via emitting and trapping of atoms. <b>2018</b> , 1, 781-786	492
1433	A mixed-ion strategy to construct CNT-decorated Co/N-doped hollow carbon for enhanced oxygen reduction. <b>2018</b> , 54, 11570-11573	27
1432	Selective Electrochemical H <sub>2</sub> O <sub>2</sub> Production through Two-Electron Oxygen Electrochemistry. <b>2018</b> , 8, 1801909	263
1431	Metal-Organic Framework (MOF)-Derived Effective Solid Catalysts for Valorization of Lignocellulosic Biomass. <b>2018</b> , 6, 13628-13643	216
1430	Fabrication of Single-Atom Catalysts with Precise Structure and High Metal Loading. <b>2018</b> , 30, e1801649	149
1429	Electrochemical Energy Conversion and Storage with Zeolitic Imidazolate Framework Derived Materials: A Perspective. <b>2018</b> , 5, 3571-3588	31

1428	Defects on carbons for electrocatalytic oxygen reduction. <b>2018</b> , 47, 7628-7658		282
1427	Highly effective photoreduction of CO to CO promoted by integration of CdS with molecular redox catalysts through metal-organic frameworks. <b>2018</b> , 9, 8890-8894		66
1426	Encapsulation of C-N-decorated metal sub-nanoclusters/single atoms into a metal-organic framework for highly efficient catalysis. <b>2018</b> , 9, 8962-8968		22
1425	Defect and Interface Engineering for Aqueous Electrocatalytic CO <sub>2</sub> Reduction. <b>2018</b> , 2, 2551-2582		272
1424	The Multifaceted Reactivity of Single-Atom Heterogeneous Catalysts. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57, 15316-15329	16.4	179
1423	Metal-organic framework-derived cobalt and nitrogen co-doped porous carbon with four-coordinated Co <sub>N</sub> x for efficient acetylene hydrochlorination. <b>2018</b> , 32, e4570		3
1422	Single Atom Catalysts on Carbon-Based Materials. <b>2018</b> , 10, 5058-5091		99
1421	High-Density Ultra-small Clusters and Single-Atom Fe Sites Embedded in Graphitic Carbon Nitride (g-CN) for Highly Efficient Catalytic Advanced Oxidation Processes. <b>2018</b> , 12, 9441-9450		251
1420	A boron imidazolate framework with mechanochromic and electrocatalytic properties. <b>2018</b> , 5, 1151-1155		36
1419	Designing Porous Structures and Active Sites in Carbon-Based Electrocatalysts. <b>2018</b> , 77-99		
1418	One-Pot Pyrolysis to N-Doped Graphene with High-Density Pt Single Atomic Sites as Heterogeneous Catalyst for Alkene Hydrosilylation. <b>2018</b> , 8, 10004-10011		75
1417	Surface Engineering Protocol To Obtain an Atomically Dispersed Pt/CeO <sub>2</sub> Catalyst with High Activity and Stability for CO Oxidation. <b>2018</b> , 6, 14054-14062		54
1416	Cobalt nanoparticles incorporated into hollow doped porous carbon capsules as a highly efficient oxygen reduction electrocatalyst. <b>2018</b> , 8, 5244-5250		15
1415	Confined Pyrolysis within a Nanochannel to Form a Highly Efficient Single Iron Site Catalyst for Zn-Air Batteries. <b>2018</b> , 3, 2383-2389		58
1414	Activity and selectivity regulation through varying the size of cobalt active sites in photocatalytic CO <sub>2</sub> reduction. <b>2018</b> , 6, 21110-21119		45
1413	Promoting Oxygen Reduction Reaction Activity of Fe <sub>N</sub> /C Electrocatalysts by Silica-Coating-Mediated Synthesis for Anion-Exchange Membrane Fuel Cells. <b>2018</b> , 30, 6684-6701		69
1412	In Situ Thermal Atomization To Convert Supported Nickel Nanoparticles into Surface-Bound Nickel Single-Atom Catalysts. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57, 14095-14100	16.4	206
1411	Scalable and controllable synthesis of atomic metal electrocatalysts assisted by an egg-box in alginate. <b>2018</b> , 6, 18417-18425		38

1410	In Situ Thermal Atomization To Convert Supported Nickel Nanoparticles into Surface-Bound Nickel Single-Atom Catalysts. <b>2018</b> , 130, 14291-14296	30
1409	Structural engineering of S-doped Co/N/C mesoporous nanorods via the Ostwald ripening-assisted template method for oxygen reduction reaction and Li-ion batteries. <b>2018</b> , 401, 55-64	13
1408	Single Cobalt Atoms Anchored on Porous N-Doped Graphene with Dual Reaction Sites for Efficient Fenton-like Catalysis. <b>2018</b> , 140, 12469-12475	551
1407	Edge-Site Engineering of Atomically Dispersed Fe-N by Selective C-N Bond Cleavage for Enhanced Oxygen Reduction Reaction Activities. <b>2018</b> , 140, 11594-11598	411
1406	Comparison of new metal organic framework-based catalysts for oxygen reduction reaction. <b>2018</b> , 19, 281-287	15
1405	Heterogeneous single-atom catalysis. <b>2018</b> , 2, 65-81	1624
1404	Suppression Effect of Small Organic Molecules on Oxygen Reduction Activity of Fe/N/C Catalysts. <b>2018</b> , 3, 1396-1401	24
1403	Towards High-Performance Electrocatalysts for Oxygen Reduction: Inducing Atomic-Level Reconstruction of Fe-N Site for Atomically Dispersed Fe/N-Doped Hierarchically Porous Carbon. <b>2018</b> , 24, 8848-8856	18
1402	Bifunctional Nitrogen and Cobalt Codoped Hollow Carbon for Electrochemical Syngas Production. <b>2018</b> , 5, 1800177	60
1401	Post-formation Copper-Nitrogen Species on Carbon Black: Their Chemical Structures and Active Sites for Oxygen Reduction Reaction. <b>2018</b> , 24, 9968-9975	30
1400	Rational Design of Fe/N/S-Doped Nanoporous Carbon Catalysts from Covalent Triazine Frameworks for Efficient Oxygen Reduction. <b>2018</b> , 11, 2402-2409	33
1399	O-, N-Atoms-Coordinated Mn Cofactors within a Graphene Framework as Bioinspired Oxygen Reduction Reaction Electrocatalysts. <b>2018</b> , 30, e1801732	165
1398	Adjustable photocatalytic ability of monolayer g-C <sub>3</sub> N <sub>4</sub> utilizing single metal atom: Density functional theory. <b>2018</b> , 457, 735-744	39
1397	Atomically Dispersed Fe-N <sub>x</sub> /C Electrocatalyst Boosts Oxygen Catalysis via a New Metal-Organic Polymer Supramolecule Strategy. <b>2018</b> , 8, 1801226	158
1396	Recent progress in single-atom electrocatalysts: concept, synthesis, and applications in clean energy conversion. <b>2018</b> , 6, 14025-14042	160
1395	Electronic structure engineering to boost oxygen reduction activity by controlling the coordination of the central metal. <b>2018</b> , 11, 2348-2352	203
1394	Single-Atom Catalysts for the Hydrogen Evolution Reaction. <b>2018</b> , 5, 2963-2974	49
1393	Cobalt Single Atoms Immobilized N-Doped Carbon Nanotubes for Enhanced Bifunctional Catalysis toward Oxygen Reduction and Oxygen Evolution Reactions. <b>2018</b> , 1, 3283-3291	64

1392	The Development of Yolk@Shell-Structured Pd@ZnO@Carbon Submicroreactors with High Selectivity and Stability. <b>2018</b> , 28, 1801737	60
1391	Pomegranate-like microclusters organized by ultrafine Co nanoparticles@nitrogen-doped carbon subunits as sulfur hosts for long-life lithium-sulfur batteries. <b>2018</b> , 6, 14178-14187	63
1390	ZIF-67 as Continuous Self-Sacrifice Template Derived NiCo <sub>2</sub> O <sub>4</sub> /Co,N-CNTs Nanocages as Efficient Bifunctional Electrocatalysts for Rechargeable Zn-Air Batteries. <b>2018</b> , 6, 10021-10029	60
1389	Novel Nanomaterials as Electrocatalysts for Fuel Cells. <b>2018</b> , 169-204	2
1388	Anchoring and space-confinement effects to form ultrafine Ru nanoclusters for efficient hydrogen generation. <b>2018</b> , 6, 13859-13866	42
1387	Porphyrin-like Fe-N <sub>4</sub> sites with sulfur adjustment on hierarchical porous carbon for different rate-determining steps in oxygen reduction reaction. <b>2018</b> , 11, 6260-6269	83
1386	The Activity Improvement of the TM(hexaiminotriphenylene) Monolayer for Oxygen Reduction Electrocatalysis: A Density Functional Theory Study. <b>2018</b> , 6, 351	9
1385	Beyond pristine metal-organic frameworks: Preparation and application of nanostructured, nanosized, and analogous MOFs. <b>2018</b> , 376, 20-45	84
1384	Coordination of Atomic Co-Pt Coupling Species at Carbon Defects as Active Sites for Oxygen Reduction Reaction. <b>2018</b> , 140, 10757-10763	301
1383	Key Single-Atom Electrocatalysis in Metal-Organic Framework (MOF)-Derived Bifunctional Catalysts. <b>2018</b> , 11, 3473-3479	48
1382	Carbon-Rich Nanomaterials: Fascinating Hydrogen and Oxygen Electrocatalysts. <b>2018</b> , 30, e1800528	102
1381	Transition metal-assisted carbonization of small organic molecules toward functional carbon materials. <b>2018</b> , 4, eaa0788	106
1380	Scale-Up Biomass Pathway to Cobalt Single-Site Catalysts Anchored on N-Doped Porous Carbon Nanobelt with Ultrahigh Surface Area. <b>2018</b> , 28, 1802167	78
1379	Pyridinic-nitrogen-dominated nitrogen-doped graphene stabilized Cu for efficient selective oxidation of 5-hydroxymethylfurfural. <b>2018</b> , 458, 24-31	14
1378	N-doped mesoporous carbon embedded Co nanoparticles for highly efficient and stable H <sub>2</sub> generation from hydrolysis of ammonia borane. <b>2018</b> , 399, 89-97	20
1377	Harnessing the Wisdom in Colloidal Chemistry to Make Stable Single-Atom Catalysts. <b>2018</b> , 30, e1802304	62
1376	A biomass derived nitrogen doped carbon fibers as efficient catalysts for the oxygen reduction reaction. <b>2018</b> , 824, 60-66	20
1375	Metal-Organic-Framework-Derived Co S Hollow Nanoboxes for the Selective Reduction of Nitroarenes. <b>2018</b> , 11, 3131-3138	28



