

Atomically dispersed Ni(i) as the active site for electrocatalysis

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Citation Report

#	ARTICLE	IF	CITATIONS
4	Unveiling Active Sites of CO ₂ Reduction on Nitrogen-Coordinated and Atomically Dispersed Iron and Cobalt Catalysts. ACS Catalysis, 2018, 8, 3116-3122.	5.5	405
5	Identifying Active Sites of Nitrogen-Doped Carbon Materials for the CO ₂ Reduction Reaction. Advanced Functional Materials, 2018, 28, 1800499.	7.8	244
6	In Situ/Operando Characterization Techniques to Probe the Electrochemical Reactions for Energy Conversion. Small Methods, 2018, 2, 1700395.	4.6	131
7	Electrochemical CO ₂ Reduction via Low-Valent Nickel Single-Atom Catalyst. Joule, 2018, 2, 587-589.	11.7	38
8	Pyridinic-N-Dominated Doped Defective Graphene as a Superior Oxygen Electrocatalyst for Ultrahigh-Energy-Density Zn-Air Batteries. ACS Energy Letters, 2018, 3, 1183-1191.	8.8	456
9	Toward an Effective Control of the H ₂ to CO Ratio of Syngas through CO ₂ Electroreduction over Immobilized Gold Nanoparticles on Layered Titanate Nanosheets. ACS Catalysis, 2018, 8, 4364-4374.	5.5	69
10	Isolated low-valent nickel. Nature Energy, 2018, 3, 90-91.	19.8	1
11	Die facettenreiche Reaktivität heterogener Einzelatom-Katalysatoren. Angewandte Chemie, 2018, 130, 15538-15552.	1.6	36
12	A Dynamically Stabilized Single-Nickel Electrocatalyst for Selective Reduction of Oxygen to Hydrogen Peroxide. Chemistry - A European Journal, 2018, 24, 17011-17018.	1.7	13
13	Single Nickel Atoms Anchored on Nitrogen-Doped Graphene as a Highly Active Cocatalyst for Photocatalytic H ₂ Evolution. ACS Catalysis, 2018, 8, 11863-11874.	5.5	183
14	Electrochemical Reduction of CO ₂ over Heterogeneous Catalysts in Aqueous Solution: Recent Progress and Perspectives. Small Methods, 2019, 3, 1800369.	4.6	168
15	Pyrolyzed Triazine-Based Nanoporous Frameworks Enable Electrochemical CO ₂ Reduction in Water. ACS Applied Materials & Interfaces, 2018, 10, 43588-43594.	4.0	29
16	Single platinum atoms immobilized on an MXene as an efficient catalyst for the hydrogen evolution reaction. Nature Catalysis, 2018, 1, 985-992.	16.1	1,236
17	Carbon-supported Ni nanoparticles for efficient CO ₂ electroreduction. Chemical Science, 2018, 9, 8775-8780.	3.7	179
18	Catalytic Conversion of CO ₂ to Value-Added Products under Mild Conditions. ChemCatChem, 2018, 10, 4849-4853.	1.8	5
19	Grouping Effect of Single Nickel ²⁺ Sites in Nitrogen-Doped Carbon Boosts Hydrogen Transfer Coupling of Alcohols and Amines. Angewandte Chemie, 2018, 130, 15414-15418.	1.6	7
20	Defects on carbons for electrocatalytic oxygen reduction. Chemical Society Reviews, 2018, 47, 7628-7658.	18.7	432
21	Grouping Effect of Single Nickel ²⁺ Sites in Nitrogen-Doped Carbon Boosts Hydrogen Transfer Coupling of Alcohols and Amines. Angewandte Chemie - International Edition, 2018, 57, 15194-15198.	7.2	43

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22	Nitrogen and sulfur Co-doped graphene inlaid with cobalt clusters for efficient oxygen reduction reaction. <i>Materials Today Energy</i> , 2018, 10, 184-190.	2.5	24
23	Copper and Copper-Based Bimetallic Catalysts for Carbon Dioxide Electroreduction. <i>Advanced Materials Interfaces</i> , 2018, 5, 1800919.	1.9	72
24	Reaction Mechanisms of Well-Defined Metal-N ₄ Sites in Electrocatalytic CO ₂ Reduction. <i>Angewandte Chemie</i> , 2018, 130, 16577-16580.	1.6	44
25	Reaction Mechanisms of Well-Defined Metal-N ₄ Sites in Electrocatalytic CO ₂ Reduction. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 16339-16342.	7.2	328
26	The Multifaceted Reactivity of Single-Atom Heterogeneous Catalysts. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 15316-15329.	7.2	261
27	Single Atom Catalysts on Carbon-Based Materials. <i>ChemCatChem</i> , 2018, 10, 5058-5091.	1.8	148
28	Fe/Co Double Hydroxide/Oxide Nanoparticles on N-Doped CNTs as Highly Efficient Electrocatalyst for Rechargeable Liquid and Quasi-Solid-State Zinc-Air Batteries. <i>Advanced Energy Materials</i> , 2018, 8, 1801836.	10.2	94
29	Heteroatom-doped carbon materials and their composites as electrocatalysts for CO ₂ reduction. <i>Journal of Materials Chemistry A</i> , 2018, 6, 18782-18793.	5.2	136
30	Design of active nickel single-atom decorated MoS ₂ as a pH-universal catalyst for hydrogen evolution reaction. <i>Nano Energy</i> , 2018, 53, 458-467.	8.2	222
31	One-Pot Pyrolysis Method to Fabricate Carbon Nanotube Supported Ni Single-Atom Catalysts with Ultrahigh Loading. <i>ACS Applied Energy Materials</i> , 0, , .	2.5	19
32	Efficient electroreduction of CO ₂ to C ₂ products over B-doped oxide-derived copper. <i>Green Chemistry</i> , 2018, 20, 4579-4583.	4.6	68
33	In-Situ Thermal Atomization To Convert Supported Nickel Nanoparticles into Surface-Bound Nickel Single-Atom Catalysts. <i>Angewandte Chemie - International Edition</i> , 2018, 57, 14095-14100.	7.2	310
34	In-Situ Thermal Atomization To Convert Supported Nickel Nanoparticles into Surface-Bound Nickel Single-Atom Catalysts. <i>Angewandte Chemie</i> , 2018, 130, 14291-14296.	1.6	41
35	Single Cobalt Atoms Anchored on Porous N-Doped Graphene with Dual Reaction Sites for Efficient Fenton-like Catalysis. <i>Journal of the American Chemical Society</i> , 2018, 140, 12469-12475.	6.6	1,044
36	Novel design of photoelectrochemical device by dual BiVO ₄ photoelectrode with abundant oxygen vacancy. <i>Science Bulletin</i> , 2018, 63, 1027-1028.	4.3	4
37	Heterogeneous single-atom catalysis. <i>Nature Reviews Chemistry</i> , 2018, 2, 65-81.	13.8	2,728
38	The synthesis of atomic Fe embedded in bamboo-CNTs grown on graphene as a superior CO ₂ electrocatalyst. <i>Green Chemistry</i> , 2018, 20, 3521-3529.	4.6	43
39	Recent progress in single-atom electrocatalysts: concept, synthesis, and applications in clean energy conversion. <i>Journal of Materials Chemistry A</i> , 2018, 6, 14025-14042.	5.2	224

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40	Zinc-coordinated Nitrogen-doped Graphene as an Efficient Catalyst for Selective Electrochemical Reduction of CO ₂ to CO. ChemSusChem, 2018, 11, 2944-2952.	3.6	107
41	Facile Synthesis of Iron- and Nitrogen-Doped Porous Carbon for Selective CO ₂ Electroreduction. ACS Applied Nano Materials, 2018, 1, 3608-3615.	2.4	21
42	Highly Efficient CO ₂ Electroreduction on ZnN ₄ -based Single-Atom Catalyst. Angewandte Chemie, 2018, 130, 12483-12487.	1.6	83
43	Cu-quadruplex Nanowires To Direct the Efficiency and Selectivity of Electrocatalytic CO ₂ Reduction. Angewandte Chemie, 2018, 130, 12633-12637.	1.6	3
44	Harnessing the Wisdom in Colloidal Chemistry to Make Stable Single-Atom Catalysts. Advanced Materials, 2018, 30, e1802304.	11.1	82
45	Nitrogen-Doped Graphene Quantum Dots Enhance the Activity of Bi ₂ O ₃ Nanosheets for Electrochemical Reduction of CO ₂ in a Wide Negative Potential Region. Angewandte Chemie - International Edition, 2018, 57, 12790-12794.	7.2	218
46	Microwave-Assisted Rapid Synthesis of Graphene-Supported Single Atomic Metals. Advanced Materials, 2018, 30, e1802146.	11.1	244
47	Metal-based heterogeneous electrocatalysts for reduction of carbon dioxide and nitrogen: mechanisms, recent advances and perspective. Reaction Chemistry and Engineering, 2018, 3, 591-625.	1.9	49
48	Single-Atom Catalysts: Synthetic Strategies and Electrochemical Applications. Joule, 2018, 2, 1242-1264.	11.7	1,618
49	C ₂ N-graphene supported single-atom catalysts for CO ₂ electrochemical reduction reaction: mechanistic insight and catalyst screening. Nanoscale, 2018, 10, 15262-15272.	2.8	156
50	Highly Efficient CO ₂ Electroreduction on ZnN ₄ -based Single-Atom Catalyst. Angewandte Chemie - International Edition, 2018, 57, 12303-12307.	7.2	356
51	Cu-quadruplex Nanowires To Direct the Efficiency and Selectivity of Electrocatalytic CO ₂ Reduction. Angewandte Chemie - International Edition, 2018, 57, 12453-12457.	7.2	25
52	Nitrogen-Doped Graphene Quantum Dots Enhance the Activity of Bi ₂ O ₃ Nanosheets for Electrochemical Reduction of CO ₂ in a Wide Negative Potential Region. Angewandte Chemie, 2018, 130, 12972-12976.	1.6	44
53	Carbon-Supported Single Atom Catalysts for Electrochemical Energy Conversion and Storage. Advanced Materials, 2018, 30, e1801995.	11.1	479
54	Copper-modulated bismuth nanocrystals alter the formate formation pathway to achieve highly selective CO ₂ electroreduction. Journal of Materials Chemistry A, 2018, 6, 16804-16809.	5.2	74
55	Recent Advances in Electrochemical CO ₂ to CO Conversion on Heterogeneous Catalysts. Advanced Materials, 2018, 30, e1802066.	11.1	397
56	Tris(2-benzimidazolylmethyl)amine-Directed Synthesis of Single-Atom Nickel Catalysts for Electrochemical CO Production from CO ₂ . Chemistry - A European Journal, 2018, 24, 18444-18454.	1.7	50
57	Transition metal (Mo, Fe, Co, and Ni)-based catalysts for electrochemical CO ₂ reduction. Chinese Journal of Catalysis, 2018, 39, 1157-1166.	6.9	48

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58	Enabling alternative ethylene production through its selective adsorption in the metal-organic framework Mn ₂ (dobdc). Energy and Environmental Science, 2018, 11, 2423-2431.	15.6	46
59	Selective CO ₂ Reduction to CO in Water using Earth-Abundant Metal and Nitrogen-Doped Carbon Electrocatalysts. ACS Catalysis, 2018, 8, 6255-6264.	5.5	267
60	Confinement Catalysis with 2D Materials for Energy Conversion. Advanced Materials, 2019, 31, e1901996.	11.1	257
61	Efficient Electrochemical Reduction of CO ₂ by Ni-N Catalysts with Tunable Performance. ACS Sustainable Chemistry and Engineering, 2019, 7, 15030-15035.	3.2	40
62	Coordination-Engineered Cu-N Single-Site Catalyst for Enhancing Oxygen Reduction Reaction. ACS Applied Energy Materials, 2019, 2, 6497-6504.	2.5	58
63	Harmonizing the Electronic Structures of the Adsorbate and Catalysts for Efficient CO ₂ Reduction. Nano Letters, 2019, 19, 6547-6553.	4.5	88
64	Atomic Pd on Graphdiyne/Graphene Heterostructure as Efficient Catalyst for Aromatic Nitroreduction. Advanced Functional Materials, 2019, 29, 1905423.	7.8	112
65	Carbon-based catalysts for electrochemical CO ₂ reduction. Sustainable Energy and Fuels, 2019, 3, 2890-2906.	2.5	67
66	High temperature shockwave stabilized single atoms. Nature Nanotechnology, 2019, 14, 851-857.	15.6	278
67	Single Nickel Atoms on Nitrogen-Doped Graphene Enabling Enhanced Kinetics of Lithium-Sulfur Batteries. Advanced Materials, 2019, 31, e1903955.	11.1	447
68	Tailoring of the Proximity of Platinum Single Atoms on CeO ₂ Using Phosphorus Boosts the Hydrogenation Activity. ACS Catalysis, 2019, 9, 8404-8412.	5.5	95
69	Carbon-based materials with tunable morphology confined Ni (0) and Ni-Nx active sites: Highly efficient selective hydrogenation catalysts. Carbon, 2019, 154, 48-57.	5.4	49
70	A One-Dimensional Conjugated Coordination Polymer for Sodium Storage with Catalytic Activity in Negishi Coupling. Angewandte Chemie, 2019, 131, 14873-14881.	1.6	34
71	A One-Dimensional Conjugated Coordination Polymer for Sodium Storage with Catalytic Activity in Negishi Coupling. Angewandte Chemie - International Edition, 2019, 58, 14731-14739.	7.2	144
72	Theoretical insights into selective electrochemical conversion of carbon dioxide. Nano Convergence, 2019, 6, 8.	6.3	22
73	Synergistic Catalysis over Iron-Nitrogen Sites Anchored with Cobalt Phthalocyanine for Efficient CO ₂ Electroreduction. Advanced Materials, 2019, 31, e1903470.	11.1	256
74	Polyvinyl pyrrolidone mediated fabrication of Fe, N-codoped porous carbon sheets for efficient electrocatalytic CO ₂ reduction. Carbon, 2019, 153, 609-616.	5.4	29
75	Reordering d Orbital Energies of Single-Site Catalysts for CO ₂ Electroreduction. Angewandte Chemie, 2019, 131, 12841-12846.	1.6	40

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76	Reordering d Orbital Energies of Single-Atom Site Catalysts for CO ₂ Electroreduction. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 12711-12716.	7.2	166
77	Atomically dispersed metal catalysts for the oxygen reduction reaction: synthesis, characterization, reaction mechanisms and electrochemical energy applications. <i>Energy and Environmental Science</i> , 2019, 12, 2890-2923.	15.6	317
78	Rational design of carbon-based metal-free catalysts for electrochemical carbon dioxide reduction: A review. <i>Journal of Energy Chemistry</i> , 2019, 36, 95-105.	7.1	91
79	Engineering atomically dispersed metal sites for electrocatalytic energy conversion. <i>Nano Energy</i> , 2019, 64, 103917.	8.2	59
80	Achieving tolerant CO ₂ electro-reduction catalyst in real water matrix. <i>Applied Catalysis B: Environmental</i> , 2019, 258, 117961.	10.8	19
81	A GaN:Sn nanoarchitecture integrated on a silicon platform for converting CO ₂ to HCOOH by photoelectrocatalysis. <i>Energy and Environmental Science</i> , 2019, 12, 2842-2848.	15.6	75
82	Scalable Production of Efficient Single-Atom Copper Decorated Carbon Membranes for CO ₂ Electroreduction to Methanol. <i>Journal of the American Chemical Society</i> , 2019, 141, 12717-12723.	6.6	545
83	Atomic-scale engineering of indium oxide promotion by palladium for methanol production via CO ₂ hydrogenation. <i>Nature Communications</i> , 2019, 10, 3377.	5.8	261
84	N-doped C dot/CoAl-layered double hydroxide/g-C ₃ N ₄ hybrid composites for efficient and selective solar-driven conversion of CO ₂ into CH ₄ . <i>Composites Part B: Engineering</i> , 2019, 176, 107212.	5.9	86
85	A Graphene-Supported Single-Atom FeN ₅ Catalytic Site for Efficient Electrochemical CO ₂ Reduction. <i>Angewandte Chemie</i> , 2019, 131, 15013-15018.	1.6	107
86	A Graphene-Supported Single-Atom FeN ₅ Catalytic Site for Efficient Electrochemical CO ₂ Reduction. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 14871-14876.	7.2	410
87	Electrochemical Reduction of CO ₂ on Metal-Nitrogen-Doped Carbon Catalysts. <i>ACS Catalysis</i> , 2019, 9, 7270-7284.	5.5	282
88	Active Sites on Heterogeneous Single-Iron-Atom Electrocatalysts in CO ₂ Reduction Reaction. <i>ACS Energy Letters</i> , 2019, 4, 1778-1783.	8.8	158
89	Isolated Square-Planar Copper Center in Boron Imidazolate Nanocages for Photocatalytic Reduction of CO ₂ to CO. <i>Angewandte Chemie</i> , 2019, 131, 11878-11882.	1.6	32
90	Designing materials for electrochemical carbon dioxide recycling. <i>Nature Catalysis</i> , 2019, 2, 648-658.	16.1	838
91	An Experimental- and Simulation-Based Evaluation of the CO ₂ Utilization Efficiency of Aqueous-Based Electrochemical CO ₂ Reduction Reactors with Ion-Selective Membranes. <i>ACS Applied Energy Materials</i> , 2019, 2, 5843-5850.	2.5	51
92	Manganese acting as a high-performance heterogeneous electrocatalyst in carbon dioxide reduction. <i>Nature Communications</i> , 2019, 10, 2980.	5.8	235
93	Supported Noble-Metal Single Atoms for Heterogeneous Catalysis. <i>Advanced Materials</i> , 2019, 31, e1902031.	11.1	207

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94	Antipoisoning Nickelâ€“Carbon Electrocatalyst for Practical Electrochemical CO ₂ Reduction to CO. ACS Applied Energy Materials, 2019, 2, 8002-8009.	2.5	45
95	Dynamic oxygen adsorption on single-atomic Ruthenium catalyst with high performance for acidic oxygen evolution reaction. Nature Communications, 2019, 10, 4849.	5.8	416
96	Atomicâ€“Local Environments of Singleâ€“Atom Catalysts: Synthesis, Electronic Structure, and Activity. Advanced Energy Materials, 2019, 9, 1900722.	10.2	128
97	Catalytic Mechanisms and Design Principles for Singleâ€“Atom Catalysts in Highly Efficient CO ₂ Conversion. Advanced Energy Materials, 2019, 9, 1902625.	10.2	167
98	Improved Photoactivities of Largeâ€“surfaceâ€“Area gâ€“C ₃ N ₄ for CO ₂ Conversion by Controllably Introducing Coâ€“and Niâ€“Species to Effectively Modulate Photogenerated Charges. ChemCatChem, 2019, 11, 6282-6287.	1.8	15
99	Scaffold with Micro/Macroâ€“Architecture for Myocardial Alignment Engineering into Complex 3D Cell Patterns. Advanced Healthcare Materials, 2019, 8, e1901015.	3.9	17
100	A universal ligand mediated method for large scale synthesis of transition metal single atom catalysts. Nature Communications, 2019, 10, 4585.	5.8	441
101	Synergistic Catalytic Effect of Ion Tunnels with Polar Dopants to Boost the Electrochemical Kinetics for Highâ€“Performance Sulfur Cathodes. ChemElectroChem, 2019, 6, 5051-5059.	1.7	11
102	Highly Efficient Electroreduction of CO ₂ on Nickel Singleâ€“Atom Catalysts: Atom Trapping and Nitrogen Anchoring. Small, 2019, 15, e1903668.	5.2	108
103	Atomic layer deposited Pt-Ru dual-metal dimers and identifying their active sites for hydrogen evolution reaction. Nature Communications, 2019, 10, 4936.	5.8	371
104	Porosity-Induced High Selectivity for CO ₂ Electroreduction to CO on Fe-Doped ZIF-Derived Carbon Catalysts. ACS Catalysis, 2019, 9, 11579-11588.	5.5	99
105	Catalyst: Single-Atom Catalysis: Directing the Way toward the Nature of Catalysis. Chem, 2019, 5, 2733-2735.	5.8	57
106	Synergy of a Metallic NiCo Dimer Anchored on a C ₂ Nâ€“Graphene Matrix Promotes the Electrochemical CO ₂ Reduction Reaction. ACS Sustainable Chemistry and Engineering, 2019, 7, 19113-19121.	3.2	91
107	Amorphous Feâ€“Niâ€“Pâ€“Bâ€“O Nanocages as Efficient Electrocatalysts for Oxygen Evolution Reaction. ACS Nano, 2019, 13, 12969-12979.	7.3	151
108	Atomic Ni Species Anchored Nâ€“Doped Carbon Hollow Spheres as Nanoreactors for Efficient Electrochemical CO ₂ Reduction. ChemCatChem, 2019, 11, 6092-6098.	1.8	51
109	Coordination Engineering in Cobaltâ€“Nitrogen-Functionalized Materials for CO ₂ Reduction. Journal of Physical Chemistry Letters, 2019, 10, 6551-6557.	2.1	42
110	Editorial: Significance of Peri-implant Keratinized Mucosa Width and Soft Tissue Thickness. International Journal of Periodontics and Restorative Dentistry, 2019, 39, 767-768.	0.4	2
111	Transforming Energy with Single-Atom Catalysts. Joule, 2019, 3, 2897-2929.	11.7	216

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112	Capacity Allocation and Compensation in a Dual-Channel Supply Chain under Uncertain Environment. <i>Mathematical Problems in Engineering</i> , 2019, 2019, 1-12.	0.6	1
113	Versatile Applications of Metal Single-Atom @ 2D Material Nanoplatfoms. <i>Advanced Science</i> , 2019, 6, 1901787.	5.6	128
114	Visible-light-switched electron transfer over single porphyrin-metal atom center for highly selective electroreduction of carbon dioxide. <i>Nature Communications</i> , 2019, 10, 3844.	5.8	121
115	Highly selective oxygen reduction to hydrogen peroxide on transition metal single atom coordination. <i>Nature Communications</i> , 2019, 10, 3997.	5.8	528
116	Turning Harmful Deposition of Metal Impurities into Activation of Nitrogen-Doped Carbon Catalyst toward Durable Electrochemical CO ₂ Reduction. <i>ACS Energy Letters</i> , 2019, 4, 2343-2350.	8.8	23
117	Single-Atom Catalysts: From Design to Application. <i>Electrochemical Energy Reviews</i> , 2019, 2, 539-573.	13.1	320
118	Single Sb sites for efficient electrochemical CO ₂ reduction. <i>Chemical Communications</i> , 2019, 55, 12024-12027.	2.2	65
119	Defect Engineering in Photocatalytic Nitrogen Fixation. <i>ACS Catalysis</i> , 2019, 9, 9739-9750.	5.5	286
120	Volcano Trend in Electrocatalytic CO ₂ Reduction Activity over Atomically Dispersed Metal Sites on Nitrogen-Doped Carbon. <i>ACS Catalysis</i> , 2019, 9, 10426-10439.	5.5	142
121	Bismuth Single Atoms Resulting from Transformation of Metal-Organic Frameworks and Their Use as Electrocatalysts for CO ₂ Reduction. <i>Journal of the American Chemical Society</i> , 2019, 141, 16569-16573.	6.6	501
122	Atomic Ni Anchored Covalent Triazine Framework as High Efficient Electrocatalyst for Carbon Dioxide Conversion. <i>Advanced Functional Materials</i> , 2019, 29, 1806884.	7.8	210
123	From CO ₂ methanation to ambitious long-chain hydrocarbons: alternative fuels paving the path to sustainability. <i>Chemical Society Reviews</i> , 2019, 48, 205-259.	18.7	205
124	A trifunctional Ni ^{N/P} -O-codoped graphene electrocatalyst enables dual-model rechargeable Zn ^{CO₂/Zn} -O ₂ batteries. <i>Journal of Materials Chemistry A</i> , 2019, 7, 2575-2580.	5.2	53
125	Metal-organic framework-derived indium-copper bimetallic oxide catalysts for selective aqueous electroreduction of CO ₂ . <i>Green Chemistry</i> , 2019, 21, 503-508.	4.6	66
126	Directly catalytic reduction of NO without NH ₃ by single atom iron catalyst: A DFT calculation. <i>Fuel</i> , 2019, 243, 262-270.	3.4	94
127	Rational Design of Graphene-Supported Single Atom Catalysts for Hydrogen Evolution Reaction. <i>Advanced Energy Materials</i> , 2019, 9, 1803689.	10.2	279
128	Cu-Based Single-Atom Catalysts Boost Electroreduction of CO ₂ to CH ₃ OH: First-Principles Predictions. <i>Journal of Physical Chemistry C</i> , 2019, 123, 4380-4387.	1.5	68
129	Boosting oxygen reduction activity with low-temperature derived high-loading atomic cobalt on nitrogen-doped graphene for efficient Zn-air batteries. <i>Chemical Communications</i> , 2019, 55, 334-337.	2.2	35

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130	Atomic zinc dispersed on graphene synthesized for active CO ₂ fixation to cyclic carbonates. <i>Chemical Communications</i> , 2019, 55, 1299-1302.	2.2	40
131	Atomically dispersed Ni as the active site towards selective hydrogenation of nitroarenes. <i>Green Chemistry</i> , 2019, 21, 704-711.	4.6	98
132	Superaerophilic copper nanowires for efficient and switchable CO ₂ electroreduction. <i>Nanoscale Horizons</i> , 2019, 4, 490-494.	4.1	39
133	Supported molecular catalysts for the heterogeneous CO ₂ electroreduction. <i>Current Opinion in Electrochemistry</i> , 2019, 15, 148-154.	2.5	40
134	In Situ Preparation of Ru@N-Doped Carbon Catalyst for the Hydrogenolysis of Lignin To Produce Aromatic Monomers. <i>ACS Catalysis</i> , 2019, 9, 5828-5836.	5.5	110
135	Revealing the hidden performance of metal phthalocyanines for CO ₂ reduction electrocatalysis by hybridization with carbon nanotubes. <i>Nano Research</i> , 2019, 12, 2330-2334.	5.8	72
136	Ultra dispersed cobalt anchored on nitrogen-doping ordered porous carbon as an efficient transfer hydrogenation catalyst. <i>Applied Surface Science</i> , 2019, 491, 544-552.	3.1	26
137	Surface Thermolytic Behavior of Nickel Amidinate and Its Implication on the Atomic Layer Deposition of Nickel Compounds. <i>Chemistry of Materials</i> , 2019, 31, 5172-5180.	3.2	17
138	Alloyed Pt ₃ M (M = Co, Ni) nanoparticles supported on S- and N-doped carbon nanotubes for the oxygen reduction reaction. <i>Beilstein Journal of Nanotechnology</i> , 2019, 10, 1251-1269.	1.5	6
139	Isolated Square-Planar Copper Center in Boron Imidazolate Nanocages for Photocatalytic Reduction of CO ₂ to CO. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 11752-11756.	7.2	194
140	Two-dimensional π -conjugated metal bis(dithiolene) nanosheets as promising electrocatalysts for carbon dioxide reduction: a computational study. <i>Journal of Materials Chemistry A</i> , 2019, 7, 15341-15346.	5.2	40
141	Atomically Dispersed Bimetallic FeNi Catalysts as Highly Efficient Bifunctional Catalysts for Reversible Oxygen Evolution and Oxygen Reduction Reactions. <i>ChemElectroChem</i> , 2019, 6, 3478-3487.	1.7	58
142	Atomically dispersed Fe ³⁺ sites catalyze efficient CO ₂ electroreduction to CO. <i>Science</i> , 2019, 364, 1091-1094.	6.0	1,164
143	Highly active metallic nickel sites confined in N-doped carbon nanotubes toward significantly enhanced activity of CO ₂ electroreduction. <i>Carbon</i> , 2019, 150, 52-59.	5.4	84
144	A two-coordinate Ni(σ -silyl) complex: CO ₂ insertion and oxidatively-induced silyl migrations. <i>Chemical Communications</i> , 2019, 55, 6559-6562.	2.2	22
145	Carbon-Rich Nonprecious Metal Single Atom Electrocatalysts for CO ₂ Reduction and Hydrogen Evolution. <i>Small Methods</i> , 2019, 3, 1900210.	4.6	136
146	Metal Ionic Liquids Produce Metal-Dispersed Carbon-Nitrogen Networks for Efficient CO ₂ Electroreduction. <i>ChemCatChem</i> , 2019, 11, 3166-3170.	1.8	6
147	Ultrasonic assisted synthesis of Zn-Ni bi-metal MOFs for interconnected Ni-N-C materials with enhanced electrochemical reduction of CO ₂ . <i>Journal of CO₂ Utilization</i> , 2019, 32, 251-258.	3.3	50

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148	Electrochemical CO ₂ Reduction into Chemical Feedstocks: From Mechanistic Electrocatalysis Models to System Design. <i>Advanced Materials</i> , 2019, 31, e1807166.	11.1	769
149	Poly-phenylenediamine-derived atomically dispersed Ni sites for the electroreduction of CO ₂ to CO. <i>Inorganic Chemistry Frontiers</i> , 2019, 6, 1729-1734.	3.0	11
150	Improved visible-light photoactivities of porous LaFeO ₃ by coupling with nanosized alkaline earth metal oxides and mechanism insight. <i>Catalysis Science and Technology</i> , 2019, 9, 3149-3157.	2.1	40
151	Highly efficient and selective CO ₂ electro-reduction with atomic Fe-C-N hybrid coordination on porous carbon nematosphere. <i>Nano Research</i> , 2019, 12, 2318-2323.	5.8	45
152	Engineering electronic structures of nanomaterials toward carbon dioxide electroreduction. <i>Current Opinion in Electrochemistry</i> , 2019, 17, 7-15.	2.5	14
153	Electroreduction of CO ₂ catalyzed by Co@N-C materials. <i>Journal of CO₂ Utilization</i> , 2019, 32, 241-250.	3.3	24
154	Semi-heterogene duale Nickel/Photokatalyse mit Kohlenstoffnitriden: Veresterung von Carbonsäuren mit Arylhalogeniden. <i>Angewandte Chemie</i> , 2019, 131, 9676-9681.	1.6	20
155	Semi-heterogeneous Dual Nickel/Photocatalysis using Carbon Nitrides: Esterification of Carboxylic Acids with Aryl Halides. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 9575-9580.	7.2	108
156	Morphology Manipulation of Copper Nanocrystals and Product Selectivity in the Electrocatalytic Reduction of Carbon Dioxide. <i>ACS Catalysis</i> , 2019, 9, 5217-5222.	5.5	105
157	Tailoring Nitrogen-Doped Carbons as Hosts for Single-Atom Catalysts. <i>ChemCatChem</i> , 2019, 11, 2812-2820.	1.8	40
158	Single Atoms on Graphene for Energy Storage and Conversion. <i>Small Methods</i> , 2019, 3, 1800443.	4.6	64
159	Material design at nano and atomic scale for electrocatalytic CO ₂ reduction. <i>Nano Materials Science</i> , 2019, 1, 60-69.	3.9	52
160	Dramatic differences in carbon dioxide adsorption and initial steps of reduction between silver and copper. <i>Nature Communications</i> , 2019, 10, 1875.	5.8	63
161	Simultaneous Achieving of High Faradaic Efficiency and CO Partial Current Density for CO ₂ Reduction via Robust, Noble-Metal-Free Zn Nanosheets with Favorable Adsorption Energy. <i>Advanced Energy Materials</i> , 2019, 9, 1900276.	10.2	95
162	In situ spectroscopy-guided engineering of rhodium single-atom catalysts for CO oxidation. <i>Nature Communications</i> , 2019, 10, 1330.	5.8	177
163	Facile synthesis of a bismuth nanostructure with enhanced selectivity for electrochemical conversion of CO ₂ to formate. <i>Nanoscale</i> , 2019, 11, 7805-7812.	2.8	80
164	Modulating the Electronic Structure of Single-Atom Catalysts on 2D Nanomaterials for Enhanced Electrocatalytic Performance. <i>Small Methods</i> , 2019, 3, 1800438.	4.6	88
165	Recent advances in electrochemical reduction of CO ₂ . <i>Current Opinion in Green and Sustainable Chemistry</i> , 2019, 16, 77-84.	3.2	17

