

# Single-Atom Catalysts Based on the Metal–Oxide Interface

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Selective Hydrogenation on a Highly Active Single-Atom Catalyst of Palladium Dispersed on Ceria Nanorods by Defect Engineering. <i>ACS Applied Materials &amp; Interfaces</i> , 2020, 12, 57569-57577.	4.0	34
2	Polymeric carbon nitride-based photocatalysts for photoreforming of biomass derivatives. <i>Green Chemistry</i> , 2021, 23, 7435-7457.	4.6	39
3	Cooperativity in supported metal single atom catalysis. <i>Nanoscale</i> , 2021, 13, 5985-6004.	2.8	29
4	A substituent- and temperature-controllable NHC-derived zwitterionic catalyst enables CO <sub>2</sub> upgrading for high-efficiency construction of formamides and benzimidazoles. <i>Green Chemistry</i> , 2021, 23, 5759-5765.	4.6	18
5	Anisotropic growth of ZnO nanoparticles driven by the structure of amine surfactants: the role of surface dynamics in nanocrystal growth. <i>Nanoscale Advances</i> , 2021, 3, 6088-6099.	2.2	4
6	Recent Advances of CeO <sub>2</sub> -Based Electrocatalysts for Oxygen and Hydrogen Evolution as well as Nitrogen Reduction. <i>ChemElectroChem</i> , 2021, 8, 996-1020.	1.7	45
7	Single atom catalysis poised to transition from an academic curiosity to an industrially relevant technology. <i>Nature Communications</i> , 2021, 12, 895.	5.8	52
9	Spin-Orbit Coupling Effects in Au 4f Core-Level Electronic Structures in Supported Low-Dimensional Gold Nanoparticles. <i>Nanomaterials</i> , 2021, 11, 554.	1.9	22
10	High Performance of Single-Atom Catalyst Pd <sub>1</sub> /MgO for Semi-Hydrogenation of Acetylene to Ethylene in Excess Ethylene. <i>ChemNanoMat</i> , 2021, 7, 526-529.	1.5	14
11	Highly active and stable Ir nanoclusters derived from Ir <sub>1</sub> /MgAl <sub>2</sub> O <sub>4</sub> single-atom catalysts. <i>Journal of Chemical Physics</i> , 2021, 154, 131105.	1.2	5
12	Chemoselective reduction of nitroarenes, N-acetylation of arylamines, and one-pot reductive acetylation of nitroarenes using carbon-supported palladium catalytic system in water. <i>Research on Chemical Intermediates</i> , 2021, 47, 3289-3312.	1.3	14
13	Effects of functional supports on efficiency and stability of atomically dispersed noble-metal electrocatalysts. <i>EnergyChem</i> , 2021, 3, 100054.	10.1	20
14	Dispersion and support dictated properties and activities of Pt/metal oxide catalysts in heterogeneous CO oxidation. <i>Nano Research</i> , 2021, 14, 4841-4847.	5.8	26
15	Tuning the Activity of Molybdenum Carbide MXenes for CO <sub>2</sub> Electroreduction by Embedding the Single Transition-Metal Atom. <i>Journal of Physical Chemistry C</i> , 2021, 125, 13331-13342.	1.5	14
16	Operando Surface Studies on Metal-Oxide Interfaces of Bimetal and Mixed Catalysts. <i>ACS Catalysis</i> , 2021, 11, 8645-8677.	5.5	39
17	Low-Temperature Synthesis of Single Palladium Atoms Supported on Defective Hexagonal Boron Nitride Nanosheet for Chemoselective Hydrogenation of Cinnamaldehyde. <i>ACS Nano</i> , 2021, 15, 10175-10184.	7.3	77
18	Electronic structure regulations of single-atom site catalysts and their effects on the electrocatalytic performances. <i>Applied Physics Reviews</i> , 2021, 8, .	5.5	29
19	Insights into the Mechanism of Methanol Steam Reforming Tandem Reaction over CeO <sub>2</sub> Supported Single-Site Catalysts. <i>Journal of the American Chemical Society</i> , 2021, 143, 12074-12081.	6.6	70

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20	Highly efficient photocatalytic reduction of nitrogen into ammonia by single Ru atom catalyst supported by BeO monolayer. Chinese Chemical Letters, 2022, 33, 399-403.	4.8	13
21	Synergizing metalâ€‘support interactions and spatial confinement boosts dynamics of atomic nickel for hydrogenations. Nature Nanotechnology, 2021, 16, 1141-1149.	15.6	165
22	The Electronic Metalâ€‘Support Interaction Directing the Design of Single Atomic Site Catalysts: Achieving High Efficiency Towards Hydrogen Evolution. Angewandte Chemie, 2021, 133, 19233-19239.	1.6	149
23	New Horizon in stabilization of single atoms on metal-oxide supports for CO <sub>2</sub> reduction. Nano Materials Science, 2021, 3, 368-389.	3.9	15
24	The Electronic Metalâ€‘Support Interaction Directing the Design of Single Atomic Site Catalysts: Achieving High Efficiency Towards Hydrogen Evolution. Angewandte Chemie - International Edition, 2021, 60, 19085-19091.	7.2	189
25	Single Iridium Atom Doped Ni <sub>2</sub> P Catalyst for Optimal Oxygen Evolution. Journal of the American Chemical Society, 2021, 143, 13605-13615.	6.6	162
26	Effects of Adsorbing Noble Metal Single Atoms on the Electronic Structure and Photocatalytic Activity of Ta <sub>3</sub> N <sub>5</sub> . Journal of Physical Chemistry C, 2021, 125, 17600-17611.	1.5	9
27	Pt/TiO <sub>2</sub> â€‘ nanofibrous aerogel for effective nitrogen reduction: A simple strategy for simultaneous Pt formation and TiO <sub>2</sub> â€‘ vacancy engineering. Chinese Chemical Letters, 2022, 33, 1001-1005.	4.8	14
28	Heterogeneous catalysis at metal-oxide interfaces using in situ and operando spectroscopy: From nanoparticles to single-atom sites. Applied Catalysis A: General, 2021, 624, 118330.	2.2	13
29	Single-atom catalysts for electrochemical energy storage and conversion. Journal of Energy Chemistry, 2021, 63, 170-194.	7.1	61
30	Highâ€‘Loading Pt Singleâ€‘Atom Catalyst on CeO <sub>2</sub> â€‘Modified Diatomite Support. Chemistry - an Asian Journal, 2021, 16, 2622-2625.	1.7	6
31	First-Principles Study on the Mechanism of Nitrobenzene Reduction to Aniline Catalyzed by a N-Doped Carbon-Supported Cobalt Single-Atom Catalyst. Journal of Physical Chemistry C, 2021, 125, 19171-19182.	1.5	15
32	Identify the Activity Origin of Pt Single-Atom Catalyst <i>via</i> Atom-by-Atom Counting. Journal of the American Chemical Society, 2021, 143, 15243-15249.	6.6	27
33	PdZn alloys decorated 3D hierarchical porous carbon networks for highly efficient and stable hydrogen production from aldehyde solution. International Journal of Hydrogen Energy, 2021, 46, 33429-33437.	3.8	6
34	Reaction on a Rink: Kondo-Enhanced Heterogeneous Single-Atom Catalysis. Journal of Physical Chemistry C, 0, , .	1.5	0
35	Anchoring Sites Engineering in Singleâ€‘Atom Catalysts for Highly Efficient Electrochemical Energy Conversion Reactions. Advanced Materials, 2021, 33, e2102801.	11.1	64
36	Singleâ€‘Atom Catalystsâ€‘Enabled Reductive Upgrading of CO <sub>2</sub> . ChemCatChem, 2021, 13, 4859-4877.	1.8	10
37	Creating High Regioselectivity by Electronic Metalâ€‘Support Interaction of a Single-Atomic-Site Catalyst. Journal of the American Chemical Society, 2021, 143, 15453-15461.	6.6	88