1374	Metal Organic Framework Derived Materials: Progress and Prospects for the Energy Conversion and Storage. <b>2018</b> , 30, e1705146	237
1373	Cobalt nanocomposites on N-doped hierarchical porous carbon for highly selective formation of anilines and imines from nitroarenes. <b>2018</b> , 20, 4629-4637	80
1372	Direct observation of noble metal nanoparticles transforming to thermally stable single atoms. <b>2018</b> , 13, 856-861	471
1371	Well-elaborated, mechanochemically synthesized Fe-TPP/ZIF precursors (Fe-TPP = tetraphenylporphine iron) to atomically dispersed iron/nitrogen species for oxygen reduction reaction and Zn-air batteries. <b>2018</b> , 52, 29-37	77
1370	Recent Development of Zeolitic Imidazolate Frameworks (ZIFs) Derived Porous Carbon Based Materials as Electrocatalysts. <b>2018</b> , 8, 1801257	157
1369	Atomically dispersed Au <sup>1</sup> catalyst towards efficient electrochemical synthesis of ammonia. <b>2018</b> , 63, 1246-1253	158
1368	Highly Selective and Sharp Volcano-type Synergistic NiPt@ZIF-8-Catalyzed Hydrogen Evolution from Ammonia Borane Hydrolysis. <b>2018</b> , 140, 10034-10042	205
1367	Single-Atom Catalysts: Synthetic Strategies and Electrochemical Applications. <b>2018</b> , 2, 1242-1264	1046
1366	Dehalogenated carbon-hosted cobalt-nitrogen complexes for high-performance electrochemical reduction of oxygen. <b>2018</b> , 139, 725-731	2
1365	Directly Anchoring Highly Dispersed Copper Sites on Nitrogen-Doped Carbon for Enhanced Oxygen Reduction Electrocatalysis. <b>2018</b> , 5, 1822-1826	19
1364	A porphyrin covalent organic framework cathode for flexible Zn-air batteries. <b>2018</b> , 11, 1723-1729	219
1363	From Metal-Organic Frameworks to Single-Atom Fe Implanted N-doped Porous Carbons: Efficient Oxygen Reduction in Both Alkaline and Acidic Media. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57, 8525-8529	16.4 462
1362	From Metal-Organic Frameworks to Single-Atom Fe Implanted N-doped Porous Carbons: Efficient Oxygen Reduction in Both Alkaline and Acidic Media. <b>2018</b> , 130, 8661-8665	79
1361	A Bimetallic Zn/Fe Polyphthalocyanine-Derived Single-Atom Fe-N <sub>4</sub> Catalytic Site: A Superior Trifunctional Catalyst for Overall Water Splitting and Zn-Air Batteries. <b>2018</b> , 130, 8750-8754	40
1360	A Bimetallic Zn/Fe Polyphthalocyanine-Derived Single-Atom Fe-N Catalytic Site: A Superior Trifunctional Catalyst for Overall Water Splitting and Zn-Air Batteries. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57, 8614-8618	16.4 305
1359	A modular strategy for decorating isolated cobalt atoms into multichannel carbon matrix for electrocatalytic oxygen reduction. <b>2018</b> , 11, 1980-1984	173
1358	Single Co Atoms Anchored in Porous N-Doped Carbon for Efficient Zinc-Air Battery Cathodes. <b>2018</b> , 8, 8961-8969	250
1357	Understanding the underlying mechanism of improved selectivity in Pd <sup>1</sup> single-atom catalyzed hydrogenation reaction. <b>2018</b> , 366, 70-79	42

- 1356 A rationally designed Fe-tetrapyrrophenazine complex: a promising precursor to a single-atom Fe catalyst for an efficient oxygen reduction reaction in high-power Zn-air cells. **2018**, 10, 16145-16152 32
- 1355 Hydrolytic dehydrogenation of ammonia borane over ZIF-67 derived Co nanoparticle catalysts. **2018**, 8, 4741-4746 26
- 1354 Carbon-Supported Single Atom Catalysts for Electrochemical Energy Conversion and Storage. **2018**, 30, e1801995 339
- 1353 Hierarchically Porous MN<sub>x</sub> (M = Co and Fe) Single-Atom Electrocatalysts with Robust MN<sub>x</sub> Active Moieties Enable Enhanced ORR Performance. **2018**, 8, 1801956 351
- 1352 Integrated Hierarchical Carbon Flake Arrays with Hollow P-Doped CoSe<sub>2</sub> Nanoclusters as an Advanced Bifunctional Catalyst for Zn-Air Batteries. **2018**, 28, 1804846 126
- 1351 The insights from X-ray absorption spectroscopy into the local atomic structure and chemical bonding of Metal-Organic Frameworks. **2018**, 155, 232-253 23
- 1350 Unravelling the electrochemical mechanisms for nitrogen fixation on single transition metal atoms embedded in defective graphitic carbon nitride. **2018**, 6, 21941-21948 129
- 1349 Atomically Dispersed Pt/Metal Oxide Mesoporous Catalysts from Synchronous Pyrolysis/Deposition Route for Water-Gas Shift Reaction. **2018**, 30, 5534-5538 23
- 1348 Co nanoparticle embedded in atomically-dispersed Co-N-C nanofibers for oxygen reduction with high activity and remarkable durability. **2018**, 52, 485-493 131
- 1347 Sandwich-Like Reduced Graphene Oxide/Carbon Black/Amorphous Cobalt Borate Nanocomposites as Bifunctional Cathode Electrocatalyst in Rechargeable Zinc-Air Batteries. **2018**, 8, 1801495 44
- 1346 Fe/N Codoped Carbon Nanocages with Single-Atom Feature as Efficient Oxygen Reduction Reaction Electrocatalyst. **2018**, 1, 4982-4990 28
- 1345 Recent advances in the precise control of isolated single-site catalysts by chemical methods. **2018**, 5, 673-689 153
- 1344 Boosting oxygen reduction catalysis with abundant copper single atom active sites. **2018**, 11, 2263-2269 301
- 1343 Efficient and Robust Hydrogen Evolution: Phosphorus Nitride Imide Nanotubes as Supports for Anchoring Single Ruthenium Sites. **2018**, 130, 9639-9644 21
- 1342 Recent advances in visible light-driven water oxidation and reduction in suspension systems. **2018**, 21, 897-924 103
- 1341 Functional Carbons Remedy the Shuttling of Polysulfides in Lithium-Sulfur Batteries: Confining, Trapping, Blocking, and Breaking up. **2018**, 28, 1800508 117
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- 1339 Single Tungsten Atoms Supported on MOF-Derived N-Doped Carbon for Robust Electrochemical Hydrogen Evolution. **2018**, 30, e1800396 302

1338	Lewis-Basic Lanthanide Metal-Organic Framework-Derived Versatile Multi-Active-Site Synergistic Catalysts for Oxygen Reduction Reaction. <b>2018</b> , 10, 22023-22030		27
1337	Bridging homogeneous and heterogeneous catalysis by heterogeneous single-metal-site catalysts. <b>2018</b> , 1, 385-397		461
1336	Efficient and Robust Hydrogen Evolution: Phosphorus Nitride Imide Nanotubes as Supports for Anchoring Single Ruthenium Sites. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57, 9495-9500	16.4	140
1335	Unveiling the high-activity origin of single-atom iron catalysts for oxygen reduction reaction. <b>2018</b> , 115, 6626-6631		346
1334	Hyperporous-Carbon-Supported Nonprecious Metal Electrocatalysts for the Oxygen Reduction Reaction. <b>2018</b> , 13, 2671-2676		12
1333	MOF-derived, CeO <sub>x</sub> -modified CoP/carbon composites for oxygen evolution and hydrogen evolution reactions. <b>2018</b> , 53, 12123-12131		12
1332	Efficient Oxygen Reduction Reaction (ORR) Catalysts Based on Single Iron Atoms Dispersed on a Hierarchically Structured Porous Carbon Framework. <b>2018</b> , 130, 9176-9181		73
1331	Efficient Oxygen Reduction Reaction (ORR) Catalysts Based on Single Iron Atoms Dispersed on a Hierarchically Structured Porous Carbon Framework. <i>Angewandte Chemie - International Edition</i> , <b>2018</b> , 57, 9038-9043	16.4	329
1330	A Glucose-Assisted Hydrothermal Reaction for Directly Transforming Metal-Organic Frameworks into Hollow Carbonaceous Materials. <b>2018</b> , 30, 4401-4408		77
1329	Secondary-Component Incorporated Hollow MOFs and Derivatives for Catalytic and Energy-Related Applications. <b>2019</b> , 31, e1800743		88
1328	Recent Advances of MOFs and MOF-Derived Materials in Thermally Driven Organic Transformations. <b>2019</b> , 25, 2161-2178		44
1327	Recent Approaches to Design Electrocatalysts Based on Metal-Organic Frameworks and Their Derivatives. <b>2019</b> , 14, 3474-3501		25
1326	Ionic Liquid-Modified Microporous ZnCoNC-Based Electrocatalysts for Polymer Electrolyte Fuel Cells. <b>2019</b> , 4, 2104-2110		33
1325	A versatile route to fabricate single atom catalysts with high chemoselectivity and regioselectivity in hydrogenation. <b>2019</b> , 10, 3663		152
1324	Atomic Pd on Graphdiyne/Graphene Heterostructure as Efficient Catalyst for Aromatic Nitroreduction. <b>2019</b> , 29, 1905423		66
1323	Two-Dimensional Conjugated Aromatic Networks as High-Site-Density and Single-Atom Electrocatalysts for the Oxygen Reduction Reaction. <b>2019</b> , 131, 14866-14872		15
1322	Two-Dimensional Conjugated Aromatic Networks as High-Site-Density and Single-Atom Electrocatalysts for the Oxygen Reduction Reaction. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 14724-14730	16.4	75
1321	Single iron atoms stabilized by microporous defects of biomass-derived carbon aerogels as high-performance cathode electrocatalysts for aluminum-air batteries. <b>2019</b> , 7, 20840-20846		46

1320	Updating the Intrinsic Activity of a Single-Atom Site with a P-O Bond for a Rechargeable Zn-Air Battery. <b>2019</b> , 11, 33054-33061	37
1319	High temperature shockwave stabilized single atoms. <b>2019</b> , 14, 851-857	159
1318	A pyrolysis-free path toward superiorly catalytic nitrogen-coordinated single atom. <b>2019</b> , 5, eaaw2322	168
1317	Iron-Salt Thermally Emitted Strategy to Prepare Graphene-like Carbon Nanosheets with Trapped Fe Species for an Efficient Electrocatalytic Oxygen Reduction Reaction in the All-pH Range. <b>2019</b> , 11, 27823-27832 <sup>13</sup>	13
1316	Fe/N-doped carbon nanofibers with Fe <sub>3</sub> O <sub>4</sub> /Fe <sub>2</sub> C nanocrystals enmeshed as electrocatalysts for efficient oxygen reduction reaction. <b>2019</b> , 6, 2296-2303	9
1315	Dynamic Interplay between Copper Tetramers and Iron Oxide Boosting CO <sub>2</sub> Conversion to Methanol and Hydrocarbons under Mild Conditions. <b>2019</b> , 7, 14435-14442	15
1314	Polyvinyl pyrrolidone mediated fabrication of Fe, N-codoped porous carbon sheets for efficient electrocatalytic CO <sub>2</sub> reduction. <b>2019</b> , 153, 609-616	429
1313	Achievements, challenges and perspectives on cathode catalysts in proton exchange membrane fuel cells for transportation. <b>2019</b> , 2, 578-589	74
1312	Evaluating the Catalytic Efficiency of Paired, Single-Atom Catalysts for the Oxygen Reduction Reaction. <b>2019</b> , 9, 7660-7667	208
1311	Atomically dispersed metal catalysts for the oxygen reduction reaction: synthesis, characterization, reaction mechanisms and electrochemical energy applications. <b>2019</b> , 12, 2890-2923	14
1310	Synergistic catalysis between atomically dispersed Fe and a pyrrolic-N-C framework for CO <sub>2</sub> electroreduction. <b>2019</b> , 4, 1411-1415	56
1309	PtCuNi Tetrahedra Catalysts with Tailored Surfaces for Efficient Alcohol Oxidation. <b>2019</b> , 19, 5431-5436	68
1308	Atomically dispersed manganese-based catalysts for efficient catalysis of oxygen reduction reaction. <b>2019</b> , 257, 117930	25
1307	Transition Metal Chalcogenide Single Layers as an Active Platform for Single-Atom Catalysis. <b>2019</b> , 4, 1947-1953	66
1306	Self-Templated Conversion of Metallogel into Heterostructured TMP@Carbon Quasiaserogels Boosting Bifunctional Electrocatalysis. <b>2019</b> , 29, 1903660	41
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1304	Current progress of metallic and carbon-based nanostructure catalysts towards the electrochemical reduction of CO <sub>2</sub> . <b>2019</b> , 6, 3363-3380	4
1303	Introduction to Single-Atom Catalysis. <b>2019</b> , 1-20	