#	ARTICLE	IF	CITATIONS
166	Catalysts in electro-, photo- and photoelectrocatalytic CO ₂ reduction reactions. Journal of Photochemistry and Photobiology C: Photochemistry Reviews, 2019, 40, 117-149.	5.6	101
167	Electrochemical CO ₂ reduction on copper nanoparticles-dispersed carbon aerogels. Journal of Colloid and Interface Science, 2019, 545, 1-7.	5.0	48
168	Nitrogen-carbon layer coated nickel nanoparticles for efficient electrocatalytic reduction of carbon dioxide. Nano Research, 2019, 12, 1167-1172.	5.8	41
169	Atomically dispersed nickel–nitrogen–sulfur species anchored on porous carbon nanosheets for efficient water oxidation. Nature Communications, 2019, 10, 1392.	5.8	424
170	High-Rate, Tunable Syngas Production with Artificial Photosynthetic Cells. Angewandte Chemie, 2019, 131, 7800-7804.	1.6	12
171	Isolated Diatomic Ni–Fe Metal–Nitrogen Sites for Synergistic Electroreduction of CO ₂ . Angewandte Chemie - International Edition, 2019, 58, 6972-6976.	7.2	707
172	High-Rate, Tunable Syngas Production with Artificial Photosynthetic Cells. Angewandte Chemie - International Edition, 2019, 58, 7718-7722.	7.2	75
173	Aqueous CO ₂ Reduction with High Efficiency Using Ir–Co(OH) ₂ -Supported Atomic Ir Electrocatalysts. Angewandte Chemie, 2019, 131, 4717-4721.	1.6	20
174	Atomically dispersed Mo atoms on amorphous g-C ₃ N ₄ promotes visible-light absorption and charge carriers transfer. Applied Catalysis B: Environmental, 2019, 250, 273-279.	10.8	92
175	The renaissance of the Sabatier reaction and its applications on Earth and in space. Nature Catalysis, 2019, 2, 188-197.	16.1	369
176	Uniform Lithium Deposition Assisted by Single-Atom Doping toward High-Performance Lithium Metal Anodes. Advanced Energy Materials, 2019, 9, 1804019.	10.2	151
177	Single-atomic-site cobalt stabilized on nitrogen and phosphorus co-doped carbon for selective oxidation of primary alcohols. Nanoscale Horizons, 2019, 4, 902-906.	4.1	29
178	Cu _x Ni _y alloy nanoparticles embedded in a nitrogen–carbon network for efficient conversion of carbon dioxide. Chemical Science, 2019, 10, 4491-4496.	3.7	32
179	The Role of Defect Sites in Nanomaterials for Electrocatalytic Energy Conversion. Chem, 2019, 5, 1371-1397.	5.8	273
180	Surface coordination chemistry on graphene and two-dimensional carbon materials for well-defined single atom supported catalysts. Advances in Organometallic Chemistry, 2019, 71, 53-174.	0.5	33
181	Controlling Nitrogen Doping in Graphene with Atomic Precision: Synthesis and Characterization. Nanomaterials, 2019, 9, 425.	1.9	67
182	Defect engineering in earth-abundant electrocatalysts for CO ₂ and N ₂ reduction. Energy and Environmental Science, 2019, 12, 1730-1750.	15.6	439
183	Isolated Diatomic Ni–Fe Metal–Nitrogen Sites for Synergistic Electroreduction of CO ₂ . Angewandte Chemie, 2019, 131, 7046-7050.	1.6	65

#	ARTICLE	IF	CITATIONS
184	Heterogeneous catalysts for catalytic CO ₂ conversion into value-added chemicals. BMC Chemical Engineering, 2019, 1, .	3.4	64
185	3D Heteroatom-Doped Carbon Nanomaterials as Multifunctional Metal-Free Catalysts for Integrated Energy Devices. Advanced Materials, 2019, 31, e1805598.	11.1	194
186	Aqueous CO ₂ Reduction with High Efficiency Using Ir-Co(OH) ₂ -Supported Atomic Ir Electrocatalysts. Angewandte Chemie - International Edition, 2019, 58, 4669-4673.	7.2	90
187	In Situ/Operando Techniques for Characterization of Single-Atom Catalysts. ACS Catalysis, 2019, 9, 2521-2531.	5.5	296
188	Graphene-based materials for electrochemical CO ₂ reduction. Journal of CO ₂ Utilization, 2019, 30, 168-182.	3.3	87
189	Surface chemical-functionalization of ultrathin two-dimensional nanomaterials for electrocatalysis. Materials Today Energy, 2019, 12, 250-268.	2.5	48
190	Fabrication of Superior Single-Atom Catalysts toward Diverse Electrochemical Reactions. Small Methods, 2019, 3, 1800497.	4.6	99
191	Supported Single Atoms as New Class of Catalysts for Electrochemical Reduction of Carbon Dioxide. Small Methods, 2019, 3, 1800440.	4.6	155
192	Recent Advances for MOF-Derived Carbon-Supported Single-Atom Catalysts. Small Methods, 2019, 3, 1800471.	4.6	315
193	Efficient and Robust Carbon Dioxide Electroreduction Enabled by Atomically Dispersed Sn ⁺ Sites. Advanced Materials, 2019, 31, e1808135.	11.1	321
194	Cocatalysts for Selective Photoreduction of CO ₂ into Solar Fuels. Chemical Reviews, 2019, 119, 3962-4179.	23.0	1,591
195	Oxygen vacancy associated single-electron transfer for photofixation of CO ₂ to long-chain chemicals. Nature Communications, 2019, 10, 788.	5.8	222
196	Atomically dispersed nickel as coke-resistant active sites for methane dry reforming. Nature Communications, 2019, 10, 5181.	5.8	398
197	Highly active oxygen evolution integrated with efficient CO ₂ to CO electroreduction. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 23915-23922.	3.3	58
198	Plasma-activated CoO _x nanoclusters supported on graphite intercalation compounds for improved CO ₂ electroreduction to formate. Journal of Materials Chemistry A, 2019, 7, 24337-24346.	5.2	22
199	Atomic-level active sites of efficient imidazolate framework-derived nickel catalysts for CO ₂ reduction. Journal of Materials Chemistry A, 2019, 7, 26231-26237.	5.2	72
200	Bismuth oxyiodide microflower-derived catalysts for efficient CO ₂ electroreduction in a wide negative potential region. Chemical Communications, 2019, 55, 12392-12395.	2.2	25
201	A local hydrophobic environment in a metal-organic framework for boosting photocatalytic CO ₂ reduction in the presence of water. Chemical Communications, 2019, 55, 14781-14784.	2.2	38

#	ARTICLE	IF	CITATIONS
202	Single atom electrocatalysts supported on graphene or graphene-like carbons. <i>Chemical Society Reviews</i> , 2019, 48, 5207-5241.	18.7	441
203	Facile synthesis of polymerized cobalt phthalocyanines for highly efficient CO ₂ reduction. <i>Green Chemistry</i> , 2019, 21, 6056-6061.	4.6	33
204	Emerging nanostructured carbon-based non-precious metal electrocatalysts for selective electrochemical CO ₂ reduction to CO. <i>Journal of Materials Chemistry A</i> , 2019, 7, 25191-25202.	5.2	82
205	Single-atom catalysts templated by metal-organic frameworks for electrochemical nitrogen reduction. <i>Journal of Materials Chemistry A</i> , 2019, 7, 26371-26377.	5.2	152
206	Biomass-Derived Nickel Phosphide Nanoparticles as a Robust Catalyst for Hydrogen Production by Catalytic Decomposition of C ₂ H ₂ or Dry Reforming of CH ₄ . <i>ACS Applied Energy Materials</i> , 2019, 2, 8649-8658.	2.5	11
207	Atomically Dispersed Nickel Sites for Selective Electroreduction of CO ₂ . <i>ACS Applied Energy Materials</i> , 2019, 2, 8836-8842.	2.5	16
208	Tuning the Coordination Environment in Single-Atom Catalysts to Achieve Highly Efficient Oxygen Reduction Reactions. <i>Journal of the American Chemical Society</i> , 2019, 141, 20118-20126.	6.6	683
209	Surface strategies for catalytic CO ₂ reduction: from two-dimensional materials to nanoclusters to single atoms. <i>Chemical Society Reviews</i> , 2019, 48, 5310-5349.	18.7	607
210	Atomic interface effect of a single atom copper catalyst for enhanced oxygen reduction reactions. <i>Energy and Environmental Science</i> , 2019, 12, 3508-3514.	15.6	278
211	Facile synthesis of single-nickel-atomic dispersed N-doped carbon framework for efficient electrochemical CO ₂ reduction. <i>Applied Catalysis B: Environmental</i> , 2019, 241, 113-119.	10.8	227
212	Emerging Carbon-Based Heterogeneous Catalysts for Electrochemical Reduction of Carbon Dioxide into Value-Added Chemicals. <i>Advanced Materials</i> , 2019, 31, e1804257.	11.1	218
213	Catalysis with Two-Dimensional Materials Confining Single Atoms: Concept, Design, and Applications. <i>Chemical Reviews</i> , 2019, 119, 1806-1854.	23.0	745
214	Recent advances in emerging single atom confined two-dimensional materials for water splitting applications. <i>Materials Today Energy</i> , 2019, 11, 1-23.	2.5	189
215	Single-atom catalysis for electrochemical CO ₂ reduction. <i>Current Opinion in Green and Sustainable Chemistry</i> , 2019, 16, 1-6.	3.2	65
216	Transition metal-nitrogen sites for electrochemical carbon dioxide reduction reaction. <i>Chinese Journal of Catalysis</i> , 2019, 40, 23-37.	6.9	62
217	Large-Scale and Highly Selective CO ₂ Electrocatalytic Reduction on Nickel Single-Atom Catalyst. <i>Joule</i> , 2019, 3, 265-278.	11.7	663
218	Dispersive Single-Atom Metals Anchored on Functionalized Nanocarbons for Electrochemical Reactions. <i>Topics in Current Chemistry</i> , 2019, 377, 4.	3.0	29
219	Tracking Structural Self-Reconstruction and Identifying True Active Sites toward Cobalt Oxide Precatalyst of Oxygen Evolution Reaction. <i>Advanced Materials</i> , 2019, 31, e1805127.	11.1	211

#	ARTICLE	IF	CITATIONS
220	Unsaturated edge-anchored Ni single atoms on porous microwave exfoliated graphene oxide for electrochemical CO ₂ . <i>Applied Catalysis B: Environmental</i> , 2019, 243, 294-303.	10.8	243
221	Heterostructures Based on 2D Materials: A Versatile Platform for Efficient Catalysis. <i>Advanced Materials</i> , 2019, 31, e1804828.	11.1	142
222	Single-Atom Catalysis toward Efficient CO ₂ Conversion to CO and Formate Products. <i>Accounts of Chemical Research</i> , 2019, 52, 656-664.	7.6	348
223	Electrochemical Reduction of Carbon Dioxide to Value-Added Products: The Electrocatalyst and Microbial Electrosynthesis. <i>Chemical Record</i> , 2019, 19, 1272-1282.	2.9	22
224	Probe active sites of heterogeneous electrocatalysts by X-ray absorption spectroscopy: From single atom to complex multi-element composites. <i>Current Opinion in Electrochemistry</i> , 2019, 14, 7-15.	2.5	22
225	XAFS study on single-atomic-site Cu ₁ /N-graphene catalyst for oxygen reduction reaction. <i>Radiation Physics and Chemistry</i> , 2020, 175, 108230.	1.4	11
226	Surface and Interface Control in Nanoparticle Catalysis. <i>Chemical Reviews</i> , 2020, 120, 1184-1249.	23.0	492
227	N-doped porous carbon supported Ni catalysts derived from modified Ni-MOF-74 for highly effective and selective catalytic hydrodechlorination of 1,2-dichloroethane to ethylene. <i>Chemosphere</i> , 2020, 241, 124978.	4.2	43
228	Syngas electrosynthesis using self-supplied CO ₂ from photoelectrocatalytic pollutant degradation. <i>Applied Catalysis B: Environmental</i> , 2020, 261, 118253.	10.8	25
229	Electrolytic cell design for electrochemical CO ₂ reduction. <i>Journal of CO₂ Utilization</i> , 2020, 35, 90-105.	3.3	184
230	Two-Dimensional Electrocatalysts for Efficient Reduction of Carbon Dioxide. <i>ChemSusChem</i> , 2020, 13, 59-77.	3.6	31
231	A general bimetal-ion adsorption strategy to prepare nickel single atom catalysts anchored on graphene for efficient oxygen evolution reaction. <i>Journal of Energy Chemistry</i> , 2020, 43, 52-57.	7.1	85
232	Graphene-based composites for electrochemical energy storage. <i>Energy Storage Materials</i> , 2020, 24, 22-51.	9.5	364
233	A Universal Seeding Strategy to Synthesize Single Atom Catalysts on 2D Materials for Electrocatalytic Applications. <i>Advanced Functional Materials</i> , 2020, 30, 1906157.	7.8	91
234	Geometric structures, electronic characteristics, stabilities, catalytic activities, and descriptors of graphene-based single-atom catalysts. <i>Nano Materials Science</i> , 2020, 2, 120-131.	3.9	55
235	Controlled Synthesis of a Vacancy-Defect Single-Atom Catalyst for Boosting CO ₂ Electroreduction. <i>Angewandte Chemie</i> , 2020, 132, 1977-1981.	1.6	66
236	Controlled Synthesis of a Vacancy-Defect Single-Atom Catalyst for Boosting CO ₂ Electroreduction. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 1961-1965.	7.2	255
237	Enhancing CO ₂ catalytic activation and direct electroreduction on in-situ exsolved Fe/MnO _x nanoparticles from (Pr,Ba) ₂ Mn _{2-y} FeyO _{5+Î} layered perovskites for SOEC cathodes. <i>Applied Catalysis B: Environmental</i> , 2020, 268, 118389.	10.8	58

#	ARTICLE	IF	CITATIONS
238	Co ₂ + anchored on surface-functionalized PET non-woven fabric and used as high efficiency monoatom-like catalyst for activating Oxone in water. <i>Science of the Total Environment</i> , 2020, 699, 134286.	3.9	4
239	Carbon nitride embedded with transition metals for selective electrocatalytic CO ₂ reduction. <i>Applied Catalysis B: Environmental</i> , 2020, 268, 118391.	10.8	64
240	Atomically Defined Undercoordinated Active Sites for Highly Efficient CO ₂ Electroreduction. <i>Advanced Functional Materials</i> , 2020, 30, 1907658.	7.8	210
241	Selenium-Doped Hierarchically Porous Carbon Nanosheets as an Efficient Metal-Free Electrocatalyst for CO ₂ Reduction. <i>Advanced Functional Materials</i> , 2020, 30, 1906194.	7.8	66
242	Elucidating the Electrocatalytic CO ₂ Reduction Reaction over a Model Single-Atom Nickel Catalyst. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 798-803.	7.2	315
243	Looking Back and Looking Ahead in Electrochemical Reduction of CO ₂ . <i>Chemical Record</i> , 2020, 20, 89-101.	2.9	9
244	Elucidating the Electrocatalytic CO ₂ Reduction Reaction over a Model Single-Atom Nickel Catalyst. <i>Angewandte Chemie</i> , 2020, 132, 808-813.	1.6	33
245	Nanocarbon Catalysts: Recent Understanding Regarding the Active Sites. <i>Advanced Science</i> , 2020, 7, 1902126.	5.6	94
246	Understanding the Origin of Highly Selective CO ₂ Electroreduction to CO on Ni,N-doped Carbon Catalysts. <i>Angewandte Chemie</i> , 2020, 132, 4072-4079.	1.6	48
247	Understanding the Origin of Highly Selective CO ₂ Electroreduction to CO on Ni,N-doped Carbon Catalysts. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 4043-4050.	7.2	148
248	Progress in development of electrocatalyst for CO ₂ conversion to selective CO production. , 2020, 2, 72-98.		117
249	Hierarchically micro- and meso-porous Fe-N ₄ O-doped carbon as robust electrocatalyst for CO ₂ reduction. <i>Applied Catalysis B: Environmental</i> , 2020, 266, 118630.	10.8	74
250	Nickel-nitrogen-modified porous carbon/carbon nanotube hybrid with necklace-like geometry: An efficient and durable electrocatalyst for selective reduction of CO ₂ to CO in a wide negative potential region. <i>Electrochimica Acta</i> , 2020, 334, 135583.	2.6	21
251	Point-defect-optimized electron distribution for enhanced electrocatalysis: Towards the perfection of the imperfections. <i>Nano Today</i> , 2020, 31, 100833.	6.2	52
252	Structural Regulation with Atomic-Level Precision: From Single-Atomic Site to Diatomic and Atomic Interface Catalysis. <i>Matter</i> , 2020, 2, 78-110.	5.0	221
253	Highly efficient utilization of single atoms via constructing 3D and free-standing electrodes for CO ₂ reduction with ultrahigh current density. <i>Nano Energy</i> , 2020, 70, 104454.	8.2	106
254	CO ₂ Reduction on Copper's Twin Boundary. <i>ACS Catalysis</i> , 2020, 10, 2026-2032.	5.5	60
255	Electrochemical CO ₂ reduction: from nanoclusters to single atom catalysts. <i>Sustainable Energy and Fuels</i> , 2020, 4, 1012-1028.	2.5	69

#	ARTICLE	IF	CITATIONS
256	Durable Cathodes and Electrolyzers for the Efficient Aqueous Electrochemical Reduction of CO ₂ . ChemSusChem, 2020, 13, 855-875.	3.6	124
257	Optimizing Electron Densities of Ni ^{II} Complexes by Hybrid Coordination for Efficient Electrocatalytic CO ₂ Reduction. ChemSusChem, 2020, 13, 929-937.	3.6	76
258	Carbonaceous materials for electrochemical CO ₂ reduction. EnergyChem, 2020, 2, 100024.	10.1	55
259	Understanding the Origin of Selective Reduction of CO ₂ to CO on Single-Atom Nickel Catalyst. Journal of Physical Chemistry B, 2020, 124, 511-518.	1.2	18
260	Zn-Modified Co@N ^{II} C composites with adjusted Co particle size as catalysts for the efficient electroreduction of CO ₂ . Catalysis Science and Technology, 2020, 10, 967-977.	2.1	17
261	Engineering Local Coordination Environments of Atomically Dispersed and Heteroatom-Coordinated Single Metal Site Electrocatalysts for Clean Energy Conversion. Advanced Energy Materials, 2020, 10, 1902844.	10.2	245
262	Densely Populated Single Atom Catalysts. Small Methods, 2020, 4, 1900540.	4.6	185
263	Electrochemical reduction of carbon dioxide on precise number of Fe atoms anchored graphdiyne. Journal of CO ₂ Utilization, 2020, 37, 272-277.	3.3	76
264	Breaking scaling relations for efficient CO ₂ electrochemical reduction through dual-atom catalysts. Chemical Science, 2020, 11, 1807-1813.	3.7	230
265	Hydrogen peroxide electrochemical synthesis on hybrid double-atom (Pd ^{II} Cu) doped N vacancy g-C ₃ N ₄ : a novel design strategy for electrocatalyst screening. Journal of Materials Chemistry A, 2020, 8, 2672-2683.	5.2	40
266	High efficiency and selectivity from synergy: Bi nanoparticles embedded in nitrogen doped porous carbon for electrochemical reduction of CO ₂ to formate. Electrochimica Acta, 2020, 334, 135563.	2.6	37
267	Boosting CO ₂ reduction on Fe-N-C with sulfur incorporation: Synergistic electronic and structural engineering. Nano Energy, 2020, 68, 104384.	8.2	106
268	Hard-Sphere Random Close-Packed Au ₄₇ Cd ₂ (TBBT) ₃₁ Nanoclusters with a Faradaic Efficiency of Up to 96% for Electrocatalytic CO ₂ Reduction to CO. Angewandte Chemie, 2020, 132, 3097-3101.	1.6	33
269	Antiperovskites with Exceptional Functionalities. Advanced Materials, 2020, 32, e1905007.	11.1	93
270	Regulating the Coordination Environment of MOF-Templated Single-Atom Nickel Electrocatalysts for Boosting CO ₂ Reduction. Angewandte Chemie - International Edition, 2020, 59, 2705-2709.	7.2	404
271	Gravity field-mediated synthesis of carbon-conjugated quantum dots with tunable defective density for enhanced triiodide reduction. Nano Energy, 2020, 69, 104377.	8.2	19
272	Electrochemical Conversion of CO ₂ to Syngas with Controllable CO/H ₂ Ratios over Co and Ni Single-Atom Catalysts. Angewandte Chemie, 2020, 132, 3057-3061.	1.6	22
273	Regulating the Coordination Environment of MOF-Templated Single-Atom Nickel Electrocatalysts for Boosting CO ₂ Reduction. Angewandte Chemie, 2020, 132, 2727-2731.	1.6	110

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274	Hardâ€šphere Random Closeâ€šPacked Au₄₇Cd₂(TBBT)₃₁ Nanoclusters with a Faradaic Efficiency of Up to 96â€š% for Electrocatalytic CO₂ Reduction to CO. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 3073-3077.	7.2	139
275	Nitrogen-Stabilized Low-Valent Ni Motifs for Efficient CO₂ Electrocatalysis. <i>ACS Catalysis</i> , 2020, 10, 1086-1093.	5.5	101
276	In-situ X-ray techniques for non-noble electrocatalysts. <i>Pure and Applied Chemistry</i> , 2020, 92, 733-749.	0.9	19
277	Electrochemical Conversion of CO₂ to Syngas with Controllable CO/H₂ Ratios over Co and Ni Singleâ€šAtom Catalysts. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 3033-3037.	7.2	203
278	Impact of the Coordination Environment on Atomically Dispersed Pt Catalysts for Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2020, 10, 907-913.	5.5	121
279	Tuning single atom-nanoparticle ratios of Ni-based catalysts for synthesis gas production from CO ₂ . <i>Applied Catalysis B: Environmental</i> , 2020, 264, 118502.	10.8	47
280	Iron/nickel nano-alloy encapsulated in nitrogen-doped carbon framework for CO ₂ electrochemical conversion with prominent CO selectivity. <i>Journal of Power Sources</i> , 2020, 449, 227496.	4.0	10
281	Activation of Ni Particles into Single Niâ€šN Atoms for Efficient Electrochemical Reduction of CO₂. <i>Advanced Energy Materials</i> , 2020, 10, 1903068.	10.2	210
282	Spontaneous Solar Syngas Production from CO ₂ Driven by Energetically Favorable Wastewater Microbial Anodes. <i>Joule</i> , 2020, 4, 2149-2161.	11.7	27
283	A metalâ€šorganic framework/polymer derived catalyst containing single-atom nickel species for electrocatalysis. <i>Chemical Science</i> , 2020, 11, 10991-10997.	3.7	32
284	Spontaneously Formed Mottâ€šSchottky Electrocatalyst for Lithiumâ€šSulfur Batteries. <i>Advanced Materials Interfaces</i> , 2020, 7, 1902092.	1.9	21
285	Quantitative Electro-Reduction of CO₂ to Liquid Fuel over Electro-Synthesized Metalâ€šOrganic Frameworks. <i>Journal of the American Chemical Society</i> , 2020, 142, 17384-17392.	6.6	73
286	Single-Atom Catalysts across the Periodic Table. <i>Chemical Reviews</i> , 2020, 120, 11703-11809.	23.0	690
287	Metal-based nanomaterials for efficient CO ₂ electroreduction: Recent advances in mechanism, material design and selectivity. <i>Nano Energy</i> , 2020, 78, 105311.	8.2	42
288	Regulating the coordination structure of metal single atoms for efficient electrocatalytic CO₂ reduction. <i>Energy and Environmental Science</i> , 2020, 13, 4609-4624.	15.6	188
289	Beyond d Orbit: Steering the Selectivity of Electrochemical CO₂ Reduction via Hybridized sp Band of Sulfurâ€šIncorporated Porous Cd Architectures with Dual Collaborative Sites. <i>Advanced Energy Materials</i> , 2020, 10, 2002499.	10.2	20
290	Bifunctional Single Atom Electrocatalysts: Coordinationâ€šPerformance Correlations and Reaction Pathways. <i>ACS Nano</i> , 2020, 14, 13279-13293.	7.3	107
291	<i>In-Situ</i> Surface Reconstruction of InN Nanosheets for Efficient CO₂ Electroreduction into Formate. <i>Nano Letters</i> , 2020, 20, 8229-8235.	4.5	55

#	ARTICLE	IF	CITATIONS
292	Recent Progress in Engineering the Atomic and Electronic Structure of Electrocatalysts via Cation Exchange Reactions. <i>Advanced Materials</i> , 2020, 32, e2001866.	11.1	101
293	Single-Atom Electrocatalysts for Lithium Sulfur Batteries: Progress, Opportunities, and Challenges. , 2020, 2, 1450-1463.		108
294	Atomic layer deposition of transition metal films and nanostructures for electronic and catalytic applications. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2021, 46, 468-489.	6.8	12
295	Recent Progress on Two-dimensional Electrocatalysis. <i>Chemical Research in Chinese Universities</i> , 2020, 36, 611-621.	1.3	140
296	Recent Developments on the Single Atom Supported at 2D Materials Beyond Graphene as Catalysts. <i>ACS Catalysis</i> , 2020, 10, 9634-9648.	5.5	102
297	Single Mn atom anchored on N-doped porous carbon as highly efficient Fenton-like catalyst for the degradation of organic contaminants. <i>Applied Catalysis B: Environmental</i> , 2020, 279, 119363.	10.8	182
298	Electrocatalytic reduction of carbon dioxide on gold-copper bimetallic nanoparticles: Effects of surface composition on selectivity. <i>Electrochimica Acta</i> , 2020, 356, 136756.	2.6	24
299	Discovery of main group single Sb ⁴⁺ active sites for CO ₂ electroreduction to formate with high efficiency. <i>Energy and Environmental Science</i> , 2020, 13, 2856-2863.	15.6	245
300	Theoretical insights into the factors affecting the electrochemical reduction of CO ₂ . <i>Sustainable Energy and Fuels</i> , 2020, 4, 4352-4369.	2.5	14
302	Low-temperature strategy toward Ni-NC@Ni core-shell nanostructure with Single-Ni sites for efficient CO ₂ electroreduction. <i>Nano Energy</i> , 2020, 77, 105010.	8.2	70
303	Electrochemical Conversion of CO ₂ to Syngas with Palladium-Based Electrocatalysts. <i>Accounts of Chemical Research</i> , 2020, 53, 1535-1544.	7.6	81
304	Achieving Near-Unity CO Selectivity for CO ₂ Electroreduction on an Iron-Decorated Carbon Material. <i>ChemSusChem</i> , 2020, 13, 6360-6369.	3.6	8
305	Active Sites in Single-Atom Fe ^{N₄} -C Nanosheets for Selective Electrochemical Dechlorination of 1,2-Dichloroethane to Ethylene. <i>ACS Nano</i> , 2020, 14, 9929-9937.	7.3	83
306	Scalable strategy to fabricate single Cu atoms coordinated carbons for efficient electroreduction of CO ₂ to CO. <i>Carbon</i> , 2020, 168, 528-535.	5.4	57
307	Size-Dependent Nickel-Based Electrocatalysts for Selective CO ₂ Reduction. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 18572-18577.	7.2	100
308	Size-Dependent Nickel-Based Electrocatalysts for Selective CO ₂ Reduction. <i>Angewandte Chemie</i> , 2020, 132, 18731-18736.	1.6	30
309	Structural Regulation and Support Coupling Effect of Single-Atom Catalysts for Heterogeneous Catalysis. <i>Advanced Energy Materials</i> , 2020, 10, 2001482.	10.2	172
310	Identification of the Electronic and Structural Dynamics of Catalytic Centers in Single-Fe-Atom Material. <i>CheM</i> , 2020, 6, 3440-3454.	5.8	231

#	ARTICLE	IF	CITATIONS
311	Engineering efficient bifunctional electrocatalysts for rechargeable zinc-air batteries by confining Fe-Co-Ni nanoalloys in nitrogen-doped carbon nanotube@nanosheet frameworks. <i>Journal of Materials Chemistry A</i> , 2020, 8, 25919-25930.	5.2	58
312	Nanostructured Cobalt-Based Electrocatalysts for CO ₂ Reduction: Recent Progress, Challenges, and Perspectives. <i>Small</i> , 2020, 16, e2004158.	5.2	45
313	Understanding the Efficiency and Selectivity of Two-Electron Production of Metalloporphyrin-Embedded Zirconium-Pyrogallol Scaffolds in Electrochemical CO ₂ Reduction. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 52588-52594.	4.0	3
314	Electronic Effect in a Ruthenium Catalyst Designed in Nanoporous N-Functionalized Carbon for Efficient Hydrogenation of Heteroarenes. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 52668-52677.	4.0	17
315	General synthesis of single atom electrocatalysts via a facile condensation-carbonization process. <i>Journal of Materials Chemistry A</i> , 2020, 8, 25959-25969.	5.2	14
316	Electrochemical CO ₂ reduction over nanoparticles derived from an oxidized Cu-Ni intermetallic alloy. <i>Chemical Communications</i> , 2020, 56, 15008-15011.	2.2	10
317	CuNiN@C coupled with peroxy monosulfate as efficient catalytic system for the removal of norfloxacin by adsorption and catalysis. <i>Separation and Purification Technology</i> , 2020, 252, 117476.	3.9	25
318	Mesoporous 3D/2D NiCoP/g-C ₃ N ₄ Heterostructure with Dual Co-N and Ni-N Bonding States for Boosting Photocatalytic H ₂ Production Activity and Stability. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 12934-12943.	3.2	45
319	Molecular engineering of dispersed nickel phthalocyanines on carbon nanotubes for selective CO ₂ reduction. <i>Nature Energy</i> , 2020, 5, 684-692.	19.8	365
320	Efficient bi-directional OER/ORR catalysis of metal-free C ₆ H ₄ NO ₂ /g-C ₃ N ₄ : Density functional theory approaches. <i>Applied Surface Science</i> , 2020, 531, 147292.	3.1	18
321	Transforming active sites in nickel-nitrogen-carbon catalysts for efficient electrochemical CO ₂ reduction to CO. <i>Nano Energy</i> , 2020, 78, 105213.	8.2	69
322	Synthesis of Ag-Doped Polyoxotitanium Nanoclusters for Efficient Electrocatalytic CO ₂ Reduction. <i>Inorganic Chemistry</i> , 2020, 59, 11442-11448.	1.9	23
323	Surface Reconstruction of Ultrathin Palladium Nanosheets during Electrocatalytic CO ₂ Reduction. <i>Angewandte Chemie</i> , 2020, 132, 21677-21682.	1.6	37
324	Pr and Mo Co-Doped SrFeO ₃ as an Efficient Cathode for Pure CO ₂ Reduction Reaction in a Solid Oxide Electrolysis Cell. <i>Energy Technology</i> , 2020, 8, 2000539.	1.8	7
325	Highly Selective CO ₂ Electroreduction to CO on Cu-Co Bimetallic Catalysts. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 12561-12567.	3.2	33
326	Carbon Nanotubes Codoped with Nickel and Nitrogen for Electrochemical Syngas Production. <i>ACS Applied Nano Materials</i> , 2020, 3, 8581-8585.	2.4	0
327	Dual active sites-dependent syngas proportions from aqueous CO ₂ electroreduction. <i>Applied Catalysis B: Environmental</i> , 2020, 279, 119380.	10.8	24
328	Single atom is not alone: Metal-support interactions in single-atom catalysis. <i>Materials Today</i> , 2020, 40, 173-192.	8.3	174