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38	One-step synthesis of single palladium atoms in WO <sub>2.72</sub> with high efficiency in chemoselective hydrodeoxygenation of vanillin. <i>Applied Catalysis B: Environmental</i> , 2021, 298, 120535.	10.8	61
39	Photoinduction of palladium single atoms supported on defect-containing $\gamma$ -AlOOH nanoleaf for efficient trans-stilbene epoxidation. <i>Chemical Engineering Journal</i> , 2022, 429, 132149.	6.6	8
40	An open superstructure of hydrangea-like carbon with highly accessible Fe-N <sub>4</sub> active sites for enhanced oxygen reduction reaction. <i>Chemical Engineering Journal</i> , 2022, 429, 132307.	6.6	16
41	Electronic interaction between transition metal single-atoms and anatase TiO <sub>2</sub> boosts CO <sub>2</sub> photoreduction with H <sub>2</sub> O. <i>Energy and Environmental Science</i> , 2022, 15, 601-609.	15.6	88
42	Photothermal CO <sub>2</sub> hydrogenation to hydrocarbons over trimetallic Co-Cu-Mn catalysts. <i>Green Chemistry</i> , 2021, 23, 5775-5785.	4.6	24
43	Non-carbon-supported single-atom site catalysts for electrocatalysis. <i>Energy and Environmental Science</i> , 2021, 14, 2809-2858.	15.6	198
44	Progress in batch preparation of single-atom catalysts and application in sustainable synthesis of fine chemicals. <i>Green Chemistry</i> , 2021, 23, 8754-8794.	4.6	39
45	Noble-metal single-atoms in thermocatalysis, electrocatalysis, and photocatalysis. <i>Energy and Environmental Science</i> , 2021, 14, 2954-3009.	15.6	188
46	Perspectives for Single-Atom Nanozymes: Advanced Synthesis, Functional Mechanisms, and Biomedical Applications. <i>Analytical Chemistry</i> , 2021, 93, 1221-1231.	3.2	86
47	Enhancing the inherent catalytic activity and stability of TiO <sub>2</sub> supported Pt single-atoms at CeO <sub>x</sub> /TiO <sub>2</sub> interfaces. <i>Journal of Materials Chemistry A</i> , 2022, 10, 5942-5952.	5.2	7
48	Effect of Coordination Environment Surrounding a Single Pt Site on the Liquid-Phase Aerobic Oxidation of 5-Hydroxymethylfurfural. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 48582-48594.	4.0	12
49	Single-Atom (Iron-Based) Catalysts: Synthesis and Applications. <i>Chemical Reviews</i> , 2021, 121, 13620-13697.	23.0	136
50	Plasmon-Induced Water Splitting on Ag-Alloyed Pt Single-Atom Catalysts. <i>Frontiers in Chemistry</i> , 2021, 9, 742794.	1.8	6
51	Highly Selective Hydrogenation of Phenols to Cyclohexanone Derivatives Using a Palladium@N-Doped Carbon/SiO <sub>2</sub> Catalyst. <i>Organic Process Research and Development</i> , 2021, 25, 2425-2431.	1.3	3
52	Water Splitting by a C <sub>60</sub> Supported Single Vanadium Atom. <i>Angewandte Chemie</i> , 0, , .	1.6	0
53	Water Splitting by C <sub>60</sub> -Supported Vanadium Single Atoms. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 27095-27101.	7.2	25
54	Tunable metal-support interaction of Pt/CeO <sub>2</sub> catalyst via surfactant-assisted strategy: Insight into the total oxidation of CO and toluene. <i>Journal of Hazardous Materials</i> , 2022, 424, 127601.	6.5	23
55	The Dehydrogenation of H <sub>2</sub> S Bond into Sulfur Species on Supported Pd Single Atoms Allows Highly Selective and Sensitive Hydrogen Sulfide Detection. <i>Small</i> , 2021, 17, e2105643.	5.2	14

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56	Electronic configuration of single ruthenium atom immobilized in urchin-like tungsten trioxide towards hydrazine oxidation-assisted hydrogen evolution under wide pH media. <i>Chemical Engineering Journal</i> , 2022, 430, 132953.	6.6	20
57	Single atoms supported on metal oxides for energy catalysis. <i>Journal of Materials Chemistry A</i> , 2022, 10, 5717-5742.	5.2	29
58	A single-atom Cu <sup>2+</sup> catalyst eliminates oxygen interference for electrochemical sensing of hydrogen peroxide in a living animal brain. <i>Chemical Science</i> , 2021, 12, 15045-15053.	3.7	36
59	Single-Atom Catalysis: Far beyond the Matter of Metal Dispersion. <i>Nano Letters</i> , 2021, 21, 9835-9837.	4.5	35
60	Boosting the Dispersity of Metallic Ag Nanoparticles and Ozone Decomposition Performance of Ag-Mn Catalysts via Manganese Vacancy-Dependent Metal-Support Interactions. <i>Environmental Science &amp; Technology</i> , 2021, 55, 16143-16152.	4.6	24
61	Single-Atom Catalysts: A Review of Synthesis Strategies and Their Potential for Biofuel Production. <i>Catalysts</i> , 2021, 11, 1470.	1.6	6
62	Advanced Support Materials and Interactions for Atomically Dispersed Noble-Metal Catalysts: From Support Effects to Design Strategies. <i>Advanced Energy Materials</i> , 2022, 12, 2102556.	10.2	78
64	Single-Atomic Ruthenium Active Sites on Ti <sub>3</sub> C <sub>2</sub> MXene with Oxygen-Terminated Surface Synchronize Enhanced Activity and Selectivity for Electrocatalytic Nitrogen Reduction to Ammonia. <i>ChemSusChem</i> , 2022, 15, e202102352.	3.6	17
65	A general strategy for preparing pyrrolic-N <sub>4</sub> type single-atom catalysts via pre-located isolated atoms. <i>Nature Communications</i> , 2021, 12, 6806.	5.8	81
66	Performance improvement of ultra-low Pt proton exchange membrane fuel cell by catalyst layer structure optimization. <i>Chinese Journal of Chemical Engineering</i> , 2022, 41, 473-479.	1.7	7
67	Tuning partially charged Pt <sup>+</sup> of atomically dispersed Pt catalysts toward superior propane dehydrogenation performance. <i>Catalysis Science and Technology</i> , 2021, 11, 7840-7843.	2.1	5
68	Recent advances in composite and heterostructured photoactive materials for the photochemical conversion of solar energy. <i>Current Opinion in Green and Sustainable Chemistry</i> , 2022, 34, 100588.	3.2	7
69	Elucidating the Critical Role of Ruthenium Single Atom Sites in Water Dissociation and Dehydrogenation Behaviors for Robust Hydrazine Oxidation-Boosted Alkaline Hydrogen Evolution. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	77
70	Atomically precise structures of Pt <sub>2</sub> (S-Adam) <sub>4</sub> (PPh <sub>3</sub> ) <sub>2</sub> complexes and catalytic application in propane dehydrogenation. <i>Nanoscale</i> , 2022, 14, 2482-2489.	2.8	3
71	Exploration of Metal-Molecule interaction of subnanometric heterogeneous catalysts via simulated Raman spectrum. <i>Applied Surface Science</i> , 2022, 579, 152194.	3.1	2
72	Electronic Metal-Support Interaction Modulation of Single-Atom Electrocatalysts for Rechargeable Zinc-Air Batteries. <i>Small Methods</i> , 2022, 6, e2100947.	4.6	29
73	Plasmonic Core-Shell Materials: Synthesis, Spectroscopic Characterization, and Photocatalytic Applications. <i>Accounts of Materials Research</i> , 2022, 3, 187-198.	5.9	13
74	Polyoxometalate-based materials: quasi-homogeneous single-atom catalysts with atomic-precision structures. <i>Journal of Materials Chemistry A</i> , 2022, 10, 5758-5770.	5.2	17