1302	Enhanced catalytic activity of cobalt nanoparticles encapsulated with an N-doped porous carbon shell derived from hollow ZIF-8 for efficient synthesis of nitriles from primary alcohols in water. <b>2019</b> , 21, 4334-4340		30
1301	Graphene edge-enhanced anchoring of the well-exposed cobalt clusters via strong chemical bonding for accelerating the oxygen reduction reaction. <b>2019</b> , 3, 2859-2866		5
1300	Fabricating Nitrogen-Rich Fe <sub>N</sub> /C Electrocatalysts through CeO <sub>2</sub> -Assisted Pyrolysis for Enhanced Oxygen Reduction Reaction. <b>2019</b> , 6, 4040-4048		9
1299	Metal-organic framework-derived materials for electrochemical energy applications. <b>2019</b> , 1, 100001		333
1298	Transition Metal Atoms Embedded in Graphene: How Nitrogen Doping Increases CO Oxidation Activity. <b>2019</b> , 9, 6864-6868		44
1297	Atomically Dispersed Semimetallic Selenium on Porous Carbon Membrane as an Electrode for Hydrazine Fuel Cells. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 13466-13471	16.4	55
1296	2D Metal-Organic Framework Derived CuCo Alloy Nanoparticles Encapsulated by Nitrogen-Doped Carbonaceous Nanoleaves for Efficient Bifunctional Oxygen Electrocatalyst and Zinc-Air Batteries. <b>2019</b> , 25, 12780-12788		27
1295	Atomically Dispersed Semimetallic Selenium on Porous Carbon Membrane as an Electrode for Hydrazine Fuel Cells. <b>2019</b> , 131, 13600-13605		21
1294	Single-Atom Mn-N Site-Catalyzed Peroxone Reaction for the Efficient Production of Hydroxyl Radicals in an Acidic Solution. <b>2019</b> , 141, 12005-12010		94
1293	Dynamic oxygen adsorption on single-atomic Ruthenium catalyst with high performance for acidic oxygen evolution reaction. <b>2019</b> , 10, 4849		194
1292	Single-Atomic-Co Electrocatalysts with Self-Supported Architecture toward Oxygen-Involved Reaction. <b>2019</b> , 29, 1906477		53
1291	Ambient Synthesis of Single-Atom Catalysts from Bulk Metal via Trapping of Atoms by Surface Dangling Bonds. <b>2019</b> , 31, e1904496		82
1290	Atomically Dispersed Binary Co-Ni Sites in Nitrogen-Doped Hollow Carbon Nanocubes for Reversible Oxygen Reduction and Evolution. <b>2019</b> , 31, e1905622		340
1289	Liberating N-CNTs Confined Highly Dispersed Co <sub>2</sub> N Sites for Selective Hydrogenation of Quinolines. <b>2019</b> , 31, e1906051		40
1288	Atomic-Local Environments of Single-Atom Catalysts: Synthesis, Electronic Structure, and Activity. <b>2019</b> , 9, 1900722		78
1287	Interfacial Super-Assembled Porous CeO <sub>2</sub> /C Frameworks Featuring Efficient and Sensitive Decomposing Li <sub>2</sub> O <sub>2</sub> for Smart Li <sub>2</sub> O <sub>2</sub> Batteries. <b>2019</b> , 9, 1901751		53
1286	Dual Graphitic-N Doping in a Six-Membered C-Ring of Graphene-Analogous Particles Enables an Efficient Electrocatalyst for the Hydrogen Evolution Reaction. <i>Angewandte Chemie - International Edition</i> , <b>2019</b> , 58, 16973-16980	16.4	28
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1280	Metal-Organic frameworks: a promising platform for constructing non-noble electrocatalysts for the oxygen-reduction reaction. <b>2019</b> , 7, 1964-1988	118
1279	Directed Self-Assembly of MOF-Derived Nanoparticles toward Hierarchical Structures for Enhanced Catalytic Activity in CO Oxidation. <b>2019</b> , 9, 1901754	12
1278	Ag <sub>2</sub> S decorated nanocubes with enhanced near-infrared photothermal and photodynamic properties for rapid sterilization. <b>2019</b> , 33, 100201	31
1277	Boron-Doped g-C <sub>6</sub> N <sub>6</sub> Layer as a Metal-Free Photoelectrocatalyst for N <sub>2</sub> Reduction Reaction. <b>2019</b> , 123, 28739-28743	17
1276	Bimetallic Oxide Hollow Structures Induced by Surface Coordination of ZIF-67. <b>2019</b> , 2019, 4920-4926	3
1275	Proliferating Oxygen Reduction Reaction by High Volume of Mesopores in Regular Nickel-Nitrogen Codoped Carbon Nanocubes. <b>2019</b> , 6, 1901186	6
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1273	Cu,N-Codoped Carbon Nanodisks with Biomimic Stomata-Like Interconnected Hierarchical Porous Topology as Efficient Electrocatalyst for Oxygen Reduction Reaction. <b>2019</b> , 15, e1902410	43
1272	Subnano Amorphous Fe-Based Clusters with High Mass Activity for Efficient Electrocatalytic Oxygen Reduction Reaction. <b>2019</b> , 11, 41432-41439	11
1271	Direct Growth of Carbon Nanotubes Doped with Single Atomic Fe-N <sub>4</sub> Active Sites and Neighboring Graphitic Nitrogen for Efficient and Stable Oxygen Reduction Electrocatalysis. <b>2019</b> , 29, 1906174	89
1270	Ultrathin Nanosheet of Graphdiyne-Supported Palladium Atom Catalyst for Efficient Hydrogen Production. <b>2019</b> , 11, 31-41	104
1269	A versatile approach for quantification of surface site fractions using reaction kinetics: The case of CO oxidation on supported Ir single atoms and nanoparticles. <b>2019</b> , 378, 121-130	27
1268	Self-Adjusting Activity Induced by Intrinsic Reaction Intermediate in Fe-N-C Single-Atom Catalysts. <b>2019</b> , 141, 14115-14119	134
1267	Ionic Liquid Dispersed Ti/SBA-15 for Double-Bond Cleavage Oxidation of $\beta$ -Methylstyrene into Acetophenone. <b>2019</b> , 149, 3491-3500	4

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1265	Decamethylcucurbit[5]uril based supramolecular assemblies as efficient electrocatalysts for the oxygen reduction reaction. <b>2019</b> , 55, 11687-11690	2
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1263	A metal-catalyzed thermal polymerization strategy toward atomically dispersed catalysts. <b>2019</b> , 55, 11579-11582	
1262	Controllable synthesis of CoN <sub>3</sub> catalysts derived from Co/Zn-ZIF-67 for electrocatalytic oxygen reduction in acidic electrolytes. <b>2019</b> , 7, 21884-21891	40
1261	MoS <sub>2</sub> -nanosheet-decorated C-N/Co <sub>4</sub> S <sub>3</sub> nanorod hybrid as a bifunctional electrocatalyst. <b>2019</b> , 106, 106515	7
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1259	Theoretical Investigation on the Single Transition-Metal Atom-Decorated Defective MoS for Electrocatalytic Ammonia Synthesis. <b>2019</b> , 11, 36506-36514	49
1258	Regulating the coordination structure of single-atom Fe-NC catalytic sites for benzene oxidation. <b>2019</b> , 10, 4290	173
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1255	Atomic-level dispersed catalysts for PEMFCs: Progress and future prospects. <b>2019</b> , 1, 100018	38
1254	Precisely Tuning the Number of Fe Atoms in Clusters on N-Doped Carbon toward Acidic Oxygen Reduction Reaction. <b>2019</b> , 5, 2865-2878	180
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1252	Structure-activity relationships in metal organic framework derived mesoporous nitrogen-doped carbon containing atomically dispersed iron sites for CO <sub>2</sub> electrochemical reduction. <b>2019</b> , 378, 320-330	20
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1250	Highly Dispersed Ruthenium-Based Multifunctional Electrocatalyst. <b>2019</b> , 9, 9897-9904	73
1249	Band gap engineering of BiOI via oxygen vacancies induced by graphene for improved photocatalysis. <b>2019</b> , 43, 1523-1530	19

1248	Boosting the ORR performance of modified carbon black C-O bonds. <b>2019</b> , 10, 2118-2123	15
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1244	An efficient carbon-based ORR catalyst from low-temperature etching of ZIF-67 with ultra-small cobalt nanoparticles and high yield. <b>2019</b> , 7, 3544-3551	64
1243	Defect Engineering and Surface Functionalization of Nanocarbons for Metal-Free Catalysis. <b>2019</b> , 31, e1805717	88
1242	Iron-Free Cathode Catalysts for Proton-Exchange-Membrane Fuel Cells: Cobalt Catalysts and the Peroxide Mitigation Approach. <b>2019</b> , 31, e1805126	139
1241	Nitrogen-Doped Carbon Nanotube Confined Co-N Sites for Selective Hydrogenation of Biomass-Derived Compounds. <b>2019</b> , 31, e1808341	83
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1239	Hollow capsules of doped carbon incorporating metal@metal sulfide and metal@metal oxide core-shell nanoparticles derived from metal-organic framework composites for efficient oxygen electrocatalysis. <b>2019</b> , 7, 3624-3631	40
1238	Unraveling the enzyme-like activity of heterogeneous single atom catalyst. <b>2019</b> , 55, 2285-2288	120
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1236	Atomic (single, double, and triple atoms) catalysis: frontiers, opportunities, and challenges. <b>2019</b> , 7, 3492-3515	160
1235	New and Advanced Porous Carbon Materials in Fine Chemical Synthesis. Emerging Precursors of Porous Carbons. <b>2019</b> , 9, 133	34
1234	Metal-Organic-Framework-Based Single-Atom Catalysts for Energy Applications. <b>2019</b> , 5, 786-804	361
1233	Catalytic synthesis and simultaneous co-doping of hierarchically porous carbon with in-situ coated graphene from biomass tar as efficient catalyst for ORR. <b>2019</b> , 100, 52-59	16
1232	Trifunctional Self-Supporting Cobalt-Embedded Carbon Nanotube Films for ORR, OER, and HER Triggered by Solid Diffusion from Bulk Metal. <b>2019</b> , 31, e1808043	186
1231	-60 °C solution synthesis of atomically dispersed cobalt electrocatalyst with superior performance. <b>2019</b> , 10, 606	87