#	ARTICLE	IF	CITATIONS
329	Fundamentals of Electrochemical CO ₂ Reduction on Single-Metal-Atom Catalysts. ACS Catalysis, 2020, 10, 10068-10095.	5.5	161
330	Isolated Ni single atoms in nitrogen doped ultrathin porous carbon templated from porous g-C ₃ N ₄ for high-performance CO ₂ reduction. Nano Energy, 2020, 77, 105158.	8.2	83
331	Surface Reconstruction of Ultrathin Palladium Nanosheets during Electrocatalytic CO ₂ Reduction. Angewandte Chemie - International Edition, 2020, 59, 21493-21498.	7.2	97
332	Highly selective electrocatalytic CO ₂ reduction to ethanol by metallic clusters dynamically formed from atomically dispersed copper. Nature Energy, 2020, 5, 623-632.	19.8	393
333	Highly active and thermally stable single-atom catalysts for high-temperature electrochemical devices. Energy and Environmental Science, 2020, 13, 4903-4920.	15.6	35
334	Recent Advances in MOF-Derived Single Atom Catalysts for Electrochemical Applications. Advanced Energy Materials, 2020, 10, 2001561.	10.2	265
335	Surface Coordination Chemistry of Atomically Dispersed Metal Catalysts. Chemical Reviews, 2020, 120, 11810-11899.	23.0	325
336	Atomically dispersed Ni in cadmium-zinc sulfide quantum dots for high-performance visible-light photocatalytic hydrogen production. Science Advances, 2020, 6, eaaz8447.	4.7	83
337	Double Atom Catalysts: Heteronuclear Transition Metal Dimer Anchored on Nitrogen-Doped Graphene as Superior Electrocatalyst for Nitrogen Reduction Reaction. Advanced Theory and Simulations, 2020, 3, 2000190.	1.3	26
338	Advanced Electrocatalysts with Single-Metal-Atom Active Sites. Chemical Reviews, 2020, 120, 12217-12314.	23.0	563
339	Single-Atom Catalysts Based on the Metal-Oxide Interaction. Chemical Reviews, 2020, 120, 11986-12043.	23.0	486
340	Photoinduction of Cu Single Atoms Decorated on UiO-66-NH ₂ for Enhanced Photocatalytic Reduction of CO ₂ to Liquid Fuels. Journal of the American Chemical Society, 2020, 142, 19339-19345.	6.6	373
341	Confinement of Ionic Liquids at Single-Ni-Sites Boost Electroreduction of CO ₂ in Aqueous Electrolytes. ACS Catalysis, 2020, 10, 13171-13178.	5.5	54
342	Design of a Single-Atom Indium ⁺ -N ₄ Interface for Efficient Electroreduction of CO ₂ to Formate. Angewandte Chemie - International Edition, 2020, 59, 22465-22469.	7.2	232
343	Promoting Electrocatalytic Hydrogen Evolution Reaction and Oxygen Evolution Reaction by Fields: Effects of Electric Field, Magnetic Field, Strain, and Light. Small Methods, 2020, 4, 2000494.	4.6	146
344	Theoretical insights into single-atom catalysts. Chemical Society Reviews, 2020, 49, 8156-8178.	18.7	231
345	Origin of the enhanced oxygen evolution reaction activity and stability of a nitrogen and cerium co-doped CoS ₂ electrocatalyst. Journal of Materials Chemistry A, 2020, 8, 22694-22702.	5.2	23
346	Synthesis of a Nickel Single-Atom Catalyst Based on Ni ⁺ -N ₄ -C _x Active Sites for Highly Efficient CO ₂ Reduction Utilizing a Gas Diffusion Electrode. ACS Applied Energy Materials, 2020, 3, 8739-8745.	2.5	34

#	ARTICLE	IF	CITATIONS
347	<i>In situ</i> X-ray diffraction and X-ray absorption spectroscopy of electrocatalysts for energy conversion reactions. <i>Journal of Materials Chemistry A</i> , 2020, 8, 19079-19112.	5.2	98
348	Recent Progress in Non-Precious Metal Single Atomic Catalysts for Solar and Non-Solar Driven Hydrogen Evolution Reaction. <i>Advanced Sustainable Systems</i> , 2020, 4, 2000151.	2.7	14
349	Design of a Single-Atom Indium In^+ N_4 Interface for Efficient Electroreduction of CO_2 to Formate. <i>Angewandte Chemie</i> , 2020, 132, 22651-22655.	1.6	29
350	Microenvironment modulation of single-atom catalysts and their roles in electrochemical energy conversion. <i>Science Advances</i> , 2020, 6, .	4.7	214
351	Electrochemical conversion of CO_2 to syngas with a wide range of CO/H_2 ratio over Ni/Fe binary single-atom catalysts. <i>Nano Research</i> , 2020, 13, 3206-3211.	5.8	45
352	Coordination engineering of iridium nanocluster bifunctional electrocatalyst for highly efficient and pH-universal overall water splitting. <i>Nature Communications</i> , 2020, 11, 4246.	5.8	221
353	Single-atom catalysts for the oxygen evolution reaction: recent developments and future perspectives. <i>Chemical Communications</i> , 2020, 56, 12687-12697.	2.2	69
354	Transition metal-based catalysts for the electrochemical CO_2 reduction: from atoms and molecules to nanostructured materials. <i>Chemical Society Reviews</i> , 2020, 49, 6884-6946.	18.7	305
355	Recent advances and strategies in the stabilization of single-atom catalysts for electrochemical applications. , 2020, 2, 488-520.		37
356	A Mn-N ₃ single-atom catalyst embedded in graphitic carbon nitride for efficient CO_2 electroreduction. <i>Nature Communications</i> , 2020, 11, 4341.	5.8	257
357	Single atom catalysis: a decade of stunning progress and the promise for a bright future. <i>Nature Communications</i> , 2020, 11, 4302.	5.8	179
358	Cu atomic clusters on N-doped porous carbon with tunable oxidation state for the highly-selective electroreduction of CO_2 . <i>Materials Advances</i> , 2020, 1, 2286-2292.	2.6	4
359	Thermal Transformation of Molecular Ni^{2+} N_4 Sites for Enhanced CO_2 Electroreduction Activity. <i>ACS Catalysis</i> , 2020, 10, 10920-10931.	5.5	81
360	Constructing Chemical Interaction between Hematite and Carbon Nanosheets with Single Active Sites for Efficient Photo-Electrochemical Water Oxidation. <i>Small Methods</i> , 2020, 4, 2000577.	4.6	23
361	Isolated Single Atoms Anchored on N-Doped Carbon Materials as a Highly Efficient Catalyst for Electrochemical and Organic Reactions. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 14630-14656.	3.2	88
362	Hollow Mesoporous Carbon Sphere Loaded Ni^{2+} N_4 Single-Atom: Support Structure Study for CO_2 Electrocatalytic Reduction Catalyst. <i>Small</i> , 2020, 16, e2003943.	5.2	82
363	Immobilizing single atom catalytic sites onto highly reduced carbon hosts: Fe^{2+} N_4 /CNT as a durable oxygen reduction catalyst for Na-air batteries. <i>Journal of Materials Chemistry A</i> , 2020, 8, 18891-18902.	5.2	31
364	Emerging Metal Single Atoms in Electrocatalysts and Batteries. <i>Advanced Functional Materials</i> , 2020, 30, 2003870.	7.8	38

#	ARTICLE	IF	CITATIONS
365	<i>Operando</i> characterization techniques for electrocatalysis. <i>Energy and Environmental Science</i> , 2020, 13, 3748-3779.	15.6	159
366	Co ^{II} -N-C-Supported Platinum Catalyst: Synergistic Effect on the Aerobic Oxidation of Glycerol. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 19062-19071.	3.2	12
367	Nickel-Coordinated Carbon Nitride as a Metallaphotoredox Platform for the Cross-Coupling of Aryl Halides with Alcohols. <i>ACS Catalysis</i> , 2020, 10, 15178-15185.	5.5	72
368	Electron-withdrawing functional ligand promotes CO ₂ reduction catalysis in single atom catalyst. <i>Science China Chemistry</i> , 2020, 63, 1727-1733.	4.2	49
369	Understanding the Mechanism of High Capacitance in Nickel Hexaaminobenzene-Based Conductive Metal-Organic Frameworks in Aqueous Electrolytes. <i>ACS Nano</i> , 2020, 14, 15919-15925.	7.3	46
370	Theoretical investigation on graphene-supported single-atom catalysts for electrochemical CO ₂ reduction. <i>Catalysis Science and Technology</i> , 2020, 10, 8465-8472.	2.1	35
371	Single-atom Ru anchored in nitrogen-doped MXene (Ti ₃ C ₂ T _x) as an efficient catalyst for the hydrogen evolution reaction at all pH values. <i>Journal of Materials Chemistry A</i> , 2020, 8, 24710-24717.	5.2	102
372	Recent Advances in the Development of Single-Atom Catalysts for Oxygen Electrocatalysis and Zinc-Air Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 2003018.	10.2	181
373	Recent Progress of Carbon-Supported Single-Atom Catalysts for Energy Conversion and Storage. <i>Matter</i> , 2020, 3, 1442-1476.	5.0	196
374	Electrosynthesis of Syngas via the Co-Reduction of CO ₂ and H ₂ O. <i>Cell Reports Physical Science</i> , 2020, 1, 100237.	2.8	42
375	Recent strategy(ies) for the electrocatalytic reduction of CO ₂ : Ni single-atom catalysts for the selective electrochemical formation of CO in aqueous electrolytes. <i>Current Opinion in Electrochemistry</i> , 2020, 22, 87-93.	2.5	10
376	Reticular chemistry in electrochemical carbon dioxide reduction. <i>Science China Materials</i> , 2020, 63, 1113-1141.	3.5	30
377	Metal-Organic Layers Leading to Atomically Thin Bismuthene for Efficient Carbon Dioxide Electroreduction to Liquid Fuel. <i>Angewandte Chemie</i> , 2020, 132, 15124-15130.	1.6	57
378	Metal-Organic Layers Leading to Atomically Thin Bismuthene for Efficient Carbon Dioxide Electroreduction to Liquid Fuel. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 15014-15020.	7.2	276
379	Spontaneous Atomic Ruthenium Doping in Mo ₂ CT _x MXene Defects Enhances Electrocatalytic Activity for the Nitrogen Reduction Reaction. <i>Advanced Energy Materials</i> , 2020, 10, 2001364.	10.2	173
380	Single-atom-Ni-decorated, nitrogen-doped carbon layers for efficient electrocatalytic CO ₂ reduction reaction. <i>Electrochemistry Communications</i> , 2020, 116, 106758.	2.3	31
381	Reaction mechanism and kinetics for CO ₂ reduction on nickel single atom catalysts from quantum mechanics. <i>Nature Communications</i> , 2020, 11, 2256.	5.8	140
382	Efficient Tetra-Functional Electrocatalyst with Synergetic Effect of Different Active Sites for Multi-Model Energy Conversion and Storage. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 23017-23027.	4.0	12

#	ARTICLE	IF	CITATIONS
383	Composition Engineeringâ€“Triggered Bifunctionality of Freeâ€“Standing Coralâ€“Like 1Tâ€“MoS ₂ for Highly Efficient Overall Water Splitting. Energy Technology, 2020, 8, 2000268.	1.8	7
384	Synergy between a Silverâ€“Copper Surface Alloy Composition and Carbon Dioxide Adsorption and Activation. ACS Applied Materials & Interfaces, 2020, 12, 25374-25382.	4.0	19
385	Heterogeneous Catalysts with Wellâ€“Defined Active Metal Sites toward CO ₂ Electrochemical Reduction. Advanced Energy Materials, 2020, 10, 2001142.	10.2	66
386	Boosting the bifunctional oxygen electrocatalytic performance of atomically dispersed Fe site via atomic Ni neighboring. Applied Catalysis B: Environmental, 2020, 274, 119091.	10.8	130
387	Highly dispersed nickel anchored on a N-doped carbon molecular sieve derived from metalâ€“organic frameworks for efficient hydrodeoxygenation in the aqueous phase. Chemical Communications, 2020, 56, 6696-6699.	2.2	17
388	Activation strategies of water-splitting electrocatalysts. Journal of Materials Chemistry A, 2020, 8, 10096-10129.	5.2	67
389	Dynamic active-site generation of atomic iridium stabilized on nanoporous metal phosphides for water oxidation. Nature Communications, 2020, 11, 2701.	5.8	204
390	Photoelectrochemical CO ₂ reduction to syngas by a ZnOâ€“CdSâ€“Cu nanocomposite. Molecular Catalysis, 2020, 492, 110953.	1.0	9
391	Wellâ€“Defined Singleâ€“Atom Cobalt Catalyst for Electrocatalytic Flue Gas CO ₂ Reduction. Small, 2020, 16, e2001896.	5.2	85
392	Selective electroreduction of CO ₂ to acetone by single copper atoms anchored on N-doped porous carbon. Nature Communications, 2020, 11, 2455.	5.8	265
393	A Universal Principle to Accurately Synthesize Atomically Dispersed Metalâ€“N ₄ Sites for CO ₂ Electroreduction. Nano-Micro Letters, 2020, 12, 108.	14.4	65
394	Single-Ni-atom catalyzes aqueous phase electrochemical reductive dechlorination reaction. Applied Catalysis B: Environmental, 2020, 277, 119057.	10.8	51
395	Designing CO ₂ reduction electrode materials by morphology and interface engineering. Energy and Environmental Science, 2020, 13, 2275-2309.	15.6	251
396	Atomically dispersed metal sites anchored in N-doped carbon nanosheets with enhanced Li storage performance. Materials Chemistry Frontiers, 2020, 4, 2157-2167.	3.2	12
397	Tuning nanocavities of Au@Cu ₂ O yolkâ€“shell nanoparticles for highly selective electroreduction of CO ₂ to ethanol at low potential. RSC Advances, 2020, 10, 19192-19198.	1.7	33
398	Electrocatalysis of Single-Atom Sites: Impacts of Atomic Coordination. ACS Catalysis, 2020, 10, 7584-7618.	5.5	274
399	P-block metal-based (Sn, In, Bi, Pb) electrocatalysts for selective reduction of CO ₂ to formate. APL Materials, 2020, 8, .	2.2	93
400	Gas Diffusion Strategy for Inserting Atomic Iron Sites into Graphitized Carbon Supports for Unusually Highâ€“Efficient CO ₂ Electroreduction and Highâ€“Performance Znâ€“CO ₂ Batteries. Advanced Materials, 2020, 32, e2002430.	11.1	141

#	ARTICLE	IF	CITATIONS
401	Efficient wettability-controlled electroreduction of CO ₂ to CO at Au/C interfaces. <i>Nature Communications</i> , 2020, 11, 3028.	5.8	294
402	Iridium single-atom catalyst on nitrogen-doped carbon for formic acid oxidation synthesized using a general host-guest strategy. <i>Nature Chemistry</i> , 2020, 12, 764-772.	6.6	452
403	Solid-state synthesis of Cu nanoparticles embedded in carbon substrate for efficient electrochemical reduction of carbon dioxide to formic acid. <i>Chemical Engineering Journal</i> , 2020, 400, 125879.	6.6	33
404	Modelling of the degradation of martensitic stainless steels by the Boudouard reaction. <i>Corrosion Science</i> , 2020, 173, 108699.	3.0	8
405	Metal-Nitrogen-Doped Carbon Materials as Highly Efficient Catalysts: Progress and Rational Design. <i>Advanced Science</i> , 2020, 7, 2001069.	5.6	228
406	Recent Progress in Single-Atom Catalysts for Photocatalytic Water Splitting. <i>Solar Rrl</i> , 2020, 4, 2000283.	3.1	59
407	Dynamic Evolution of Solid-Liquid Electrochemical Interfaces over Single-Atom Active Sites. <i>Journal of the American Chemical Society</i> , 2020, 142, 12306-12313.	6.6	124
408	Electrochemical CO ₂ -to-CO conversion: electrocatalysts, electrolytes, and electrolyzers. <i>Journal of Materials Chemistry A</i> , 2020, 8, 15458-15478.	5.2	118
409	Engineering the coordination environment enables molybdenum single-atom catalyst for efficient oxygen reduction reaction. <i>Journal of Catalysis</i> , 2020, 389, 150-156.	3.1	64
410	Rational Design of Nanocatalysts with Nonmetal Species Modification for Electrochemical CO ₂ Reduction. <i>Advanced Energy Materials</i> , 2020, 10, 2000588.	10.2	53
411	Design Principles of Single Atoms on Carbons for Lithium-Sulfur Batteries. <i>Small Methods</i> , 2020, 4, 2000315.	4.6	84
412	N-Doped carbon nanotubes decorated with Fe/Ni sites to stabilize lithium metal anodes. <i>Inorganic Chemistry Frontiers</i> , 2020, 7, 2747-2752.	3.0	12
413	Rich Bismuth-Oxygen Bonds in Bismuth Derivatives from Bi ₂ S ₃ Pre-Catalysts Promote the Electrochemical Reduction of CO ₂ . <i>ChemElectroChem</i> , 2020, 7, 2864-2868.	1.7	12
414	Single-Atom Catalysts for Electrocatalytic Applications. <i>Advanced Functional Materials</i> , 2020, 30, 2000768.	7.8	390
415	Toward Commercial Carbon Dioxide Electrolysis. <i>Advanced Sustainable Systems</i> , 2020, 4, 2000096.	2.7	20
416	2D Boron Imidazolate Framework Nanosheets with Electrocatalytic Applications for Oxygen Evolution and Carbon Dioxide Reduction Reaction. <i>Small</i> , 2020, 16, e1907669.	5.2	20
417	Computational Screening of Transition Metal-Phthalocyanines for the Electrochemical Reduction of Carbon Dioxide. <i>Journal of Physical Chemistry C</i> , 2020, 124, 7708-7715.	1.5	27
418	CO ₂ controls the oriented growth of metal-organic framework with highly accessible active sites. <i>Nature Communications</i> , 2020, 11, 1431.	5.8	51

#	ARTICLE	IF	CITATIONS
419	Nickel nanoflakes on 4-Amino-4H-1,2,4-triazole/graphene for sustainable hydrogen evolution in acid and alkaline media. <i>Applied Surface Science</i> , 2020, 515, 145999.	3.1	21
420	Strong metal-support interaction promoted scalable production of thermally stable single-atom catalysts. <i>Nature Communications</i> , 2020, 11, 1263.	5.8	198
421	Rational design of dual-metal-site catalysts for electroreduction of carbon dioxide. <i>Journal of Materials Chemistry A</i> , 2020, 8, 15809-15815.	5.2	83
422	Supported and coordinated single metal site electrocatalysts. <i>Materials Today</i> , 2020, 37, 93-111.	8.3	71
423	(N, B) Dual Heteroatom-Doped Hierarchical Porous Carbon Framework for Efficient Electroreduction of Carbon Dioxide. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 6003-6010.	3.2	45
424	Surface composition dominates the electrocatalytic reduction of CO ₂ on ultrafine CuPd nanoalloys. , 2020, 2, 443-451.		56
425	The Chemistry and Promising Applications of Graphene and Porous Graphene Materials. <i>Advanced Functional Materials</i> , 2020, 30, 1909035.	7.8	181
426	Boosting CO ₂ Electroreduction on N,Co-doped Carbon Aerogels. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 11123-11129.	7.2	138
427	Chemical Synthesis of Single Atomic Site Catalysts. <i>Chemical Reviews</i> , 2020, 120, 11900-11955.	23.0	806
428	Engineering Local and Global Structures of Single Co Atoms for a Superior Oxygen Reduction Reaction. <i>ACS Catalysis</i> , 2020, 10, 5862-5870.	5.5	126
429	A Ti ₃ C ₂ O ₂ supported single atom, trifunctional catalyst for electrochemical reactions. <i>Journal of Materials Chemistry A</i> , 2020, 8, 7801-7807.	5.2	69
430	Ordered Mesoporous Carbon Confined Pb/PbO Composites: Superior Electrocatalysts for CO ₂ Reduction. <i>ChemSusChem</i> , 2020, 13, 6346-6352.	3.6	22
431	Atomic site electrocatalysts for water splitting, oxygen reduction and selective oxidation. <i>Chemical Society Reviews</i> , 2020, 49, 2215-2264.	18.7	582
432	Electrochemical deposition as a universal route for fabricating single-atom catalysts. <i>Nature Communications</i> , 2020, 11, 1215.	5.8	254
433	Immobilized trimeric metal clusters: A family of the smallest catalysts for selective CO ₂ reduction toward multi-carbon products. <i>Nano Energy</i> , 2020, 76, 105049.	8.2	56
434	Boosting Defective Carbon by Anchoring Well-Defined Atomically Dispersed Ni ₄ Sites for Electrocatalytic CO ₂ Reduction. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 10536-10543.	3.2	52
435	A Planar, Conjugated N ₄ -Macrocyclic Cobalt Complex for Heterogeneous Electrocatalytic CO ₂ Reduction with High Activity. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 17104-17109.	7.2	80
436	Efficient Bifunctional Catalytic Electrodes with Uniformly Distributed Ni ₂ Active Sites and Channels for Long-Lasting Rechargeable Zinc-Air Batteries. <i>Small</i> , 2020, 16, e2002518.	5.2	20

#	ARTICLE	IF	CITATIONS
437	A Planar, Conjugated N ₄ -Macrocyclic Cobalt Complex for Heterogeneous Electrocatalytic CO ₂ Reduction with High Activity. <i>Angewandte Chemie</i> , 2020, 132, 17252-17257.	1.6	14
438	Advances in Thermodynamic-Kinetic Model for Analyzing the Oxygen Evolution Reaction. <i>ACS Catalysis</i> , 2020, 10, 8597-8610.	5.5	89
439	Universal Approach to Fabricating Graphene-Supported Single-Atom Catalysts from Doped ZnO Solid Solutions. <i>ACS Central Science</i> , 2020, 6, 1431-1440.	5.3	69
440	Advanced Characterization Techniques for Identifying the Key Active Sites of Gas-Involved Electrocatalysts. <i>Advanced Functional Materials</i> , 2020, 30, 2001704.	7.8	19
441	Heterogeneous Single-Atom Catalysts for Electrochemical CO ₂ Reduction Reaction. <i>Advanced Materials</i> , 2020, 32, e2001848.	11.1	366
442	Advanced Ni-Nx-C single-site catalysts for CO ₂ electroreduction to CO based on hierarchical carbon nanocages and S-doping. <i>Nano Research</i> , 2020, 13, 2777-2783.	5.8	46
443	One-pot synthesized citric acid-modified bimetallic PtNi hollow nanospheres as peroxidase mimics for colorimetric detection of human serum albumin. <i>Materials Science and Engineering C</i> , 2020, 116, 111231.	3.8	24
444	Insight into atomically dispersed porous Mn-C single-site catalysts for electrochemical CO ₂ reduction. <i>Nanoscale</i> , 2020, 12, 16617-16626.	2.8	46
445	pH dependence of CO ₂ electroreduction selectivity over size-selected Au nanoparticles. <i>Journal of Materials Science</i> , 2020, 55, 13916-13926.	1.7	9
446	Tunable Syngas Production through CO ₂ Electroreduction on Cobalt-Carbon Composite Electrocatalyst. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 9307-9315.	4.0	79
447	Design of hierarchical, three-dimensional free-standing single-atom electrode for H ₂ O ₂ production in acidic media. , 2020, 2, 276-282.		56
448	Uncovering near-free platinum single-atom dynamics during electrochemical hydrogen evolution reaction. <i>Nature Communications</i> , 2020, 11, 1029.	5.8	379
449	Multi-shelled CuO microboxes for carbon dioxide reduction to ethylene. <i>Nano Research</i> , 2020, 13, 768-774.	5.8	60
450	Non-noble metal single-atom catalysts prepared by wet chemical method and their applications in electrochemical water splitting. <i>Journal of Energy Chemistry</i> , 2020, 47, 333-345.	7.1	104
451	In situ electrochemical conversion of CO ₂ in molten salts to advanced energy materials with reduced carbon emissions. <i>Science Advances</i> , 2020, 6, eaay9278.	4.7	80
452	Unveiling the Active Structure of Single Nickel Atom Catalysis: Critical Roles of Charge Capacity and Hydrogen Bonding. <i>Journal of the American Chemical Society</i> , 2020, 142, 5773-5777.	6.6	199
453	A general method to construct single-atom catalysts supported on N-doped graphene for energy applications. <i>Journal of Materials Chemistry A</i> , 2020, 8, 6190-6195.	5.2	41
454	Achieving Low Charge Overpotential in a Li-CO ₂ Battery with Bimetallic RuCo Nanoalloy Decorated Carbon Nanofiber Cathodes. <i>ACS Sustainable Chemistry and Engineering</i> , 2020, 8, 2783-2792.	3.2	41

#	ARTICLE	IF	CITATIONS
455	Unveiling Catalytic Sites in a Typical Hydrogen Photogeneration System Consisting of Semiconductor Quantum Dots and 3d-Metal Ions. <i>Journal of the American Chemical Society</i> , 2020, 142, 4680-4689.	6.6	51
456	State of the art and perspectives in heterogeneous catalysis of CO ₂ hydrogenation to methanol. <i>Chemical Society Reviews</i> , 2020, 49, 1385-1413.	18.7	605
457	Recent Progress in Self-Supported Catalysts for CO ₂ Electrochemical Reduction. <i>Small Methods</i> , 2020, 4, 1900826.	4.6	48
458	MOF derived high-density atomic platinum heterogeneous catalyst for C-H bond activation. <i>Materials Chemistry Frontiers</i> , 2020, 4, 1158-1163.	3.2	19
459	Strategies in catalysts and electrolyzer design for electrochemical CO ₂ reduction toward C ₂₊ products. <i>Science Advances</i> , 2020, 6, eaay3111.	4.7	477
460	Achieving efficient electroreduction CO ₂ to CO in a wide potential range over pitch-derived ordered mesoporous carbon with engineered Ni-N sites. <i>Journal of CO₂ Utilization</i> , 2020, 38, 212-219.	3.3	19
461	Ni and nitrogen-codoped ultrathin carbon nanosheets with strong bonding sites for efficient CO ₂ electrochemical reduction. <i>Journal of Colloid and Interface Science</i> , 2020, 570, 31-40.	5.0	33
462	Nanoporous Metal-Organic Framework-Based Ellipsoidal Nanoparticles for the Catalytic Electroreduction of CO ₂ . <i>ACS Applied Nano Materials</i> , 2020, 3, 2625-2635.	2.4	28
463	Microstructure Induced Thermodynamic and Kinetic Modulation to Enhance CO ₂ Photothermal Reduction: A Case of Atomic-Scale Dispersed Co-N Species Anchored Co@C Hybrid. <i>ACS Catalysis</i> , 2020, 10, 4726-4736.	5.5	84
464	Accelerating CO ₂ Electroreduction to CO Over Pd Single-Atom Catalyst. <i>Advanced Functional Materials</i> , 2020, 30, 2000407.	7.8	173
465	Dual-atom Ag ₂ /graphene catalyst for efficient electroreduction of CO ₂ to CO. <i>Applied Catalysis B: Environmental</i> , 2020, 268, 118747.	10.8	140
466	Harnessing the interplay of Fe-Ni atom pairs embedded in nitrogen-doped carbon for bifunctional oxygen electrocatalysis. <i>Nano Energy</i> , 2020, 71, 104597.	8.2	231
467	Structure Sensitivity and Evolution of Nickel-Bearing Nitrogen-Doped Carbons in the Electrochemical Reduction of CO ₂ . <i>ACS Catalysis</i> , 2020, 10, 3444-3454.	5.5	20
468	Atomic-level tuning of Co-N-C catalyst for high-performance electrochemical H ₂ O ₂ production. <i>Nature Materials</i> , 2020, 19, 436-442.	13.3	725
469	Enabling Direct H ₂ O ₂ Production in Acidic Media through Rational Design of Transition Metal Single Atom Catalyst. <i>Chem</i> , 2020, 6, 658-674.	5.8	418
470	Mechanistic understanding of the electrocatalytic CO ₂ reduction reaction - New developments based on advanced instrumental techniques. <i>Nano Today</i> , 2020, 31, 100835.	6.2	80
471	Current progress in electrocatalytic carbon dioxide reduction to fuels on heterogeneous catalysts. <i>Journal of Materials Chemistry A</i> , 2020, 8, 3541-3562.	5.2	204
472	Nickel-Nitrogen-Carbon Molecular Catalysts for High Rate CO ₂ Electro-reduction to CO: On the Role of Carbon Substrate and Reaction Chemistry. <i>ACS Applied Energy Materials</i> , 2020, 3, 1617-1626.	2.5	28

#	ARTICLE	IF	CITATIONS
473	Novel folic acid complex derived nitrogen and nickel co-doped carbon nanotubes with embedded Ni nanoparticles as efficient electrocatalysts for CO ₂ reduction. Journal of Materials Chemistry A, 2020, 8, 5105-5114.	5.2	18
474	Colloidal Co single-atom catalyst: a facile synthesis strategy and high catalytic activity for hydrogen generation. Green Chemistry, 2020, 22, 1269-1274.	4.6	15
475	Heterogeneous Single Atom Electrocatalysis, Where "Singles" Are "Married". Advanced Energy Materials, 2020, 10, 1903181.	10.2	113
476	Engineering Electronic Structure of Stannous Sulfide by Amino-Functionalized Carbon: Toward Efficient Electrocatalytic Reduction of CO ₂ to Formate. Advanced Energy Materials, 2020, 10, 1903664.	10.2	86
477	Amidation-Dominated Reassembly Strategy for Single-Atom Design/Nano-Engineering: Constructing Ni/S/C Nanotubes with Fast and Stable K ₂ S Storage. Angewandte Chemie - International Edition, 2020, 59, 6459-6465.	7.2	23
478	Single-atom catalysis for a sustainable and greener future. Current Opinion in Green and Sustainable Chemistry, 2020, 22, 54-64.	3.2	33
479	Carbon dioxide electroreduction on single-atom nickel decorated carbon membranes with industry compatible current densities. Nature Communications, 2020, 11, 593.	5.8	330
480	Electron Configuration Modulation of Nickel Single Atoms for Elevated Photocatalytic Hydrogen Evolution. Angewandte Chemie, 2020, 132, 6894-6898.	1.6	49
481	Amidation-Dominated Reassembly Strategy for Single-Atom Design/Nano-Engineering: Constructing Ni/S/C Nanotubes with Fast and Stable K ₂ S Storage. Angewandte Chemie, 2020, 132, 6521-6527.	1.6	1
482	High-Valence Nickel Single-Atom Catalysts Coordinated to Oxygen Sites for Extraordinarily Activating Oxygen Evolution Reaction. Advanced Science, 2020, 7, 1903089.	5.6	182
483	Metal-Organic Nitrogen-Carbon Electrocatalysts for CO ₂ Reduction towards Syngas Generation. ChemSusChem, 2020, 13, 1688-1698.	3.6	36
484	Electron Configuration Modulation of Nickel Single Atoms for Elevated Photocatalytic Hydrogen Evolution. Angewandte Chemie - International Edition, 2020, 59, 6827-6831.	7.2	142
485	Efficient Photocatalytic Nitrogen Fixation over Cu ⁺ -Modified Defective ZnAl ₂ O ₄ Layered Double Hydroxide Nanosheets. Advanced Energy Materials, 2020, 10, 1901973.	10.2	173
486	A Disquisition on the Active Sites of Heterogeneous Catalysts for Electrochemical Reduction of CO ₂ to Value-Added Chemicals and Fuel. Advanced Energy Materials, 2020, 10, 1902106.	10.2	113
487	Metal-organic framework-derived mesoporous carbon nanoframes embedded with atomically dispersed Fe-N active sites for efficient bifunctional oxygen and carbon dioxide electroreduction. Applied Catalysis B: Environmental, 2020, 267, 118720.	10.8	151
488	Atomically Dispersed Single Ni Site Catalysts for Nitrogen Reduction toward Electrochemical Ammonia Synthesis Using N ₂ and H ₂ O. Small Methods, 2020, 4, 1900821.	4.6	148
489	Carbon-based single-atom catalysts for CO ₂ electroreduction: progress and optimization strategies. Journal of Materials Chemistry A, 2020, 8, 10695-10708.	5.2	86
490	A Novel Single-Atom Electrocatalyst Ti ₁ /rGO for Efficient Cathodic Reduction in Hybrid Photovoltaics. Advanced Materials, 2020, 32, e2000478.	11.1	31