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75	Noble-metal based single-atom catalysts for the water-gas shift reaction. <i>Chemical Communications</i> , 2021, 58, 208-222.	2.2	13
76	Modulating the Local Coordination Environment of Single-Atom Catalysts for Enhanced Catalytic Performance in Hydrogen/Oxygen Evolution Reaction. <i>Small</i> , 2022, 18, e2105680.	5.2	56
77	Anomalously persistent p-type behavior of WSe <sub>2</sub> field-effect transistors by oxidized edge-induced Fermi-level pinning. <i>Journal of Materials Chemistry C</i> , 2022, 10, 846-853.	2.7	5
78	Single-atom catalysts for thermal- and electro-catalytic hydrogenation reactions. <i>Journal of Materials Chemistry A</i> , 2022, 10, 5743-5757.	5.2	22
79	Rare earth element based single-atom catalysts: synthesis, characterization and applications in photo/electro-catalytic reactions. <i>Nanoscale Horizons</i> , 2021, 7, 31-40.	4.1	26
80	Atomically Defined Undercoordinated Copper Active Sites over Nitrogen-Doped Carbon for Aerobic Oxidation of Alcohols. <i>Small</i> , 2022, 18, e2106614.	5.2	15
81	Atom manufacturing of photocatalyst towards solar CO <sub>2</sub> reduction. <i>Reports on Progress in Physics</i> , 2022, 85, 026501.	8.1	8
82	One-pot synthesis of mesoporous silicas supported Cu single-atom and CuO nanoparticles for peroxydisulfate-activated degradation of tetracycline over a wide pH range. <i>Microporous and Mesoporous Materials</i> , 2022, 333, 111729.	2.2	9
83	Unprecedentedly high activity and selectivity for hydrogenation of nitroarenes with single atomic Co <sub>1</sub> -N <sub>3</sub> P <sub>1</sub> sites. <i>Nature Communications</i> , 2022, 13, 723.	5.8	91
84	Regulating the Tip Effect on Single-Atom and Cluster Catalysts: Forming Reversible Oxygen Species with High Efficiency in Chlorine Evolution Reaction. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	76
85	Regulating the Tip Effect on Single-Atom and Cluster Catalysts: Forming Reversible Oxygen Species with High Efficiency in Chlorine Evolution Reaction. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	25
86	Higher loadings of Pt single atoms and clusters over reducible metal oxides: application to C=O bond activation. <i>Catalysis Science and Technology</i> , 2022, 12, 2920-2928.	2.1	7
87	Single metal atoms catalysts—Promising candidates for next generation energy storage and conversion devices. <i>EcoMat</i> , 2022, 4, .	6.8	28
88	Synthesis of cobalt single atom catalyst by a solid-state transformation strategy for direct C-C cross-coupling of primary and secondary alcohols. <i>Nano Research</i> , 2022, 15, 4023-4031.	5.8	16
91	Mn <sup>II/III</sup> and Ce <sup>III/IV</sup> Units Supported on an Octahedral Molecular Nanoparticle of CeO <sub>2</sub> . <i>Inorganic Chemistry</i> , 2022, .	1.9	2
92	Regeneration of La <sub>2</sub> O <sub>3</sub> -Supported Pt Nanoparticles Giving High Loadings of Thermally Stable Pt Single Atoms on La <sub>2</sub> O <sub>3</sub> Supports: Implications for Catalysis. <i>ACS Applied Nano Materials</i> , 2022, 5, 2688-2698.	2.4	6
93	Atomic Lego Catalysts Synthesized by Atomic Layer Deposition. <i>Accounts of Materials Research</i> , 2022, 3, 358-368.	5.9	28
94	Exploiting the Fracture in Metal-Organic Frameworks: A General Strategy for Bifunctional Atom-Precise Nanocluster/ZIF-8(300Å°C) Composites. <i>Small</i> , 2022, 18, e2107459.	5.2	11

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95	Experimental and Theoretical Investigation of Metal-Support Interactions in Metal-Oxide-Supported Rhenium Materials. <i>Journal of Physical Chemistry C</i> , 2022, 126, 4472-4482.	1.5	5
96	Highly Stable and Reactive Platinum Single Atoms on Oxygen Plasma-Functionalized CeO <sub>2</sub> Surfaces: Nanostructuring and Peroxo Effects. <i>Angewandte Chemie</i> , 0, , .	1.6	1
97	Enabling High Loading in Single-Atom Catalysts on Bare Substrate with Chemical Scissors by Saturating the Anchoring Sites. <i>Small</i> , 2022, 18, e2200073.	5.2	14
98	Highly Active and Selective Electroreduction of N <sub>2</sub> by the Catalysis of Ga Single Atoms Stabilized on Amorphous TiO <sub>2</sub> Nanofibers. <i>ACS Nano</i> , 2022, 16, 4186-4196.	7.3	33
99	Crystal-Phase-Mediated Restructuring of Pt on TiO <sub>2</sub> with Tunable Reactivity: Redispersion versus Reshaping. <i>ACS Catalysis</i> , 2022, 12, 3634-3643.	5.5	44
100	Emerging Ultrahigh-Density Single-Atom Catalysts for Versatile Heterogeneous Catalysis Applications: Redefinition, Recent Progress, and Challenges. <i>Small Structures</i> , 2022, 3, .	6.9	41
101	Modulating the Electronic Metal-Support Interactions in Single-Atom Pt <sub>1</sub> -CuO Catalyst for Boosting Acetone Oxidation. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	4
102	PO <sub>4</sub> <sup>3-</sup> Coordinated Robust Single-Atom Platinum Catalyst for Selective Polyol Oxidation**. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	21
103	Top-down synthetic strategies toward single atoms on the rise. <i>Matter</i> , 2022, 5, 788-807.	5.0	28
104	Highly Stable and Reactive Platinum Single Atoms on Oxygen Plasma-Functionalized CeO <sub>2</sub> Surfaces: Nanostructuring and Peroxo Effects. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	26
105	PO <sub>4</sub> <sup>3-</sup> Coordinated Robust Single-Atom Platinum Catalyst for Selective Polyol Oxidation**. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	51
106	Modulating the Electronic Metal-Support Interactions in Single-Atom Pt <sub>1</sub> -CuO Catalyst for Boosting Acetone Oxidation. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	46
107	Heterolytic Dissociation of H <sub>2</sub> in Heterogeneous Catalysis. <i>ACS Catalysis</i> , 2022, 12, 4707-4723.	5.5	80
108	Observation of unsaturated platinum carbenes Pt <sub>2</sub> C <sub>2n</sub> (n = 1-3) clusters: A photoelectron imaging spectroscopic and theoretical study. <i>Journal of Chemical Physics</i> , 2022, 156, 164302.	1.2	2
109	Modulating the d-band centers by coordination environment regulation of single-atom Ni on porous carbon fibers for overall water splitting. <i>Nano Energy</i> , 2022, 98, 107266.	8.2	57
110	Highly dispersed and stabilized Pd species on H <sub>2</sub> pre-treated Al <sub>2</sub> O <sub>3</sub> for anthraquinone hydrogenation and H <sub>2</sub> O <sub>2</sub> production. <i>Molecular Catalysis</i> , 2022, 524, 112264.	1.0	3
111	Solid supported ruthenium catalyst for growing single-walled carbon nanotubes with narrow chirality distribution. <i>Carbon</i> , 2022, 193, 35-41.	5.4	7
112	Catalytic Scenarios Over Metal-Carbon Interaction Interface. <i>Frontiers in Chemistry</i> , 2021, 9, 810147.	1.8	2