1230	Highlights of Major Progress on Single-Atom Catalysis in 2017. <b>2019</b> , 9, 135	18
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1227	Achieving an exceptionally high loading of isolated cobalt single atoms on a porous carbon matrix for efficient visible-light-driven photocatalytic hydrogen production. <b>2019</b> , 10, 2585-2591	31
1226	Low-Dimensional Metal-Organic Frameworks and their Diverse Functional Roles in Catalysis. <b>2019</b> , 11, 3138-3165	18
1225	The combination of metal-organic frameworks and polydopamine nanotubes aiming for efficient one-dimensional oxygen reduction electrocatalyst. <b>2019</b> , 552, 351-358	17
1224	Theoretical Screening of Single-Atom-Embedded MoSSe Nanosheets for Electrocatalytic N <sub>2</sub> Fixation. <b>2019</b> , 123, 14501-14507	52
1223	Urea-bridging synthesis of nitrogen-doped carbon tube supported single metallic atoms as bifunctional oxygen electrocatalyst for zinc-air battery. <b>2019</b> , 256, 117778	46
1222	The Role of Supported Atomically Distributed Metal Species in Electrochemistry and How to Create Them. <b>2019</b> , 6, 3860-3877	9
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1220	Construction of Single-Iron-Atom Nanocatalysts for Highly Efficient Catalytic Antibiotics. <b>2019</b> , 15, e1901834	63
1219	Recent Advances in Carbon-Based Bifunctional Oxygen Catalysts for Zinc-Air Batteries. <b>2019</b> , 2, 743-765	74
1218	Rational design of positive-hexagon-shaped two-dimensional ZIF-derived materials as improved bifunctional oxygen electrocatalysts for use as long-lasting rechargeable Zn/Air batteries. <b>2019</b> , 256, 117871	40
1217	Ultra dispersed cobalt anchored on nitrogen-doping ordered porous carbon as an efficient transfer hydrogenation catalyst. <b>2019</b> , 491, 544-552	13
1216	Cage-confinement of gas-phase ferrocene in zeolitic imidazolate frameworks to synthesize high-loading and atomically dispersed Fe/N codoped carbon for efficient oxygen reduction reaction. <b>2019</b> , 7, 16508-16515	50
1215	High-performance fuel cell cathodes exclusively containing atomically dispersed iron active sites. <b>2019</b> , 12, 2548-2558	280
1214	Supercritical Deposition Coupled with Ammonia Treatment: A New Route to Co-Promoted N-Doped Carbon Aerogels with High Oxygen Reduction Reaction Activity. <b>2019</b> , 7, 1900450	7
1213	Fe <sub>3</sub> O <sub>4</sub> encapsulated in porous carbon nanobowls as efficient oxygen reduction reaction catalyst for Zn-air batteries. <b>2019</b> , 375, 122058	38

1212	Nanocrystal supracrystal-derived atomically dispersed Mn-Fe catalysts with enhanced oxygen reduction activity. <b>2019</b> , 63, 103851	55
1211	Catalysis of Oxygen Reduction Reaction on Atomically Dispersed Copper- and Nitrogen-Codoped Graphene. <b>2019</b> , 2, 4755-4762	19
1210	Atomically Dispersed Metal Catalysts for Oxygen Reduction. <b>2019</b> , 4, 1619-1633	176
1209	Efficient oxygen reduction on sandwich-like metal@N-C composites with ultrafine Fe nanoparticles embedded in N-doped carbon nanotubes grafted on graphene sheets. <b>2019</b> , 11, 12610-12618	16
1208	Charge Polarization from Atomic Metals on Adjacent Graphitic Layers for Enhancing the Hydrogen Evolution Reaction. <b>2019</b> , 131, 9504-9508	1
1207	Role of Sulfur Vacancies and Undercoordinated Mo Regions in MoS Nanosheets toward the Evolution of Hydrogen. <b>2019</b> , 13, 6824-6834	229
1206	Secondary-Atom-Assisted Synthesis of Single Iron Atoms Anchored on N-Doped Carbon Nanowires for Oxygen Reduction Reaction. <b>2019</b> , 9, 5929-5934	98
1205	Atomic scandium and nitrogen-codoped graphene for oxygen reduction reaction. <b>2019</b> , 431, 265-273	28
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1202	N-doped carbon spheres impregnated with highly monodispersed ruthenium nanoparticles as a hydrogenation catalyst. <b>2019</b> , 374, 895-903	30
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1199	Insights into the role of active site density in the fuel cell performance of Co-N-C catalysts. <b>2019</b> , 256, 117849	58
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1197	A Theoretical Perspective on Charge Separation and Transfer in Metal Oxide Photocatalysts for Water Splitting. <b>2019</b> , 11, 3688-3715	13
1196	Ammonia borane dehydrogenation and selective hydrogenation of functionalized nitroarene over a porous nickel-cobalt bimetallic catalyst.. <b>2019</b> , 9, 14580-14585	8
1195	Nitrogen-Doped Porous Carbon Supported Nonprecious Metal Single-Atom Electrocatalysts: from Synthesis to Application. <b>2019</b> , 3, 1900159	137

1194	Switching Co/N/C Catalysts for Heterogeneous Catalysis and Electrocatalysis by Controllable Pyrolysis of Cobalt Porphyrin. <b>2019</b> , 15, 282-290	12
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1191	Rational design of multifunctional air electrodes for rechargeable Zn/Air batteries: Recent progress and future perspectives. <b>2019</b> , 21, 253-286	102
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1189	Rational design of two-dimensional hybrid Co/N-doped carbon nanosheet arrays for efficient bi-functional electrocatalysis. <b>2019</b> , 3, 1757-1763	9
1188	Single Mo atoms supported on N-Doped carbon with N/C edge-site for enhanced electrochemical hydrogen evolution. <b>2019</b> , 44, 14861-14868	18
1187	Nitrogen-Doped Carbon Nanotube/Graphene Frameworks with Encapsulated Fe/Fe <sub>3</sub> N Nanoparticles as Catalysts for Oxygen Reduction. <b>2019</b> , 2, 3538-3547	29
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1184	Manipulating the redox kinetics of Li/S chemistry by porous hollow cobalt-B, N codoped-graphitic carbon polyhedrons for high performance lithium-sulfur batteries. <b>2019</b> , 149, 564-571	28
1183	Nitrogen-coordinated cobalt nanocrystals for oxidative dehydrogenation and hydrogenation of N-heterocycles. <b>2019</b> , 10, 5345-5352	39
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1181	Nitrogen-Doped Carbon Nanosheets Encapsulating Cobalt Nanoparticle Hybrids as High-Performance Bifunctional Electrocatalysts. <b>2019</b> , 6, 2683-2688	13
1180	MOF-Derived Carbon Networks with Atomically Dispersed Fe <sub>2</sub> O <sub>3</sub> Sites for Oxygen Reduction Reaction Catalysis in Acidic Media. <b>2019</b> , 1, 37-43	30
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1178	Harnessing MOF materials in photovoltaic devices: recent advances, challenges, and perspectives. <b>2019</b> , 7, 17079-17095	182
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1176	Ostwald Ripening-Mediated Grafting of Metal-Organic Frameworks on a Single Colloidal Nanocrystal to Form Uniform and Controllable MXF. <b>2019</b> , 141, 7407-7413	45
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1169	Tuning the active sites in the cobalt-based nitrogen-doped carbon by zinc for enhancing hydrogen evolution reaction. <b>2019</b> , 789, 100-107	9
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1167	Oxygen Reduction Reactions of Fe-N-C Catalysts: Current Status and the Way Forward. <b>2019</b> , 2, 252-276	70
1166	Metal-Organic Frameworks for Nanoarchitectures: Nanoparticle, Composite, Core-Shell, Hierarchical, and Hollow Structures. <b>2019</b> , 151-194	
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1162	Nature of Atomically Dispersed Ru on Anatase TiO <sub>2</sub> : Revisiting Old Data Based on DFT Calculations. <b>2019</b> , 123, 7271-7282	6
1161	Thermal Emitting Strategy to Synthesize Atomically Dispersed Pt Metal Sites from Bulk Pt Metal. <b>2019</b> , 141, 4505-4509	174
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1148	Recent advances in hybrid sodium-air batteries. <b>2019</b> , 6, 1306-1335	41
1147	A general route via formamide condensation to prepare atomically dispersed metal-nitrogen-carbon electrocatalysts for energy technologies. <b>2019</b> , 12, 1317-1325	181
1146	Metal and Nonmetal Codoped 3D Nanoporous Graphene for Efficient Bifunctional Electrocatalysis and Rechargeable Zn-Air Batteries. <b>2019</b> , 31, e1900843	170
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1129	Atomically Transition Metals on Self-Supported Porous Carbon Flake Arrays as Binder-Free Air Cathode for Wearable Zinc-Air Batteries. <b>2019</b> , 31, e1808267	265
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818	Fe <sub>3</sub> O <sub>4</sub> nanoparticles encapsulated in single-atom Fe-N-C towards efficient oxygen reduction reaction: Effect of the micro and macro pores. <b>2020</b> , 162, 245-255	42
817	Pyrolysis-free formamide-derived N-doped carbon supporting atomically dispersed cobalt as high-performance bifunctional oxygen electrocatalyst. <b>2020</b> , 49, 283-290	22

816	Electrochemical Synthesis of Ammonia from Nitrogen Under Mild Conditions: Current Status and Challenges. <b>2020</b> , 3, 239-270	27
815	Preparation of Nonprecious Metal Electrocatalysts for the Reduction of Oxygen Using a Low-Temperature Sacrificial Metal. <b>2020</b> , 142, 5477-5481	62
814	Carbon-nanotube-grafted and nano-Co <sub>3</sub> O <sub>4</sub> -doped porous carbon derived from metal-organic framework as an excellent bifunctional catalyst for zinc-air battery. <b>2020</b> , 452, 227841	24
813	A general method to construct single-atom catalysts supported on N-doped graphene for energy applications. <b>2020</b> , 8, 6190-6195	24
812	Cobalt Nanoparticles Encapsulated in Nitrogen-Doped Carbon Shells: Efficient and Stable Catalyst for Nitrobenzene Reduction. <b>2020</b> , 59, 4367-4376	23
811	Controlled Synthesis of Co@N-Doped Carbon by Pyrolysis of ZIF with 2-Aminobenzimidazole Ligand for Enhancing Oxygen Reduction Reaction and the Application in Zn-Air Battery. <b>2020</b> , 12, 11693-11701 <sup>36</sup>	36
810	MOF derived high-density atomic platinum heterogeneous catalyst for C-H bond activation. <b>2020</b> , 4, 1158-1163	4
809	Hierarchical nitrogen-doped porous carbon incorporating cobalt nanocrystal sites for nitrophenol reduction. <b>2020</b> , 217, 115525	12
808	Incorporation of single cobalt active sites onto N-doped graphene for superior conductive membranes in electrochemical filtration. <b>2020</b> , 602, 117966	6
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801	Advanced Electrocatalysts for the Oxygen Reduction Reaction in Energy Conversion Technologies. <b>2020</b> , 4, 45-68	288
800	Single-Atom Enzyme-Functionalized Solution-Gated Graphene Transistor for Real-Time Detection of Mercury Ion. <b>2020</b> , 12, 6268-6275	19
799	Tailoring N-Coordination Environment by Ligand Competitive Thermolysis Strategy for Efficient Oxygen Reduction. <b>2020</b> , 12, 7270-7276	3