#	ARTICLE	IF	CITATIONS
491	Boosting CO ₂ Electroreduction on N,P-Co-doped Carbon Aerogels. <i>Angewandte Chemie</i> , 2020, 132, 11216-11222.	1.6	39
492	Controlled One-pot Synthesis of Nickel Single Atoms Embedded in Carbon Nanotube and Graphene Supports with High Loading. <i>ChemNanoMat</i> , 2020, 6, 1063-1074.	1.5	14
493	Graphene-supported metal single-atom catalysts: a concise review. <i>Science China Materials</i> , 2020, 63, 903-920.	3.5	72
494	Atomically dispersed Ni species on N-doped carbon nanotubes for electroreduction of CO ₂ with nearly 100% CO selectivity. <i>Applied Catalysis B: Environmental</i> , 2020, 271, 118929.	10.8	158
495	Selective C-C Coupling by Spatially Confined Dimeric Metal Centers. <i>IScience</i> , 2020, 23, 101051.	1.9	37
496	Boosting carbon dioxide electroreduction to C1 feedstocks via theory-guided tailoring oxygen defects in porous tin-oxide nanocubes. <i>Journal of Catalysis</i> , 2020, 385, 246-254.	3.1	17
497	From metal-organic frameworks to single/dual-atom and cluster metal catalysts for energy applications. <i>Energy and Environmental Science</i> , 2020, 13, 1658-1693.	15.6	323
498	Integrated design for electrocatalytic carbon dioxide reduction. <i>Catalysis Science and Technology</i> , 2020, 10, 2711-2720.	2.1	92
499	A green approach to the fabrication of a TiO ₂ /NiAl-LDH core-shell hybrid photocatalyst for efficient and selective solar-powered reduction of CO ₂ into value-added fuels. <i>Journal of Materials Chemistry A</i> , 2020, 8, 8020-8032.	5.2	65
500	Atomically Dispersed Iron-Nitrogen Sites on Hierarchically Mesoporous Carbon Nanotube and Graphene Nanoribbon Networks for CO ₂ Reduction. <i>ACS Nano</i> , 2020, 14, 5506-5516.	7.3	125
501	High-Efficiency Oxygen Reduction to Hydrogen Peroxide Catalyzed by Nickel Single-Atom Catalysts with Tetradentate N ₂ O ₂ Coordination in a Three-Phase Flow Cell. <i>Angewandte Chemie</i> , 2020, 132, 13157-13162.	1.6	16
502	High-Efficiency Oxygen Reduction to Hydrogen Peroxide Catalyzed by Nickel Single-Atom Catalysts with Tetradentate N ₂ O ₂ Coordination in a Three-Phase Flow Cell. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 13057-13062.	7.2	222
503	Atomically Dispersed Nickel(I) on an Alloy-Encapsulated Nitrogen-Doped Carbon Nanotube Array for High-Performance Electrochemical CO ₂ Reduction Reaction. <i>Angewandte Chemie</i> , 2020, 132, 12153-12159.	1.6	27
504	Atomically Dispersed Nickel(I) on an Alloy-Encapsulated Nitrogen-Doped Carbon Nanotube Array for High-Performance Electrochemical CO ₂ Reduction Reaction. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 12055-12061.	7.2	117
505	Nanostructures for Electrocatalytic CO ₂ Reduction. <i>Chemistry - A European Journal</i> , 2020, 26, 14024-14035.	1.7	26
506	Toward Excellence of Transition Metal-Based Catalysts for CO ₂ Electrochemical Reduction: An Overview of Strategies and Rationales. <i>Small Methods</i> , 2020, 4, 2000033.	4.6	60
507	Surface plasma Ag-decorated Bi ₅ O ₇ I microspheres uniformly distributed on a zwitterionic fluorinated polymer with superfunctional antifouling property. <i>Applied Catalysis B: Environmental</i> , 2020, 271, 118920.	10.8	46
508	Optimistic performance of carbon-free hydrazine fuel cells based on controlled electrode structure and water management. <i>Journal of Energy Chemistry</i> , 2020, 51, 175-181.	7.1	20

#	ARTICLE	IF	CITATIONS
509	Synergistic Interaction of Nitrogen-Doped Carbon Nanorod Array Anchored with Cobalt Phthalocyanine for Electrochemical Reduction of CO ₂ . ACS Applied Energy Materials, 2020, 3, 3893-3901.	2.5	30
510	In Situ Phosphatizing of Triphenylphosphine Encapsulated within Metal-Organic Frameworks to Design Atomic Co ₁ P ₁ N ₃ Interfacial Structure for Promoting Catalytic Performance. Journal of the American Chemical Society, 2020, 142, 8431-8439.	6.6	259
511	The synthesis of interface-modulated ultrathin Ni(<i>scp</i>) MOF/g-C ₃ N ₄ heterojunctions as efficient photocatalysts for CO ₂ reduction. Nanoscale, 2020, 12, 10010-10018.	2.8	64
512	Insights into the adsorption/desorption of CO ₂ and CO on single-atom Fe-nitrogen-graphene catalyst under electrochemical environment. Journal of Energy Chemistry, 2021, 53, 20-25.	7.1	38
513	Molten salt as ultrastrong polar solvent enables the most straightforward pyrolysis towards highly efficient and stable single-atom electrocatalyst. Journal of Energy Chemistry, 2021, 54, 519-527.	7.1	11
514	CO ₂ reduction by single copper atom supported on g-C ₃ N ₄ with asymmetrical active sites. Applied Surface Science, 2021, 540, 148293.	3.1	33
515	Photocatalytic, electrocatalytic and photoelectrocatalytic conversion of carbon dioxide: a review. Environmental Chemistry Letters, 2021, 19, 941-967.	8.3	68
516	Efficient CO ₂ electroreduction over N-doped hieratically porous carbon derived from petroleum pitch. Journal of Energy Chemistry, 2021, 56, 113-120.	7.1	21
517	A highly efficient Fenton-like catalyst based on isolated diatomic Fe-Co anchored on N-doped porous carbon. Chemical Engineering Journal, 2021, 404, 126376.	6.6	143
518	Engineering Atomically Dispersed FeN ₄ Active Sites for CO ₂ Electroreduction. Angewandte Chemie, 2021, 133, 1035-1045.	1.6	39
519	Fluorine-tuned single-atom catalysts with dense surface Ni-N ₄ sites on ultrathin carbon nanosheets for efficient CO ₂ electroreduction. Applied Catalysis B: Environmental, 2021, 283, 119591.	10.8	116
520	Single-metal-atom catalysts: An emerging platform for electrocatalytic oxygen reduction. Chemical Engineering Journal, 2021, 406, 127135.	6.6	67
521	Environmental Materials beyond and below the Nanoscale: Single-Atom Catalysts. ACS ES&T Engineering, 2021, 1, 157-172.	3.7	88
522	Activation of peroxymonosulfate by iron-biochar composites: Comparison of nanoscale Fe with single-atom Fe. Journal of Colloid and Interface Science, 2021, 582, 598-609.	5.0	99
523	Improving the tribological properties of diamond-like carbon film applied under methane by tailoring sliding interface. International Journal of Refractory Metals and Hard Materials, 2021, 94, 105380.	1.7	8
524	Engineering Atomically Dispersed FeN ₄ Active Sites for CO ₂ Electroreduction. Angewandte Chemie - International Edition, 2021, 60, 1022-1032.	7.2	121
525	Confinement in two-dimensional materials: Major advances and challenges in the emerging renewable energy conversion and other applications. Progress in Solid State Chemistry, 2021, 61, 100294.	3.9	24
526	Curvature-induced Zn 3d Electron Return on Zn ²⁺ N ₄ Single-atom Carbon Nanofibers for Boosting Electroreduction of CO ₂ . ChemCatChem, 2021, 13, 603-609.	1.8	29

#	ARTICLE	IF	CITATIONS
527	Synergistic adsorption and activation of nickel phthalocyanine anchored onto ketjenblack for CO ₂ electrochemical reduction. Applied Surface Science, 2021, 538, 148134.	3.1	14
528	Recent progress on hybrid electrocatalysts for efficient electrochemical CO ₂ reduction. Nano Energy, 2021, 80, 105504.	8.2	78
529	Theoretical insights into the performance of single and double transition metal atoms doped on N-graphenes for N ₂ electroreduction. Applied Surface Science, 2021, 537, 148012.	3.1	27
530	“More is Different”: Synergistic Effect and Structural Engineering in Double-Atom Catalysts. Advanced Functional Materials, 2021, 31, 2007423.	7.8	179
531	Dynamic Activation of Adsorbed Intermediates via Axial Traction for the Promoted Electrochemical CO ₂ Reduction. Angewandte Chemie - International Edition, 2021, 60, 4192-4198.	7.2	183
532	Hollow NiSe Nanocrystals Heterogenized with Carbon Nanotubes for Efficient Electrocatalytic Methanol Upgrading to Boost Hydrogen Co-Production. Advanced Functional Materials, 2021, 31, 2008812.	7.8	84
533	Coordination Engineering of Single-Atom Catalysts for the Oxygen Reduction Reaction: A Review. Advanced Energy Materials, 2021, 11, 2002473.	10.2	217
534	Designed Iron Single Atom Catalysts for Highly Efficient Oxygen Reduction Reaction in Alkaline and Acid Media. Advanced Materials Interfaces, 2021, 8, 2001788.	1.9	11
535	Mixed-Metal MOF-74 Templated Catalysts for Efficient Carbon Dioxide Capture and Methanation. Advanced Functional Materials, 2021, 31, 2007624.	7.8	65
536	The lab-to-fab journey of copper-based electrocatalysts for multi-carbon production: Advances, challenges, and opportunities. Nano Today, 2021, 36, 101028.	6.2	25
537	Developing micro-kinetic model for electrocatalytic reduction of carbon dioxide on copper electrode. Journal of Catalysis, 2021, 393, 11-19.	3.1	16
538	Design of Local Atomic Environments in Single-Atom Electrocatalysts for Renewable Energy Conversions. Advanced Materials, 2021, 33, e2003075.	11.1	187
539	Metal-organic framework-derived porous carbon templates for catalysis. , 2021, , 73-121.		0
540	CO ₂ electroreduction by transition metal-embedded two-dimensional C ₃ N: A theoretical study. Journal of CO ₂ Utilization, 2021, 43, 101367.	3.3	19
541	H ₂ Activation with Co Nanoparticles Encapsulated in N-Doped Carbon Nanotubes for Green Synthesis of Benzimidazoles. ChemSusChem, 2021, 14, 709-720.	3.6	23
542	Electroreduction of Carbon Dioxide Driven by the Intrinsic Defects in the Carbon Plane of a Single Fe-N ₄ Site. Advanced Materials, 2021, 33, e2003238.	11.1	202
543	Highly active, selective, and stable Pd single-atom catalyst anchored on N-doped hollow carbon sphere for electrochemical H ₂ O ₂ synthesis under acidic conditions. Journal of Catalysis, 2021, 393, 313-323.	3.1	43
544	Enabling selective, room-temperature gas detection using atomically dispersed Zn. Sensors and Actuators B: Chemical, 2021, 329, 129221.	4.0	10

#	ARTICLE	IF	CITATIONS
545	Selective CO ₂ reduction towards a single upgraded product: a minireview on multi-elemental copper-free electrocatalysts. <i>Catalysis Science and Technology</i> , 2021, 11, 416-424.	2.1	8
546	Regulating the oxidation state of nanomaterials for electrocatalytic CO ₂ reduction. <i>Energy and Environmental Science</i> , 2021, 14, 1121-1139.	15.6	178
547	Dynamic Activation of Adsorbed Intermediates via Axial Traction for the Promoted Electrochemical CO ₂ Reduction. <i>Angewandte Chemie</i> , 2021, 133, 4238-4244.	1.6	20
548	Recent Advances in Strategies for Improving the Performance of CO ₂ Reduction Reaction on Single Atom Catalysts. <i>Small Science</i> , 2021, 1, 2000028.	5.8	57
549	Multiatom Catalysts for Energy-Related Electrocatalysis. <i>Advanced Sustainable Systems</i> , 2021, 5, 2000213.	2.7	13
550	Construction of atomically dispersed Cu-N4 sites via engineered coordination environment for high-efficient CO ₂ electroreduction. <i>Chemical Engineering Journal</i> , 2021, 407, 126842.	6.6	91
551	Structural insight into [Fe-S ₂ -Mo] motif in electrochemical reduction of N ₂ over Fe ₁ -supported molecular MoS ₂ . <i>Chemical Science</i> , 2021, 12, 688-695.	3.7	20
552	How to select effective electrocatalysts: Nano or single atom?. <i>Nano Select</i> , 2021, 2, 492-511.	1.9	82
553	Interfacial engineering of Cu ₂ Se/Co ₃ Se ₄ multivalent hetero-nanocrystals for energy-efficient electrocatalytic co-generation of value-added chemicals and hydrogen. <i>Applied Catalysis B: Environmental</i> , 2021, 285, 119800.	10.8	51
554	Two-dimensional matrices confining metal single atoms with enhanced electrochemical reaction kinetics for energy storage applications. <i>Energy and Environmental Science</i> , 2021, 14, 1794-1834.	15.6	45
555	Atomically Dispersed Reactive Centers for Electrocatalytic CO ₂ Reduction and Water Splitting. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 13177-13196.	7.2	143
556	Recent advances in innovative strategies for the CO ₂ electroreduction reaction. <i>Energy and Environmental Science</i> , 2021, 14, 765-780.	15.6	188
557	Incorporation of nickel single atoms into carbon paper as self-standing electrocatalyst for CO ₂ reduction. <i>Journal of Materials Chemistry A</i> , 2021, 9, 1583-1592.	5.2	35
558	Atomically Dispersed Reactive Centers for Electrocatalytic CO ₂ Reduction and Water Splitting. <i>Angewandte Chemie</i> , 2021, 133, 13285-13304.	1.6	20
559	Bioinspired Atomic Manganese Site Accelerates Oxo-Dehydrogenation of N-Heterocycles over a Conjugated Tri-s-Triazine Framework. <i>ACS Catalysis</i> , 2021, 11, 313-322.	5.5	33
560	Atomically precise metal nanoclusters for (photo)electroreduction of CO ₂ : Recent advances, challenges and opportunities. <i>Journal of Energy Chemistry</i> , 2021, 57, 359-370.	7.1	43
561	Stability and Redispersion of Ni Nanoparticles Supported on N-Doped Carbons for the CO ₂ Electrochemical Reduction. <i>ACS Catalysis</i> , 2021, 11, 88-94.	5.5	19
562	Ultrahigh Oxygen Evolution Reaction Activity Achieved Using Ir Single Atoms on Amorphous CoO _x Nanosheets. <i>ACS Catalysis</i> , 2021, 11, 123-130.	5.5	138

#	ARTICLE	IF	CITATIONS
563	Tobacco stem-derived nitrogen-containing porous carbon with highly dispersed Ni ^{II} sites as an efficient electrocatalyst for CO ₂ reduction to CO. <i>New Journal of Chemistry</i> , 2021, 45, 1063-1071.	1.4	9
564	Boosting CO ₂ -to-CO conversion on a robust single-atom copper decorated carbon catalyst by enhancing intermediate binding strength. <i>Journal of Materials Chemistry A</i> , 2021, 9, 1705-1712.	5.2	49
565	NiSn Atomic Pair on an Integrated Electrode for Synergistic Electrocatalytic CO ₂ Reduction. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 7382-7388.	7.2	137
566	Metal chalcogenide-associated catalysts enabling CO ₂ electroreduction to produce low-carbon fuels for energy storage and emission reduction: catalyst structure, morphology, performance, and mechanism. <i>Journal of Materials Chemistry A</i> , 2021, 9, 2526-2559.	5.2	26
567	Self-supported bifunctional electrocatalysts with Ni nanoparticles encapsulated in vertical N-doped carbon nanotube for efficient overall water splitting. <i>Chemical Engineering Journal</i> , 2021, 413, 127531.	6.6	43
568	CO ₂ -emission-free electrocatalytic CH ₃ OH selective upgrading with high productivity at large current densities for energy saved hydrogen co-generation. <i>Nano Energy</i> , 2021, 80, 105530.	8.2	76
569	Ultrathin Fe ^{II} -N-C single-atom catalysts with bifunctional active site for simultaneous production of ethylene and aromatic chlorides. <i>Nano Energy</i> , 2021, 80, 105532.	8.2	33
570	Electronic structure modulation of isolated Co-N ₄ electrocatalyst by sulfur for improved pH-universal hydrogen evolution reaction. <i>Nano Energy</i> , 2021, 80, 105544.	8.2	37
571	Single-Atom Cobalt-Based Electrochemical Biomimetic Uric Acid Sensor with Wide Linear Range and Ultralow Detection Limit. <i>Nano-Micro Letters</i> , 2021, 13, 7.	14.4	76
572	In-depth understanding of catalytic mechanism in solar cells via synergistic effect of interfacial engineering and structural integration. <i>Chemical Engineering Journal</i> , 2021, 407, 127205.	6.6	5
573	Identification of the activity source of CO ₂ electroreduction by strategic catalytic site distribution in stable supramolecular structure system. <i>National Science Review</i> , 2021, 8, nwa195.	4.6	23
574	Reticular materials for electrochemical reduction of CO ₂ . <i>Coordination Chemistry Reviews</i> , 2021, 427, 213564.	9.5	29
575	Applications of Atomically Dispersed Oxygen Reduction Catalysts in Fuel Cells and Zinc-Air Batteries. <i>Energy and Environmental Materials</i> , 2021, 4, 307-335.	7.3	58
576	Strategies to improve electrocatalytic and photocatalytic performance of two-dimensional materials for hydrogen evolution reaction. <i>Chinese Journal of Catalysis</i> , 2021, 42, 511-556.	6.9	131
577	Direct transformation of raw biomass into a Fe _x -N-C single-atom catalyst for efficient oxygen reduction reaction. <i>Materials Chemistry Frontiers</i> , 2021, 5, 3093-3098.	3.2	11
578	Insights on forming N,O-coordinated Cu single-atom catalysts for electrochemical reduction CO ₂ to methane. <i>Nature Communications</i> , 2021, 12, 586.	5.8	230
579	Quasi-double-star nickel and iron active sites for high-efficiency carbon dioxide electroreduction. <i>Energy and Environmental Science</i> , 2021, 14, 4847-4857.	15.6	43
580	Electrochemical reduction of CO ₂ towards multi-carbon products via a two-step process. <i>Reaction Chemistry and Engineering</i> , 2021, 6, 612-628.	1.9	28

#	ARTICLE	IF	CITATIONS
581	Electrocatalysis for CO ₂ conversion: from fundamentals to value-added products. Chemical Society Reviews, 2021, 50, 4993-5061.	18.7	559
582	Discovering ultrahigh loading of single-metal-atoms <i>via</i> surface tensile-strain for unprecedented urea electrolysis. Energy and Environmental Science, 2021, 14, 6494-6505.	15.6	79
583	Single-atom catalysis in advanced oxidation processes for environmental remediation. Chemical Society Reviews, 2021, 50, 5281-5322.	18.7	502
584	<i>In Situ</i> Formed Metal Oxide/Metal Interface Enhanced C-C Coupling in CO ₂ Reduction into CH ₃ COOH over Hexagonal Closed-Packed Cobalt. ACS Sustainable Chemistry and Engineering, 2021, 9, 1203-1212.	3.2	19
585	Recent advances in surface/interface engineering of noble-metal free catalysts for energy conversion reactions. Materials Chemistry Frontiers, 2021, 5, 3576-3592.	3.2	9
586	Selective electrochemical hydrogenation of furfural to 2-methylfuran over a single atom Cu catalyst under mild pH conditions. Green Chemistry, 2021, 23, 3028-3038.	4.6	43
587	Boosting CO ₂ electroreduction to CO with abundant nickel single atom active sites. Inorganic Chemistry Frontiers, 2021, 8, 2542-2548.	3.0	15
588	Designing electrode materials for the electrochemical reduction of carbon dioxide. Materials Horizons, 2021, 8, 2420-2443.	6.4	18
589	Recent progresses in the mechanism, performance, and fabrication methods of metal-derived nanomaterials for efficient electrochemical CO ₂ reduction. Journal of Materials Chemistry A, 2021, 9, 4558-4588.	5.2	8
590	Recent progress on the synthesis and oxygen reduction applications of Fe-based single-atom and double-atom catalysts. Journal of Materials Chemistry A, 2021, 9, 19489-19507.	5.2	104
591	Structure Sensitivity in Single-Atom Catalysis toward CO ₂ Electroreduction. ACS Energy Letters, 2021, 6, 713-727.	8.8	149
592	Fast operando spectroscopy tracking in situ generation of rich defects in silver nanocrystals for highly selective electrochemical CO ₂ reduction. Nature Communications, 2021, 12, 660.	5.8	68
593	From nanoparticle to single-atom catalyst; electrocatalytic reduction of carbon dioxide. , 2021, , 111-153.		1
595	Single copper sites dispersed on defective TiO _{2-x} as a synergistic oxygen reduction reaction catalyst. Journal of Chemical Physics, 2021, 154, 034705.	1.2	7
596	Promoted alkaline hydrogen evolution by an N-doped Pt-Ru single atom alloy. Journal of Materials Chemistry A, 2021, 9, 14941-14947.	5.2	39
597	Steric shelter-free cobalt nanoparticle-based high-sensitive biomimetic superoxide anion sensor. Materials Chemistry Frontiers, 2021, 5, 6860-6864.	3.2	2
598	Lattice-strained nickel hydroxide nanosheets for the boosted diluted CO ₂ photoreduction. Environmental Science: Nano, 2021, 8, 2360-2371.	2.2	12
599	Promoting the conversion of CO ₂ to CH ₄ <i>via</i> synergistic dual active sites. Nanoscale, 2021, 13, 12233-12241.	2.8	16

#	ARTICLE	IF	CITATIONS
600	Quasi-square-shaped cadmium hydroxide nanocatalysts for electrochemical CO ₂ reduction with high efficiency. <i>Chemical Science</i> , 2021, 12, 11914-11920.	3.7	10
601	Electrochemical C–N coupling with perovskite hybrids toward efficient urea synthesis. <i>Chemical Science</i> , 2021, 12, 6048-6058.	3.7	138
602	Identification of Single-Atom Ni Site Active toward Electrochemical CO ₂ Conversion to CO. <i>Journal of the American Chemical Society</i> , 2021, 143, 925-933.	6.6	107
603	Regulating the Spin State of Nickel in Molecular Catalysts for Boosting Carbon Dioxide Reduction. <i>ACS Applied Energy Materials</i> , 2021, 4, 2891-2898.	2.5	25
604	In Situ Identifying the Dynamic Structure behind Activity of Atomically Dispersed Platinum Catalyst toward Hydrogen Evolution Reaction. <i>Small</i> , 2021, 17, e2005713.	5.2	38
605	Carbon-Based Materials for Electrochemical Reduction of CO ₂ to C ₂₊ Oxygenates: Recent Progress and Remaining Challenges. <i>ACS Catalysis</i> , 2021, 11, 2076-2097.	5.5	116
606	Recent advances in multilevel nickel-nitrogen-carbon catalysts for CO ₂ electroreduction to CO. <i>New Carbon Materials</i> , 2021, 36, 19-33.	2.9	5
607	600 Ånm induced nearly 99% selectivity of CH ₄ from CO ₂ photoreduction using defect-rich monolayer structures. <i>Cell Reports Physical Science</i> , 2021, 2, 100322.	2.8	23
608	Atomic-level-designed copper atoms on hierarchically porous gold architectures for high-efficiency electrochemical CO ₂ reduction. <i>Science China Materials</i> , 2021, 64, 1900-1909.	3.5	26
609	Atomically Dispersed Indium Sites for Selective CO ₂ Electroreduction to Formic Acid. <i>ACS Nano</i> , 2021, 15, 5671-5678.	7.3	121
610	Ambient sunlight-driven photothermal methanol dehydrogenation for syngas production with 32.9 % solar-to-hydrogen conversion efficiency. <i>Science</i> , 2021, 24, 102056.	1.9	12
611	Atomically dispersed Ir [±] -MoC catalyst with high metal loading and thermal stability for water-promoted hydrogenation reaction. <i>National Science Review</i> , 2022, 9, nwab026.	4.6	41
612	Operando XAS/SAXS: Guiding Design of Single-Atom and Subnanocluster Catalysts. <i>Small Methods</i> , 2021, 5, e2001194.	4.6	41
613	2D Materials Bridging Experiments and Computations for Electro/Photocatalysis. <i>Advanced Energy Materials</i> , 2022, 12, 2003841.	10.2	116
614	Highly Boosted Reaction Kinetics in Carbon Dioxide Electroreduction by Surface-Introduced Electronegative Dopants. <i>Advanced Functional Materials</i> , 2021, 31, 2008146.	7.8	88
615	Engineering transition metal-based nanomaterials for high-performance electrocatalysis. <i>Materials Reports Energy</i> , 2021, 1, 100006.	1.7	14
616	NiSn Atomic Pair on an Integrated Electrode for Synergistic Electrocatalytic CO ₂ Reduction. <i>Angewandte Chemie</i> , 2021, 133, 7458-7464.	1.6	25
617	Metal-support interactions in designing noble metal-based catalysts for electrochemical CO ₂ reduction: Recent advances and future perspectives. <i>Nano Research</i> , 2021, 14, 3795-3809.	5.8	80

#	ARTICLE	IF	CITATIONS
618	Structural Evolution and Underlying Mechanism of Single-Atom Centers on Mo ₂ C(100) Support during Oxygen Reduction Reaction. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 17075-17084.	4.0	4
619	Three-Dimensional Graphene-Based Macrostructures for Electrocatalysis. <i>Small</i> , 2021, 17, e2005255.	5.2	34
620	Single-Atom Ruthenium Biomimetic Enzyme for Simultaneous Electrochemical Detection of Dopamine and Uric Acid. <i>Analytical Chemistry</i> , 2021, 93, 4916-4923.	3.2	119
621	Cu ₃ Pd _x N nanocrystals for efficient CO ₂ electrochemical reduction to methane. <i>Electrochimica Acta</i> , 2021, 371, 137793.	2.6	6
622	Electrodeposition of Ni on MWNTs as a promising catalyst for CO ₂ RR. <i>Energy Science and Engineering</i> , 2021, 9, 1042-1047.	1.9	10
623	Transition metal doped C ₃ N monolayer as efficient electrocatalyst for carbon dioxide electroreduction: A computational study. <i>Applied Surface Science</i> , 2021, 542, 148568.	3.1	14
624	Self-Activated Catalytic Sites on Nanoporous Dilute Alloy for High-Efficiency Electrochemical Hydrogen Evolution. <i>ACS Nano</i> , 2021, 15, 5333-5340.	7.3	53
625	Probing Single-Atom Catalysts and Catalytic Reaction Processes by Shell-Isolated Nanoparticle-Enhanced Raman Spectroscopy. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 9306-9310.	7.2	41
626	Probing Single-Atom Catalysts and Catalytic Reaction Processes by Shell-Isolated Nanoparticle-Enhanced Raman Spectroscopy. <i>Angewandte Chemie</i> , 2021, 133, 9392-9396.	1.6	7
627	Recent Advancements of Porphyrin-Like Single-Atom Catalysts: Synthesis and Applications. <i>Small Structures</i> , 2021, 2, 2100007.	6.9	77
628	Enhanced Cuprophilic Interactions in Crystalline Catalysts Facilitate the Highly Selective Electroreduction of CO ₂ to CH ₄ . <i>Journal of the American Chemical Society</i> , 2021, 143, 3808-3816.	6.6	187
629	Single-Ni Sites Embedded in Multilayer Nitrogen-Doped Graphene Derived from Amino-Functionalized MOF for Highly Selective CO ₂ Electroreduction. <i>ACS Sustainable Chemistry and Engineering</i> , 2021, 9, 3792-3801.	3.2	24
630	Spatial Sites Separation Strategy to Fabricate Atomically Isolated Nickel Catalysts for Efficient CO ₂ Electroreduction. , 2021, 3, 454-461.		34
631	From CO ₂ to Value-Added Products: A Review about Carbon-Based Materials for Electro-Chemical CO ₂ Conversion. <i>Catalysts</i> , 2021, 11, 351.	1.6	33
632	Toward Rational Design of Single-Atom Catalysts. <i>Journal of Physical Chemistry Letters</i> , 2021, 12, 2837-2847.	2.1	45
633	Single Atom-Based Nanoarchitected Electrodes for High-Performance Lithium-Sulfur Batteries. <i>Advanced Materials Interfaces</i> , 2021, 8, 2002159.	1.9	22
634	Engineering Sn-Based Catalytic Materials for Efficient Electrochemical CO ₂ Reduction to Formate. <i>ChemNanoMat</i> , 2021, 7, 380-391.	1.5	16
635	Solid-liquid phase transition induced electrocatalytic switching from hydrogen evolution to highly selective CO ₂ reduction. <i>Nature Catalysis</i> , 2021, 4, 202-211.	16.1	89

#	ARTICLE	IF	CITATIONS
636	Structural tuning of heterogeneous molecular catalysts for electrochemical energy conversion. <i>Science Advances</i> , 2021, 7, .	4.7	48
637	Rational strain engineering of single-atom ruthenium on nanoporous MoS ₂ for highly efficient hydrogen evolution. <i>Nature Communications</i> , 2021, 12, 1687.	5.8	210
638	Highly efficient Co single-atom catalyst for epoxidation of plant oils. <i>Journal of Chemical Physics</i> , 2021, 154, 131103.	1.2	6
639	Steric Hindrance and Work Function Promoted High Performance for Electrochemical CO Methanation on Antisite Defects of MoS ₂ and WS ₂ . <i>ChemSusChem</i> , 2021, 14, 2255-2261.	3.6	6
640	Proton Capture Strategy for Enhancing Electrochemical CO ₂ Reduction on Atomically Dispersed Metal Nitrogen Active Sites. <i>Angewandte Chemie</i> , 2021, 133, 12066-12072.	1.6	25
641	Ambient-Stable Black Phosphorus-Based 2D/2D S-Scheme Heterojunction for Efficient Photocatalytic CO ₂ Reduction to Syngas. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 20162-20173.	4.0	111
642	Folic acid self-assembly synthesis of ultrathin N-doped carbon nanosheets with single-atom metal catalysts. <i>Energy Storage Materials</i> , 2021, 36, 409-416.	9.5	39
643	Atomic Indium Catalysts for Switching CO ₂ Electroreduction Products from Formate to CO. <i>Journal of the American Chemical Society</i> , 2021, 143, 6877-6885.	6.6	140
644	Nonnitrogen Coordination Environment Steering Electrochemical CO ₂ -to-CO Conversion over Single-Atom Tin Catalysts in a Wide Potential Window. <i>ACS Catalysis</i> , 2021, 11, 5212-5221.	5.5	79
645	Unveiling Electrochemical Urea Synthesis by Co Activation of CO ₂ and N ₂ with Mott-Schottky Heterostructure Catalysts. <i>Angewandte Chemie</i> , 2021, 133, 11005-11013.	1.6	38
646	Recent Advances in Catalyst Structure and Composition Engineering Strategies for Regulating CO ₂ Electrochemical Reduction. <i>Advanced Materials</i> , 2021, 33, e2005484.	11.1	100
647	Direct electrosynthesis of 52% concentrated CO on silver's twin boundary. <i>Nature Communications</i> , 2021, 12, 2139.	5.8	34
648	Revealing the importance of kinetics in N-coordinated dual-metal sites catalyzed oxygen reduction reaction. <i>Journal of Catalysis</i> , 2021, 396, 215-223.	3.1	47
649	Unveiling Electrochemical Urea Synthesis by Co Activation of CO ₂ and N ₂ with Mott-Schottky Heterostructure Catalysts. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 10910-10918.	7.2	182
650	Identification of Active Sites for CO ₂ Reduction on Graphene-Supported Single-Atom Catalysts. <i>ChemSusChem</i> , 2021, 14, 2475-2480.	3.6	5
651	Recent Advances on Nanomaterials for Electrocatalytic CO ₂ Conversion. <i>Energy & Fuels</i> , 2021, 35, 7485-7510.	2.5	24
652	Nanoporous Intermetallic Pd ₃ Bi for Efficient Electrochemical Nitrogen Reduction. <i>Advanced Materials</i> , 2021, 33, e2007733.	11.1	98
653	Highly dispersed cobalt phthalocyanine on nitrogen-doped carbon towards electrocatalytic reduction of CO ₂ to CO. <i>Ionics</i> , 2021, 27, 2583-2590.	1.2	7

#	ARTICLE	IF	CITATIONS
654	Boosting Electrochemical CO ₂ Reduction by Controlling Coordination Environment in Atomically Dispersed Ni@N _x C _y Catalysts. ACS Sustainable Chemistry and Engineering, 2021, 9, 6438-6445.	3.2	18
655	Ni-N-Doped Carbon-Modified Reduced Graphene Oxide Catalysts for Electrochemical CO ₂ Reduction Reaction. Catalysts, 2021, 11, 561.	1.6	2
656	Atomic-Dispersed Coordinated Unsaturated Nickel–Nitrogen Sites in Hollow Carbon Spheres for the Efficient Electrochemical CO ₂ Reduction. ACS Sustainable Chemistry and Engineering, 2021, 9, 5437-5444.	3.2	17
657	Carbon and Oxygen Coordinating Atoms Adjust Transition Metal Single-Atom Catalysts Based On Boron Nitride Monolayers for Highly Efficient CO ₂ Electroreduction. ACS Applied Materials & Interfaces, 2021, 13, 18934-18943.	4.0	13
658	Proton Capture Strategy for Enhancing Electrochemical CO ₂ Reduction on Atomically Dispersed Metal–Nitrogen Active Sites**. Angewandte Chemie - International Edition, 2021, 60, 11959-11965.	7.2	144
659	Rational design of ultrahigh loading metal single-atoms (Co, Ni, Mo) anchored on in-situ pre-crosslinked guar gum derived N-doped carbon aerogel for efficient overall water splitting. Chemical Engineering Journal, 2021, 410, 128359.	6.6	41
660	How increasing proton and electron conduction benefits electrocatalytic CO ₂ reduction. Matter, 2021, 4, 1555-1577.	5.0	22
661	Heteroatom-doped porous carbon-supported single-atom catalysts for electrocatalytic energy conversion. Journal of Energy Chemistry, 2021, 63, 54-73.	7.1	16
662	Challenges and opportunities for nitrogen reduction to ammonia on transitional metal nitrides via Mars-van Krevelen mechanism. Cell Reports Physical Science, 2021, 2, 100438.	2.8	27
663	Folic Acid Self-Assembly Enabling Manganese Single-Atom Electrocatalyst for Selective Nitrogen Reduction to Ammonia. Nano-Micro Letters, 2021, 13, 125.	14.4	39
664	Discovery of Single-Atom Catalyst: Customized Heteroelement Dopants on Graphene. Accounts of Materials Research, 2021, 2, 394-406.	5.9	19
665	Tailoring the Electronic Metal–Support Interactions in Supported Atomically Dispersed Gold Catalysts for Efficient Fenton-like Reaction. Angewandte Chemie, 2021, 133, 14491-14496.	1.6	15
666	Transforming cobalt hydroxide nanowires into single atom site catalysts. Nano Energy, 2021, 83, 105799.	8.2	19
667	Atomically Precise Gold Nanoclusters as Model Catalysts for Identifying Active Sites for Electroreduction of CO ₂ . Angewandte Chemie - International Edition, 2021, 60, 14563-14570.	7.2	111
668	Inducing Electron Dissipation of Pyridinic N Enabled by Single Ni–N ₄ Sites for the Reduction of Aldehydes/Ketones with Ethanol. ACS Catalysis, 2021, 11, 6398-6405.	5.5	43
669	Nickel Nanoparticles with Narrow Size Distribution Confined in Nitrogen-Doped Carbon for Efficient Reduction of CO ₂ to CO. Catalysis Letters, 2022, 152, 600-609.	1.4	6
670	Biomimetic inspired porphyrin-based nanoframes for highly efficient photocatalytic CO ₂ reduction. Chemical Engineering Journal, 2021, 411, 128414.	6.6	31
671	Atomically Precise Gold Nanoclusters as Model Catalysts for Identifying Active Sites for Electroreduction of CO ₂ . Angewandte Chemie, 2021, 133, 14684-14691.	1.6	17