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113	Single palladium atoms stabilized by $\hat{\Gamma}^2$ -FeOOH nanorod with superior performance for selective hydrogenation of cinnamaldehyde. <i>Nano Research</i> , 2022, 15, 3114-3121.	5.8	34
114	Light-promoted activation of oxygen and carbon monoxide for low-temperature catalytic oxidation. <i>Cell Reports Physical Science</i> , 2021, 2, 100678.	2.8	4
115	Metalâ€“Support Interactions of Single-Atom Catalysts for Biomedical Applications. <i>ACS Applied Materials &amp; Interfaces</i> , 2021, 13, 60815-60836.	4.0	16
116	Single-Atoms on Covalent or Metalâ€“Organic Frameworks: Current Findings and Perspectives for Pollutants Abatement, Hydrogen Evolution, and Reduction of CO <sub>2</sub> . <i>Topics in Current Chemistry</i> , 2022, 380, 7.	3.0	5
117	Pd/Fe <sub>2</sub> O <sub>3</sub> with Electronic Coupling Single-Site Pdâ€“Fe Pair Sites for Low-Temperature Semihydrogenation of Alkynes. <i>Journal of the American Chemical Society</i> , 2022, 144, 573-581.	6.6	69
118	Highly selective generation of singlet oxygen from dioxygen with atomically dispersed catalysts. <i>Chemical Science</i> , 2022, 13, 5606-5615.	3.7	9
119	Engineering single-atom catalysts toward biomedical applications. <i>Chemical Society Reviews</i> , 2022, 51, 3688-3734.	18.7	43
120	Ultrafast synthetic strategies under extreme heating conditions toward single-atom catalysts. <i>International Journal of Extreme Manufacturing</i> , 2022, 4, 032003.	6.3	13
121	Modulation of Moâ€“Feâ€“C Sites Over Mesoscale Diffusionâ€“Enhanced Hollow Subâ€“Micro Reactors Toward Boosted Electrochemical Water Oxidation. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	26
122	Facile Synthesis of Single Iron Atoms over MoS <sub>2</sub> Nanosheets via Spontaneous Reduction for Highly Efficient Selective Oxidation of Alcohols. <i>Small</i> , 2022, 18, e2201092.	5.2	23
123	High Pt-mass activity of PtIV1/ $\hat{\Gamma}^2$ -MnO <sub>2</sub> surface for low-temperature oxidation of CO under O <sub>2</sub> -rich conditions. <i>Catalysis Science and Technology</i> , 2022, 12, 2749-2754.	2.1	1
124	Diverse and efficient catalytic applications of new cockscomb flower-like Fe <sub>3</sub> O <sub>4</sub> @SiO <sub>2</sub> @KCC-1@MPTMS@Cu <sup>sup</sup> mesoporous nanocomposite in the environmentally benign reduction and reductive acetylation of nitroarenes and one-pot synthesis of some coumarin compounds. <i>RSC Advances</i> , 2022, 12, 11164-11189.	1.7	13
125	Atomically dispersed Ru catalysts for polychlorinated aromatic hydrocarbon oxidation. <i>Nanoscale</i> , 2022, 14, 7849-7855.	2.8	4
126	Coexistence of Fe Nanoclusters Boosting Fe Single Atoms to Generate Singlet Oxygen for Efficient Aerobic Oxidation of Primary Amines to Imines. <i>ACS Catalysis</i> , 2022, 12, 5595-5604.	5.5	58
127	Recent advances in the rational design of single-atom catalysts for electrochemical CO <sub>2</sub> reduction. <i>Nano Research</i> , 2022, 15, 9747-9763.	5.8	19
128	Adatom Bonding Sites in a Nickelâ€“Fe <sub>3</sub> O <sub>4</sub> (001) Singleâ€“Atom Model Catalyst and O <sub>2</sub> Reactivity Unveiled by Surface Action Spectroscopy with Infrared Freeâ€“electron Laser Light. <i>Angewandte Chemie</i> , 0, , .	1.6	2
129	Effect of ceria surface facet on stability and reactivity of isolated platinum atoms. <i>Nano Research</i> , 2022, 15, 5922-5932.	5.8	11
130	Universal Principles for the Rational Design of Single Atom Electrocatalysts? Handle with Care. <i>ACS Catalysis</i> , 2022, 12, 5846-5856.	5.5	60



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131	Defect engineering of oxide surfaces: dream or reality?. Journal of Physics Condensed Matter, 2022, 34, 291501.	0.7	2
132	Adatom Bonding Sites in a Nickel-Fe <sub>3</sub> O <sub>4</sub> (001) Single-Atom Model Catalyst and O <sub>2</sub> Reactivity Unveiled by Surface Action Spectroscopy with Infrared Free-Electron Laser Light. Angewandte Chemie - International Edition, 2022, 61, e202202561.	7.2	6
133	Electroreduction of N <sub>2</sub> to NH <sub>3</sub> catalyzed by a Mn/Re(111) single-atom alloy catalyst with high activity and selectivity: a new insight from a first-principles study. Catalysis Science and Technology, 2022, 12, 4074-4085.	2.1	6
134	Redispersion of Pt nanoparticles encapsulated within ZSM-5 in oxygen and catalytic properties in partial oxidation of methane. Journal of Porous Materials, 0, , 1.	1.3	0
135	Isolating Single and Few Atoms for Enhanced Catalysis. Advanced Materials, 2022, 34, e2201796.	11.1	84
136	Atomically dispersed metal catalysts confined by covalent organic frameworks and their derivatives for electrochemical energy conversion and storage. Coordination Chemistry Reviews, 2022, 466, 214592.	9.5	16
137	Pd single-atom catalysts derived from strong metal-support interaction for selective hydrogenation of acetylene. Nano Research, 2022, 15, 10037-10043.	5.8	28
138	Non-noble metal single-atom catalyst with MXene support: Fe <sub>1</sub> /Ti <sub>2</sub> CO <sub>2</sub> for CO oxidation. Chinese Journal of Catalysis, 2022, 43, 1830-1841.	6.9	16
139	Co <sub>3</sub> -O <sub>4</sub> /NiO with abundant Ni <sup>3+</sup> active sites for boosting oxygen evolution reaction. Chemical Engineering Journal, 2022, 446, 137036.	6.6	15
140	Evaluating acid and metallic site proximity in Pt/ <sup>β</sup> -Al <sub>2</sub> O <sub>3</sub> -Cl bifunctional catalysts through an atomic scale geometrical model. Nanoscale, 2022, 14, 8753-8765.	2.8	6
141	Single Atom Catalysts for Selective Methane Oxidation to Oxygenates. ACS Nano, 2022, 16, 8557-8618.	7.3	48
142	Silicalite-1 encapsulated rhodium nanoparticles for hydroformylation of 1-hexene. Catalysis Today, 2023, 410, 150-156.	2.2	3
143	Mass Production of Pt Single-Atom-Decorated Bismuth Sulfide for n-Type Environmentally Friendly Thermoelectrics. Nano Letters, 2022, 22, 4750-4757.	4.5	20
144	Single-Atom Catalysts for Hydrogen Generation: Rational Design, Recent Advances, and Perspectives. Advanced Energy Materials, 2022, 12, .	10.2	42
145	Single-atom site catalysts based on high specific surface area supports. Physical Chemistry Chemical Physics, 2022, 24, 17417-17438.	1.3	11
146	Machine learning for design principles for single atom catalysts towards electrochemical reactions. Journal of Materials Chemistry A, 2022, 10, 15309-15331.	5.2	28
147	Single-Atom Catalysts (SACs) for Photocatalytic CO <sub>2</sub> Reduction with H <sub>2</sub> O: Activity, Product Selectivity, Stability, and Surface Chemistry. Small, 2022, 18, .	5.2	54
148	Understanding the structure-performance relationship of active sites at atomic scale. Nano Research, 2022, 15, 6888-6923.	5.8	391