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797	Recent Advances in Non-Precious Transition Metal/Nitrogen-doped Carbon for Oxygen Reduction Electrocatalysts in PEMFCs. <b>2020</b> , 10, 141	26
796	Enabling Direct H <sub>2</sub> O <sub>2</sub> Production in Acidic Media through Rational Design of Transition Metal Single Atom Catalyst. <b>2020</b> , 6, 658-674	176
795	Understanding the Activity of Co-N <sub>4</sub> C <sub>x</sub> in Atomic Metal Catalysts for Oxygen Reduction Catalysis. <b>2020</b> , 132, 6178-6183	30
794	Understanding the Activity of Co-N C in Atomic Metal Catalysts for Oxygen Reduction Catalysis. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 6122-6127	16.4 86
793	Cobalt-Exchanged Poly(Heptazine Imides) as Transition Metal-N Electrocatalysts for the Oxygen Evolution Reaction. <b>2020</b> , 32, e1903942	30
792	N-doped porous carbon hollow microspheres encapsulated with iron-based nanocomposites as advanced bifunctional catalysts for rechargeable Zn-air battery. <b>2020</b> , 49, 14-21	37
791	Persulfate activation by two-dimensional MoS <sub>2</sub> confining single Fe atoms: Performance, mechanism and DFT calculations. <b>2020</b> , 389, 122137	23
790	A Freestanding Flexible Single-Atom Cobalt-Based Multifunctional Interlayer toward Reversible and Durable Lithium-Sulfur Batteries. <b>2020</b> , 4, 1900701	66
789	Heterogeneous Single Atom Electrocatalysis, Where Singles Are Married <b>2020</b> , 10, 1903181	64
788	Atomically dispersed hierarchically ordered porous Fe <sub>3</sub> N <sub>4</sub> electrocatalyst for high performance electrocatalytic oxygen reduction in Zn-Air battery. <b>2020</b> , 71, 104547	99
787	NiS-Decorated ZnO/ZnS Nanorod Heterostructures for Enhanced Photocatalytic Hydrogen Production: Insight into the Role of NiS. <b>2020</b> , 4, 1900568	20
786	Synergistic effect between atomically dispersed Fe and Co metal sites for enhanced oxygen reduction reaction. <b>2020</b> , 8, 4369-4375	57
785	High-Valence Nickel Single-Atom Catalysts Coordinated to Oxygen Sites for Extraordinarily Activating Oxygen Evolution Reaction. <b>2020</b> , 7, 1903089	93
784	An Enzyme-Mimicking Single-Atom Catalyst as an Efficient Multiple Reactive Oxygen and Nitrogen Species Scavenger for Sepsis Management. <i>Angewandte Chemie - International Edition</i> , <b>2020</b> , 59, 5108-5115	16.4 82
783	Space-confined synthesis of CoNi nanoalloy in N-doped porous carbon frameworks as efficient oxygen reduction catalyst for neutral and alkaline aluminum-air batteries. <b>2020</b> , 27, 96-108	32
782	Uniform Virus-Like Co <sub>3</sub> N <sub>4</sub> s Electro catalyst Derived from Prussian Blue Analog for Stretchable Fiber-Shaped Zn-Air Batteries. <b>2020</b> , 30, 1908945	40
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778	Cobalt/zinc dual-sites coordinated with nitrogen in nanofibers enabling efficient and durable oxygen reduction reaction in acidic fuel cells. <b>2020</b> , 8, 3686-3691	42
777	Single-Atom Catalysts in Catalytic Biomedicine. <b>2020</b> , 32, e1905994	128
776	Coordinatively Unsaturated Metal-Nitrogen Active Sites at Twisted Surfaces in Metallic Porous Nitride Single Crystals Delivering Enhanced Electrocatalysis Activity. <b>2020</b> , 26, 2327-2332	1
775	Metal-organic framework-derived mesoporous carbon nanoframes embedded with atomically dispersed Fe active sites for efficient bifunctional oxygen and carbon dioxide electroreduction. <b>2020</b> , 267, 118720	78
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773	Recent Advances on Metal Organic Framework-Derived Catalysts for Electrochemical Oxygen Reduction Reaction. <b>2020</b> , 231-278	5
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771	Recent Advances on Water-Splitting Electrocatalysis Mediated by Noble-Metal-Based Nanostructured Materials. <b>2020</b> , 10, 1903120	273
770	When hollow multishelled structures (HoMSs) meet metal-organic frameworks (MOFs). <b>2020</b> , 11, 5359-5368	17
769	Periodic Three-Dimensional Nitrogen-Doped Mesoporous Carbon Spheres Embedded with Co/CoO Nanoparticles toward Microwave Absorption. <b>2020</b> , 12, 24102-24111	57
768	Few-atom cluster model systems for a hydrogen economy. <b>2020</b> , 5, 1754132	6
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766	Cooperative Nitrogen Activation and Ammonia Synthesis on Densely Monodispersed Mo-N-C Sites. <b>2020</b> , 11, 3962-3968	13
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764	A Novel Single-Atom Electrocatalyst Ti/rGO for Efficient Cathodic Reduction in Hybrid Photovoltaics. <b>2020</b> , 32, e2000478	20
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761	Ultrasmall NiFe layered double hydroxide strongly coupled on atomically dispersed FeCo-NC nanoflowers as efficient bifunctional catalyst for rechargeable Zn-air battery. <b>2020</b> , 63, 1182-1195	22
760	Atomically dispersed Ni species on N-doped carbon nanotubes for electroreduction of CO <sub>2</sub> with nearly 100% CO selectivity. <b>2020</b> , 271, 118929	78
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756	From metal/organic frameworks to single/dual-atom and cluster metal catalysts for energy applications. <b>2020</b> , 13, 1658-1693	156
755	Atomically dispersed palladium-based catalysts obtained via constructing a spatial structure with high performance for lean methane combustion. <b>2020</b> , 8, 7395-7404	21
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752	Bimetallic metal-organic frameworks and their derivatives. <b>2020</b> , 11, 5369-5403	115
751	Recent progress on MOF-derived carbon materials for energy storage. <b>2020</b> , 2, 176-202	76
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749	High efficient catalytic oxidation of 5-hydroxymethylfurfural into 2,5-furandicarboxylic acid under benign conditions with nitrogen-doped graphene encapsulated Cu nanoparticles. <b>2020</b> , 50, 96-105	11
748	Atomically dispersed Fe-N-S-C anchored on pomegranate-shaped carbon spheres for oxygen reduction reaction and all-solid-state zinc-air battery. <b>2020</b> , 9, 100039	18
747	Defect-induced nucleation and epitaxial growth of a MOF-derived hierarchical MoC@Co architecture for an efficient hydrogen evolution reaction.. <b>2020</b> , 10, 13838-13847	3
746	Ultrafine Co nanodots embedded in N-doped carbon nanotubes grafted on hexagonal VN for highly efficient overall water splitting. <b>2020</b> , 73, 104788	38
745	Atomic Dispersion and Surface Enrichment of Palladium in Nitrogen-Doped Porous Carbon Cages Lead to High-Performance Electrocatalytic Reduction of Oxygen. <b>2020</b> , 12, 17641-17650	16

744	Electrochemical conversion of bulk platinum into platinum single-atom sites for the hydrogen evolution reaction. <b>2020</b> , 8, 10755-10760		23
743	MOF-derived Fe,Co@N/C bifunctional oxygen electrocatalysts for Zn-air batteries. <b>2020</b> , 8, 9355-9363		77
742	Intrinsic Electrocatalytic Activity Regulation of M-N-C Single-Atom Catalysts for the Oxygen Reduction Reaction. <i>Angewandte Chemie - International Edition</i> , <b>2021</b> , 60, 4448-4463	16.4	145
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740	Integration of Fe <sub>2</sub> O <sub>3</sub> -based photoanode and atomically dispersed cobalt cathode for efficient photoelectrochemical NH <sub>3</sub> synthesis. <b>2021</b> , 32, 805-810		7
739	Surface/interface engineering of high-efficiency noble metal-free electrocatalysts for energy-related electrochemical reactions. <b>2021</b> , 54, 89-104		33
738	Atomic Level Dispersed Metal-Nitrogen-Carbon Catalyst toward Oxygen Reduction Reaction: Synthesis Strategies and Chemical Environmental Regulation. <b>2021</b> , 4, 5-18		25
737	Recent advances in defect electrocatalysts: Preparation and characterization. <b>2021</b> , 53, 208-225		40
736	Recent progress on single atom/sub-nano electrocatalysts for energy applications. <b>2021</b> , 115, 100711		15
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733	Coupling of iron phthalocyanine at carbon defect site via π-stacking for enhanced oxygen reduction reaction. <b>2021</b> , 280, 119437		57
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731	A highly efficient Fenton-like catalyst based on isolated diatomic Fe-Co anchored on N-doped porous carbon. <b>2021</b> , 404, 126376		52
730	Atomically dispersed and nanoscaled Co species embedded in micro-/mesoporous carbon nanosheet/nanotube architecture with enhanced oxygen reduction and evolution bifunction for Zn-Air batteries. <b>2021</b> , 404, 127112		14
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727	Cobalt Nitride Anchored on Nitrogen-Rich Carbons for Efficient Carbon Dioxide Reduction with Visible Light. <b>2021</b> , 280, 119454		22

726	Stable confinement of Fe/Fe <sub>3</sub> C in Fe, N-codoped carbon nanotube towards robust zinc-air batteries. <b>2021</b> , 32, 1121-1126	13
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723	Single-Atom and Dual-Atom Electrocatalysts Derived from Metal Organic Frameworks: Current Progress and Perspectives. <b>2021</b> , 14, 73-93	27
722	Confining isolated atoms and clusters in crystalline porous materials for catalysis. <b>2021</b> , 6, 244-263	75
721	Graphitic Carbon Nitride Nanosheets-Immobilized Single-Atom Zn Towards Efficient Electroreduction of CO <sub>2</sub> . <b>2021</b> , 16, 2150016	1
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719	Salt melt synthesis of Chlorella-derived nitrogen-doped porous carbon with atomically dispersed CoN sites for efficient oxygen reduction reaction. <b>2021</b> , 586, 498-504	9
718	Synthesis strategies and emerging mechanisms of metal-organic frameworks for sulfate radical-based advanced oxidation process: A review. <b>2021</b> , 421, 127863	41
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716	Design of Local Atomic Environments in Single-Atom Electrocatalysts for Renewable Energy Conversions. <b>2021</b> , 33, e2003075	73
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712	Atomic Fe-Zn dual-metal sites for high-efficiency pH-universal oxygen reduction catalysis. <b>2021</b> , 14, 1374-1381	56
711	Atom migration-trapping toward single-atom catalysts for energy electrocatalysis. <b>2021</b> , 19, 100586	8
710	Highly active and stable Co nanoparticles embedded in nitrogen-doped mesoporous carbon nanofibers for aqueous-phase levulinic acid hydrogenation. <b>2021</b> , 6, 567-577	3
709	Highly active, selective, and stable Pd single-atom catalyst anchored on N-doped hollow carbon sphere for electrochemical H <sub>2</sub> O <sub>2</sub> synthesis under acidic conditions. <b>2021</b> , 393, 313-323	10