#	ARTICLE	IF	CITATIONS
672	Tailoring the Electronic Metal-Support Interactions in Supported Atomically Dispersed Gold Catalysts for Efficient Fenton-Like Reaction. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 14370-14375.	7.2	46
673	One-dimensional nanomaterial supported metal single-atom electrocatalysts: Synthesis, characterization, and applications. <i>Nano Select</i> , 2021, 2, 2072-2111.	1.9	12
674	Phthalocyanine-derived catalysts decorated by metallic nanoclusters for enhanced CO ₂ electroreduction. <i>Green Energy and Environment</i> , 2023, 8, 444-451.	4.7	7
675	Nickel single atom-decorated carbon nanosheets as multifunctional electrocatalyst supports toward efficient alkaline hydrogen evolution. <i>Nano Energy</i> , 2021, 83, 105850.	8.2	66
676	Comprehensive Understandings into Complete Reconstruction of Precatalysts: Synthesis, Applications, and Characterizations. <i>Advanced Materials</i> , 2021, 33, e2007344.	11.1	198
677	Highly Scalable Conversion of Blood Protoporphyrin to Efficient Electrocatalyst for CO ₂ Conversion. <i>Advanced Materials Interfaces</i> , 2021, 8, 2100067.	1.9	4
678	Coordinatively and Spatially Coconfining High-Loading Atomic Sb in Sulfur-Rich 2D Carbon Matrix for Fast K ⁺ Diffusion and Storage. , 2021, 3, 790-798.		10
679	Single-atom catalysts with bimetallic centers for high-performance electrochemical CO ₂ reduction. <i>Materials Today</i> , 2021, 45, 54-61.	8.3	34
680	The chemical states of conjugated coordination polymers. <i>CheM</i> , 2021, 7, 1224-1243.	5.8	71
681	N-doped hollow carbon spheres with controllable shell numbers for high-performance electrical double-layer capacitors. <i>Journal of Power Sources</i> , 2021, 493, 229679.	4.0	23
682	A Highly Efficient Conjoined-Twin Porphyrin-Based Complex for the Electrochemical Reduction of CO to Ethanol. <i>ChemNanoMat</i> , 2021, 7, 935-941.	1.5	2
683	Boosting Li-CO ₂ battery performances by engineering oxygen vacancy on NiO nanosheets array. <i>Journal of Power Sources</i> , 2021, 495, 229782.	4.0	34
684	CO ₂ electrochemical reduction to methane on transition metal porphyrin nitrogen-doped carbon material M@d-NC: theoretical insight. <i>Theoretical Chemistry Accounts</i> , 2021, 140, 1.	0.5	2
685	Tuning the coordination environment of single-atom catalyst M-N-C towards selective hydrogenation of functionalized nitroarenes. <i>Nano Research</i> , 2022, 15, 519-527.	5.8	53
686	Atomic Structural Evolution of Single-Layer Pt Clusters as Efficient Electrocatalysts. <i>Small</i> , 2021, 17, e2100732.	5.2	26
687	Conductive Two-Dimensional Phthalocyanine-based Metal-Organic Framework Nanosheets for Efficient Electroreduction of CO ₂ . <i>Angewandte Chemie - International Edition</i> , 2021, 60, 17108-17114.	7.2	213
688	Bridging Thermal Catalysis and Electrocatalysis: Catalyzing CO ₂ Conversion with Carbon-Based Materials. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 17472-17480.	7.2	21
689	Theoretical considerations on activity of the electrochemical CO ₂ reduction on metal single-atom catalysts with asymmetrical active sites. <i>Catalysis Today</i> , 2022, 397-399, 574-580.	2.2	9

#	ARTICLE	IF	CITATIONS
690	Unveiling the In Situ Generation of a Monovalent Fe(I) Site in the Single-Fe-Atom Catalyst for Electrochemical CO ₂ Reduction. ACS Catalysis, 2021, 11, 7292-7301.	5.5	51
691	Recent advances of single-atom electrocatalysts for hydrogen evolution reaction. JPhys Materials, 2021, 4, 042002.	1.8	11
692	General synthesis of single-atom catalysts with high metal loading using graphene quantum dots. Nature Chemistry, 2021, 13, 887-894.	6.6	362
693	Wide Potential CO ₂ to CO Electroreduction Relies on Pyridinic N/Ni Sites and Its Zn-CO ₂ Battery Application. Energy Technology, 2021, 9, 2100205.	1.8	8
694	Molecular Design of Dispersed Nickel Phthalocyanine@Nanocarbon Hybrid Catalyst for Active and Stable Electroreduction of CO ₂ . Journal of Physical Chemistry C, 2021, 125, 13836-13849.	1.5	16
695	Activity Selectivity Enhancement and Catalytic Trend of CO ₂ Electroreduction on Metallic Dimers Supported by N-Doped Graphene: A Computational Study. Journal of Physical Chemistry C, 2021, 125, 13176-13184.	1.5	12
696	Recent progress on single-atom catalysts for CO ₂ electroreduction. Materials Today, 2021, 48, 95-114.	8.3	63
697	Conductive Two-Dimensional Phthalocyanine-based Metal-Organic Framework Nanosheets for Efficient Electroreduction of CO ₂ . Angewandte Chemie, 2021, 133, 17245-17251.	1.6	48
698	Carbon nanosheets supporting Ni _{3S} single-atom sites for efficient electrocatalytic CO ₂ reduction. Carbon, 2021, 178, 488-496.	5.4	48
699	A brief review of electrocatalytic reduction of CO ₂ Materials, reaction conditions, and devices. Energy Science and Engineering, 2021, 9, 1012-1032.	1.9	60
700	Effective anodic sulfide removal catalyzed by single nickel atoms on nitrogen-doped graphene with stainless steel substrate. Chemical Engineering Journal, 2022, 427, 130963.	6.6	13
701	Bridging Thermal Catalysis and Electrocatalysis: Catalyzing CO ₂ Conversion with Carbon-Based Materials. Angewandte Chemie, 2021, 133, 17613-17621.	1.6	1
702	Atomically Structural Regulations of Carbon-Based Single-Atom Catalysts for Electrochemical CO ₂ Reduction. Small Methods, 2021, 5, e2100102.	4.6	61
703	Theoretical insights into catalytic CO ₂ hydrogenation over single-atom (Fe or Ni) incorporated nitrogen-doped graphene. Journal of CO ₂ Utilization, 2021, 48, 101532.	3.3	26
704	Electronic structure regulations of single-atom site catalysts and their effects on the electrocatalytic performances. Applied Physics Reviews, 2021, 8, .	5.5	29
705	Modulating Oxygen Reduction Behaviors on Nickel Single-Atom Catalysts to Probe the Electrochemiluminescence Mechanism at the Atomic Level. Analytical Chemistry, 2021, 93, 8663-8670.	3.2	48
706	Highly selective and robust single-atom catalyst Ru ₁ /NC for reductive amination of aldehydes/ketones. Nature Communications, 2021, 12, 3295.	5.8	152
708	Promoting the activity and selectivity of Ni sites via chemical coordination with pyridinic nitrogen for CO ₂ -to-CO electrochemical catalysis. International Journal of Hydrogen Energy, 2021, 46, 25448-25456.	3.8	7

#	ARTICLE	IF	CITATIONS
709	MOF-Templated Sulfurization of Atomically Dispersed Manganese Catalysts Facilitating Electroreduction of CO ₂ to CO. ACS Applied Materials & Interfaces, 2021, 13, 52134-52143.	4.0	17
710	Zero-Valent Palladium Single-Atom Catalysts Confined in Black Phosphorus for Efficient Semi-Hydrogenation. Advanced Materials, 2021, 33, e2008471.	11.1	55
711	Atomically Dispersed Co to an End-Adsorbing Molecule for Excellent Biomimetically and Prime Sensitive Detecting O ₂ Released from Living Cells. Analytical Chemistry, 2021, 93, 10789-10797.	3.2	13
712	Engineering the Electronic Interaction between Metals and Carbon Supports for Oxygen/Hydrogen Electrocatalysis. , 2021, 3, 1197-1212.		27
713	Room-temperature electrochemical acetylene reduction to ethylene with high conversion and selectivity. Nature Catalysis, 2021, 4, 565-574.	16.1	121
714	Carbon-based single atom catalyst: Synthesis, characterization, DFT calculations. Chinese Chemical Letters, 2022, 33, 663-673.	4.8	126
715	Electronic Coupling of Single Atom and FePS ₃ Boosts Water Electrolysis. Energy and Environmental Materials, 2022, 5, 899-905.	7.3	16
716	Modulating Coordination Environment of Single-Atom Catalysts and Their Proximity to Photosensitive Units for Boosting MOF Photocatalysis. Journal of the American Chemical Society, 2021, 143, 12220-12229.	6.6	219
717	Orbital coupling of hetero-diatomic nickel-iron site for bifunctional electrocatalysis of CO ₂ reduction and oxygen evolution. Nature Communications, 2021, 12, 4088.	5.8	259
718	Photoelectrochemical Reduction of Carbon Dioxide with a Copper Graphitic Carbon Nitride Photocathode. Chemistry - A European Journal, 2021, 27, 13513-13517.	1.7	4
719	Synergizing metal-support interactions and spatial confinement boosts dynamics of atomic nickel for hydrogenations. Nature Nanotechnology, 2021, 16, 1141-1149.	15.6	165
721	A nickel-nitrogen-doped carbon foam as monolithic electrode for highly efficient CO ₂ electroreduction. Journal of CO ₂ Utilization, 2021, 49, 101549.	3.3	6
722	Ultrathin CuNi Nanosheets for CO ₂ Reduction and O ₂ Reduction Reaction in Fuel Cells. , 2021, 3, 1143-1150.		23
723	Single-Atom Electrocatalysts for Multi-Electron Reduction of CO ₂ . Small, 2021, 17, e2101443.	5.2	44
724	Reduction Mechanism of NO Gas on Iron-Phthalocyanines (Fe-PCs): A DFT Investigation. Catalysis Letters, 2022, 152, 1338-1346.	1.4	3
725	Chemical Reduction of NiII Cyclam and Characterization of Isolated NiI Cyclam with Cryogenic Vibrational Spectroscopy and Inert-Gas-Mediated High-Resolution Mass Spectrometry. Journal of Physical Chemistry A, 2021, 125, 6715-6721.	1.1	0
726	Visualizing highly selective electrochemical CO ₂ reduction on a molecularly dispersed catalyst. Materials Today Physics, 2021, 19, 100427.	2.9	15
727	Emerging Dual-Atomic-Site Catalysts for Efficient Energy Catalysis. Advanced Materials, 2021, 33, e2102576.	11.1	226

#	ARTICLE	IF	CITATIONS
728	General Design Concept for Single-Atom Catalysts toward Heterogeneous Catalysis. <i>Advanced Materials</i> , 2021, 33, e2004287.	11.1	170
729	Nanoporous Intermetallic Cu ₃ Sn/Cu Hybrid Electrodes as Efficient Electrocatalysts for Carbon Dioxide Reduction. <i>Small</i> , 2021, 17, e2100683.	5.2	22
730	Progress and Prospect of Organic Electrocatalysts in Lithium-Sulfur Batteries. <i>Frontiers in Chemistry</i> , 2021, 9, 703354.	1.8	5
731	Activity descriptor of Ni,N-Codoped carbon electrocatalyst in CO ₂ electroreduction reaction. <i>Chemical Engineering Journal</i> , 2022, 433, 131965.	6.6	13
732	Boosting CO ₂ Electroreduction over a Cadmium Single-Atom Catalyst by Tuning of the Axial Coordination Structure. <i>Angewandte Chemie</i> , 2021, 133, 20971-20978.	1.6	16
733	Binary Atomically Dispersed Metal-Site Catalysts with Core-Shell Nanostructures for O ₂ and CO ₂ Reduction Reactions. <i>Small Science</i> , 2021, 1, 2100046.	5.8	29
734	Electrocatalytic Reactions for Converting CO ₂ to Value-Added Products. <i>Small Science</i> , 2021, 1, 2100043.	5.8	66
735	N-doped carbon-encapsulated nickel on reduced graphene oxide materials for efficient CO ₂ electroreduction to syngas with potential-independent H ₂ /CO ratios. <i>Journal of Environmental Chemical Engineering</i> , 2021, 9, 105515.	3.3	12
736	Single site catalyst with enzyme-mimic micro-environment for electroreduction of CO ₂ . <i>Nano Research</i> , 2022, 15, 1817-1823.	5.8	22
737	Atomically dispersed S-Fe-N ₄ for fast kinetics sodium-sulfur batteries via a dual function mechanism. <i>Cell Reports Physical Science</i> , 2021, 2, 100531.	2.8	31
738	Theory-guided design of atomic Fe-Ni dual sites in N,P-co-doped C for boosting oxygen evolution reaction. <i>Chem Catalysis</i> , 2021, 1, 734-745.	2.9	45
739	On the Roles of Electron Transfer in Catalysis by Nanoclusters and Nanoparticles. <i>Chemistry - A European Journal</i> , 2021, 27, 16291-16308.	1.7	8
740	Co-based molecular catalysts for efficient CO ₂ reduction via regulating spin states. <i>Applied Catalysis B: Environmental</i> , 2021, 290, 120067.	10.8	35
741	Bimetallic effects on Zn-Cu electrocatalysts enhance activity and selectivity for the conversion of CO ₂ to CO. <i>Chem Catalysis</i> , 2021, 1, 663-680.	2.9	42
742	Application of X-Ray Absorption Spectroscopy in Electrocatalytic Water Splitting and CO ₂ Reduction. <i>Small Science</i> , 2021, 1, 2100023.	5.8	16
743	Revealing the Real Role of Nickel Decorated Nitrogen-Doped Carbon Catalysts for Electrochemical Reduction of CO ₂ to CO. <i>Advanced Energy Materials</i> , 2021, 11, 2101477.	10.2	63
744	Ultra-low-loaded Ni-Fe Dimer Anchored to Nitrogen/Oxygen Sites for Boosting Electroreduction of Carbon Dioxide. <i>ChemSusChem</i> , 2021, 14, 4499-4506.	3.6	9
745	Recent Developments of Microenvironment Engineering of Single-Atom Catalysts for Oxygen Reduction toward Desired Activity and Selectivity. <i>Advanced Functional Materials</i> , 2021, 31, 2103857.	7.8	77

#	ARTICLE	IF	CITATIONS
746	Synergistic Effect of Atomically Dispersed Ni-Zn Pair Sites for Enhanced CO ₂ Electroreduction. <i>Advanced Materials</i> , 2021, 33, e2102212.	11.1	155
747	Operando toolbox for heterogeneous interface in electrocatalysis. <i>Chem Catalysis</i> , 2021, 1, 509-522.	2.9	27
748	Two-Electron Electrochemical Reduction of CO ₂ on B-Doped Ni-C Catalysts: A First-Principles Study. <i>Journal of Physical Chemistry C</i> , 2021, 125, 19247-19258.	1.5	15
749	Manipulating Cu Nanoparticle Surface Oxidation States Tunes Catalytic Selectivity toward CH ₄ or C ₂₊ Products in CO ₂ Electroreduction. <i>Advanced Energy Materials</i> , 2021, 11, 2101424.	10.2	71
750	Boosting CO ₂ Electroreduction over a Cadmium Single-Atom Catalyst by Tuning of the Axial Coordination Structure. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 20803-20810.	7.2	86
751	A New Strategy for Accelerating Dynamic Proton Transfer of Electrochemical CO ₂ Reduction at High Current Densities. <i>Advanced Functional Materials</i> , 2021, 31, 2104243.	7.8	49
752	Identify the Activity Origin of Pt Single-Atom Catalyst via Atom-by-Atom Counting. <i>Journal of the American Chemical Society</i> , 2021, 143, 15243-15249.	6.6	27
753	Enhancement of Mass Transfer for Facilitating Industrial-Level CO ₂ Electroreduction on Atomic Ni ₄ N ₄ Sites. <i>Advanced Energy Materials</i> , 2021, 11, 2102152.	10.2	56
754	Recent advances in carbon-based materials for electrochemical CO ₂ reduction reaction. <i>Chinese Chemical Letters</i> , 2022, 33, 2270-2280.	4.8	43
755	Electron-Rich Pincer Ligand-Coupled Cobalt Porphyrin Polymer with Single-Atom Sites for Efficient (Photo)Electrocatalytic CO ₂ Reduction at Ultralow Overpotential. <i>Small</i> , 2021, 17, e2102957.	5.2	22
756	Design concept for electrocatalysts. <i>Nano Research</i> , 2022, 15, 1730-1752.	5.8	396
757	Activation of Transition Metal (Fe, Co and Ni) Oxide Nanoclusters by Nitrogen Defects in Carbon Nanotube for Selective CO ₂ Reduction Reaction. <i>Energy and Environmental Materials</i> , 2023, 6, .	7.3	16
758	High-Temperature Nitridation Induced Carbon Nanotubes@NiFe Layered Double Hydroxide Nanosheets Taking as an Oxygen Evolution Reaction Electrocatalyst for CO ₂ Electroreduction. <i>Advanced Materials Interfaces</i> , 2021, 8, 2101165.	1.9	13
759	Self-Supported Nickel Single Atoms Overwhelming the Concomitant Nickel Nanoparticles Enable Efficient and Selective CO ₂ Electroreduction. <i>Advanced Materials Interfaces</i> , 2021, 8, 2101542.	1.9	10
760	Fe-Ni Nanoparticles on N-Doped Carbon as Catalysts for Electrocatalytic Reduction of CO ₂ to Tune CO/H ₂ Ratio. <i>ChemElectroChem</i> , 2021, 8, 4233-4239.	1.7	5
761	Metal-Organic Framework-Based Electrocatalysts for CO ₂ Reduction. <i>Small Structures</i> , 2022, 3, 2100090.	6.9	90
762	Anchoring Sites Engineering in Single-Atom Catalysts for Highly Efficient Electrochemical Energy Conversion Reactions. <i>Advanced Materials</i> , 2021, 33, e2102801.	11.1	64
763	Nitrogen Vacancy Induced Coordinative Reconstruction of Single-Atom Ni Catalyst for Efficient Electrochemical CO ₂ Reduction. <i>Advanced Functional Materials</i> , 2021, 31, 2107072.	7.8	89

#	ARTICLE	IF	CITATIONS
764	Metal ⁺ -Metal ⁺ pair sites steer C-C coupling for selective CO ₂ photoreduction to C ₂ hydrocarbons. Nano Research, 2022, 15, 1882-1891.	5.8	31
765	Effect of coordination surroundings of isolated metal sites on electrocatalytic performances. Journal of Power Sources, 2021, 506, 230143.	4.0	15
766	Biocompatible Ruthenium Single-Atom Catalyst for Cascade Enzyme-Mimicking Therapy. ACS Applied Materials & Interfaces, 2021, 13, 45269-45278.	4.0	41
767	Sulfur-Dopant-Promoted Electroreduction of CO ₂ over Coordinatively Unsaturated Ni ₂ Moieties. Angewandte Chemie - International Edition, 2021, 60, 23342-23348.	7.2	98
768	Bamboo-like N-doped carbon nanotubes encapsulating M(Co, Fe)-Ni alloy for electrochemical production of syngas with potential-independent CO/H ₂ ratios. Frontiers of Chemical Science and Engineering, 0, , 1.	2.3	1
769	Elucidating the Role of Single-Atom Pd for Electrocatalytic Hydrodechlorination. Environmental Science & Technology, 2021, 55, 13306-13316.	4.6	12
770	Recent progress, developing strategies, theoretical insights, and perspectives towards high-performance copper single atom electrocatalysts. Materials Today Energy, 2021, 21, 100761.	2.5	8
771	Nanoparticle-Assisted Ni-Co Binary Single-Atom Catalysts Supported on Carbon Nanotubes for Efficient Electroreduction of CO ₂ to Syngas with Controllable CO/H ₂ Ratios. ACS Applied Energy Materials, 2021, 4, 9572-9581.	2.5	19
772	A Facile Strategy for Constructing a Carbon-Particle-Modified Metal-Organic Framework for Enhancing the Efficiency of CO ₂ Electroreduction into Formate. Angewandte Chemie - International Edition, 2021, 60, 23394-23402.	7.2	58
773	A Facile Strategy for Constructing a Carbon-Particle-Modified Metal-Organic Framework for Enhancing the Efficiency of CO ₂ Electroreduction into Formate. Angewandte Chemie, 2021, 133, 23582-23590.	1.6	16
774	Recent advances in heterogeneous catalysts for the effective electroreduction of carbon dioxide to carbon monoxide. Journal of Power Sources, 2021, 506, 230215.	4.0	22
775	Construction of Six-Oxygen-Coordinated Single Ni Sites on g-C ₃ N ₄ with Boron-Oxo Species for Photocatalytic Water-Activation-Induced CO ₂ Reduction. Advanced Materials, 2021, 33, e2105482.	11.1	128
776	Catalyst Design for Electrochemical Reduction of CO ₂ to Multicarbon Products. Small Methods, 2021, 5, e2100736.	4.6	74
777	In Situ Characterization for Boosting Electrocatalytic Carbon Dioxide Reduction. Small Methods, 2021, 5, e2100700.	4.6	51
778	Sulfur-Dopant-Promoted Electroreduction of CO ₂ over Coordinatively Unsaturated Ni ₂ Moieties. Angewandte Chemie, 0, , .	1.6	9
779	Carbon nanomaterials: Synthesis, properties and applications in electrochemical sensors and energy conversion systems. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2021, 272, 115341.	1.7	40
780	Ni-N ₄ sites in a single-atom Ni catalyst on N-doped carbon for hydrogen production from formic acid. Journal of Catalysis, 2021, 402, 264-274.	3.1	41
781	Highly-configured TiO ₂ hollow spheres adorned with N-doped carbon dots as a high-performance photocatalyst for solar-induced CO ₂ reduction to methane. Applied Surface Science, 2021, 563, 150292.	3.1	21

#	ARTICLE	IF	CITATIONS
782	Distorted carbon nitride nanosheets with activated $n\hat{A}t\hat{A}i\epsilon^*$ transition and preferred textural properties for photocatalytic CO ₂ reduction. <i>Journal of Catalysis</i> , 2021, 402, 166-176.	3.1	101
783	Idiosyncratic skewness and cross-section of stock returns: Evidence from Taiwan. <i>International Review of Financial Analysis</i> , 2021, 77, 101816.	3.1	5
784	Dual-atom active sites embedded in two-dimensional C ₂ N for efficient CO ₂ electroreduction: A computational study. <i>Journal of Energy Chemistry</i> , 2021, 61, 507-516.	7.1	69
785	M-N-C-based single-atom catalysts for H ₂ , O ₂ & CO ₂ electrocatalysis: activity descriptors, active sites identification, challenges and prospects. <i>Fuel</i> , 2021, 304, 121420.	3.4	63
786	Efficient carboxylation of styrene and carbon dioxide by single-atomic copper electrocatalyst. <i>Journal of Colloid and Interface Science</i> , 2021, 601, 378-384.	5.0	27
787	Enhanced mass transfer in three-dimensional single-atom nickel catalyst with open-pore structure for highly efficient CO ₂ electrolysis. <i>Journal of Energy Chemistry</i> , 2021, 62, 43-50.	7.1	35
788	Crystal orientation effects on the electrochemical conversion of CO ₂ to syngas over Cu-M (M=Ag, Ni, Tj ETQq0 0 0 rgBT /Overlock 1	3.1	19
789	Self-generated Ni nanoparticles/LaFeO ₃ heterogeneous oxygen carrier for robust CO ₂ utilization under a cyclic redox scheme. <i>Nano Energy</i> , 2021, 89, 106379.	8.2	25
790	Achieving efficient electroreduction of CO ₂ to CO in a wide potential window by encapsulating Ni nanoparticles in N-doped carbon nanotubes. <i>Carbon</i> , 2021, 185, 9-16.	5.4	29
791	Individual Ni atoms on reduced graphene oxide as efficient catalytic system for reduction of 4-nitrophenol. <i>Applied Surface Science</i> , 2021, 565, 150503.	3.1	16
792	Electrochemical conversion of CO ₂ to syngas over Cu-M (M=Cd, Zn, Ni, Ag, and Pd) bimetal catalysts. <i>Fuel</i> , 2021, 304, 121341.	3.4	26
793	Towards a library of atomically dispersed catalysts. <i>Materials and Design</i> , 2021, 210, 110080.	3.3	6
794	Boosting electrochemical CO ₂ reduction on ternary heteroatoms-doped porous carbon. <i>Chemical Engineering Journal</i> , 2021, 425, 131661.	6.6	20
795	High-entropy carbons: From high-entropy aromatic species to single-atom catalysts for electrocatalysis. <i>Chemical Engineering Journal</i> , 2021, 426, 131320.	6.6	14
796	Synthetic multiscale design of nanostructured Ni single atom catalyst for superior CO ₂ electroreduction. <i>Chemical Engineering Journal</i> , 2021, 426, 131063.	6.6	43
797	Surface regulated Ni nanoparticles on N-doped mesoporous carbon as an efficient electrocatalyst for CO ₂ reduction. <i>Chinese Journal of Catalysis</i> , 2021, 42, 2306-2312.	6.9	15
798	Preparation and application of 0D-2D nanomaterial hybrid heterostructures for energy applications. <i>Materials Today Advances</i> , 2021, 12, 100169.	2.5	20
799	Stone-Wales defect-rich carbon-supported dual-metal single atom sites for Zn-air batteries. <i>Nano Energy</i> , 2021, 90, 106488.	8.2	55

#	ARTICLE	IF	CITATIONS
800	Pitfalls in X-ray absorption spectroscopy analysis and interpretation: A practical guide for general users. <i>Current Opinion in Electrochemistry</i> , 2021, 30, 100803.	2.5	34
801	Polymeric carbon nitride with internal n-p homojunctions for efficient photocatalytic CO ₂ reduction coupled with cyclohexene oxidation. <i>Applied Catalysis B: Environmental</i> , 2021, 298, 120568.	10.8	38
802	Implanted metal-nitrogen active sites enhance the electrocatalytic activity of zeolitic imidazolate zinc framework-derived porous carbon for the hydrogen evolution reaction in acidic and alkaline media. <i>Journal of Colloid and Interface Science</i> , 2021, 604, 441-457.	5.0	47
803	Robust coal matrix intensifies electron/substrate interaction of nickel-nitrogen (Ni-N) active sites for efficient CO ₂ electroreduction at industrial current density. <i>Applied Catalysis B: Environmental</i> , 2021, 299, 120661.	10.8	25
804	Opportunities and challenges in CO ₂ utilization. <i>Journal of Environmental Sciences</i> , 2022, 113, 322-344.	3.2	90
805	Directly anchoring non-noble metal single atoms on 1T-TMDs with tip structure for efficient hydrogen evolution. <i>Chemical Engineering Journal</i> , 2022, 428, 131210.	6.6	22
806	Nickel dual-atom catalysts for the selective electrocatalytic debromination of tribromoacetic acid as a green chemistry process. <i>Chemical Engineering Journal</i> , 2022, 427, 131719.	6.6	24
807	Operando HERFD-XANES and surface sensitive ¹³ C analyses identify the structural evolution of copper(II) phthalocyanine for electroreduction of CO ₂ . <i>Journal of Energy Chemistry</i> , 2022, 64, 1-7.	7.1	27
808	A perspective on the electrocatalytic conversion of carbon dioxide to methanol with metallomacrocyclic catalysts. <i>Journal of Energy Chemistry</i> , 2022, 64, 263-275.	7.1	28
809	Single Ir atom anchored in pyrrolic-N ₄ doped graphene as a promising bifunctional electrocatalyst for the ORR/OER: a computational study. <i>Journal of Colloid and Interface Science</i> , 2022, 607, 1005-1013.	5.0	78
810	Single-atom catalysts for CO oxidation, CO ₂ reduction, and O ₂ electrochemistry. <i>Journal of Energy Chemistry</i> , 2022, 65, 254-279.	7.1	56
811	High-pressure synthesis of CO and syngas from CO ₂ reduction using Ni [~] N-doped porous carbon electrocatalyst. <i>Chemical Engineering Journal</i> , 2022, 429, 132251.	6.6	9
812	Predictable interfacial mass transfer intensification of Sn [~] N doped multichannel hollow carbon nanofibers for the CO ₂ electro-reduction reaction. <i>Sustainable Energy and Fuels</i> , 2021, 5, 3097-3101.	2.5	4
813	Single-atom Fe [~] N ₄ site for the hydrogenation of nitrobenzene: theoretical and experimental studies. <i>Dalton Transactions</i> , 2021, 50, 7995-8001.	1.6	2
814	Marked enhancement of electrocatalytic activities for gas-consuming reactions by bimodal mesopores. <i>Journal of Materials Chemistry A</i> , 2021, 9, 17821-17829.	5.2	7
815	Carbon [~] Supported Single Metal Site Catalysts for Electrochemical CO ₂ Reduction to CO and Beyond. <i>Small</i> , 2021, 17, e2005148.	5.2	86
816	Recent advances in single atom catalysts for the electrochemical carbon dioxide reduction reaction. <i>Chemical Science</i> , 2021, 12, 6800-6819.	3.7	130
817	Atomic regulation of metal [~] organic framework derived carbon-based single-atom catalysts for the electrochemical CO ₂ reduction reaction. <i>Journal of Materials Chemistry A</i> , 2021, 9, 23382-23418.	5.2	46