#	ARTICLE	IF	CITATIONS
149	Solid-State Reaction Synthesis of Nanoscale Materials: Strategies and Applications. <i>Chemical Reviews</i> , 2022, 122, 12748-12863.	23.0	35
150	Heterogeneous Catalysis for Carbon Dioxide Mediated Hydrogen Storage Technology Based on Formic Acid. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	38
151	Promotional Effect of H <sub>2</sub> Pretreatment on the CO PROX Performance of Pt <sub>1</sub> /Co <sub>3</sub> O <sub>4</sub> : A First-Principles-Based Microkinetic Analysis. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 27762-27774.	4.0	2
152	Single atoms meet metal-organic frameworks: collaborative efforts for efficient photocatalysis. <i>Energy and Environmental Science</i> , 2022, 15, 3722-3749.	15.6	107
153	Emerging ruthenium single-atom catalysts for the electrocatalytic hydrogen evolution reaction. <i>Journal of Materials Chemistry A</i> , 2022, 10, 15370-15389.	5.2	19
154	Fully-exposed Pt clusters stabilized on Sn-decorated nanodiamond/graphene hybrid support for efficient ethylbenzene direct dehydrogenation. <i>Nano Research</i> , 2022, 15, 10029-10036.	5.8	7
155	Effect of Hydroxyl Groups on Metal Anchoring and Formaldehyde Oxidation Performance of Pt/Al <sub>2</sub> O <sub>3</sub> . <i>Environmental Science &amp; Technology</i> , 2022, 56, 10916-10924.	4.6	30
156	Homogeneity of Supported Single-Atom Active Sites Boosting the Selective Catalytic Transformations. <i>Advanced Science</i> , 2022, 9, .	5.6	47
157	Amorphous metallic ultrathin nanostructures: A latent ultra-high-density atomic-level catalyst for electrochemical energy conversion. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 26956-26977.	3.8	35
158	Single Atom Catalysts: What Matters Most, the Active Site or The Surrounding?. <i>ChemCatChem</i> , 2022, 14, .	1.8	18
159	Reaction-dominated combustion control of ammonium perchlorate-based composites by layered V <sub>2</sub> C MXene. <i>Energetic Materials Frontiers</i> , 2022, 3, 199-208.	1.3	6
160	A Single-Atom Cobalt Catalyst for the Fluorination of Acyl Chlorides at Parts-per-million Catalyst Loading. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	41
161	Catalytic applications of single-atom metal-anchored hydroxides: Recent advances and perspective. <i>Materials Reports Energy</i> , 2022, 2, 100146.	1.7	4
162	Zero-oxidation state precursor assisted fabrication of highly dispersed and stable Pt catalyst for chemoselective hydrogenation of I <sub>2</sub> , I <sub>2</sub> -unsaturated aldehydes. <i>Nano Research</i> , 2023, 16, 6085-6093.	5.8	5
163	Advances and challenges in developing cocatalysts for photocatalytic conversion of carbon dioxide to fuels. <i>Nano Research</i> , 2022, 15, 10090-10109.	5.8	21
164	Theoretical Evaluation of Electrochemical Nitrate Reduction Reaction on Graphdiyne-Supported Transition Metal Single-Atom Catalysts. <i>ACS Omega</i> , 2022, 7, 31309-31317.	1.6	5
165	Carrier Dynamics and Surface Reaction Boosted by Polymer-based Single-atom Photocatalysts. <i>Chemical Research in Chinese Universities</i> , 2022, 38, 1207-1218.	1.3	7
166	Data-driven models for ground and excited states for Single Atoms on Ceria. <i>Npj Computational Materials</i> , 2022, 8, .	3.5	5

#	ARTICLE	IF	CITATIONS
167	Single-atom catalysts for thermochemical gas-phase reactions. <i>Molecular Catalysis</i> , 2022, 529, 112535.	1.0	1
168	Heterogeneous hydroformylation of alkenes by Rh-based catalysts. <i>CheM</i> , 2022, 8, 2630-2658.	5.8	35
169	Coupling Metal and Support Redox Terms in Single-Atom Catalysts. <i>Journal of Physical Chemistry C</i> , 2022, 126, 13698-13704.	1.5	8
170	A Single-Atom Cobalt Catalyst for the Fluorination of Acyl Chlorides at Parts-per-Million Catalyst Loading. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	2
171	Coordinating single-atom catalysts on two-dimensional nanomaterials: A paradigm towards bolstered photocatalytic energy conversion. <i>Coordination Chemistry Reviews</i> , 2022, 471, 214743.	9.5	25
172	Synergistic Pt-CeO <sub>2</sub> interface boosting low temperature dry reforming of methane. <i>Applied Catalysis B: Environmental</i> , 2022, 318, 121809.	10.8	46
173	In Situ DRIFTS Study of Single-Atom, 2D, and 3D Pt on $\gamma$ -Al <sub>2</sub> O <sub>3</sub> Nanoflakes and Nanowires for C <sub>2</sub> H <sub>4</sub> Oxidation. <i>Processes</i> , 2022, 10, 1773.	1.3	2
174	Outlook on Single Atom Catalysts for Persulfate-Based Advanced Oxidation. <i>ACS ES&amp;T Engineering</i> , 2022, 2, 1776-1796.	3.7	57
175	Understanding and application of metal-support interactions in catalysts for CO-PROX. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 18454-18468.	1.3	3
176	Valence states of single Au atoms dictate the catalytic activity of Au <sub>1</sub> /CeO <sub>2</sub> (100). <i>Chemical Communications</i> , 0, , .	2.2	0
177	Understanding the facet effects of heterogeneous Rh <sub>2</sub> P catalysts for styrene hydroformylation. <i>Catalysis Science and Technology</i> , 2022, 12, 6112-6119.	2.1	4
178	Heterogeneous N-coordinated single-atom photocatalysts and electrocatalysts. <i>Chinese Journal of Catalysis</i> , 2022, 43, 2453-2483.	6.9	33
179	MOF-derived single-atom catalysts: The next frontier in advanced oxidation for water treatment. <i>Chemical Engineering Journal</i> , 2023, 452, 139446.	6.6	28
180	Dehydroxylation of Kaolinite Tunes Metal Oxide-Nanoclay Interactions for Enhancing Antibacterial Activity. <i>Minerals (Basel, Switzerland)</i> , 2022, 12, 1097.	0.8	2
181	The Progress and Outlook of Metal Single-Atom-Site Catalysis. <i>Journal of the American Chemical Society</i> , 2022, 144, 18155-18174.	6.6	151
182	Advanced Strategies for Stabilizing Single-Atom Catalysts for Energy Storage and Conversion. <i>Electrochemical Energy Reviews</i> , 2022, 5, .	13.1	43
183	Single-Atom Iridium-Catalyst-Embedded Zeolitic Imidazolate Frameworks for CO <sub>2</sub> and Glycerol Transformations. <i>Chemistry of Materials</i> , 2022, 34, 8153-8162.	3.2	6
184	High-Areal Density Single-Atoms/Metal Oxide Nanosheets: A Micro-Gas Blasting Synthesis and Superior Catalytic Properties. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	3