708	Recent Advances in Strategies for Improving the Performance of CO <sub>2</sub> Reduction Reaction on Single Atom Catalysts. <b>2021</b> , 1, 2000028	28
707	A core-shell structured metal-organic frameworks-derived porous carbon nanowires as a superior anode for alkaline metal-ion batteries. <b>2021</b> , 541, 148473	5
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704	Recent advances in polysaccharide-based carbon aerogels for environmental remediation and sustainable energy. <b>2021</b> , 27, e00240	4
703	Atomic Fe Dispersed Hierarchical Mesoporous Fe <sub>3</sub> N <sub>4</sub> Nanostructures for an Efficient Oxygen Reduction Reaction. <b>2021</b> , 11, 74-81	57
702	Recent advances in the field of carbon-based cathode electrocatalysts for Zn-air batteries. <b>2021</b> , 2, 96-114	10
701	Modulated FeCo nanoparticle in situ growth on the carbon matrix for high-performance oxygen catalysts. <b>2021</b> , 19, 100610	5
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698	Electrocatalytic Oxygen Reduction to Hydrogen Peroxide: From Homogeneous to Heterogeneous Electrocatalysis. <b>2021</b> , 11, 2003323	45
697	Potential active sites of Mo single atoms for electrocatalytic reduction of N <sub>2</sub> . <b>2021</b> , 32, 53-56	35
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692	Synthesis of High Metal Loading Single Atom Catalysts and Exploration of the Active Center Structure. <b>2021</b> , 13, 28-58	8
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690	Design strategies for MOF-derived porous functional materials: Preserving surfaces and nurturing pores. <b>2021</b> , 7, 440-459	24
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688	Single copper sites dispersed on hierarchically porous carbon for improving oxygen reduction reaction towards zinc-air battery. <b>2021</b> , 14, 998-1003	21
687	Cost-effective mechanochemical synthesis of highly dispersed supported transition metal catalysts for hydrogen storage. <b>2021</b> , 80, 105535	36
686	Applications of Atomically Dispersed Oxygen Reduction Catalysts in Fuel Cells and Zinc-Air Batteries. <b>2021</b> , 4, 307-335	15
685	Modified Metal-Organic Frameworks as Efficient Catalysts for Lignocellulosic Biomass Conversion. <b>2021</b> , 42, 346-358	3
684	Direct transformation of raw biomass into a Fe-Ni-C single-atom catalyst for efficient oxygen reduction reaction. <b>2021</b> , 5, 3093-3098	2
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682	Cobalt nanoclusters coated with N-doped carbon for chemoselective nitroarene hydrogenation and tandem reactions in water. <b>2021</b> , 23, 4490-4501	12
681	Cobalt single atom site catalysts with ultrahigh metal loading for enhanced aerobic oxidation of ethylbenzene. <b>2021</b> , 14, 2418	99
680	Single-atom catalysis in advanced oxidation processes for environmental remediation. <b>2021</b> , 50, 5281-5322	164
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674	A review of the hot spot analysis and the research status of single-atom catalysis based on the bibliometric analysis. <b>2021</b> , 45, 4253-4269	2
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670	Metal-Organic Framework-Derived Catalysts for Zn-Air Batteries. <b>2021</b> , 2475-2489	
669	Design of ternary Pt <sub>10</sub> Zn alloy catalysts coated with N-doped carbon towards acidic oxygen reduction. <b>2021</b> , 2, 5479-5486	2
668	The application of the inexpensive and synthetically simple electrocatalyst CuFe-MoC@NG in immunosensors. <b>2021</b> , 146, 5421-5428	1
667	Co@N-CNT/MXenes grown on carbon nanotube film for multifunctional sensors and flexible supercapacitors. <b>2021</b> , 13, 14460-14468	3
666	Electrospun ZIF-derived cavity porous carbon nanofibers as a freestanding cathode for lithium-oxygen batteries with ultralow overpotential. <b>2021</b> , 13, 16477-16486	0
665	Co/N-Doped hierarchical porous carbon as an efficient oxygen electrocatalyst for rechargeable Zn-air battery.. <b>2021</b> , 11, 15753-15761	2
664	In situ self-organization of uniformly dispersed Co <sup>II</sup> centers at moderate temperature without a sacrificial subsidiary metal. <b>2021</b> , 23, 3115-3126	11
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659	Fe induction strategy for hollow porous N-doped carbon with superior performance in oxygen reduction. <b>2021</b> , 57, 7108-7111	4
658	Efficient Fe <sub>3</sub> /C electrocatalyst for the oxygen reduction reaction derived from porphyrin-encapsulated zeolitic imidazolate frameworks. <b>2021</b> , 45, 6018-6024	2
657	Rational design and controllable synthesis of polymer aerogel-based single-atom catalysts with high loading.	0
656	MOF-Derived Materials for Energy Conversion. <b>2021</b> , 165-209	
655	Dual Evolution in Defect and Morphology of Single-Atom Dispersed Carbon Based Oxygen Electrocatalyst. <b>2021</b> , 31, 2010472	32



654	Selective Hydrogenation of Furfural over the Co-Based Catalyst: A Subtle Synergy with Ni and Zn Dopants. <b>2021</b> , 13, 8507-8517	10
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288	Bimetallic zeolitic imidazolate framework derived magnetic catalyst for high-efficiency CO <sub>2</sub> chemical fixation. <b>2022</b> , 252, 117530	1
287	Metal-organic framework-derived multifunctional photocatalysts. <b>2022</b> , 43, 971-1000	3
286	Atomically Dispersed Cu Sites on Dual-Mesoporous N-Doped Carbon for Efficient Ammonia Electrolysis from Nitrate.. <b>2022</b> ,	2
285	Single Nickel sites - easy separation and high-performance catalyst for the production of N-nitro alcohols. <b>2022</b> , 289, 120769	1
284	Copper-involved highly efficient oxygen reduction reaction in both alkaline and acidic media. <b>2022</b> , 437, 135377	2
283	The effect of coordination environment on the activity and selectivity of single-atom catalysts. <b>2022</b> , 461, 214493	11
282	Highly dispersed Co atoms anchored in porous nitrogen-doped carbon for acidic H <sub>2</sub> O <sub>2</sub> electrolysis. <b>2022</b> , 438, 135619	1
281	Construction of dual active sites on diatomic metal (FeCo <sub>2</sub> /C-x) catalysts for enhanced Fenton-like catalysis. <b>2022</b> , 309, 121256	5
280	ZIF-derived zinc decorated cobalt nanoparticles for efficient oxygen reduction and Zn-air batteries. <b>2022</b> , 908, 164638	2
279	Transition metal-based single-atom catalysts (TM-SACs); rising materials for electrochemical CO <sub>2</sub> reduction. <b>2022</b> , 70, 444-471	1
278	Theoretical investigation of HER/OER/ORR catalytic activity of single atom-decorated graphyne by DFT and comparative DOS analyses. <b>2022</b> , 592, 153237	1
277	Recent advances in high-loading catalysts for low-temperature fuel cells: From nanoparticle to single atom. <b>2021</b> , 1, 569-592	8

276	Recent Advances in Synthesis and Applications of Single-Atom Catalysts for Rechargeable Batteries.. <b>2021</b> ,	1
275	Study on the Structure-Activity Relationship Between Single-Atom, Cluster and Nanoparticle Catalysts in a Hierarchical Structure for the Oxygen Reduction Reaction. <b>2021</b> , e2105487	0
274	Theoretical studies of MXene-supported single-atom catalysts: Os <sub>1</sub> /Ti <sub>2</sub> CS <sub>2</sub> for low-temperature CO oxidation. <b>2022</b> , 65, 1303-1312	0
273	Nanocatalysts for fuel cells. <b>2022</b> , 579-604	
272	Engineering single-atom catalysts toward biomedical applications.. <b>2022</b> ,	6
271	Single-atom catalysts for photocatalytic hydrogen evolution: A review. <b>2022</b> ,	1
270	Experimental and DFT studies of oxygen reduction reaction promoted by binary site Fe/Co-N-C catalyst in acid. <b>2022</b> , 116322	0
269	Atomically dispersed metal-nitrogen-carbon electrocatalysts for oxygen reduction reaction: from synthesis strategies to activity engineering. <b>2022</b> , 101017	3
268	Fe Single-atom Sites in Two-Dimensional Nitrogen doped Porous Carbon for Electrocatalytic Oxygen Reduction.	
267	Fabricating different coordination states of cobalt as magnetic acid-base bifunctional catalyst for biodiesel production from microalgal lipid. <b>2022</b> , 322, 124172	0
266	Cobalt-catalysed CH-alkylation of indoles with alcohols by borrowing hydrogen methodology.	0
265	Interfacing single-atom catalysis with continuous-flow organic electrosynthesis.. <b>2022</b> ,	5
264	Sorption enhanced catalysis for CO <sub>2</sub> hydrogenation towards fuels and chemicals with focus on methanation. <b>2022</b> , 95-119	
263	Yolk-Shell Co Catalysts with Controlled Nanoparticle/Single-Atom Ratio for Aqueous Levulinic Acid Hydrogenation to $\gamma$ -Valerolactone.	
262	Effect of structural modifications on the oxygen reduction reaction properties of metal-organic framework-based catalysts. <b>2022</b> , 165-184	
261	Rugae-like N-doped porous carbon incorporated with Fe-N <sub>x</sub> and Fe <sub>3</sub> O <sub>4</sub> dual active sites as a powerful oxygen reduction catalyst for zinc-air batteries.	0
260	Peroxymonosulfate Activation on Synergistically Enhanced Single-Atom Co/Co@C for Boosted Chemiluminescence of Tris(bipyridine) Ruthenium(II) Derivative.. <b>2022</b> ,	2
259	Synthesis of hollow Fe, Co, and N-doped carbon catalysts from conducting polymer-metal-organic-frameworks core-shell particles for their application in an oxygen reduction reaction. <b>2022</b> ,	2

258	Single-Atom Tailoring of Two-Dimensional Atomic Crystals Enables Highly Efficient Detection and Pattern Recognition of Chemical Vapors.. <b>2022,</b>	2
257	Construction of isolated Ni sites on nitrogen-doped hollow carbon spheres with NiN <sub>3</sub> configuration for enhanced reduction of nitroarenes.	1
256	Self-sacrifice MOFs for heterogeneous catalysis: Synthesis mechanisms and future perspectives. <b>2022,</b>	6
255	Direct Visualization of the Evolution of a Single-Atomic Cobalt Catalyst from Melting Nanoparticles with Carbon Dissolution.. <b>2022,</b> e2200592	1
254	Research progress of precise structural regulation of single atom catalyst for accelerating electrocatalytic oxygen reduction reaction. <b>2022,</b>	3
253	A plasma bombing strategy to synthesize high-loading single-atom catalysts for oxygen reduction reaction. <b>2022,</b> 100880	2
252	Carbon-Based Material-Supported Single-Atom Catalysts for Energy Conversion. <b>2022,</b> 104367	3
251	Nitrogen-doped 3D porous graphene coupled with densely distributed CoOx nanoparticles for efficient multifunctional electrocatalysis and Zn-Air battery. <b>2022,</b> 420, 140432	0
250	Advances of atomically dispersed catalysts from single-atom to clusters in energy storage and conversion applications. <b>2022,</b> 128, 100964	0
249	Surface engineering of MOFs as a route to cobalt phosphide electrocatalysts for efficient oxygen evolution reaction. <b>2022,</b> 98, 107315	3
248	Coordination anchoring synthesis of high-density single-metal-atom sites for electrocatalysis. <b>2022,</b> 466, 214603	5
247	Hybridization of iron phthalocyanine and MoS <sub>2</sub> for high-efficiency and durable oxygen reduction reaction. <b>2022,</b> 71, 528-538	0
246	Morphology and composition dependence of multicomponent Cu-based nanoreactor for tandem electrocatalysis CO <sub>2</sub> reduction. <b>2022,</b> 314, 121498	2
245	Efficient and cost-effective ORR electrocatalysts based on low content transition metals highly dispersed on C <sub>3</sub> N <sub>4</sub> /super-activated carbon composites. <b>2022,</b> 196, 378-390	0
244	Highly porous nanostructures: Rational fabrication and promising application in energy electrocatalysis. <b>2022,</b> 466, 214604	5
243	Atomically dispersed lewis acid sites meet poly(ionic liquid)s networks for solvent-free and co-catalyst-free conversion of CO <sub>2</sub> to cyclic carbonates. <b>2022,</b> 313, 121463	5
242	Non-Noble-Metal Catalyst and Zn/Graphene Film for Low-Cost and Ultra-Long-Durability Solid-State Zn-Air Batteries in Harsh Electrolytes. 2200397	4
241	Research progress of highly efficient noble metal catalysts for the oxidation of 5-hydroxymethylfurfural.. <b>2022,</b>	1