#	ARTICLE	IF	CITATIONS
818	Unveiling the genesis of the high catalytic activity in nickel phthalocyanine for electrochemical ammonia synthesis. <i>Journal of Materials Chemistry A</i> , 2021, 9, 14477-14484.	5.2	46
819	Non-carbon-supported single-atom site catalysts for electrocatalysis. <i>Energy and Environmental Science</i> , 2021, 14, 2809-2858.	15.6	198
820	Reaction mechanism on Ni-C ₂ -NS single-atom catalysis for the efficient CO ₂ reduction. <i>Journal of Experimental Nanoscience</i> , 2021, 16, 255-264.	1.3	10
821	Gram-scale synthesis of single-atom metal-N-CNT catalysts for highly efficient CO ₂ electroreduction. <i>Chemical Communications</i> , 2021, 57, 1514-1517.	2.2	15
822	Recent advances in Cu-based catalysts for electroreduction of carbon dioxide. <i>Materials Chemistry Frontiers</i> , 2021, 5, 2668-2683.	3.2	21
823	Emerging dynamic structure of electrocatalysts unveiled by <i>in situ</i> X-ray diffraction/absorption spectroscopy. <i>Energy and Environmental Science</i> , 2021, 14, 1928-1958.	15.6	179
824	Electrocatalytic CO ₂ Reduction Activity Over Transition Metal Anchored on Nitrogen-Doped Carbon: A Density Functional Theory Investigation. <i>Catalysis Letters</i> , 2021, 151, 2547-2559.	1.4	3
825	Design of bimetallic atomic catalysts for CO ₂ reduction based on an effective descriptor. <i>Journal of Materials Chemistry A</i> , 2021, 9, 4770-4780.	5.2	32
826	The Hallmarks of Copper Single Atom Catalysts in Direct Alcohol Fuel Cells and Electrochemical CO ₂ Fixation. <i>Advanced Materials Interfaces</i> , 2021, 8, 2001822.	1.9	43
827	The atomic-level regulation of single-atom site catalysts for the electrochemical CO ₂ reduction reaction. <i>Chemical Science</i> , 2021, 12, 4201-4215.	3.7	61
828	Atomic-level engineering of two-dimensional electrocatalysts for CO ₂ reduction. <i>Nanoscale</i> , 2021, 13, 7081-7095.	2.8	24
829	In/ZnO@C hollow nanocubes for efficient electrochemical reduction of CO ₂ to formate and rechargeable Zn-CO ₂ batteries. <i>Materials Chemistry Frontiers</i> , 2021, 5, 6618-6627.	3.2	19
830	Amination strategy to boost the CO ₂ electroreduction current density of M-N/C single-atom catalysts to the industrial application level. <i>Energy and Environmental Science</i> , 2021, 14, 2349-2356.	15.6	148
831	N-Bridged Co-Ni: new bimetallic sites for promoting electrochemical CO ₂ reduction. <i>Energy and Environmental Science</i> , 2021, 14, 3019-3028.	15.6	128
832	Recent Progress of 3d Transition Metal Single-Atom Catalysts for Electrochemical CO ₂ Reduction. <i>Advanced Materials Interfaces</i> , 2021, 8, 2001904.	1.9	40
833	Mn ₄ Oxygen Reduction Electrocatalyst: Operando Investigation of Active Sites and High Performance in Zinc-Air Battery. <i>Advanced Energy Materials</i> , 2021, 11, 2002753.	10.2	83
834	Integrating Nickel-Nitrogen Doped Carbon Catalyzed CO ₂ Electroreduction with Chlor-Alkali Process for CO, Cl ₂ and KHCO ₃ Production with Enhanced Techno-Economics. <i>Applied Catalysis B: Environmental</i> , 2020, 275, 119154.	10.8	56
835	Universal Principle to Describe Reactivity and Selectivity of CO ₂ Electroreduction on Transition Metals and Single-Atom Catalysts. <i>Journal of Physical Chemistry C</i> , 2020, 124, 25898-25906.	1.5	20

#	ARTICLE	IF	CITATIONS
836	Constructing Efficient Single Rh Sites on Activated Carbon via Surface Carbonyl Groups for Methanol Carbonylation. <i>ACS Catalysis</i> , 2021, 11, 682-690.	5.5	19
837	Cooperative CO ₂ -to-ethanol conversion via enriched intermediates at molecule-metal catalyst interfaces. <i>Nature Catalysis</i> , 2020, 3, 75-82.	16.1	390
838	One-step coating of commercial Ni nanoparticles with a Ni, N-co-doped carbon shell towards efficient electrocatalysts for CO ₂ reduction. <i>Chemical Communications</i> , 2020, 56, 7495-7498.	2.2	13
839	Industrial carbon dioxide capture and utilization: state of the art and future challenges. <i>Chemical Society Reviews</i> , 2020, 49, 8584-8686.	18.7	610
840	A strategy to control the grain boundary density and Cu ⁺ /Cu ⁰ ratio of Cu-based catalysts for efficient electroreduction of CO ₂ to C ₂ products. <i>Green Chemistry</i> , 2020, 22, 1572-1576.	4.6	49
841	Graphene-supported single-atom catalysts and applications in electrocatalysis. <i>Nanotechnology</i> , 2021, 32, 032001.	1.3	33
842	Review-Non-Noble Metal-Based Single-Atom Catalysts for Efficient Electrochemical CO ₂ Reduction Reaction. <i>Journal of the Electrochemical Society</i> , 2020, 167, 164503.	1.3	15
843	Electrochemical flow systems enable renewable energy industrial chain of CO ₂ reduction. <i>Pure and Applied Chemistry</i> , 2020, 92, 1937-1951.	0.9	8
844	Nitrogen Coordinated Single Atomic Metals Supported on Nanocarbons: A New Frontier in Electrocatalytic CO ₂ Reduction. <i>Engineered Science</i> , 2018, , .	1.2	13
845	Origin of the N-coordinated single-atom Ni sites in heterogeneous electrocatalysts for CO ₂ reduction reaction. <i>Chemical Science</i> , 2021, 12, 14065-14073.	3.7	35
846	Nitrogen doped carbon for Pd-catalyzed hydropurification of crude terephthalic acid: roles of nitrogen species. <i>RSC Advances</i> , 2021, 11, 33646-33652.	1.7	4
847	Electrochemical reduction of carbon dioxide with nearly 100% carbon monoxide faradaic efficiency from vacancy-stabilized single-atom active sites. <i>Journal of Materials Chemistry A</i> , 2021, 9, 24955-24962.	5.2	30
848	Effective Screening Route for Highly Active and Selective Metal-Nitrogen-Doped Carbon Catalysts in CO ₂ Electrochemical Reduction. <i>Small</i> , 2021, 17, e2103705.	5.2	12
849	Recent Advances in Interface Engineering for Electrocatalytic CO ₂ Reduction Reaction. <i>Nano-Micro Letters</i> , 2021, 13, 216.	14.4	58
850	Synergistic Ni single atoms and oxygen vacancies on SnO ₂ nanorods toward promoting SO ₂ gas sensing. <i>Sensors and Actuators B: Chemical</i> , 2022, 351, 130983.	4.0	32
851	Single-Atom Catalysts: Advances and Challenges in Metal-Support Interactions for Enhanced Electrocatalysis. <i>Electrochemical Energy Reviews</i> , 2022, 5, 145-186.	13.1	86
852	Facile Synthesis of Atomic Fe-N Materials and Dual Roles Investigation of Fe-N ₄ Sites in Fenton-Like Reactions. <i>Advanced Science</i> , 2021, 8, e2101824.	5.6	118
853	Key factors for designing single-atom metal-nitrogen-carbon catalysts for electrochemical CO ₂ reduction. <i>Current Opinion in Electrochemistry</i> , 2022, 31, 100854.	2.5	13

#	ARTICLE	IF	CITATIONS
854	Loading Single Ni Atoms on Assembled Hollow N-Rich Carbon Plates for Efficient CO ₂ Electroreduction. <i>Advanced Materials</i> , 2022, 34, e2105204.	11.1	100
855	2.6% cm ⁻² Single-Pass CO ₂ -to-CO Conversion Using Ni Single Atoms Supported on Ultra-Thin Carbon Nanosheets in a Flow Electrolyzer. <i>ACS Catalysis</i> , 2021, 11, 12701-12711.	5.5	14
856	Hydroxyapatite Nanorods Rich in [Ca-O-P] Sites Stabilized Ni Species for Methane Dry Reforming. <i>Industrial & Engineering Chemistry Research</i> , 2021, 60, 15064-15073.	1.8	11
857	Roles of Coordination Geometry in Single-Atom Catalysts. <i>ACS Symposium Series</i> , 2020, , 37-76.	0.5	4
860	Activating COOH* intermediate by Ni/Ni ₃ ZnCO ₇ heterostructure in porous N-doped carbon nanofibers for boosting CO ₂ electroreduction. <i>Applied Catalysis B: Environmental</i> , 2022, 302, 120861.	10.8	32
861	Dynamic Restructuring of Coordinatively Unsaturated Copper Paddle Wheel Clusters to Boost Electrochemical CO ₂ Reduction to Hydrocarbons**. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	8
862	Dynamic Restructuring of Coordinatively Unsaturated Copper Paddle Wheel Clusters to Boost Electrochemical CO ₂ Reduction to Hydrocarbons**. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	61
863	Electrochemical Reduction of CO ₂ to CO over Transition Metal/N-Doped Carbon Catalysts: The Active Sites and Reaction Mechanism. <i>Advanced Science</i> , 2021, 8, e2102886.	5.6	121
864	Conductive MOFs based on Thiol-functionalized Linkers: Challenges, Opportunities, and Recent Advances. <i>Coordination Chemistry Reviews</i> , 2022, 450, 214235.	9.5	42
865	CO ₂ electroreduction performance of transition metals supported on g-C(CN) ₃ monolayer with specific TMN ₃ active sites. <i>Applied Surface Science</i> , 2022, 573, 151544.	3.1	5
866	Nickel sulfide and cobalt sulfide nanoparticles deposited on ultrathin carbon two-dimensional nanosheets for hybrid supercapacitors. <i>Applied Surface Science</i> , 2022, 574, 151727.	3.1	14
867	Efficient and selective electrochemical reduction of nitrate to N ₂ by relay catalytic effects of Fe-Ni bimetallic sites on MOF-derived structure. <i>Applied Catalysis B: Environmental</i> , 2022, 301, 120829.	10.8	68
868	A single-atom Cu ₂ 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
869	Closing the Anthropogenic Chemical Carbon Cycle toward a Sustainable Future via CO ₂ Valorization. <i>Advanced Energy Materials</i> , 2021, 11, 2102767.	10.2	35
870	Carbon Nanotubes-Based Electrocatalysts: Structural Regulation, Support Effect, and Synchrotron-Based Characterization. <i>Advanced Functional Materials</i> , 2022, 32, 2106684.	7.8	14
871	Synergy between Confined Cobalt Centers and Oxygen Defects on Î±-Fe ₂ O ₃ Platelets for Efficient Photocatalytic CO ₂ Reduction. <i>Solar Rrl</i> , 2022, 6, 2100833.	3.1	6
872	Emerging Single-Atom Catalysts/Nanozymes for Catalytic Biomedical Applications. <i>Advanced Healthcare Materials</i> , 2022, 11, e2101682.	3.9	26
873	Recent progress in quantum dots based nanocomposite electrodes for rechargeable monovalent metal-ion and lithium metal batteries. <i>Journal of Materials Chemistry A</i> , 2022, 10, 508-553.	5.2	12

#	ARTICLE	IF	CITATIONS
874	In situ studies of energy-related electrochemical reactions using Raman and X-ray absorption spectroscopy. Chinese Journal of Catalysis, 2022, 43, 33-46.	6.9	28
875	Cost-effective and durable electrocatalysts for Co-electrolysis of CO ₂ conversion and glycerol upgrading. Nano Energy, 2022, 92, 106751.	8.2	35
876	A promising single-atom Co-N-C catalyst for efficient CO ₂ electroreduction and high-current solar conversion of CO ₂ to CO. Applied Catalysis B: Environmental, 2022, 304, 120958.	10.8	28
877	Understanding Single-Atom Catalysis in View of Theory. Jacs Au, 2021, 1, 2130-2145.	3.6	86
878	Hierarchical flower-like architecture of nickel phosphide anchored with nitrogen-doped carbon quantum dots and cobalt oxide for advanced hybrid supercapacitors. Journal of Colloid and Interface Science, 2022, 609, 503-512.	5.0	17
879	Moving beyond bimetallic-alloy to single-atom dimer atomic-interface for all-pH hydrogen evolution. Nature Communications, 2021, 12, 6766.	5.8	123
880	Scalable two-step annealing method for preparing ultra-high-density single-atom catalyst libraries. Nature Nanotechnology, 2022, 17, 174-181.	15.6	279
881	Engineering Single-Atomic Ni-N ₄ -O Sites on Semiconductor Photoanodes for High-Performance Photoelectrochemical Water Splitting. Journal of the American Chemical Society, 2021, 143, 20657-20669.	6.6	114
882	Observation of 4th-order water oxidation kinetics by time-resolved photovoltage spectroscopy. IScience, 2021, 24, 103500.	1.9	8
883	Dual-Atomic Cu Sites for Electrocatalytic CO Reduction to C ₂₊ Products. , 2021, 3, 1729-1737.		66
884	Electroreduction of low concentration CO ₂ at atomically dispersed Ni-N-C catalysts with nanoconfined ionic liquids. Applied Catalysis B: Environmental, 2022, 304, 120963.	10.8	29
885	Inspirational perspectives and principles on the use of catalysts to create sustainability. Catalysis Today, 2022, 387, 237-243.	2.2	17
886	Boosting the Electrocatalytic Conversion of Nitrogen to Ammonia on Metal-Phthalocyanine-Based Two-Dimensional Conjugated Covalent Organic Frameworks. Journal of the American Chemical Society, 2021, 143, 19992-20000.	6.6	100
887	Electrochemical CO ₂ Reduction Reaction on 3d Transition Metal Single-Atom Catalysts Supported on Graphdiyne: A DFT Study. Journal of Physical Chemistry C, 2021, 125, 26013-26020.	1.5	38
888	Single-atom catalysts for next-generation rechargeable batteries and fuel cells. Energy Storage Materials, 2022, 45, 301-322.	9.5	67
889	Nickel single-atom catalysts intrinsically promoted by fast pyrolysis for selective electroreduction of CO ₂ into CO. Applied Catalysis B: Environmental, 2022, 304, 120997.	10.8	73
890	Coordination environment engineering on nickel single-atom catalysts for CO ₂ electroreduction. Nanoscale, 2021, 13, 19133-19143.	2.8	27
891	Highly selective electroreduction of N ₂ and CO ₂ to urea over artificial frustrated Lewis pairs. Energy and Environmental Science, 2021, 14, 6605-6615.	15.6	130

#	ARTICLE	IF	CITATIONS
892	The site pair matching of a tandem Au/CuO@CuO nanocatalyst for promoting the selective electrolysis of CO ₂ to C ₂ products. RSC Advances, 2021, 11, 38486-38494.	1.7	4
893	Electrocatalysis enabled transformation of earth-abundant water, nitrogen and carbon dioxide for a sustainable future. Materials Advances, 2022, 3, 1359-1400.	2.6	17
894	Nanocatalyst doped bacterial cellulose-based thermosensitive nanogel with biocatalytic function for antibacterial application. International Journal of Biological Macromolecules, 2022, 195, 294-301.	3.6	10
895	Selective and stable upgrading of biomass-derived furans into plastic monomers by coupling homogeneous and heterogeneous catalysis. Chem, 2022, 8, 1034-1049.	5.8	24
896	Tunable Cu@M bimetal catalysts enable syngas electrosynthesis from carbon dioxide. New Journal of Chemistry, 2022, 46, 1203-1209.	1.4	9
897	Rationalization on high-loading iron and cobalt dual metal single atoms and mechanistic insight into the oxygen reduction reaction. Nano Energy, 2022, 93, 106793.	8.2	109
898	Lattice-dislocated Bi nanosheets for electrocatalytic reduction of carbon dioxide to formate over a wide potential window. Journal of Colloid and Interface Science, 2022, 611, 246-254.	5.0	17
899	Anode-cathode interchangeable strategy for in situ reviving electrocatalysts' critical active sites for highly stable methanol upgrading and hydrogen evolution reactions. Applied Catalysis B: Environmental, 2022, 305, 121082.	10.8	21
900	High Hydrothermal Stability of Mesoporous Ni-Phyllosilicate Spherical Particle. SSRN Electronic Journal, 0, , .	0.4	0
901	Less Energy Consumed Hydrogen Evolution Coupled with Electrocatalytic Removal of Ethanolamine Pollutant in Saline Water over Ni@Ni ₃ S ₂ /CNT Nano-Heterostructured Electrocatalysts. Small Methods, 2022, 6, e2101195.	4.6	10
902	The synergetic effect of an aqua ligand and metal site on the performance of single-atom catalysts in H ₂ O ₂ synthesis: a density functional theory study. Physical Chemistry Chemical Physics, 2022, 24, 3905-3917.	1.3	1
903	Hybrid palladium nanoparticles and nickel single atom catalysts for efficient electrocatalytic ethanol oxidation. Journal of Materials Chemistry A, 2022, 10, 6129-6133.	5.2	28
904	Ammonia etched petroleum pitch-based porous carbon as efficient catalysts for CO ₂ electroreduction. Carbon Letters, 2022, 32, 807-814.	3.3	5
905	Dual Role of Pyridinic-N Doping in Carbon-Coated Ni Nanoparticles for Highly Efficient Electrochemical CO ₂ Reduction to CO over a Wide Potential Range. ACS Catalysis, 2022, 12, 1364-1374.	5.5	73
906	Superiority of Dual-Atom Catalysts in Electrocatalysis: One Step Further Than Single-Atom Catalysts. Advanced Energy Materials, 2022, 12, .	10.2	189
907	Metalized Carbon Nitrides for Efficient Catalytic Functionalization of CO ₂ . ACS Catalysis, 2022, 12, 1797-1808.	5.5	48
908	Advances of the functionalized carbon nitrides for electrocatalysis. , 2022, 4, 211-236.		33
909	Progress and perspectives for engineering and recognizing active sites of two-dimensional materials in CO ₂ electroreduction. Science China Chemistry, 2022, 65, 428-440.	4.2	19

#	ARTICLE	IF	CITATIONS
910	Clustering of metal dopants in defect sites of graphene-based materials. <i>Physical Chemistry Chemical Physics</i> , 2021, 24, 98-111.	1.3	3
911	Functional catalysts for polysulfide conversion in Li-S batteries: from micro/nanoscale to single atom. <i>Rare Metals</i> , 2022, 41, 1080-1100.	3.6	16
912	Covalent Organic Framework (COF) Derived Ni-Catalysts for Electrochemical CO ₂ Reduction: Unraveling Fundamental Kinetic and Structural Parameters of the Active Sites. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	8
913	Impact of Nickel Content on the Structure and Electrochemical CO ₂ Reduction Performance of Nickel-Nitrogen-Carbon Catalysts Derived from Zeolitic Imidazolate Frameworks. <i>ACS Applied Energy Materials</i> , 2022, 5, 430-439.	2.5	11
914	Electrochemical Deposited Zeolitic Imidazolate Frameworks as an Efficient Electrocatalyst for CO ₂ Electrocatalytic Reduction. <i>ChemCatChem</i> , 2022, 14, .	1.8	13
915	Nurturing the marriages of single atoms with atomic clusters and nanoparticles for better heterogeneous electrocatalysis. , 2022, 1, 51-87.		114
916	Support-based modulation strategies in single-atom catalysts for electrochemical CO ₂ reduction: graphene and conjugated macrocyclic complexes. <i>Journal of Materials Chemistry A</i> , 2022, 10, 5699-5716.	5.2	13
917	Au-activated N motifs in non-coherent cupric porphyrin metal organic frameworks for promoting and stabilizing ethylene production. <i>Nature Communications</i> , 2022, 13, 63.	5.8	64
918	Electrochemical CO ₂ reduction in membrane-electrode assemblies. <i>CheM</i> , 2022, 8, 663-692.	5.8	86
919	Site-Specific Axial Oxygen Coordinated FeN ₄ Active Sites for Highly Selective Electroreduction of Carbon Dioxide. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	38
920	Covalent Organic Framework (COF) Derived Ni-Catalysts for Electrochemical CO ₂ Reduction: Unraveling Fundamental Kinetic and Structural Parameters of the Active Sites. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	28
921	Engineering the Local Atomic Environments of Indium Single-Atom Catalysts for Efficient Electrochemical Production of Hydrogen Peroxide. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	27
922	Engineering the Local Atomic Environments of Indium Single-Atom Catalysts for Efficient Electrochemical Production of Hydrogen Peroxide. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	127
923	Effects of microporous layer on electrolyte flooding in gas diffusion electrodes and selectivity of CO ₂ electrolysis to CO. <i>Journal of Power Sources</i> , 2022, 522, 230998.	4.0	31
924	Dual-metal single-atomic catalyst: The challenge in synthesis, characterization, and mechanistic investigation for electrocatalysis. <i>SmartMat</i> , 2022, 3, 533-564.	6.4	35
925	Surface and interface chemistry in metal-free electrocatalysts for electrochemical CO ₂ reduction. <i>SmartMat</i> , 2022, 3, 5-34.	6.4	25
926	Acidic Electrocatalytic CO ₂ Reduction Using Space-Confined Nanoreactors. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 7900-7908.	4.0	42
927	Atomic Tuning of Single-Atom Fe-N-C Catalysts with Phosphorus for Robust Electrochemical CO ₂ Reduction. <i>Nano Letters</i> , 2022, 22, 1557-1565.	4.5	111

#	ARTICLE	IF	CITATIONS
928	Recent progress in CO ₂ reduction using bimetallic electrodes containing copper. <i>Electrochemistry Communications</i> , 2022, 135, 107212.	2.3	20
929	CO ₂ reduction reaction pathways on single-atom Co sites: Impacts of local coordination environment. <i>Chinese Journal of Catalysis</i> , 2022, 43, 832-838.	6.9	18
930	Conversion of reverse osmosis membranes into metal-free carbocatalyst for electrochemical syngas production. <i>Journal of CO₂ Utilization</i> , 2022, 58, 101908.	3.3	1
931	Uniform zinc deposition on O,N-dual functionalized carbon cloth current collector. <i>Journal of Energy Chemistry</i> , 2022, 69, 76-83.	7.1	19
932	Atomic alloys of nickel-platinum on carbon network for methanol oxidation. <i>Nano Energy</i> , 2022, 95, 106984.	8.2	31
933	Size-dependent selectivity and activity of highly dispersed sub-nanometer Pt clusters integrated with P25 for CO ₂ photoreduction into methane fuel. <i>Applied Surface Science</i> , 2022, 584, 152532.	3.1	7
934	A fully-conjugated covalent organic framework-derived carbon supporting ultra-close single atom sites for ORR. <i>Applied Catalysis B: Environmental</i> , 2022, 307, 121147.	10.8	42
935	Diminishing the Uncoordinated N Species in Co-N-C Catalysts toward Highly Efficient Electrochemical CO ₂ Reduction. <i>ACS Catalysis</i> , 2022, 12, 2513-2521.	5.5	38
936	Construction of single-atom catalysts for electro-, photo- and photoelectro-catalytic applications: State-of-the-art, opportunities, and challenges. <i>Materials Today</i> , 2022, 53, 217-237.	8.3	34
937	Optimizing the Electrocatalytic Selectivity of Carbon Dioxide Reduction Reaction by Regulating the Electronic Structure of Single-Atom Materials. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	129
938	Thermal migration towards constructing W-W dual-sites for boosted alkaline hydrogen evolution reaction. <i>Nature Communications</i> , 2022, 13, 763.	5.8	68
939	A metal-supported single-atom catalytic site enables carbon dioxide hydrogenation. <i>Nature Communications</i> , 2022, 13, 819.	5.8	83
940	Dual-Atom Metal and Nonmetal Site Catalyst on a Single Nickel Atom Supported on a Hybridized BCN Nanosheet for Electrochemical CO ₂ Reduction to Methane: Combining High Activity and Selectivity. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 9073-9083.	4.0	34
941	Applications of Carbon Dots for the Photocatalytic and Electrocatalytic Reduction of CO ₂ . <i>Molecules</i> , 2022, 27, 1081.	1.7	23
942	Template-Sacrificing Synthesis of Well-Defined Asymmetrically Coordinated Single-Atom Catalysts for Highly Efficient CO ₂ Electrocatalytic Reduction. <i>ACS Nano</i> , 2022, 16, 2110-2119.	7.3	82
943	On the Sensitivity to Density-Functional Approximations for CO Binding Energies of Single-Atom Catalysts in Nitrogen-Doped Graphene. <i>ChemPhysChem</i> , 2022, 23, e202100787.	1.0	6
944	Boosting oxygen reduction reaction with Fe and Se dual-atom sites supported by nitrogen-doped porous carbon. <i>Applied Catalysis B: Environmental</i> , 2022, 308, 121206.	10.8	82
945	Edge-enriched Ni-N ₄ atomic sites embedded enoki-mushroom-like carbon nanotubes assembling hollow fibers for CO ₂ conversion and flexible Zn-air battery. <i>Energy Storage Materials</i> , 2022, 47, 235-248.	9.5	28

#	ARTICLE	IF	CITATIONS
946	Modified UiO-66 as photocatalysts for boosting the carbon-neutral energy cycle and solving environmental remediation issues. <i>Coordination Chemistry Reviews</i> , 2022, 458, 214428.	9.5	107
947	Ligand Engineering in Nickel Phthalocyanine to Boost the Electrocatalytic Reduction of CO ₂ . <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	80
948	Atomically Dispersed Cu Anchored on Nitrogen and Boron Codoped Carbon Nanosheets for Enhancing Catalytic Performance. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 61047-61054.	4.0	18
949	Topologically protected oxygen redox in a layered manganese oxide cathode for sustainable batteries. <i>Nature Sustainability</i> , 2022, 5, 214-224.	11.5	44
950	Operando X-ray absorption spectroscopic studies of the carbon dioxide reduction reaction in a modified flow cell. <i>Catalysis Science and Technology</i> , 0, , .	2.1	5
951	Electrochemical conversion of CO ₂ to syngas with a stable H ₂ /CO ratio in a wide potential range over ligand-engineered metal-organic frameworks. <i>Journal of Materials Chemistry A</i> , 2022, 10, 9954-9959.	5.2	5
952	Functionalized Graphitic Carbon Nitrides for Photocatalytic H ₂ O ₂ Production: Desired Properties Leading to Rational Catalyst Design. <i>KONA Powder and Particle Journal</i> , 2023, 40, 124-148.	0.9	2
953	Single Ni active sites with a nitrogen and phosphorus dual coordination for an efficient CO ₂ reduction. <i>Nanoscale</i> , 2022, 14, 6846-6853.	2.8	9
954	Controllable Fabrication of Atomic Dispersed Low-Coordination Nickel-Nitrogen Sites for Highly Efficient Electrocatalytic CO ₂ Reduction. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
955	Comparative life cycle and economic assessments of various value-added chemicals' production via electrochemical CO ₂ reduction. <i>Green Chemistry</i> , 2022, 24, 2927-2936.	4.6	7
956	Host-guest molecular interaction promoted urea electrosynthesis over a precisely designed conductive metal-organic framework. <i>Energy and Environmental Science</i> , 2022, 15, 2084-2095.	15.6	73
957	Triggering Electronic Coupling between Neighbouring Hetero-Diatomic Metal Sites Promotes Hydrogen Evolution Reaction Kinetics. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
958	Atomically dispersed single Ni site catalysts for high-efficiency CO ₂ electroreduction at industrial-level current densities. <i>Energy and Environmental Science</i> , 2022, 15, 2108-2119.	15.6	99
959	Nickel Single Atoms Anchored on Ultrathin Carbon Nitride for Selective Hydrogen Peroxide Generation with Enhanced Photocatalytic Activity. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
960	High-efficiency radon adsorption by nickel nanoparticles supported on activated carbon. <i>New Journal of Chemistry</i> , 2022, 46, 9222-9228.	1.4	5
961	Identification of Fenton-like active Cu sites by heteroatom modulation of electronic density. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2022, 119, .	3.3	132
962	Boron bridged Ni ₄ B ₂ Cx single-atom catalyst for superior electrochemical CO ₂ reduction. <i>Materials Today</i> , 2022, 54, 63-71.	8.3	26
963	Engineering Steam Induced Surface Oxygen Vacancy onto Ni-Fe Bimetallic Nanocomposite for CO ₂ Electroreduction. <i>Small</i> , 2022, 18, e2108034.	5.2	20

#	ARTICLE	IF	CITATIONS
964	Strong Correlation between the Dynamic Chemical State and Product Profile of Carbon Dioxide Electroreduction. ACS Applied Materials & Interfaces, 2022, 14, 22681-22696.	4.0	30
965	Anchoring Copper Single Atoms on Porous Boron Nitride Nanofiber to Boost Selective Reduction of Nitroaromatics. ACS Nano, 2022, 16, 4152-4161.	7.3	47
966	An orientated mass transfer in Ni-Cu tandem nanofibers for highly selective reduction of CO ₂ to ethanol. Fundamental Research, 2023, 3, 786-795.	1.6	3
967	Boosting ORR performance by single atomic divacancy Zn-N ₃ C ₈ sites on ultrathin N-doped carbon nanosheets. Chem Catalysis, 2022, 2, 836-852.	2.9	25
969	Single-Atom Catalysts for the Electro-Reduction of CO ₂ to Syngas with a Tunable CO/H ₂ Ratio: A Review. Catalysts, 2022, 12, 275.	1.6	13
971	Recent Progress on Fe-Based Single/Dual-Atom Catalysts for Zn-Air Batteries. Small, 2022, 18, e2106635.	5.2	47
972	Recent Progress in Two-Dimensional Materials for Electrocatalytic CO ₂ Reduction. Catalysts, 2022, 12, 228.	1.6	23
973	Size-Tunable Carbon-Doped Ni Nanoparticles for Switchable Reductive Amination of Biomass-Derived Carbonyl Compounds to Primary Amines and Secondary Imines. ACS Sustainable Chemistry and Engineering, 2022, 10, 3777-3786.	3.2	9
974	Synthesis of N-Doped Highly Graphitic Carbon Urchin-Like Hollow Structures Loaded with Single Ni Atoms towards Efficient CO ₂ Electroreduction. Angewandte Chemie, 2022, 134, .	1.6	11
975	Advances in the Development of Single-Atom Catalysts for High-Energy-Density Lithium-Sulfur Batteries. Advanced Materials, 2022, 34, e2200102.	11.1	202
976	Highly efficient and selective electrocatalytic hydrogen peroxide production on Co-O-C active centers on graphene oxide. Communications Chemistry, 2022, 5, .	2.0	33
977	Copper(II) Frameworks with Varied Active Site Distribution for Modulating Selectivity of Carbon Dioxide Electroreduction. ACS Applied Materials & Interfaces, 2022, 14, 13645-13652.	4.0	20
978	Recent development of nanomaterials for carbon dioxide electroreduction. SmartMat, 2022, 3, 35-53.	6.4	30
979	Low-dimensional material supported single-atom catalysts for electrochemical CO ₂ reduction. SmartMat, 2022, 3, 84-110.	6.4	46
980	Towards single-atom photocatalysts for future carbon-neutral application. SmartMat, 2022, 3, 417-446.	6.4	35
981	Gadolinium Changes the Local Electron Densities of Nickel 3d Orbitals for Efficient Electrocatalytic CO ₂ Reduction. Angewandte Chemie, 0, , .	1.6	1
982	Synthesis of N-Doped Highly Graphitic Carbon Urchin-Like Hollow Structures Loaded with Single Ni Atoms towards Efficient CO ₂ Electroreduction. Angewandte Chemie - International Edition, 2022, 61, .	7.2	64
983	Electronic Regulation of Nickel Single Atoms by Confined Nickel Nanoparticles for Energy-Efficient CO ₂ Electroreduction. Angewandte Chemie - International Edition, 2022, 61, .	7.2	57

#	ARTICLE	IF	CITATIONS
984	Ultrahigh Photocatalytic CO ₂ Reduction Efficiency and Selectivity Manipulation by Single-Atom Tungsten Oxide at the Atomic Step of TiO ₂ . <i>Advanced Materials</i> , 2022, 34, e2109074.	11.1	107
985	Structural regulation of single-atomic site catalysts for enhanced electrocatalytic CO ₂ reduction. <i>Nano Research</i> , 2022, 15, 4925-4941.	5.8	20
986	Gadolinium Changes the Local Electron Densities of Nickel 3d Orbitals for Efficient Electrocatalytic CO ₂ Reduction. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	32
987	Top-down synthetic strategies toward single atoms on the rise. <i>Matter</i> , 2022, 5, 788-807.	5.0	28
988	Electronic Regulation of Nickel Single Atoms by Confined Nickel Nanoparticles for Energy-Efficient CO ₂ Electroreduction. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	9
989	Isotope Heterojunction-Boosted CO ₂ Photoreduction to CO. <i>Nano-Micro Letters</i> , 2022, 14, 74.	14.4	56
990	Hydrolysis of Ammonia Borane on a Single Pt Atom Supported by N-Doped Graphene. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 13231-13239.	4.0	25
991	Electrode Engineering for Electrochemical CO ₂ Reduction. <i>Energy & Fuels</i> , 2022, 36, 4234-4249.	2.5	22
992	Co single atoms and nanoparticles dispersed on N-doped carbon nanotube as high-performance catalysts for Zn-air batteries. <i>Rare Metals</i> , 2022, 41, 2055-2062.	3.6	27
993	Ni single-atom sites supported on carbon aerogel for highly efficient electroreduction of carbon dioxide with industrial current densities. <i>EScience</i> , 2022, 2, 295-303.	25.0	81
994	Electronic Structure Engineering of Single-Atom Ru Sites via Co-N ₄ Sites for Bifunctional pH-Universal Water Splitting. <i>Advanced Materials</i> , 2022, 34, e2110103.	11.1	199
995	Toward enhanced alkaline hydrogen electrocatalysis with transition metal-functionalized nitrogen-doped carbon supports. <i>Chinese Journal of Catalysis</i> , 2022, 43, 1351-1359.	6.9	6
996	Built-in electron transport channels and interfacial ions doping in BiVO ₄ modified with isolated Ni atoms anchored on carbon hollow matrix for boosting charge separation and transport efficiency. <i>Chemical Engineering Journal</i> , 2022, 437, 135272.	6.6	9
997	Electrochemical CO ₂ conversion to fuels on metal-free N-doped carbon-based materials: functionalities, mechanistic, and techno-economic aspects. <i>Materials Today Chemistry</i> , 2022, 24, 100838.	1.7	5
998	Nickel-modified polymeric carbon nitride for improving TiO ₂ -based photoanode: photoelectrocatalytical evaluation and mechanistical insights. <i>Materials Today Nano</i> , 2022, 18, 100192.	2.3	5
999	The effect of coordination environment on the activity and selectivity of single-atom catalysts. <i>Coordination Chemistry Reviews</i> , 2022, 461, 214493.	9.5	91
1000	Controllable fabrication of atomic dispersed low-coordination nickel-nitrogen sites for highly efficient electrocatalytic CO ₂ reduction. <i>Chemical Engineering Journal</i> , 2022, 440, 135956.	6.6	23
1001	High hydrothermal stability of mesoporous Ni-phyllsilicate spherical particles. <i>Applied Surface Science</i> , 2022, 590, 153114.	3.1	9