#	ARTICLE	IF	CITATIONS
185	Single-Atom Materials as Electrochemical Sensors: Sensitivity, Selectivity, and Stability. <i>Analysis &amp; Sensing</i> , 2023, 3, .	1.1	0
186	High-Areal Density Single-Atoms/Metal Oxide Nanosheets: A Micro-Gas Blasting Synthesis and Superior Catalytic Properties. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	11
187	TiO <sub>2</sub> -supported Single-atom Catalysts: Synthesis, Structure, and Application. <i>Chemical Research in Chinese Universities</i> , 2022, 38, 1123-1138.	1.3	14
188	Switchable Tuning CO <sub>2</sub> Hydrogenation Selectivity by Encapsulation of the Rh Nanoparticles While Exposing Single Atoms. <i>Small</i> , 2022, 18, .	5.2	12
189	Single-atom catalysts on metal-based supports for solar photoreduction catalysis. <i>Chinese Journal of Catalysis</i> , 2022, 43, 2301-2315.	6.9	19
190	Long-Range Interactions in Diatomic Catalysts Boosting Electrocatalysis. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	18
191	Recent Advances on Confining Noble Metal Nanoparticles Inside Metal-Organic Frameworks for Hydrogenation Reactions. <i>Chemical Research in Chinese Universities</i> , 2022, 38, 1309-1323.	1.3	9
192	Long-Range Interactions in Diatomic Catalysts Boosting Electrocatalysis. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	142
193	Volcano-type relationship between oxidation states and catalytic activity of single-atom catalysts towards hydrogen evolution. <i>Nature Communications</i> , 2022, 13, .	5.8	48
194	Sn auxiliary agent promoting dispersion of Pt atoms over CeO <sub>2</sub> catalysts and DFT calculation. <i>Journal of Alloys and Compounds</i> , 2022, 929, 167214.	2.8	0
195	Crystalline Support. , 2022, , 197-218.		0
196	Exploring high-efficiency electrocatalysts of metal-doped two-dimensional C <sub>4</sub> N for oxygen reduction, oxygen evolution, and hydrogen evolution reactions by first-principles screening. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 26061-26069.	1.3	15
197	Overview of Crystalline Metal Oxide Catalysts. , 2022, , 1-51.		0
198	Tailoring the Dispersion of Metals on ZnO with Preadsorbed Water. <i>Journal of Physical Chemistry Letters</i> , 2022, 13, 10207-10215.	2.1	0
199	Optimizing the semiconductor-metal-single-atom interaction for photocatalytic reactivity. <i>Nature Reviews Chemistry</i> , 2022, 6, 823-838.	13.8	42
200	Functional CeO <sub>x</sub> nanoglues for robust atomically dispersed catalysts. <i>Nature</i> , 2022, 611, 284-288.	13.7	110
201	Electrical Pulse Induced One-Step Formation of Atomically Dispersed Pt on Oxide Clusters for Ultra-Low-Temperature Zinc-Air Battery. <i>Angewandte Chemie</i> , 0, , .	1.6	3
202	Electrical Pulse Induced One-Step Formation of Atomically Dispersed Pt on Oxide Clusters for Ultra-Low-Temperature Zinc-Air Battery. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	26

#	ARTICLE	IF	CITATIONS
203	Precise Construction of High Metallicity and High Stability TM1/Cu2O(111) Single-Atom Catalysts by First-Principles. <i>Catalysis Letters</i> , 0, , .	1.4	0
204	Revealing the Tunable Effects of Single Metal Atoms Supported on Nitrogen-Doped Carbon Nanotubes during NO Oxidation from Microkinetic Simulation. <i>Journal of Physical Chemistry C</i> , 2022, 126, 18275-18281.	1.5	3
205	Comprehensive activity evaluation of single-atom catalysts. <i>Chem Catalysis</i> , 2023, 3, 100424.	2.9	3
206	Single Nickel Atom Catalysts Enable Fast Polysulfide Redox for Safe and Longâ€Cycle Lithiumâ€Sulfur Batteries. <i>Small</i> , 2022, 18, .	5.2	14
207	<i>In-Situ</i> Grafting of Single-Atomic Titaniumâ€Nitrogen Moiety onto Carbon Nanostructures for Efficient Photovoltaic Devices. <i>ACS Applied Materials &amp; Interfaces</i> , 2022, 14, 50849-50857.	4.0	3
208	Facet-dependent electronic state of Pt single atoms anchoring on CeO2 nanocrystal for CO (preferential) oxidation. <i>Journal of Catalysis</i> , 2022, 415, 174-185.	3.1	24
209	Pd single atom stabilized on multiscale porous hollow carbon fibers for phenylacetylene semi-hydrogenation reaction. <i>Chemical Engineering Journal</i> , 2023, 454, 140031.	6.6	2
210	Selective Hydrodeoxygenation of Aromatics to Cyclohexanols over Ru Single Atoms Supported on CeO <sub>2</sub> . <i>Journal of the American Chemical Society</i> , 2022, 144, 20834-20846.	6.6	35
211	Insight into Key Parameters for Fabricating Stable Singleâ€Atom Ptâ€Ni <sub>x</sub> Alloy by Reduction Environmentâ€Induced Antiâ€Ostwald Effects. <i>ChemSusChem</i> , 2023, 16, .	3.6	2
212	Entropy-Increasing Single-Atom Photocatalysts Strengthening the Polarization Field for Boosting H <sub>2</sub> O Overall Splitting into H <sub>2</sub> . <i>ACS Catalysis</i> , 2022, 12, 14708-14716.	5.5	18
213	Fine-tuned local coordination environment of Pt single atoms on ceria controls catalytic reactivity. <i>Nature Communications</i> , 2022, 13, .	5.8	47
214	The dual-active-site tandem catalyst containing Ru single atoms and Ni nanoparticles boosts CO2 methanation. <i>Applied Catalysis B: Environmental</i> , 2023, 323, 122190.	10.8	32
215	Fundamental, application and opportunities of single atom catalysts for Li-S batteries. <i>Energy Storage Materials</i> , 2023, 55, 322-355.	9.5	36
216	Computational screening of transition metal atom doped C3N as electrocatalysts for nitrogen fixation. <i>Molecular Catalysis</i> , 2023, 535, 112888.	1.0	3
217	Excellent catalytic oxidation performance on toluene over Pt supported on CeTiOx with hierarchical tubular-like structures: Effects of Ce addition in CeTiOx on activity of Pt/CeTiOx. <i>Applied Catalysis A: General</i> , 2023, 650, 118999.	2.2	4
218	Hydroperoxyl-mediated C-H bond activation on Cr single atom catalyst: An alternative to the Fenton mechanism. <i>Journal of Catalysis</i> , 2023, 417, 323-333.	3.1	4
219	Highly porous CuZnAl layered double hydroxides prepared by biochar-templated co-precipitation method as catalysts for the preferential oxidation of CO reaction. <i>Applied Clay Science</i> , 2023, 232, 106776.	2.6	3
220	Configuration regulation of active sites by accurate doping inducing self-adapting defect for enhanced photocatalytic applications: A review. <i>Coordination Chemistry Reviews</i> , 2023, 478, 214970.	9.5	28

#	ARTICLE	IF	CITATIONS
221	Recent advances in heterogeneous single-atom nanomaterials: From engineered metal-support interaction to applications in sensors. <i>Coordination Chemistry Reviews</i> , 2023, 478, 214976.	9.5	33
222	Thermocatalytic CO <sub>2</sub> conversion by siliceous matter: a review. <i>Journal of Materials Chemistry A</i> , 2023, 11, 1593-1633.	5.2	7
223	Synergistic Effects of Keggin-Type Phosphotungstic Acid-Supported Single-Atom Catalysts in a Fast NH <sub>3</sub> -SCR Reaction. <i>Inorganic Chemistry</i> , 2022, 61, 19156-19171.	1.9	4
224	Strategies toward High-Loading Lithium-Sulfur Batteries. <i>ACS Energy Letters</i> , 2023, 8, 116-150.	8.8	65
225	Matching Bidentate Ligand Anchoring: an Accurate Control Strategy for Stable Single-Atom/ZIF Nanocatalysts. <i>Advanced Materials</i> , 2023, 35, .	11.1	13
226	Periodic Arrays of Metal Nanoclusters on Ultrathin Fe-Oxide Films Modulated by Metal-Oxide Interactions. <i>Jacs Au</i> , 2023, 3, 176-184.	3.6	2
227	Coupled Co-Doped MoS <sub>2</sub> and CoS <sub>2</sub> as the Dual-Active Site Catalyst for Chemoselective Hydrogenation. <i>ACS Applied Materials &amp; Interfaces</i> , 2023, 15, 1317-1325.	4.0	7
228	Electrochemical NO reduction to NH <sub>3</sub> on Cu single atom catalyst. <i>Nano Research</i> , 2023, 16, 5857-5863.	5.8	59
229	Ultrafine Nickel Sulfide-Based Bipolar Resistive Switching Device as Artificial Synapses for Neuromorphic Application. <i>ACS Applied Electronic Materials</i> , 2022, 4, 6117-6124.	2.0	2
230	Gold Atomic Layers and Isolated Atoms on MoC for the Low-Temperature Water Gas Shift Reaction. <i>ACS Catalysis</i> , 2022, 12, 15648-15657.	5.5	3
231	Cathode Materials for Secondary Zinc-Air Batteries. , 2023, , 67-156.		0
232	Integrated <i>in situ</i> spectroscopic studies on syngas production from partial oxidation of methane catalyzed by atomically dispersed rhodium cations on ceria. <i>Physical Chemistry Chemical Physics</i> , 0, , .	1.3	1
233	Dual-Metal Single Atoms with Dual Coordination for the Domino Synthesis of Natural Flavones. <i>Jacs Au</i> , 2023, 3, 185-194.	3.6	7
235	Screening out the Transition Metal Single Atom Supported on Onion-like Carbon (OLC) for the Hydrogen Evolution Reaction. <i>Inorganic Chemistry</i> , 2023, 62, 1001-1006.	1.9	4
236	Surface immobilization of nitrogen-coordinated iron atoms: a facile and efficient strategy toward MNC sites with superior catalytic activities. <i>Inorganic Chemistry Frontiers</i> , 2023, 10, 1143-1152.	3.0	3
237	Site-Selective Polyolefin Hydrogenolysis on Atomic Ru for Methanation Suppression and Liquid Fuel Production. <i>Research</i> , 2023, 6, .	2.8	15
238	Facile fabrication of atomically dispersed Ru-P-Ru ensembles for efficient hydrogenations beyond isolated single atoms. <i>Chinese Journal of Catalysis</i> , 2023, 45, 107-119.	6.9	3
239	Nickel single atoms/cerium oxide hybrid for hydrogen production via solar-heating catalytic dehydrogenation of methyl Cyclohexane. <i>Journal of Power Sources</i> , 2023, 559, 232674.	4.0	1