240	Isolating Single and Few Atoms for Enhanced Catalysis.. <b>2022</b> , e2201796	12
239	Optimizing Atomically Dispersed Metal Electrocatalysts for Hydrogen Evolution: Chemical Coordination Effect and Electronic Metal Support Interaction.. <b>2022</b> ,	1
238	Fe <sub>3</sub> C confined in N-doped carbons derived from Fe-N bearing ionic liquids for selective oxidation of styrene into benzaldehyde with molecular oxygen. <b>2022</b> , 135, 104368	0
237	Promoting Oxygen Reduction via Crafting Bridge-bonded Oxygen Ligands on Iron Single-Atom Catalyst.	0
236	Phthalocyanone Nanosheet as Excellent N <sub>2</sub> Reduction Reaction Electrocatalyst: A First-Principles Study.	0
235	Promoting Oxygen Reduction via Coordination Environment Modulation through Secondary Metal-atom Incorporation.	0
234	Single atomic cobalt catalyst for efficient oxygen reduction reaction. <b>2022</b> ,	11
233	Rational Regulation of Co-N Coordination for High-Efficiency Generation of H <sub>2</sub> toward Nearly 100% Selective Degradation of Organic Pollutants.	0
232	Constructing ohmic contact on hollow carbon nanocages to enhance conduction loss enabling high-efficient microwave absorption. <b>2022</b> , 196, 552-561	4
231	Ultralow Loading Ru-Mo <sub>2</sub> C on Cnt Boosting High Durability Electrocatalyst for Oxygen Reduction Reaction.	0
230	A superior electrocatalyst toward oxygen reduction reaction by atomically dispersed copper on N, F co-doped graphene through atomic interface engineering.	0
229	Metal-organic framework-derived Co nanoparticles and single atoms as efficient electrocatalyst for pH universal hydrogen evolution reaction.	1
228	Recent advances in metal-organic frameworks-derived carbon-based electrocatalysts for the oxygen reduction reaction. <b>2022</b> ,	2
227	A Supported Palladium on Gallium-based Liquid Metal Catalyst for Enhanced Oxygen Reduction Reaction.	0
226	Catalytically Active Atomically Thin Cuprate with Periodic Cu Single Sites.	0
225	Hetero MOF-on-MOF-derived carbon nanotube interconnected nitrogen-doped carbon-encapsulated FeNi/Fe <sub>2</sub> C for efficient oxygen evolution reaction.	5
224	Non-oxidative Propane Dehydrogenation over Vanadium Doped Graphitic Carbon Nitride Catalysts.	0
223	Atomically Dispersed Co <sub>3</sub> C <sub>1</sub> -TeN <sub>1</sub> C <sub>3</sub> Diatomic Sites Anchored in N-Doped Carbon as Efficient Bifunctional Catalyst for Synergistic Electrocatalytic Hydrogen Evolution and Oxygen Reduction. 2201974	0



222	Single-Atom Catalysts for Hydrogen Generation: Rational Design, Recent Advances, and Perspectives. 2200875	5
221	Electrocatalytic activity on single atoms catalysts: Synthesis strategies, characterization, classification, and energy conversion applications. <b>2022</b> , 467, 214600	1
220	Research Progress of Asymmetrically Coordinated Single-Atom Catalysts for Electrocatalytic Reactions.	6
219	Single Atom Sites Catalysts based on High Specific Surface Area Supports.	0
218	Regeneration of single-atom catalysts deactivated under acid oxygen reduction reaction conditions. <b>2022</b> ,	2
217	Solid-State Reaction Synthesis of Nanoscale Materials: Strategies and Applications.	0
216	Boosting toluene oxidation by the regulation of Pd species on UiO-66: Synergistic effect of Pd species. <b>2022</b> , 413, 59-75	3
215	A novel fluorescence-scattering ratiometric sensor based on Fe-N-C nanozyme with robust oxidase-like activity. <b>2022</b> , 368, 132181	1
214	Exploiting the trade-offs of electron transfer in MOF-derived single Zn/Co atomic couples for performance-enhanced zinc-air battery. <b>2022</b> , 316, 121591	3
213	Iron-nickel alloy nanoparticles encapsulated in nitrogen-doped carbon nanotubes as efficient bifunctional electrocatalyst for rechargeable zinc-air batteries. <b>2022</b> , 625, 278-288	0
212	Accelerating Electrochemically Catalyzed Nitrogen Reductions on Metalloporphyrin-Mediated Metal-Nitrogen-Doped Carbon (M-N-C) Catalysts.	1
211	Single atoms meet metal-organic frameworks: collaborative efforts for efficient photocatalysis.	7
210	Changing charge transfer mode with cobalt-molybdenum bimetallic atomic pairs for enhanced nitrogen fixation.	0
209	Efficient CO <sub>2</sub> Reduction to Reveal the Piezocatalytic Mechanism: From Displacement Current to Active Sites.	
208	Low-coordinated Ni(100) sites atomically dispersed on hollow carbon nanotubes for efficient CO <sub>2</sub> reduction.	1
207	Graphene-based electrocatalysts for advanced energy conversion. <b>2022</b> ,	2
206	Synthesis and electrocatalysis of ordered carbonaceous frameworks from Ni porphyrin with four ethynyl groups. <b>2022</b> ,	
205	Homogeneity of Supported Single-Atom Active Sites Boosting the Selective Catalytic Transformations. 2201520	3

204	Tuning the Site-to-Site Interaction in RuM (M=Co, Fe, Ni) Diatomic Electrocatalysts to Climb up the Volcano Plot of Oxygen Electroreduction.	2
203	Fabrication of multi-pore structure Cu, N-codoped porous carbon-based catalyst and its oxygen reduction reaction catalytic performance for microbial fuel cell.	
202	Robust Oxygen Reduction Electrocatalysis Enabled by Platinum Rooted on Molybdenum Nitride Microrods.	1
201	Single-atom catalysis for carbon neutrality.	8
200	A comparison study on single metal atoms (Fe, Co, Ni) within nitrogen-doped graphene for oxygen electrocatalysis and rechargeable Zn-air batteries. <b>2022</b> ,	
199	MOF-derived Metal Sulfides for Electrochemical Energy Applications. <b>2022</b> ,	1
198	Preparation of FePcNs@GO composites and boosting oxygen reduction reaction.	0
197	Fe single-atom catalysts with pre-organized coordination structure for efficient electrochemical nitrate reduction to ammonia. <b>2022</b> , 121750	2
196	Single-atomic Mn sites coupled with Fe <sub>3</sub> C nanoparticles encapsulated in carbon matrixes derived from bimetallic Mn/Fe polyphthalocyanine conjugated polymer networks for accelerating electrocatalytic oxygen reduction.	1
195	A self-supported bifunctional air cathode composed of Co <sub>3</sub> O <sub>4</sub> /Fe <sub>2</sub> O <sub>3</sub> nanoparticles embedded in nanosheet arrays grafted onto carbon nanofibers for secondary zinc-air batteries. <b>2022</b> , 921, 166128	1
194	Yolk-shell Co catalysts with controlled nanoparticle/single-atom ratio for aqueous levulinic acid hydrogenation to $\gamma$ -valerolactone. <b>2022</b> , 450, 138153	1
193	Electrochemical removal of ammonium nitrogen in high efficiency and N <sub>2</sub> selectivity using non-noble single-atomic iron catalyst. <b>2023</b> , 125, 544-552	0
192	Tailoring Bond Microenvironments and Reaction Pathways of Single-Atom Catalysts for Efficient Water Electrolysis. <i>Angewandte Chemie - International Edition</i> ,	16.4 4
191	Tailoring Bond Microenvironments and Reaction Pathways of Single-Atom Catalysts for Efficient Water Electrolysis.	
190	Rational coordination regulation in carbon-based single-metal-atom catalysts for electrocatalytic oxygen reduction reaction. <b>2022</b> , 9,	2
189	Modulating the strong metal-support interaction of single-atom catalysts via vicinal structure decoration. <b>2022</b> , 13,	1
188	FeNiO single atom catalysts for the electrochemical conversion of carbon, nitrogen and oxygen elements. <b>2022</b> , 100141	0
187	In-situ cobalt-nickel alloy catalyzed nitrogen-doped carbon nanotube arrays as superior freestanding air electrodes for flexible zinc-air and aluminum-air batteries. <b>2022</b> , 317, 121764	3

186	Synthesis of Carbon-Based Nanomaterials. <b>2022</b> , 15-51	
185	Strengthened $d\bar{p}$ Orbital Hybridization through Asymmetric Coordination Engineering of Single-Atom Catalysts for Durable Lithium-Sulfur Batteries. <b>2022</b> , 22, 6366-6374	1
184	Two-dimensional nanomaterials confined single atoms: New opportunities for environmental remediation. <b>2022</b> ,	0
183	Recent progress of electrochemical reduction of CO <sub>2</sub> by single atom catalysts. <b>2022</b> , 100140	0
182	Two 1D Anderson-Type Polyoxometalate-Based Metal-Organic Complexes as Bifunctional Heterogeneous Catalysts for CO <sub>2</sub> Photoreduction and Sulfur Oxidation. <b>2022</b> , 61, 11775-11786	0
181	3D Nanoporous Graphene Based Single-Atom Electrocatalysts for Energy Conversion and Storage.	0
180	Resisting metal aggregation in pyrolysis of MOFs towards high-density metal nanocatalysts for efficient hydrazine assisted hydrogen production.	0
179	A general synthesis of single atom catalysts with controllable atomic and mesoporous structures. <b>2022</b> , 1, 658-667	2
178	Carbon-Shielded Single-Atom Alloy Material Family for Multi-Functional Electrocatalysis. 2205654	1
177	Single-atom catalysts for thermochemical gas-phase reactions. <b>2022</b> , 529, 112535	
176	Single-Atom-Based Catalysts for Photocatalytic Water Splitting on TiO <sub>2</sub> Nanostructures. <b>2022</b> , 12, 905	0
175	Synthesis of Nitrogen-doped Carbon Supported Cerium Single Atom Catalyst by Ball Milling for Selective Oxidation of Ethylbenzene.	0
174	Tunable Structured MXenes With Modulated Atomic Environments: A Powerful New Platform for Electrocatalytic Energy Conversion. 2203281	1
173	Cobalt (iron), nitrogen and carbon doped mushroom biochar for high-efficiency oxygen reduction in microbial fuel cell and Zn-air battery. <b>2022</b> , 108474	
172	Carbon dots-derived carbon nanoflowers decorated with cobalt single atoms and nanoparticles as efficient electrocatalysts for oxygen reduction. <b>2022</b> , 43, 2443-2452	1
171	Atomically dispersed Ru <sub>3</sub> site catalysts for electrochemical sensing of small molecules. <b>2022</b> , 216, 114609	1
170	Mn-doped single atom nanozyme composited Au for enhancing enzymatic and photothermal therapy. <b>2022</b> , 628, 419-434	
169	Exploratory construction of Co/Co <sub>3</sub> O <sub>4</sub> -Ni/NiO heterointerface modified macroporous interconnected hollow carbon nanofibers towards efficient and flexible electrocatalysis. <b>2022</b> , 450, 138252	2