#	ARTICLE	IF	CITATIONS
1002	Transition metal-based single-atom catalysts (TM-SACs); rising materials for electrochemical CO ₂ reduction. <i>Journal of Energy Chemistry</i> , 2022, 70, 444-471.	7.1	44
1003	Ni single atoms anchored on N-doped carbon nanosheets as bifunctional electrocatalysts for Urea-assisted rechargeable Zn-air batteries. <i>Applied Catalysis B: Environmental</i> , 2022, 310, 121352.	10.8	71
1004	Atomically Dispersed Fe-Co Bimetallic Catalysts for the Promoted Electroreduction of Carbon Dioxide. <i>Nano-Micro Letters</i> , 2022, 14, 25.	14.4	49
1005	In Situ Synthesis of CuN ₄ /Mesoporous N-Doped Carbon for Selective Oxidative Crosscoupling of Terminal Alkynes under Mild Conditions. <i>Small</i> , 2022, 18, e2105178.	5.2	11
1006	Recent Advances in Synthesis and Applications of Single-Atom Catalysts for Rechargeable Batteries. <i>Chemical Record</i> , 2022, 22, .	2.9	14
1007	Atomic Bridging Structure of Nickel-Nitrogen-Carbon for Highly Efficient Electrocatalytic Reduction of CO ₂ . <i>Angewandte Chemie - International Edition</i> , 2022, 61, e202113918.	7.2	85
1008	Engineering Electrochemical Surface for Efficient Carbon Dioxide Upgrade. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	33
1009	Recent progress in electrochemical reduction of carbon dioxide on metal single-atom catalysts. <i>Energy Science and Engineering</i> , 2022, 10, 1584-1600.	1.9	11
1010	Atomic Bridging Structure of Nickel-Nitrogen-Carbon for Highly Efficient Electrocatalytic Reduction of CO ₂ . <i>Angewandte Chemie</i> , 2022, 134, .	1.6	12
1011	Unveiling the Ir single atoms as selective active species for the partial hydrogenation of butadiene by <i>in operando</i> XAS. <i>Nanoscale</i> , 2022, 14, 7641-7649.	2.8	5
1012	CO ₂ Electroreduction over Metallic Oxide, Carbon-Based, and Molecular Catalysts: A Mini-Review of the Current Advances. <i>Catalysts</i> , 2022, 12, 450.	1.6	14
1013	Ultrafine Bi Nanoparticles Confined in Hydrothermal Carbon-Modified Carbon Nanotubes for Highly Efficient CO ₂ Electroreduction to Formate. <i>Journal of the Electrochemical Society</i> , 0, , .	1.3	1
1014	Triggering electronic coupling between neighboring hetero-diatomic metal sites promotes hydrogen evolution reaction kinetics. <i>Nano Energy</i> , 2022, 98, 107296.	8.2	30
1015	Ligand centered electrocatalytic efficient CO ₂ reduction reaction at low overpotential on single-atom Ni regulated molecular catalyst. <i>Nano Research</i> , 2022, 15, 5816-5823.	5.8	11
1016	Reducing Valence States of Co Active Sites in a Single-Atom Nanozyme for Boosted Tumor Therapy. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	47
1017	Single-atom catalysts for photocatalytic hydrogen evolution: A review. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 17583-17599.	3.8	37
1018	Atomic- and Molecular-Level Modulation of Dispersed Active Sites for Electrocatalytic CO ₂ Reduction. <i>Chemistry - an Asian Journal</i> , 2022, 17, .	1.7	2
1019	Recovering carbon losses in CO ₂ electrolysis using a solid electrolyte reactor. <i>Nature Catalysis</i> , 2022, 5, 288-299.	16.1	90

#	ARTICLE	IF	CITATIONS
1020	Constructing single-atomic nickel sites in carbon nanotubes for efficient CO ₂ electroreduction. Carbon, 2022, 196, 1-9.	5.4	19
1021	Insight into the Active Sites of N,P-Codoped Carbon Materials for Electrocatalytic CO ₂ Reduction. Inorganic Chemistry, 2022, 61, 6073-6082.	1.9	13
1022	Structural and interfacial engineering of well-defined metal-organic ensembles for electrocatalytic carbon dioxide reduction. Chinese Journal of Catalysis, 2022, 43, 1417-1432.	6.9	11
1023	Atomically Dispersed Dual-Metal Site Catalysts for Enhanced CO ₂ Reduction: Mechanistic Insight into Active Site Structures. Angewandte Chemie - International Edition, 2022, 61, .	7.2	83
1024	Single-Cation Catalyst: Ni Cation in Monolayered CuO for CO Oxidation. Journal of the American Chemical Society, 2022, 144, 8430-8433.	6.6	17
1025	Reconstruction-induced NiCu-based catalysts towards paired electrochemical refining. Energy and Environmental Science, 2022, 15, 3004-3014.	15.6	51
1026	The Deep Understanding into the Promoted Carbon Dioxide Electroreduction of ZIF ₈ -Derived Single-Atom Catalysts by the Simple Grinding Process. Small Structures, 2022, 3, .	6.9	13
1027	Electroreduction of CO ₂ toward High Current Density. Processes, 2022, 10, 826.	1.3	13
1028	Recent advances in the rational design of single-atom catalysts for electrochemical CO ₂ reduction. Nano Research, 2022, 15, 9747-9763.	5.8	19
1029	Atomically Dispersed Dual-Metal Site Catalysts for Enhanced CO ₂ Reduction: Mechanistic Insight into Active Site Structures. Angewandte Chemie, 2022, 134, .	1.6	6
1030	Turn the Trash into Treasure: Egg-White-Derived Single-Atom Electrocatalysts Boost Oxygen Reduction Reaction. ACS Sustainable Chemistry and Engineering, 0, , .	3.2	6
1031	Constructing the separation pathway for photo-generated carriers by diatomic sites decorated on MIL-53-NH ₂ (Al) for enhanced photocatalytic performance. Nano Research, 0, , .	5.8	8
1032	Modulating Pt-O-Pt atomic clusters with isolated cobalt atoms for enhanced hydrogen evolution catalysis. Nature Communications, 2022, 13, 2430.	5.8	98
1033	Construction of Porphyrin Porous Organic Cage as a Support for Single Cobalt Atoms for Photocatalytic Oxidation in Visible Light. ACS Catalysis, 2022, 12, 5827-5833.	5.5	23
1034	Carbon-based material-supported single-atom catalysts for energy conversion. IScience, 2022, 25, 104367.	1.9	20
1035	Electrochemical CO ₂ conversion towards syngas: Recent catalysts and improving strategies for ratio-tunable syngas. Journal of Power Sources, 2022, 535, 231453.	4.0	27
1036	Controlling the D-band for improved oxygen evolution performance in Ni modulated ultrafine Co nanoparticles embedded in Nitrogen-doped carbon microspheres. Journal of Colloid and Interface Science, 2022, 623, 44-53.	5.0	4
1037	Molecular engineering to introduce carbonyl between nickel salophen active sites to enhance electrochemical CO ₂ reduction to methanol. Applied Catalysis B: Environmental, 2022, 314, 121451.	10.8	32

#	ARTICLE	IF	CITATIONS
1038	Atomistic Understanding of Two-dimensional Electrocatalysts from First Principles. <i>Chemical Reviews</i> , 2022, 122, 10675-10709.	23.0	60
1039	Isolating Single and Few Atoms for Enhanced Catalysis. <i>Advanced Materials</i> , 2022, 34, e2201796.	11.1	84
1040	Potential-Dependent Free Energy Relationship in Interpreting the Electrochemical Performance of CO ₂ Reduction on Single Atom Catalysts. <i>ACS Catalysis</i> , 2022, 12, 6606-6617.	5.5	34
1041	Non-Covalent Interaction of Atomically Dispersed Cu and Zn Pair Sites for Efficient Oxygen Reduction Reaction. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	79
1042	Selective Hydrogenation of Aromatic Nitro Compounds Using Unsupported Nickel Catalysts. <i>ChemistrySelect</i> , 2022, 7, .	0.7	3
1043	Synergetic effect of nitrogen-doped carbon catalysts for high-efficiency electrochemical CO ₂ reduction. <i>Chinese Journal of Catalysis</i> , 2022, 43, 1697-1702.	6.9	10
1044	Single atom-based catalysts for electrochemical CO ₂ reduction. <i>Chinese Journal of Catalysis</i> , 2022, 43, 1547-1597.	6.9	37
1045	Recent Advances in Dual-Atom Site Catalysts for Efficient Oxygen and Carbon Dioxide Electrocatalysis. <i>Small Methods</i> , 2022, 6, .	4.6	36
1046	A hierarchical Single-Atom Ni-N ₃ -C catalyst for electrochemical CO ₂ reduction to CO with Near-Unity faradaic efficiency in a broad potential range. <i>Chemical Engineering Journal</i> , 2022, 446, 137296.	6.6	30
1047	Atomic Layer Infiltration Enabled Cu Coordination Environment Construction for Enhanced Electrochemical CO ₂ Reduction Selectivity: Case Study of a Cu Metal-Organic Framework. <i>Chemistry of Materials</i> , 2022, 34, 6713-6722.	3.2	10
1048	Quasi-Covalently Coupled Ni-Cu Atomic Pair for Synergistic Electroreduction of CO ₂ . <i>Journal of the American Chemical Society</i> , 2022, 144, 9661-9671.	6.6	134
1049	Improving NiNX and pyridinic N active sites with space-confined pyrolysis for effective CO ₂ electroreduction. <i>EScience</i> , 2022, 2, 445-452.	25.0	54
1050	Nickel single atoms anchored on ultrathin carbon nitride for selective hydrogen peroxide generation with enhanced photocatalytic activity. <i>Chemical Engineering Journal</i> , 2022, 446, 137379.	6.6	32
1051	Highly active and thermostable submonolayer La(NiCo)O ₃ catalyst stabilized by a perovskite LaCrO ₃ support. <i>Communications Chemistry</i> , 2022, 5, .	2.0	4
1052	Stimulating the Pre-Catalyst Redox Reaction and the Proton-Electron Transfer Process of Cobalt Phthalocyanine for CO ₂ Electroreduction. <i>Journal of Physical Chemistry C</i> , 2022, 126, 9665-9672.	1.5	7
1053	Boosting faradaic efficiency of CO ₂ electroreduction to CO for Fe-N-C single-site catalysts by stabilizing Fe ³⁺ sites via F-doping. <i>Nano Research</i> , 2022, 15, 7896-7902.	5.8	27
1054	Dual-Atom Nickel Moieties of Ni ₂ N ₄ (μ ₂ -N) ₂ Anchored on Alfa-Derived Developed Porous N-Doped Carbon for High-Performance Li-S Battery. <i>Small</i> , 2022, 18, .	5.2	7
1055	Single-Atom Catalysts for Hydrogen Generation: Rational Design, Recent Advances, and Perspectives. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	42

#	ARTICLE	IF	CITATIONS
1056	Metal-Organic Framework Based Single-Atom Catalysts for Electrochemical CO ₂ Sequestration. ACS Symposium Series, 0, , 309-314.	0.5	0
1057	Ni single atoms supported on hierarchically porous carbonized wood with highly active Ni ⁴⁺ sites as a self-supported electrode for superior CO ₂ electroreduction. Nanoscale, 2022, 14, 10003-10008.	2.8	16
1058	The electrocatalytic performance of Ni ³⁺ AlO(OH) ₃ @RGO for the reduction of CO ₂ to CO. New Journal of Chemistry, 2022, 46, 12023-12033.	1.4	6
1059	Single-atom site catalysts based on high specific surface area supports. Physical Chemistry Chemical Physics, 2022, 24, 17417-17438.	1.3	11
1060	Potential Applications of Nickel-Based Metal-Organic Frameworks and their Derivatives. Chemical Record, 2022, 22, .	2.9	38
1061	Synergetic Dual-Ion Centers Boosting Metal Organic Framework Alloy Catalysts toward Efficient Two Electron Oxygen Reduction. Small, 2022, 18, .	5.2	17
1062	Molecularly Engineered Carbon Platform To Anchor Edge-Hosted Single-Atomic M ⁿ⁺ /C (M = Fe, Co, Ni,) Tj ETQq0,0,0 rgBT /Overlock 1	5.5	36
1063	Pyrolic N-Stabilized Monovalent Ni Single-Atom Electrocatalyst for Efficient CO ₂ Reduction: Identifying the Role of Pyrolic ⁿ⁺ and Synergistic Electrocatalysis. Advanced Functional Materials, 2022, 32, .	7.8	40
1064	Anodic corrosion of heteroatom doped graphene oxide supports and its influence on the electrocatalytic oxygen evolution reaction. International Journal of Hydrogen Energy, 2022, 47, 22738-22751.	3.8	13
1065	Light-Induced Structural Dynamic Evolution of Pt Single Atoms for Highly Efficient Photocatalytic CO ₂ Reduction. ACS Applied Materials & Interfaces, 2022, 14, 26752-26765.	4.0	10
1066	Orbital Dependence in Single-Atom Electrocatalytic Reactions. Journal of Physical Chemistry Letters, 2022, 13, 5969-5976.	2.1	18
1067	Single-Atom Iron Anchored on 2-D Graphene Carbon to Realize Bridge-Adsorption of O ⁿ⁺ as Biomimetic Enzyme for Remarkably Sensitive Electrochemical Detection of H ₂ O ₂ . Analytical Chemistry, 2022, 94, 14109-14117.	3.2	22
1068	In-situ structural evolution of Bi ₂ O ₃ nanoparticle catalysts for CO ₂ electroreduction. International Journal of Extreme Manufacturing, 2022, 4, 035002.	6.3	12
1069	Mechanism of Catalytic Transfer Hydrogenation for Furfural Using Single Ni Atom Catalysts Anchored to Nitrogen-Doped Graphene Sheets. Inorganic Chemistry, 2022, 61, 9138-9146.	1.9	10
1070	Graphene oxide-based materials in electrocatalysis. , 2022, , 189-238.		0
1071	Atomic Bridging of Metal-Nitrogen-Carbon toward Efficient Integrated Electrocatalysis. Advanced Functional Materials, 2022, 32, .	7.8	18
1072	Low-coordinated Ni-N1-C3 sites atomically dispersed on hollow carbon nanotubes for efficient CO ₂ reduction. Nano Research, 2023, 16, 146-154.	5.8	12
1073	Homogeneity of Supported Single-Atom Active Sites Boosting the Selective Catalytic Transformations. Advanced Science, 2022, 9, .	5.6	47

#	ARTICLE	IF	CITATIONS
1074	Electrochemical CO ₂ reduction to C ₂₊ products using Cu-based electrocatalysts: A review. , 2022, 1, e9120021.		112
1075	Chemical Structure and Distribution in Nickel–Nitrogen–Carbon Catalysts for CO ₂ Electroreduction Identified by Scanning Transmission X-ray Microscopy. ACS Catalysis, 2022, 12, 8746-8760.	5.5	8
1076	Unraveling the Potential-Dependent Volcanic Selectivity Changes of an Atomically Dispersed Ni Catalyst During CO ₂ Reduction. ACS Catalysis, 2022, 12, 8676-8686.	5.5	16
1077	The porosity engineering for single-atom metal-nitrogen-carbon catalysts for the electroreduction of CO ₂ . Current Opinion in Green and Sustainable Chemistry, 2022, 37, 100651.	3.2	4
1078	Single-atom catalysis for carbon neutrality. , 2022, 4, 1021-1079.		96
1079	Borocarbonitrides As Metal-Free Electrocatalysts for the Electrochemical Reduction of CO ₂ . Chemistry of Materials, 2022, 34, 6626-6635.	3.2	2
1080	A comparison study on single metal atoms (Fe, Co, Ni) within nitrogen-doped graphene for oxygen electrocatalysis and rechargeable Zn-air batteries. Chinese Chemical Letters, 2023, 34, 107681.	4.8	4
1081	CO ₂ Reduction by Multiple Low-Energy Electric Discharges in a Microstructured Reactor: Experiments and Modeling. Industrial & Engineering Chemistry Research, 0, , .	1.8	4
1082	High-efficiency Electrochemical Dechlorination Using an Atomically Dispersed Co Catalyst in an Aqueous Phase. International Journal of Electrochemical Science, 2022, 17, 220834.	0.5	2
1083	Single-Atom-Kernelled Nanocluster Catalyst. Nano Letters, 2022, 22, 7144-7150.	4.5	15
1084	Cobalt Quaterpyridine Complexes for Highly Efficient Heterogeneous CO ₂ Reduction in Aqueous Media. Advanced Energy Materials, 2022, 12, .	10.2	11
1085	Electronic Metal–Support Interaction Directing the Design of Fe(III)-Based Catalysts for Efficient Advanced Oxidation Processes by Dual Reaction Paths. Small, 2022, 18, .	5.2	5
1086	In Situ Periodic Regeneration of Catalyst during CO ₂ Electroreduction to C ₂₊ Products. Angewandte Chemie - International Edition, 2022, 61, .	7.2	30
1087	Zn–N Doping in Carbon Nanotubes Boosts Selective CO ₂ Electroreduction to CO. ChemCatChem, 2022, 14, .	1.8	7
1088	Designing Cu-Based Tandem Catalysts for CO ₂ Electroreduction Based on Mass Transport of CO Intermediate. ACS Catalysis, 2022, 12, 9735-9752.	5.5	51
1089	Fe–N–C single atom catalysts for the electrochemical conversion of carbon, nitrogen and oxygen elements. Materials Reports Energy, 2022, 2, 100141.	1.7	5
1090	A comprehensive study on heterogeneous single atom catalysis: Current progress, and challenges†. Coordination Chemistry Reviews, 2022, 470, 214710.	9.5	27
1091	Atomically Isolated Nickel–Nitrogen–Carbon Electrocatalysts Derived by the Utilization of Mg ²⁺ ions as Spacers in Bimetallic Ni/Mg–Metal–Organic Framework Precursors for Boosting the Electroreduction of CO ₂ . ACS Applied Energy Materials, 2022, 5, 9408-9417.	2.5	5

#	ARTICLE	IF	CITATIONS
1092	Confined Gold Single Atomsâ€“MXene Heterostructure-Based Electrochemiluminescence Functional Material and Its Sensing Application. <i>Analytical Chemistry</i> , 2022, 94, 11016-11022.	3.2	18
1093	Twoâˆ“dimensional nanomaterials confined single atoms: New opportunities for environmental remediation. <i>Nano Materials Science</i> , 2023, 5, 15-38.	3.9	10
1094	Recent progress of electrochemical reduction of CO ₂ by single atom catalysts. <i>Materials Reports Energy</i> , 2022, 2, 100140.	1.7	2
1095	Single-Atom Catalysts Supported on the Graphene/Graphdiyne Heterostructure for Effective CO ₂ Electroreduction. <i>Inorganic Chemistry</i> , 2022, 61, 12012-12022.	1.9	14
1096	Oxygen-Plasma-Treated Feâ€“Nâ€“C Catalysts with Dual Binding Sites for Enhanced Electrocatalytic Polysulfide Conversion in Lithiumâ€“Sulfur Batteries. <i>ACS Energy Letters</i> , 2022, 7, 2646-2653.	8.8	28
1097	Recent advances on carbon-based nanomaterials supported single-atom photo-catalysts for waste water remediation. <i>Journal of Nanostructure in Chemistry</i> , 2024, 14, 21-52.	5.3	14
1098	3D Nanoporous Graphene Based Single-Atom Electrocatalysts for Energy Conversion and Storage. <i>Accounts of Materials Research</i> , 2022, 3, 1011-1021.	5.9	5
1099	Copper-Based Catalysts for Electrochemical Carbon Dioxide Reduction to Multicarbon Products. <i>Electrochemical Energy Reviews</i> , 2022, 5, .	13.1	49
1100	Constructing singleâ€“atom Ni on Nâ€“doped carbon via chelationâ€“anchored strategy for the hydrogenolysis of lignin. <i>AIChE Journal</i> , 2023, 69, .	1.8	15
1101	Dynamic coordination structure evolutions of atomically dispersed metal catalysts for electrocatalytic reactions. <i>Materials Reports Energy</i> , 2022, , 100145.	1.7	0
1102	Recent Advances in Heterogeneous Electroreduction of CO ₂ on Copper-Based Catalysts. <i>Catalysts</i> , 2022, 12, 860.	1.6	11
1103	Challenges and Opportunities in Electrocatalytic CO ₂ Reduction to Chemicals and Fuels. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	8
1104	Rational Regulation of Electronic Structure in Layered Double Hydroxide Via Vanadium Incorporation to Trigger Highly Selective CO ₂ Photoreduction to CH ₄ . <i>Small</i> , 2022, 18, .	5.2	6
1105	Enhanced catalytic activities of Fe anchored on graphene substrates for water splitting and hydrogen evolution. <i>International Journal of Hydrogen Energy</i> , 2022, 47, 32039-32049.	3.8	9
1106	Nickel dual-atom sites for electrochemical carbon dioxide reduction. , 2022, 1, 719-728.		83
1107	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
1108	Electrochemical CO ₂ Reduction over Metal-/Nitrogen-Doped Graphene Single-Atom Catalysts Modeled Using the Grand-Canonical Density Functional Theory. <i>ACS Catalysis</i> , 2022, 12, 10161-10171.	5.5	22
1109	Atomically Dispersed Iron Active Sites Promoting Reversible Redox Kinetics and Suppressing Shuttle Effect in Aluminumâ€“Sulfur Batteries. <i>Nano-Micro Letters</i> , 2022, 14, .	14.4	16

#	ARTICLE	IF	CITATIONS
1110	A general synthesis of single atom catalysts with controllable atomic and mesoporous structures. , 2022, 1, 658-667.		62
1111	CoN4 active sites in a graphene matrix for the highly efficient electrocatalysis of CO2 reduction. New Carbon Materials, 2022, 37, 734-742.	2.9	6
1112	Ultrathin $\text{NiO}/\text{Ni}_3\text{S}_2$ Heterostructure as Electrocatalyst for Accelerated Polysulfide Conversion in Lithium-Sulfur Batteries. Energy and Environmental Materials, 2023, 6, .	7.3	6
1113	In Situ Periodic Regeneration of Catalyst during CO_2 Electroreduction to C_2^+ Products. Angewandte Chemie, 2022, 134, .	1.6	4
1114	Heterogeneous Catalysis for CO2 Conversion into Chemicals and Fuels. Transactions of Tianjin University, 2022, 28, 245-264.	3.3	36
1115	Metal-Coordinated Phthalocyanines as Platform Molecules for Understanding Isolated Metal Sites in the Electrochemical Reduction of CO_2 . Journal of the American Chemical Society, 2022, 144, 16131-16138.	6.6	61
1116	Superbase and Hydrophobic Ionic Liquid Confined within Ni Foams as a Free-Standing Catalyst for CO_2 Electroreduction. ACS Applied Materials & Interfaces, 2022, 14, 38717-38726.	4.0	6
1117	In Situ Dynamic Construction of a Copper Tin Sulfide Catalyst for High-Performance Electrochemical CO_2 Conversion to Formate. ACS Catalysis, 2022, 12, 9922-9932.	5.5	45
1118	Sulfur-Coordinated Transition Metal Atom in Graphene for Electrocatalytic Nitrogen Reduction with an Electronic Descriptor. Journal of Physical Chemistry Letters, 2022, 13, 8177-8184.	2.1	9
1119	Challenges and Opportunities in Electrocatalytic CO_2 Reduction to Chemicals and Fuels. Angewandte Chemie - International Edition, 2022, 61, .	7.2	62
1120	Rational Design of Atomic Site Catalysts for Electrocatalytic Nitrogen Reduction Reaction: One Step Closer to Optimum Activity and Selectivity. Electrochemical Energy Reviews, 2022, 5, .	13.1	22
1121	Computational screening of TMN4 based graphene-like BC6N for CO2 electroreduction to C1 hydrocarbon products. Molecular Catalysis, 2022, 530, 112571.	1.0	2
1122	Engineering d-band center of iron single atom site through boron incorporation to trigger the efficient bifunctional oxygen electrocatalysis. Journal of Colloid and Interface Science, 2022, 628, 331-342.	5.0	29
1123	Mediating heterogenized nickel phthalocyanine into isolated Ni-N3 moiety for improving activity and stability of electrocatalytic CO2 reduction. Applied Catalysis B: Environmental, 2022, 318, 121813.	10.8	20
1124	Prediction of the catalytic site of single-atom Ni catalyst using the hydrogen evolution reaction as a model platform. Electrochimica Acta, 2022, 431, 141138.	2.6	5
1125	Asymmetric atomic sites make different: Recent progress in electrocatalytic CO2 reduction. Nano Energy, 2022, 103, 107815.	8.2	29
1126	Selective CO2 electroreduction to ethanol on encapsulated nickel nanoparticles by N-doped carbon nanotubes. Carbon, 2023, 201, 460-466.	5.4	7
1127	N-bridged Ni and Mn single-atom pair sites: A highly efficient electrocatalyst for CO2 conversion to CO. Applied Catalysis B: Environmental, 2023, 320, 121953.	10.8	13

#	ARTICLE	IF	CITATIONS
1128	Catalytic centers with multiple oxidation states: a strategy for breaking the overpotential ceiling from the linear scaling relation in oxygen evolution. <i>Journal of Materials Chemistry A</i> , 2022, 10, 23079-23086.	5.2	2
1129	Synthetic carbon nanomaterials for electrochemical energy conversion. <i>Nanoscale</i> , 2022, 14, 13473-13489.	2.8	6
1130	Characterization. <i>Springer Series in Materials Science</i> , 2022, , 53-82.	0.4	0
1131	Enhanced Electroreduction of CO ₂ by Ni ^{II} /Ni ⁰ Catalysts from the Interplay Between Valency and Local Coordination Symmetry. <i>Journal of Materials Chemistry A</i> , 0, , .	5.2	0
1132	Heterogeneous N-coordinated single-atom photocatalysts and electrocatalysts. <i>Chinese Journal of Catalysis</i> , 2022, 43, 2453-2483.	6.9	33
1133	Atomic-level engineering Fe ₁ N ₂ O ₂ interfacial structure derived from oxygen-abundant metal-organic frameworks to promote electrochemical CO ₂ reduction. <i>Energy and Environmental Science</i> , 2022, 15, 3795-3804.	15.6	36
1134	Emerging single-atom iron catalysts for advanced catalytic systems. <i>Nanoscale Horizons</i> , 2022, 7, 1340-1387.	4.1	12
1135	Challenges and strategies towards copper-based catalysts for enhanced electrochemical CO ₂ reduction to multi-carbon products. <i>Fuel</i> , 2023, 332, 126114.	3.4	27
1136	Uncovering the Nature of Active Sites during Electrocatalytic Reactions by <i>In Situ</i> Synchrotron-Based Spectroscopic Techniques. <i>Accounts of Chemical Research</i> , 2022, 55, 2594-2603.	7.6	13
1137	Yttrium- and Cerium-Codoped Ultrathin Metal-Organic Framework Nanosheet Arrays for High-Efficiency Electrocatalytic Overall Water Splitting. <i>Nano Letters</i> , 2022, 22, 7238-7245.	4.5	48
1138	A nitrogen-doped graphene-supported nickel-single-atom catalyst in the flow cell meets the industrial criteria of carbon dioxide reduction reaction to carbon monoxide. <i>Frontiers in Catalysis</i> , 0, 2, .	1.8	1
1139	Editorial for the special issue "Single-Atom Catalysis". <i>Materials Reports Energy</i> , 2022, 2, 100147.	1.7	0
1140	Space-Confined Surface Layer in Superstructured Ni ^{II} /Ni ⁰ Catalyst for Enhanced Catalytic Degradation of <i>m</i> -Cresol by PMS Activation. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 40834-40840.	4.0	11
1141	Design of Co-Cu Diatomic Site Catalysts for High-Efficiency Synergistic CO ₂ Electroreduction at Industrial-Level Current Density. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	78
1142	Recent Advances in Non-Precious Metal-Nitrogen-Carbon Single-Site Catalysts for CO ₂ Electroreduction Reaction to CO. <i>Electrochemical Energy Reviews</i> , 2022, 5, .	13.1	18
1143	Nickel single atom overcoordinated active sites to accelerate the electrochemical reaction kinetics for Li-S cathode. <i>Journal of Energy Chemistry</i> , 2023, 78, 203-210.	7.1	12
1144	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
1145	Advanced Strategies for Stabilizing Single-Atom Catalysts for Energy Storage and Conversion. <i>Electrochemical Energy Reviews</i> , 2022, 5, .	13.1	43

#	ARTICLE	IF	CITATIONS
1146	Toward Excellence in Photocathode Engineering for Photoelectrochemical CO ₂ Reduction: Design Rationales and Current Progress. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	30
1147	Adsorption Energy in Oxygen Electrocatalysis. <i>Chemical Reviews</i> , 2022, 122, 17028-17072.	23.0	45
1148	Boosting Oxygen-Evolving Activity via Atom-Stepped Interfaces Architected with Kinetic Frustration. <i>Advanced Materials</i> , 2023, 35, .	11.1	13
1149	Clean Synthesis of Bismuth Porous Nanosheets for Efficient CO ₂ Electroreduction. <i>ACS Applied Energy Materials</i> , 2022, 5, 11561-11567.	2.5	6
1150	Mesoporous N-rich Carbon with Single-Ni Atoms as a Multifunctional Sulfur Host for Li-S Batteries. <i>Angewandte Chemie</i> , 0, , .	1.6	0
1151	Mesoporous N-rich Carbon with Single-Ni Atoms as a Multifunctional Sulfur Host for Li-S Batteries. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	51
1152	Recent Progress in Electrocatalytic Urea Synthesis under Ambient Conditions. <i>ACS Sustainable Chemistry and Engineering</i> , 2022, 10, 12477-12496.	3.2	22
1153	Modeling the Potential-Dependent Kinetics of CO ₂ Electroreduction on Single-Nickel Atom Catalysts with Explicit Solvation. <i>ACS Catalysis</i> , 2022, 12, 11380-11390.	5.5	19
1154	Formation of Nitrogen-Coordinated Metal Sites (M = Fe, Co) via Solution-Phase Coordination on Nickel- And Nitrogen-Co-Doped Carbon Templates with Metal Vacancy-N _x Sites. <i>Journal of the Electrochemical Society</i> , 2022, 169, 106507.	1.3	1
1155	Design of Co-Cu Diatomic Site Catalysts for High-efficiency Synergistic CO ₂ Electroreduction at Industrial-level Current Density. <i>Angewandte Chemie</i> , 2022, 134, .	1.6	12
1156	Atomically dispersed chromium coordinated with hydroxyl clusters enabling efficient hydrogen oxidation on ruthenium. <i>Nature Communications</i> , 2022, 13, .	5.8	35
1157	Insights into the Nature of Selective Nickel Sites on Ni/Al ₂ O ₃ Catalysts for Propane Dehydrogenation. <i>ACS Catalysis</i> , 2022, 12, 12607-12616.	5.5	18
1158	Coordination Effect-Promoted Durable Ni(OH) ₂ for Energy-Saving Hydrogen Evolution from Water/Methanol Co-Electrocatalysis. <i>Nano-Micro Letters</i> , 2022, 14, .	14.4	35
1159	Ultrathin Cage-based Covalent Organic Framework Nanosheets as Precursor for Pyrolysis-free Oxygen Evolution Reaction Electrocatalyst. <i>ChemNanoMat</i> , 2022, 8, .	1.5	4
1160	The reduction reaction of carbon dioxide on a precise number of Fe atoms anchored on two-dimensional biphenylene. <i>Physical Chemistry Chemical Physics</i> , 2022, 24, 27474-27482.	1.3	4
1161	Electrochemical CO ₂ reduction catalyzed by atomically precise alkynyl-protected Au ₇ Ag ₈ , Ag ₉ Cu ₆ , and Au ₂ Ag ₈ Cu ₅ nanoclusters: probing the effect of multi-metal core on selectivity. <i>Chemical Science</i> . 2022. 13. 10149-10158.	3.7	32
1162	Transition metal single atom embedded GaN monolayer surface for efficient and selective CO ₂ electroreduction. <i>Journal of Materials Chemistry A</i> , 2022, 10, 24280-24289.	5.2	5
1163	Recent Advances on Single-Atom Catalysts for CO ₂ Reduction. <i>Small Structures</i> , 2023, 4, .	6.9	65