#	ARTICLE	IF	CITATIONS
240	In-situ reconstruction of single-atom Pt on Co <sub>3</sub> O <sub>4</sub> for hydrogenation. Nano Research, 2023, 16, 6507-6511.	5.8	5
241	Geometric and Electronic Effects in Hydrogenation Reactions. ACS Catalysis, 2023, 13, 974-1019.	5.5	11
242	Lewis Acid Fe <sup>IV</sup> Pairs Promote Nitrate Electroreduction to Ammonia. Advanced Functional Materials, 2023, 33, .	7.8	70
243	Single-atom catalysis enabled by high-energy metastable structures. Chemical Science, 2023, 14, 2631-2639.	3.7	5
244	Interface effects in metal oxide heterostructures. , 2023, , 43-75.		0
245	Electrothermal Water-Gas Shift Reaction at Room Temperature with a Silicomolybdate based Pd Single-Atom Catalyst. Angewandte Chemie, 0, , .	1.6	1
246	Atomic Cu <sup>II</sup> -N <sup>3-</sup> Active Complex with Integrated Oxidation and Chlorination for Improved Ethylene Oxychlorination. Advanced Science, 2023, 10, .	5.6	6
247	Generation and nature of water-tolerant Lewis acid sites in In <sub>x</sub> Sn <sub>10-x</sub> O <sub>y</sub> /Al <sub>2</sub> O <sub>3</sub> catalysts as active centers for the green synthesis of methyl lactate from glucose. Inorganic Chemistry Frontiers, 0, , .	3.0	1
248	Carbon Dioxide Conversion on Supported Metal Nanoparticles: A Brief Review. Catalysts, 2023, 13, 305.	1.6	9
249	p-Block Antimony Single-Atom Catalysts for Nitric Oxide Electroreduction to Ammonia. ACS Energy Letters, 2023, 8, 1281-1288.	8.8	60
250	Single-atom copper catalyst for the <i>S</i> -arylation reaction to produce diaryl disulfides. Chemical Science, 2023, 14, 4620-4626.	3.7	1
251	Single atom Pd <sub>1</sub> /ZIF-8 catalyst via partial ligand exchange. Nano Research, 2023, 16, 8003-8011.	5.8	4
252	Tuning lattice strain in Quasi-2D Au-rGO nanohybrid catalysts for dimethylphenylsilane solid state silylation to disiloxane. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2023, 291, 116395.	1.7	0
253	Triple-enzyme-mimicking AuPt <sub>3</sub> Cu hetero-structural alloy nanozymes towards cascade reactions in chemodynamic therapy. Chemical Engineering Journal, 2023, 463, 142494.	6.6	5
254	Recent advance of atomically dispersed catalysts for direct methane oxidation under mild aqueous conditions. Materials Today Sustainability, 2023, 22, 100351.	1.9	2
255	Mixed-valence palladium single-atom catalyst induced by hybrid TiO <sub>2</sub> -graphene through a photochemical strategy. Applied Surface Science, 2023, 625, 157115.	3.1	1
256	Single-Atom Iridium-Based Catalysts: Synthesis Strategies and Electro(Photo)-Catalytic Applications for Renewable Energy Conversion and Storage. Coordination Chemistry Reviews, 2023, 486, 215143.	9.5	8
257	Metal-organic frameworks stabilized Mo and W binary single-atom catalysts as high performance bifunctional electrocatalysts for water electrolysis. Nano Energy, 2023, 112, 108450.	8.2	6



#	ARTICLE	IF	CITATIONS
258	A pathway for promoting bioelectrochemical performance of microbial fuel cell by synthesizing graphite carbon nitride doped on single atom catalyst copper as cathode catalyst. <i>Bioresource Technology</i> , 2023, 372, 128677.	4.8	6
259	Electrothermal Water-Gas Shift Reaction at Room Temperature with a Silicomolybdate-Based Palladium Single-Atom Catalyst. <i>Angewandte Chemie - International Edition</i> , 2023, 62, .	7.2	5
260	Tuning the rate-determining step of uric acid electrooxidation over single-atom-site metal centers for high-performing sensing. <i>Chem Catalysis</i> , 2023, 3, 100514.	2.9	17
261	Heterolytic dissociation of H <sub>2</sub> and bond activation: Spotting new opportunities from a unified view. <i>Chem Catalysis</i> , 2023, 3, 100515.	2.9	9
262	Upgrading biogas into syngas via bi-reforming of model biogas over ruthenium-based nano-catalysts synthesized via mechanochemical method. <i>International Journal of Hydrogen Energy</i> , 2023, 48, 16958-16970.	3.8	7
263	Hydroformylation over polyoxometalates supported single-atom Rh catalysts. , 2023, 2, 20220064.		3
264	The Opportunities and Challenges in Single-Atom Catalysis. <i>ChemCatChem</i> , 2023, 15, .	1.8	4
265	Lattice confined Ru single sites in hollow Co <sub>9</sub> S <sub>8</sub> polyhedron triggering Co-S-Ru catalytic centers for rechargeable Zn-air battery. <i>Nano Research</i> , 2023, 16, 6701-6709.	5.8	6
266	Recent advances in the use of nitrogen-doped carbon materials for the design of noble metal catalysts. <i>Coordination Chemistry Reviews</i> , 2023, 481, 215053.	9.5	23
267	Challenges and Opportunities in Engineering the Electronic Structure of Single-Atom Catalysts. <i>ACS Catalysis</i> , 2023, 13, 2981-2997.	5.5	46
268	Elucidation of single atom catalysts for energy and sustainable chemical production: Synthesis, characterization and frontier science. <i>Progress in Energy and Combustion Science</i> , 2023, 96, 101074.	15.8	13
269	Tracking the Formation of Atomically Dispersed Co-NC Catalyst via <i>Operando</i> XAFS. <i>Journal of Physical Chemistry C</i> , 2023, 127, 5067-5074.	1.5	5
270	Biomass-Derived Single Zn Atom Catalysts: The Multiple Roles of Single Zn Atoms in the Oxidative Cleavage of C-N Bonds. <i>Jacs Au</i> , 2023, 3, 801-812.	3.6	3
271	Highly Effective Pt-Co/ZSM-5 Catalysts with Low Pt Loading for Preferential CO Oxidation in H <sub>2</sub> -Rich Mixture. <i>Hydrogen</i> , 2023, 4, 154-173.	1.7	2
272	2D carbon nitride as a support with single Cu, Ag, and Au atoms for carbon dioxide reduction reaction. <i>Physical Chemistry Chemical Physics</i> , 2023, 25, 8574-8582.	1.3	11
273	Transition Metal Single Atoms Constructed by Using Inherent Confined Space. <i>ACS Nano</i> , 2023, 17, 5025-5032.	7.3	9
274	Mechanochemical preparation of single atom catalysts for versatile catalytic applications: A perspective review. <i>Materials Today</i> , 2023, 63, 288-312.	8.3	29
275	Metal-oxide interactions modulating the activity of active oxygen species on atomically dispersed silver catalysts. <i>Chemical Communications</i> , 2023, 59, 3854-3857.	2.2	1