168	Microenvironment engineering of Fe-single-atomic-site with nitrogen coordination anchored on carbon nanotubes for boosting oxygen electrocatalysis in alkaline and acidic media. <b>2023</b> , 451, 138684	1
167	Insight into role of Ni/Fe existing forms in reversible oxygen catalysis based on Ni-Fe single-atom/nanoparticles and N-doped carbon.	2
166	Progress and Perspectives of Single-atom Catalysts for Gas Sensing. 2206783	1
165	Mechanism difference between nanoparticles and single-atom sites on aqueous formic acid dehydrogenation over cobalt catalyst. <b>2022</b> , 531, 112671	0
164	Synergetic contribution of Co <sup>3+</sup> /Co <sup>2+</sup> and FeNC in CoFe@CoFe <sub>2</sub> O <sub>4</sub> toward efficient electrocatalysts for oxygen reduction reaction. <b>2022</b> , 432, 141224	0
163	Co single-atom confined in N-doped hollow carbon sphere with superb stability for rapid degradation of organic pollutants. <b>2023</b> , 452, 139229	0
162	Bimetallic ordered carbonaceous frameworks from Co- and Cu-porphyrin bimolecular crystals. <b>2023</b> , 201, 338-346	0
161	Efficient CO <sub>2</sub> reduction to reveal the piezocatalytic mechanism: From displacement current to active sites. <b>2023</b> , 320, 122007	2
160	Achieving efficient oxygen reduction on ultra-low metal-loaded electrocatalysts by constructing well-dispersed bimetallic sites and interconnected porous channels. <b>2022</b> , 10, 17217-17224	0
159	Tailoring the selectivity and activity of oxygen reduction by regulating the coordination environments of carbon-supported atomically dispersed metal sites. <b>2022</b> , 10, 17948-17967	3
158	Catalytic Effect of Carbon-Based Nanomaterials in Electrochemical Catalysis. <b>2022</b> , 83-101	0
157	Modular assembly of MOF-derived carbon nanofibers into macroarchitectures for water treatment. <b>2022</b> , 13, 9159-9164	0
156	Heterogeneous N-coordinated single-atom photocatalysts and electrocatalysts. <b>2022</b> , 43, 2453-2483	2
155	Understanding the role of metal supported on TiO <sub>2</sub> in photoreforming of oxygenates.	1
154	Single-atom catalysts based on Fenton-like/peroxymonosulfate system for water purification: design and synthesis principle, performance regulation and catalytic mechanism. <b>2022</b> , 14, 13861-13889	0
153	Simultaneous non-invasive gas analysis in artificial photosynthesis reactions using rotational Raman spectroscopy. <b>2022</b> , 6, 4388-4392	0
152	Progress in metal-organic-framework-based single-atom catalysts for environmental remediation. <b>2023</b> , 474, 214855	3
151	Yttrium- and Cerium-Codoped Ultrathin Metal-Organic Framework Nanosheet Arrays for High-Efficiency Electrocatalytic Overall Water Splitting. <b>2022</b> , 22, 7238-7245	6

150	Movable type printing method to synthesize high-entropy single-atom catalysts. <b>2022</b> , 13,	5
149	Synthesis of High-Loading Pt/C Electrocatalysts Using a Surfactant-Assisted Microwave Discharge Method for Oxygen Reduction Reactions. <b>2022</b> , 14, 41079-41085	2
148	Ultralow Loading Ru-Mo <sub>2</sub> C on CNT Boosting High Durability Electrocatalyst for Oxygen Reduction Reaction. <b>2022</b> , 169, 096512	0
147	Promising approach for preparing metallic single-atom catalysts: electrochemical deposition.	0
146	Layered double hydroxide nanomaterials for bifunctional ORR/OER electro-catalyst.	1
145	Recent Advances in Non-Precious Metal-Nitrogen-Carbon Single-Site Catalysts for CO <sub>2</sub> Electroreduction Reaction to CO. <b>2022</b> , 5,	2
144	Single Atom Ru Monolithic Electrode for Efficient Chlorine Evolution and Nitrate Reduction. <b>2022</b> , 61,	3
143	The Progress and Outlook of Metal Single-Atom-Site Catalysis.	3
142	Designing oxygen-doped Fe-N-C oxygen reduction catalysts for proton- and anion-exchange membrane fuel cells. <b>2022</b> ,	4
141	MOF-Derived Bimetallic Pd-Co Alkaline ORR Electrocatalysts. <b>2022</b> , 14, 44735-44744	1
140	Boosting Wastewater Bioelectricity Recovery via Solvent Mediation and Zinc Fencing: Dual Regulation for Catalyst Spatial Structure and Active Sites. <b>2022</b> , 139276	0
139	Synthesis of Polynorbornadiene within the Pores of Activated Carbons: Effects on EDLC and Hydrogen Adsorption Performances. <b>2022</b> , 38, 12024-12034	1
138	Single Atom Ru Monolithic Electrode for Efficient Chlorine Evolution and Nitrate Reduction. <b>2022</b> , 134,	0
137	Electron modulation by atomic Ir site decoration in porous Co/N co-doped carbon for electrocatalytic hydrogen evolution.	0
136	Metal-organic framework-based single-atom catalysts for efficient electrocatalytic CO <sub>2</sub> reduction reactions. <b>2022</b> ,	2
135	Photoinduced loading of electron-rich Cu single atoms by moderate coordination for hydrogen evolution. <b>2022</b> , 13,	1
134	Non-Noble Metal Catalysts in Cathodic Oxygen Reduction Reaction of Proton Exchange Membrane Fuel Cells: Recent Advances. <b>2022</b> , 12, 3331	1
133	Decorating CoNi Alloy-Encapsulated Carbon Nanotube Hollow Nanocages to Enable Dielectric Loss for Highly Efficient Microwave Absorption. <b>2022</b> , 5, 13187-13197	0

- 132 Engineering MOF-based nanocatalysts for boosting electrocatalytic water splitting. **2022**, 0
- 131 Coordination engineering strategy of iron single-atom catalysts boosts anti-Cu(II) interference detection of As(III) with a high sensitivity. **2022**, 130122 1
- 130 Bifunctional Mesoporous MO<sub>x</sub> (M = Cr, Fe, Co, Ni, Ce) Oxygen Electrocatalysts for Platinum Group Metal-Free Oxygen Pumps. 2200927 0
- 129 Ultrathin Cage-based Covalent Organic Framework Nanosheets as Precursor for Pyrolysis-Free Oxygen Evolution Reaction Electrocatalyst. 1
- 128 Hierarchical porous carbon nanofibers embedded with ultrafine Nb<sub>2</sub>O<sub>5</sub> nanocrystals for polysulfide-trapping-conversion Li-S batteries. **2022**, 141301 0
- 127 Switch to love, switch to kill: glucose and light co-regulate iron single-atom nanozyme to modulate cell fate. **2022**, 33, 505703 0
- 126 Synergy between isolated Fe and Co sites accelerates oxygen evolution. 1
- 125 Efficient Removal of Micropollutants by Novel Carbon Materials Using Nitrogen-Rich Bio-Based Metal-Organic Framework (MOFs) as Precursors. **2022**, 14, 3413 0
- 124 The cathode catalysts of hydrogen fuel cell: From laboratory toward practical application. 0
- 123 Modulation of IrO<sub>6</sub> Chemical Environment for Highly Efficient Oxygen Evolution in Acid. 2205495 0
- 122 Small-Scale Big Science: From Nano- to Atomically Dispersed Catalytic Materials. 2200036 1
- 121 Single-Atomic Ir and Mo Co-Confined in a Co Layered Hydroxide Nanobox Mutually Boost Oxygen Evolution. 13513-13522 0
- 120 Iron Single Atoms-Assisted Cobalt Nitride Nanoparticles to Strengthen the Cycle Life of Rechargeable Zn-Air Battery. 2205228 1
- 119 Dual-atom catalysts for oxygen electrocatalysis. **2022**, 104, 107927 1
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- 117 Atom level revelation of the synergistic effect between Pd and Au atoms in PdAu nanoalloy catalyst for aerobic oxidation of 5-hydroxymethylfurfural. **2023**, 453, 139816 0
- 116 In-situ growth of Co/Zn bimetallic MOF on GO surface to prepare GO supporting Co@C single-atom catalyst for Hg<sup>0</sup> oxidation. **2023**, 333, 126135 0
- 115 Metal-organic framework derived single-atom catalysts for electrochemical CO<sub>2</sub> reduction. **2022**, 12, 32518-32525 2

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- 113 Tailoring of Active Sites from Single to Dual Atom Sites for Highly Efficient Electrocatalysis. ○
- 112 Cobalt-nickel bimetal carbon sphere catalysts for efficient hydrolysis of sodium borohydride: The role of synergy and confine effect. **2022**, ○
- 111 Quasi-Fe-/Zn-phthalocyanine polymer derived 2D Fe-N-C single-atom catalyst for highly efficient ORR and H<sub>2</sub>O<sub>2</sub> sensing. **2022**, ○
- 110 Atomization driven crystalline nanocarbon based single-atom catalysts for superior oxygen electroreduction. **2022**, 122172 ○
- 109 MOFs and MOF-Derived Materials for Antibacterial Application. **2022**, 13, 215 1
- 108 Catalytically stable potassium single-atom solid superbases. ○
- 107 Exploration of the oxygen transport behavior in non-precious metal catalyst-based cathode catalyst layer for proton exchange membrane fuel cells. 1
- 106 Oxygen reduction activity of a Pt-N<sub>4</sub> single-atom catalyst prepared by electrochemical deposition and its bioelectrochemical application. **2022**, 141543 ○
- 105 Catalytically stable potassium single-atom solid superbases. ○
- 104 Zeolitic imidazolate framework-67T-derived cobalt-based catalysts for water splitting. **2022**, 26, 101210 ○
- 103 Coordination Environment in Single-Atom Catalysts for High-Performance Electrocatalytic CO<sub>2</sub> Reduction. 2200236 ○
- 102 Fine-tuned local coordination environment of Pt single atoms on ceria controls catalytic reactivity. **2022**, 13, 3
- 101 Highly dispersed iron/nickel dual-sites in hierarchical porous carbon materials as high-performance bifunctional oxygen electrocatalysts for Zn-air batteries. **2022**, ○
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- 98 Metal-organic frameworks-derived advanced oxygen electrocatalysts as air-cathodes for Zn-air batteries: Recent trends and future perspectives. ○
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- 94 Metal-organic framework-derived single atom catalysts for electrocatalytic reduction of carbon dioxide to C1 products. 0
- 93 A closely packed Pt<sub>1.5</sub>Ni<sub>1.5</sub>/Ni<sub>1.5</sub>C hybrid for relay catalysis towards oxygen reduction. 2
- 92 Rational design of boron-nitrogen coordinated active sites towards oxygen reduction reaction in aluminum-air batteries with robust integrated air cathode. **2023**, 556, 232476 0
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