#	ARTICLE	IF	CITATIONS
276	Low-valent Manganese Atoms Stabilized on Ceria for Nitrous Oxide Synthesis. <i>Advanced Materials</i> , 2023, 35, .	11.1	4
277	Main-group indium single-atom catalysts for electrocatalytic NO reduction to NH <sub>3</sub> . <i>Journal of Materials Chemistry A</i> , 2023, 11, 6814-6819.	5.2	31
278	Heteronuclear Dual Single-Atom Catalysts for Ambient Conversion of CO <sub>2</sub> from Air to Formate. <i>ACS Catalysis</i> , 2023, 13, 3915-3924.	5.5	12
279	Ptychographic measurements of varying size and shape along zeolite channels. <i>Science Advances</i> , 2023, 9, .	4.7	8
280	Recent Advancements in the Preparation and Application of Copper Single-Atom Catalysts. <i>ACS Applied Nano Materials</i> , 2023, 6, 4987-5041.	2.4	10
281	Strong Metal-Support Interactions through Sulfur-Anchoring of Metal Catalysts on Carbon Supports. <i>Angewandte Chemie</i> , 2023, 135, .	1.6	1
282	Atomic design of carbon-based dual-metal site catalysts for energy applications. <i>Nano Research</i> , 2023, 16, 6477-6506.	5.8	25
283	Strong Metal-Support Interactions through Sulfur-Anchoring of Metal Catalysts on Carbon Supports. <i>Angewandte Chemie - International Edition</i> , 2023, 62, .	7.2	17
284	Recent advances in the theoretical studies on the electrocatalytic CO <sub>2</sub> reduction based on single and double atoms. <i>Frontiers in Chemistry</i> , 0, 11, .	1.8	2
285	Regulating the steric effect at the zero-dimensional interface. , 2023, 53, 0301.		0
286	Silica-Supported 1 <sup>st</sup> Row Transition Metal (Nano)Catalysts: Synthetic and Catalytic Insight. <i>ChemCatChem</i> , 2023, 15, .	1.8	1
287	Recent progress of Cu-based electrocatalysts for upgrading biomass-derived furanic compounds. <i>Catalysis Science and Technology</i> , 2023, 13, 2899-2921.	2.1	4
288	Advances in selective catalytic oxidation of ammonia (NH <sub>3</sub> -SCO): A review of catalyst structure-activity relationship and design principles. <i>Chinese Chemical Letters</i> , 2024, 35, 108432.	4.8	5
289	Interfacial Electron Distribution of Co Nanoparticles Supported on N-Doped Mesoporous Hollow Carbon Spheres Endows Highly Efficient ORR, OER, and HER. <i>Advanced Materials Interfaces</i> , 2023, 10, .	1.9	3
290	Atom-Precise Low-Nuclearity Cluster Catalysis: Opportunities and Challenges. <i>ACS Catalysis</i> , 2023, 13, 5609-5634.	5.5	15
291	In Situ High-Temperature Reaction-Induced Local Structural Dynamic Evolution of Single-Atom Pt on Oxide Support. , 2023, 1, 299-308.		1
292	Recent Progress on Non-Carbon-Supported Single-Atom Catalysts for Electrochemical Conversion of Green Energy. <i>Small Science</i> , 2023, 3, .	5.8	3
293	Recent Development of Single-Atom Catalysis for the Functionalization of Alkenes. <i>Catalysts</i> , 2023, 13, 730.	1.6	2

#	ARTICLE	IF	CITATIONS
294	For more and purer hydrogen-the progress and challenges in water gas shift reaction. Journal of Energy Chemistry, 2023, 83, 363-396.	7.1	11
295	Multifunctional design of single-atom catalysts for multistep reactions. Science China Chemistry, 2023, 66, 1241-1260.	4.2	5
296	Fabrication of highly oxidized Pt single-atom catalysts to suppress the deep hydrogenation of unsaturated aldehydes. Applied Catalysis B: Environmental, 2023, 333, 122783.	10.8	4
297	“Reduction-aggregation” strategy to construct a low-cost and high-efficiency Ag/Al <sub>2</sub> O <sub>3</sub> catalyst for NH <sub>3</sub> -SCO. Separation and Purification Technology, 2023, 317, 123881.	3.9	6
298	Bottom-up Synthesis of Pyramid-type (Pt/4nmCeO <sub>2</sub> )/SiO <sub>2</sub> Catalyst via Surface Reduction Strategy. Journal of Materials Chemistry A, 0, , .	5.2	0
300	Recent Advances in Electrocatalytic Nitrate Reduction to Ammonia: Mechanism Insight and Catalyst Design. ACS Sustainable Chemistry and Engineering, 2023, 11, 7965-7985.	3.2	15
308	Single-atom catalysts. , 2023, , 183-204.		0
315	Strategies for the design of ruthenium-based electrocatalysts toward acidic oxygen evolution reaction. , 2023, 1, 619-644.		2
341	Carbon nitride based materials: more than just a support for single-atom catalysis. Chemical Society Reviews, 2023, 52, 4878-4932.	18.7	31
347	Single-atom catalysts: promoters of highly sensitive and selective sensors. Chemical Society Reviews, 2023, 52, 5088-5134.	18.7	9
358	Inorganic ionic polymerization: From biomineralization to materials manufacturing. Nano Research, 2024, 17, 550-569.	5.8	2
361	Single-atom nanozymes: classification, regulation strategy, and safety concerns. Journal of Materials Chemistry B, 2023, 11, 9840-9866.	2.9	2
362	Advances and challenges in single-site catalysts towards electrochemical CO <sub>2</sub> methanation. Energy and Environmental Science, 2023, 16, 4812-4833.	15.6	3
364	Structure“performance relationship of nanomaterials. , 2024, , 43-92.		0
370	The reformation of catalyst: From a trial-and-error synthesis to rational design. Nano Research, 0, , .	5.8	16
375	Reactive oxygen nanobiocatalysts: activity-mechanism disclosures, catalytic center evolutions, and changing states. Chemical Society Reviews, 2023, 52, 6838-6881.	18.7	3
412	Exploring the Roles of Single Atom in Hydrogen Peroxide Photosynthesis. Nano-Micro Letters, 2024, 16, .	14.4	2
431	Unlocking single-atom catalysts via amorphous substrates. Nano Research, 0, , .	5.8	0

#	ARTICLE	IF	CITATIONS
432	Rare earth oxide based electrocatalysts: synthesis, properties and applications. Chemical Society Reviews, 2024, 53, 714-763.	18.7	2
446	Atomistic picture of electronic metal support interaction and the role of water. Journal of Materials Chemistry A, 2024, 12, 3258-3264.	5.2	0
457	Single atom catalysts for electrocatalytic hydrogen evolution reaction. , 2024, , 147-173.		0
472	Quantitative Measurements of Catalytic Activity of Single-Atom and Nanoparticle Palladium Catalysts for Sensitive Detection of Methane Using Cantilever-Based Temperature-Programmed Reduction Technique. , 2024, , .		0
476	Metal oxide nanocrystalsâ€™ applications. , 2024, , 853-879.		0