#	ARTICLE	IF	CITATIONS
1164	Multi-twinned gold nanoparticles with tensile surface steps for efficient electrocatalytic CO ₂ reduction. <i>Science China Chemistry</i> , 0, , .	4.2	1
1165	Rational design of asymmetric atomic Ni-P1N3 active sites for promoting electrochemical CO ₂ reduction. <i>Nano Research</i> , 2023, 16, 2170-2176.	5.8	30
1166	Stepwise dispersion of nickel species for efficient coupling of electrocatalytic redox reactions. <i>Chemical Engineering Journal</i> , 2023, 454, 140062.	6.6	3
1167	Emerging Applications of Synchrotron Radiation X-ray Techniques in Single Atomic Catalysts. <i>Small Methods</i> , 2022, 6, .	4.6	7
1168	Single-Atom Yttrium Engineering Janus Electrode for Rechargeable Na-S Batteries. <i>Journal of the American Chemical Society</i> , 2022, 144, 18995-19007.	6.6	68
1169	Highly Dispersed NiO Clusters Induced Electron Delocalization of Ni _{1-x} Ni _x C Catalysts for Enhanced CO ₂ Electroreduction. <i>Advanced Functional Materials</i> , 2023, 33, .	7.8	25
1170	Toward Unifying the Mechanistic Concepts in Electrochemical CO ₂ Reduction from an Integrated Material Design and Catalytic Perspective. <i>Advanced Functional Materials</i> , 2022, 32, .	7.8	15
1171	Modulating the Electronic Structures of Dual-Atom Catalysts via Coordination Environment Engineering for Boosting CO ₂ Electroreduction. <i>Angewandte Chemie - International Edition</i> , 2022, 61, .	7.2	37
1172	Metal single atom doped 2D materials for photocatalysis: current status and future perspectives. <i>Progress in Energy</i> , 2023, 5, 012001.	4.6	9
1173	Renewable Power for Electrocatalytic Generation of Syngas: Tuning the Syngas Ratio by Manipulating the Active Sites and System Design. <i>ChemCatChem</i> , 2022, 14, .	1.8	3
1174	Accelerated water activation and stabilized metal-organic framework via constructing triangular active-regions for ampere-level current density hydrogen production. <i>Nature Communications</i> , 2022, 13, .	5.8	51
1175	Perspective of p-block single-atom catalysts for electrocatalysis. <i>Trends in Chemistry</i> , 2022, 4, 1135-1148.	4.4	12
1176	Heteroatom-Doped Asymmetric Metal-N _x Single Atom Catalysts for Electrochemical CO ₂ Reduction Reaction. <i>Chemistry - an Asian Journal</i> , 2022, 17, .	1.7	4
1177	Modulating the Electronic Structures of Dual-Atom Catalysts via Coordination Environment Engineering for Boosting CO ₂ Electroreduction. <i>Angewandte Chemie</i> , 0, , .	1.6	0
1178	Exceptional catalytic activity of oxygen evolution reaction via two-dimensional graphene multilayer confined metal-organic frameworks. <i>Nature Communications</i> , 2022, 13, .	5.8	63
1179	Single Nickel Atom Catalysts Enable Fast Polysulfide Redox for Safe and Long-Cycle Lithium-Sulfur Batteries. <i>Small</i> , 2022, 18, .	5.2	14
1180	Synthesizing MOF-derived Ni N C catalyst via surfactant modified strategy for efficient electrocatalytic CO ₂ to CO. <i>Journal of Colloid and Interface Science</i> , 2023, 631, 96-101.	5.0	12
1181	Superstructures of Zeolitic Imidazolate Frameworks to Single and Multiatom Sites for Electrochemical Energy Conversion. <i>Small</i> , 2022, 18, .	5.2	13

#	ARTICLE	IF	CITATIONS
1182	Controlled synthesis of a Ni ₂ dual-atom catalyst for synergistic CO ₂ electroreduction. Applied Catalysis B: Environmental, 2023, 322, 122073.	10.8	17
1183	An accurate "metal pre-buried" strategy for constructing Ni ^{II} N ₂ C ₂ single-atom sites with high metal loadings toward electrocatalytic CO ₂ reduction. Journal of Materials Chemistry A, 2022, 10, 25047-25054.	5.2	8
1184	Advanced In Situ Characterization Techniques for Direct Observation of Gas-Involved Electrochemical Reactions. Energy and Environmental Materials, 2023, 6, .	7.3	8
1185	Catalytically stable potassium single-atom solid superbases. Angewandte Chemie, 0, , .	1.6	0
1186	Construction and identification of highly active single-atom Fe ^I -NC catalytic site for electrocatalytic nitrate reduction. Applied Catalysis B: Environmental, 2023, 323, 122181.	10.8	28
1187	Recent Advances of the Confinement Effects Boosting Electrochemical CO ₂ Reduction. Chemistry - an Asian Journal, 2023, 18, .	1.7	1
1188	Advances in Graphene-Supported Single-Atom Catalysts for Clean Energy Conversion. Electrochemical Energy Reviews, 2022, 5, .	13.1	17
1189	Surface Spin Enhanced High Stable NiCo ₂ S ₄ for Energy-Saving Production of H ₂ from Water/Methanol Coelectrolysis at High Current Density. Small, 2023, 19, .	5.2	9
1190	Catalytically Stable Potassium Single-Atom Solid Superbases. Angewandte Chemie - International Edition, 2022, 61, .	7.2	9
1191	Investigation of the Structure of Atomically Dispersed Ni _x Sites in Ni and N-Doped Carbon Electrocatalysts by ⁶¹ Ni Mössbauer Spectroscopy and Simulations. Journal of the American Chemical Society, 2022, 144, 21741-21750.	6.6	2
1192	Constructing nickel-based bifunctional oxygen catalyst and dual network hydrogel electrolyte for high-performance, compressible and rechargeable zinc-air batteries. Materials Today Physics, 2022, 29, 100924.	2.9	4
1193	Top-down manufacturing of efficient CO ₂ reduction catalysts from the gasification residue carbon. Chemical Communications, 2023, 59, 611-614.	2.2	5
1194	Metal-organic framework-derived single atom catalysts for electrocatalytic reduction of carbon dioxide to C ₁ products. Energy Advances, 2023, 2, 252-267.	1.4	1
1195	Vacancy defect tuning of electronic structures of transition metal (hydr)oxide-based electrocatalysts for enhanced oxygen evolution. Energy Advances, 2023, 2, 73-85.	1.4	5
1196	Single atom Co-anchored nitrogen-doped graphene for peroxydisulfate activation with high selectivity of singlet oxygen generation. Chemical Engineering Journal, 2023, 456, 141045.	6.6	12
1197	Axially coordinated Co ^{II} N ₄ sites for the electroreduction of nitrobenzene. Journal of Materials Chemistry A, 2023, 11, 5095-5103.	5.2	4
1198	Convergent paired electrosynthesis of dimethyl carbonate from carbon dioxide enabled by designing the superstructure of axial oxygen coordinated nickel single-atom catalysts. Energy and Environmental Science, 2023, 16, 502-512.	15.6	38
1199	Synthesis of dual-metal single atom in porous carbon with efficient oxygen reduction reaction in both acidic and alkaline electrolytes. Journal of Colloid and Interface Science, 2023, 633, 828-835.	5.0	6

#	ARTICLE	IF	CITATIONS
1200	Electrochemical CO ₂ Reduction. RSC Green Chemistry, 2022, , 362-387.	0.0	0
1201	Atomic-Level Interface Engineering for Boosting Oxygen Electrocatalysis Performance of Single-Atom Catalysts: From Metal Active Center to the First Coordination Sphere. Advanced Science, 2023, 10, .	5.6	25
1202	Design of Single-Atom Catalysts and Tracking Their Fate Using <i>Operando</i> and Advanced X-ray Spectroscopic Tools. Chemical Reviews, 2023, 123, 379-444.	23.0	50
1203	Recent progress in electrochemical C-N coupling reactions. EScience, 2023, 3, 100086.	25.0	23
1204	Exploring the Ni 3 <i>d</i> Orbital Unpaired Electrons Induced Polarization Loss Based on Ni Single-Atoms Model Absorber. Advanced Functional Materials, 2023, 33, .	7.8	61
1205	MOF-Derived Ni Single-Atom Catalyst with Abundant Mesopores for Efficient Mass Transport in Electrolytic Bicarbonate Conversion. ACS Applied Materials & Interfaces, 2022, 14, 54840-54847.	4.0	7
1206	Peripheral-nitrogen effects on the Ru1 centre for highly efficient propane dehydrogenation. Nature Catalysis, 2022, 5, 1145-1156.	16.1	42
1207	TM ₂ B ₂ Quadruple Active Sites Supported on a Defective C ₃ N Monolayer as Catalyst for the Electrochemical CO ₂ Reduction: A Theoretical Perspective. ChemSusChem, 2023, 16, .	3.6	3
1208	Single-atom electrocatalysts for lithium-sulfur chemistry: Design principle, mechanism, and outlook. , 2023, 5, .		18
1209	Atomically Dispersed Nickel Anchored on a Nitrogen-Doped Carbon/TiO ₂ Composite for Efficient and Selective Photocatalytic CH ₄ Oxidation to Oxygenates. Angewandte Chemie, 0, , .	1.6	1
1210	Triazine/thiophene-based microporous organic polymer for electrocatalytic hydrogen evolution reaction. Journal of Applied Polymer Science, 2023, 140, .	1.3	2
1211	Hollow Copper Nanocubes Promoting CO ₂ Electroreduction to Multicarbon Products. Industrial & Engineering Chemistry Research, 2022, 61, 18250-18257.	1.8	6
1212	Oxygen-Bridged Indium-Nickel Atomic Pair as Dual-Metal Active Sites Enabling Synergistic Electrocatalytic CO ₂ Reduction. Angewandte Chemie - International Edition, 2023, 62, .	7.2	31
1213	Atomic Replacement of PtNi Nanoalloys within Zn-ZIF-8 for the Fabrication of a Multisite CO ₂ Reduction Electrocatalyst. Journal of the American Chemical Society, 2022, 144, 23223-23229.	6.6	42
1214	Operando X-ray Absorption Spectroscopy Study of SnO ₂ Nanoparticles for Electrochemical Reduction of CO ₂ to Formate. ACS Applied Materials & Interfaces, 2022, 14, 55636-55643.	4.0	3
1215	Enhanced photocatalytic water splitting over nickel-doped CdS nanocomposites synthesized via one-step controllable irradiation routine at ambient conditions. Applied Surface Science, 2023, 614, 156190.	3.1	7
1216	Halogen-Incorporated Sn Catalysts for Selective Electrochemical CO ₂ Reduction to Formate. Angewandte Chemie, 0, , .	1.6	0
1217	Dynamic Coordination Structure Evolutions of Atomically Dispersed Metal Catalysts for Electrocatalytic Reactions. Advanced Materials Interfaces, 2023, 10, .	1.9	8

#	ARTICLE	IF	CITATIONS
1218	Oxygenâ€Bridged Indiumâ€Nickel Atomic Pair as Dualâ€Metal Active Sites Enabling Synergistic Electrochemical CO ₂ Reduction. <i>Angewandte Chemie</i> , 2023, 135, .	1.6	6
1219	Atomic design of dual-metal hetero-single-atoms for high-efficiency synthesis of natural flavones. <i>Nature Communications</i> , 2022, 13, .	5.8	15
1220	Halogenâ€Incorporated Sn Catalysts for Selective Electrochemical CO ₂ Reduction to Formate. <i>Angewandte Chemie - International Edition</i> , 2023, 62, .	7.2	36
1221	Atomically Dispersed Nickel Anchored on a Nitrogenâ€Doped Carbon/TiO ₂ Composite for Efficient and Selective Photocatalytic CH ₄ Oxidation to Oxygenates. <i>Angewandte Chemie - International Edition</i> , 2023, 62, .	7.2	18
1222	In situ/operando characterization techniques for electrochemical CO ₂ reduction. <i>Science China Chemistry</i> , 2023, 66, 315-323.	4.2	17
1223	Accelerated Transfer and Spillover of Carbon Monoxide through Tandem Catalysis for Kineticsâ€Boosted Ethylene Electrosynthesis. <i>Angewandte Chemie</i> , 2023, 135, .	1.6	1
1224	Metal and metal oxide electrocatalysts for the electrochemical reduction of CO ₂ to C1 chemicals: are we there yet?. <i>Green Chemistry Letters and Reviews</i> , 2023, 16, .	2.1	10
1225	KOHâ€Enabled Axialâ€Oxygen Coordinated Ni Singleâ€Atom Catalyst for Efficient Electrochemical CO ₂ Reduction. <i>Small Methods</i> , 2023, 7, .	4.6	8
1226	Single-atom catalysts for energy conversion. <i>Journal of Materials Chemistry A</i> , 2023, 11, 2568-2594.	5.2	11
1227	Atomically Dispersed Manganese on Carbon Substrate for Aqueous and Aprotic CO ₂ Electrochemical Reduction. <i>Advanced Materials</i> , 2023, 35, .	11.1	19
1228	Synthesis and Characterization of a Highly Reactive and Robust Chlorineâ€Bound Ni Singleâ€Atomâ€Catalyst for the Continuous Flow Ringâ€Opening Reaction of Epoxides. <i>ChemCatChem</i> , 2023, 15, .	1.8	4
1229	Accelerated Transfer and Spillover of Carbon Monoxide through Tandem Catalysis for Kineticsâ€Boosted Ethylene Electrosynthesis. <i>Angewandte Chemie - International Edition</i> , 2023, 62, .	7.2	21
1231	Selectivity and activity modulation of electrocatalytic carbon dioxide reduction by atomically dispersed dual iron catalysts. <i>Journal of Materials Chemistry A</i> , 2023, 11, 2377-2390.	5.2	1
1233	Emerging materials for electrochemical CO ₂ reduction: progress and optimization strategies of carbon-based single-atom catalysts. <i>Nanoscale</i> , 2023, 15, 3666-3692.	2.8	10
1234	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
1235	Positive Valent Metal Sites in Electrochemical CO ₂ Reduction Reaction. <i>ChemPhysChem</i> , 2023, 24, .	1.0	0
1236	Atomically Dispersed Niâ€Cu Catalysts for pHâ€Universal CO ₂ Electroreduction. <i>Advanced Materials</i> , 2023, 35, .	11.1	54
1237	Atomically dispersed Ni-N-C catalyst derived from NiZn layered double hydroxides for efficient electrochemical CO ₂ reduction. <i>Chinese Journal of Catalysis</i> , 2023, 45, 152-161.	6.9	2

#	ARTICLE	IF	CITATIONS
1238	Self-Supported Porous Carbon Nanofibers Decorated with Single Ni Atoms for Efficient CO ₂ Electroreduction. ACS Applied Materials & Interfaces, 2023, 15, 1376-1383.	4.0	11
1239	From Single Crystal to Single Atom Catalysts: Structural Factors Influencing the Performance of Metal Catalysts for CO ₂ Electroreduction. ACS Catalysis, 2023, 13, 948-973.	5.5	33
1240	Melamine sponge templated synthesis of nickel nanoparticles encapsulated in B, N co-doped carbon nanotubes towards the selective electrosynthesis of hydrogen peroxide. Journal of Materials Chemistry A, 2023, 11, 10204-10212.	5.2	6
1241	Navigating CO utilization in tandem electrocatalysis of CO ₂ . Trends in Chemistry, 2023, 5, 252-266.	4.4	4
1242	Engineering Undercoordinated Active Sites with Tailored Chemical Microenvironments over Mosaic Bismuth Nanosheets for Selective CO ₂ Electroreduction to Formate. Small, 2023, 19, .	5.2	25
1243	Highly Dispersed Ni on Nitrogen-Doped Carbon for Stable and Selective Hydrogen Generation from Gaseous Formic Acid. Nanomaterials, 2023, 13, 545.	1.9	1
1244	A hydrophobic Cu/Cu ₂ O sheet catalyst for selective electroreduction of CO to ethanol. Nature Communications, 2023, 14, .	5.8	23
1245	Electrochemical CO ₂ reduction: Progress and opportunity with alloying copper. Materials Reports Energy, 2023, 3, 100175.	1.7	5
1246	Dual metal atom catalysts: Advantages in electrocatalytic reactions. Journal of Energy Chemistry, 2023, 79, 515-534.	7.1	22
1247	Transplanting Gold Active Sites into Non-Precious-Metal Nanoclusters for Efficient CO ₂ -to-CO Electroreduction. Journal of the American Chemical Society, 2023, 145, 2152-2160.	6.6	20
1248	Rational design of atomic site catalysts for electrochemical CO ₂ reduction. Chemical Communications, 2023, 59, 2682-2696.	2.2	1
1249	Intercalation Engineering of 2D Materials at Macroscale for Smart Human-Machine Interface and Double-Layer to Faradaic Charge Storage for Ions Separation. Advanced Materials Interfaces, 2023, 10, .	1.9	4
1250	Modulating Electronic Structure of Atomically Dispersed Nickel Sites through Boron and Nitrogen Dual Coordination Boosts Oxygen Reduction. Advanced Functional Materials, 2023, 33, .	7.8	25
1251	Fascinating Electrocatalysts with Dispersed Diatomic Metals in MN ₃ -M ₂ N ₄ Moiety as Two Active Sites Separately for N ₂ and CO ₂ Reduction Reactions and Jointly for C≡N Coupling and Urea Production. Small Methods, 2023, 7, .	4.6	1
1252	A rational design of functional porous frameworks for electrocatalytic CO ₂ reduction reaction. Chemical Society Reviews, 2023, 52, 1382-1427.	18.7	48
1253	Single and dual metal atom catalysts for enhanced singlet oxygen generation and oxygen reduction reaction. Journal of Materials Chemistry A, 2023, 11, 7513-7525.	5.2	6
1254	Highly selective oxygen reduction to H ₂ O ₂ on π-d conjugated coordination polymers: The effect of coordination atoms. Chemical Engineering Journal, 2023, 460, 141688.	6.6	4
1255	Cu-Ni alloy decorating N-doped carbon nanosheets toward high-performance electrocatalysis of mildly acidic CO ₂ reduction. Inorganic Chemistry Frontiers, 2023, 10, 2276-2284.	3.0	1

#	ARTICLE	IF	CITATIONS
1256	Active Learning Accelerating to Screen Dual-Metal-Site Catalysts for Electrochemical Carbon Dioxide Reduction Reaction. ACS Applied Materials & Interfaces, 2023, 15, 12986-12997.	4.0	4
1257	Non-bonding interaction of dual atom catalysts for enhanced oxygen reduction reaction. Nano Energy, 2023, 108, 108218.	8.2	17
1258	Exclusive Co ^{IV} Sites Confined in Two-dimensional Metal-Organic Layers Enabling Highly Selective CO ₂ Electroreduction at Industrial-level Current. Angewandte Chemie, 0, , .	1.6	0
1259	Elucidating the Roles of Nafion/Solvent Formulations in Copper-Catalyzed CO ₂ Electrolysis. ACS Catalysis, 2023, 13, 5336-5347.	5.5	10
1260	Exclusive Co ^{IV} Sites Confined in Two-dimensional Metal-Organic Layers Enabling Highly Selective CO ₂ Electroreduction at Industrial-level Current. Angewandte Chemie - International Edition, 2023, 62, .	7.2	13
1261	Optimizing CO ₂ RR selectivity on single atom catalysts using graphical construction and identification of energy descriptor. Carbon, 2023, 208, 330-337.	5.4	9
1262	SO ₄ ²⁻ mediated CO ₂ activation on metal electrode for efficient CO ₂ electroreduction. Chemical Engineering Journal, 2023, 464, 142510.	6.6	5
1263	Construction of diluted magnetic semiconductor to endow nonmagnetic semiconductor with spin-regulated photocatalytic performance. Nano Energy, 2023, 110, 108381.	8.2	14
1264	N, O-diatomic dopants activate catalytic activity of 3D self-standing graphene carbon aerogel for long-cycle and high-efficiency Li-CO ₂ batteries. Chemical Engineering Journal, 2023, 465, 142787.	6.6	4
1265	Tetracycline degradation by persulfate activated with nitrogen magnetic graphene oxide confined Fe/Co dual single-atom catalyst: Performance and degradation mechanism. Journal of Environmental Chemical Engineering, 2023, 11, 109704.	3.3	4
1266	Recent advances in nanoengineering 2D metal-based materials for electrocatalytic conversion of carbon dioxide into fuels and value-added products. Fuel, 2023, 343, 127873.	3.4	7
1267	A novel peroxymonosulfate activation process by single-atom iron catalyst from waste biomass for efficient singlet oxygen-mediated degradation of organic pollutants. Journal of Hazardous Materials, 2023, 453, 131333.	6.5	10
1268	Mechanistic insight into electron orientation by tailoring Ni-Cu atom-pairs for high-performance CO ₂ electroreduction. Applied Catalysis B: Environmental, 2023, 330, 122654.	10.8	16
1269	Electrocatalytic CO ₂ conversion on metal-organic frameworks derivative electrocatalysts. Journal of CO ₂ Utilization, 2023, 69, 102412.	3.3	8
1270	Geometric and Electronic Structural Engineering of Isolated Ni Single Atoms for a Highly Efficient CO ₂ Electroreduction. Small, 2023, 19, .	5.2	7
1271	A controllable cobalt-doping improve electrocatalytic activity of ZnO basal plane for oxygen evolution reaction: A first-principles calculation study. Journal of Electroanalytical Chemistry, 2023, 932, 117191.	1.9	2
1272	Monometallic interphasic synergy via nano-hetero-interfacing for hydrogen evolution in alkaline electrolytes. Nature Communications, 2023, 14, .	5.8	31
1273	A metallic nickel site in a complex multimetallic design for controlled CO ₂ reduction and symmetric supercapacitor device. Materials Today Chemistry, 2023, 28, 101374.	1.7	3

#	ARTICLE	IF	CITATIONS
1274	Application-oriented non-thermal plasma in chemical reaction engineering: A review. , 2023, 1, 100004.		9
1275	Oxidization-induced structural optimization of Ni ₃ Fe-N-C derived from 3D covalent organic framework for high-efficiency and durable oxygen evolution reaction. Nano Research, 2023, 16, 6710-6720.	5.8	3
1276	Pyrrolic N anchored atomic Ni-N ₃ -C catalyst for highly effective electroreduction of CO ₂ into CO. Carbon, 2023, 206, 62-71.	5.4	6
1277	Theoretical Understanding of Potential-Dependent Electrocatalytic CO ₂ RR and Competition with HER upon Cobalt Single Atom Supported by Phthalocyanine Monolayer. Journal of Physical Chemistry C, 2023, 127, 2963-2973.	1.5	4
1278	One Stone Three Birds: An Aqueous Mg-CO ₂ Battery for Generation of Electricity, Syngas, and High-Value Phosphate. ACS Sustainable Chemistry and Engineering, 2023, 11, 3123-3132.	3.2	5
1279	Multi-Center Cooperativity Enables Facile C-C Coupling in Electrochemical CO ₂ Reduction on a Ni ₂ P Catalyst. ACS Catalysis, 2023, 13, 2847-2856.	5.5	10
1280	Modulating the Catalytic Properties of Bimetallic Atomic Catalysts: Role of Dangling Bonds and Charging. ChemSusChem, 2023, 16, .	3.6	1
1281	Liquid Nitrogen Sources Assisting Gram-Scale Production of Single-Atom Catalysts for Electrochemical Carbon Dioxide Reduction. Advanced Science, 2023, 10, .	5.6	7
1282	Can Metal-Nitrogen-Carbon Single-Atom Catalysts Boost the Electroreduction of Carbon Monoxide?. JACS Au, 2023, 3, 943-952.	3.6	11
1283	Diagnosing and Correcting the Failure of the Solid-State Polymer Electrolyte for Enhancing Solid-State Lithium-Sulfur Batteries. Advanced Materials, 2023, 35, .	11.1	20
1284	Effect of Electronic Structure over Late Transition-Metal M ₁ -N ₄ Single-Atom Sites on Hydroxyl Radical-Induced Oxidations. ACS Catalysis, 2023, 13, 3308-3316.	5.5	5
1285	Hierarchical Ni/N/C Single-Site Catalyst Achieving Industrial-Level Current Density and Ultra-Wide Potential Plateau of High CO Faradic Efficiency for CO ₂ Electroreduction. Advanced Functional Materials, 2023, 33, .	7.8	5
1286	Electrochemical C-N coupling of CO ₂ and nitrogenous small molecules for the electrosynthesis of organonitrogen compounds. Chemical Society Reviews, 2023, 52, 2193-2237.	18.7	47
1287	Engineering active sites and recognizing mechanisms for CO ₂ fixation to dimethyl carbonate. Trends in Chemistry, 2023, 5, 312-323.	4.4	2
1288	Coupling Ni-Cu atomic pair to promote CO ₂ electroreduction with near-unity CO selectivity. Environmental Science and Pollution Research, 2023, 30, 51876-51886.	2.7	0
1289	Edge Coordination of Ni Single Atoms on Hard Carbon Promotes the Potassium Storage and Reversibility. Small, 2023, 19, .	5.2	1
1290	Atomically dispersed metals as potential coke-resistant catalysts for dry reforming of methane. Cell Reports Physical Science, 2023, 4, 101310.	2.8	6
1291	Regulating the electronic structure of single-atom catalysts for electrochemical energy conversion. Journal of Materials Chemistry A, 2023, 11, 12643-12658.	5.2	14

#	ARTICLE	IF	CITATIONS
1292	Recent advances in the regulation of the coordination structures and environment of single-atom catalysts for carbon dioxide reduction reaction. <i>Journal of Materials Chemistry A</i> , 2023, 11, 7949-7986.	5.2	6
1293	Direct Observation of Transition Metal Ions Evolving into Single Atoms: Formation and Transformation of Nanoparticle Intermediates. <i>Advanced Science</i> , 2023, 10, .	5.6	3
1294	Face mask-derived Ni, N-doped graphene sheets for electrocatalytic CO ₂ -to-CO reduction. <i>Journal of Solid State Electrochemistry</i> , 2023, 27, 1261-1268.	1.2	1
1295	Regulating the d-band electrons of the Fe-N-C single-atom catalyst for high-efficiency CO ₂ electroreduction by electron-donating S-doping. <i>Dalton Transactions</i> , 2023, 52, 4819-4825.	1.6	2
1296	Theoretical exploration on the activity of copper single-atom catalysts for electrocatalytic reduction of CO ₂ . <i>Journal of Materials Chemistry A</i> , 2023, 11, 7735-7745.	5.2	8
1297	Theoretical Screening and experimental validation of M ₃ (2,3,6,7,10,11-hexahydroxytriphenylene) ₂ for electrocatalytic CO ₂ reduction. <i>Molecular Catalysis</i> , 2023, 540, 113033.	1.0	5
1298	Interatomic electron transfer promotes electroreduction CO ₂ -to-CO efficiency over a CuZn diatomic site. <i>Nano Research</i> , 2023, 16, 8863-8870.	5.8	9
1299	Boosting activity of Fe-N ₄ sites in single-Fe-atom catalysts via S in the second coordination sphere for direct methanol fuel cells. <i>Cell Reports Physical Science</i> , 2023, 4, 101330.	2.8	3
1300	Poly(heptazine imide) ligand exchange enables remarkable low catalyst loadings in heterogeneous metallaphotocatalysis. <i>Nature Communications</i> , 2023, 14, .	5.8	17
1301	Synergistic Functionality of Dopants and Defects in Co-Phthalocyanine/Bi-CN Z-scheme Photocatalysts for Promoting Photocatalytic CO ₂ Reduction Reactions. <i>Small</i> , 2023, 19, .	5.2	10
1302	Promoting CO ₂ Dynamic Activation via Micro-Engineering Technology for Enhancing Electrochemical CO ₂ Reduction. <i>Small</i> , 2023, 19, .	5.2	4
1303	Heteronuclear dual-metal atom catalysts for nanocatalytic tumor therapy. <i>Chinese Journal of Catalysis</i> , 2023, 47, 1-31.	6.9	14
1304	Enhancing Selective Electrochemical CO ₂ Reduction by In Situ Constructing Tensile-Strained Cu Catalysts. <i>ACS Catalysis</i> , 2023, 13, 4711-4718.	5.5	14
1305	Stable Immobilization of Nickel Ions on Covalent Organic Frameworks for Panchromatic Photocatalytic Hydrogen Evolution. <i>Angewandte Chemie</i> , 2023, 135, .	1.6	3
1306	Stable Immobilization of Nickel Ions on Covalent Organic Frameworks for Panchromatic Photocatalytic Hydrogen Evolution. <i>Angewandte Chemie - International Edition</i> , 2023, 62, .	7.2	23
1307	Facile low-temperature supercritical carbonization method to prepare high-loading nickel single atom catalysts for efficient photodegradation of tetracycline. <i>Journal of Environmental Sciences</i> , 2024, 138, 373-384.	3.2	3
1308	The built-in electric field across FeN/Fe ₃ N interface for efficient electrochemical reduction of CO ₂ to CO. <i>Nature Communications</i> , 2023, 14, .	5.8	33
1309	Precursor-mediated in situ growth of hierarchical N-doped graphene nanofibers confining nickel single atoms for CO ₂ electroreduction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2023, 120, .	3.3	3

#	ARTICLE	IF	CITATIONS
1311	Elaborately tuning the electronic structure of single-atom nickel sites using nickel nanoparticles to markedly enhance the electrochemical reduction of nitrate into ammonia. <i>Journal of Energy Chemistry</i> , 2023, 83, 32-42.	7.1	11
1312	Approaches to Improving the Selectivity of Nanozymes. <i>Advanced Materials</i> , 2024, 36, .	11.1	13
1313	Nanoscale electrochemical approaches to probing single atom electrocatalysts. <i>Current Opinion in Electrochemistry</i> , 2023, 39, 101299.	2.5	2
1314	Recent advances, properties, fabrication and opportunities in two-dimensional materials for their potential sustainable applications. <i>Energy Storage Materials</i> , 2023, 59, 102780.	9.5	12
1315	Scalable synthesis of coordinatively unsaturated metal-nitrogen sites for large-scale CO ₂ electrolysis. <i>Nature Communications</i> , 2023, 14, .	5.8	9
1316	Integrated Biochip- <i>Electronic System with Single-Atom Nanozyme for <i>in vivo</i> Analysis of Nitric Oxide.</i> <i>ACS Nano</i> , 2023, 17, 8575-8585.	7.3	5
1317	Maximizing the utilization of single-atom sites on carbon-based catalysts for efficient CO ₂ electroreduction with ultrahigh turnover frequency. <i>Applied Catalysis B: Environmental</i> , 2023, 333, 122801.	10.8	5
1333	X-Ray Absorption Spectroscopy (XAS): XANES and EXAFS. <i>Springer Handbooks</i> , 2023, , 565-600.	0.3	1
1334	STEM High Angle Annular Dark-Field Imaging. <i>Springer Handbooks</i> , 2023, , 409-448.	0.3	0
1365	Electronic and geometric modulations of catalysts for electrochemical CO ₂ reduction reaction. <i>Materials Chemistry Frontiers</i> , 2023, 7, 4723-4743.	3.2	6
1428	Molecular inspired electrocatalyst materials for environmental remediation. <i>Inorganic Chemistry Frontiers</i> , 0, , .	3.0	0
1431	Recent progress in CO ₂ conversion into organic chemicals by molecular catalysis. <i>Green Chemistry</i> , 2023, 25, 6538-6560.	4.6	8
1445	é“œâÿ°â•ãŽÿââ, -âCE-â%„ç”µâ,-âCE-è¿-âŽÿä°CE°\$âCE-çŦ³çš„ç”ç©¶è¿â±•. <i>Science China Materials</i> , 2023, 66, 3765-3781.	1.2	0
1510	Single-atom iron doped BiOCl atomic layers to promote efficient CO ₂ electroreduction towards formate. <i>Catalysis Science and Technology</i> , 0, , .	2.1	0
1537	Nanostructured single-atom catalysts derived from natural building blocks. , 2024, 2, 475-506.		0
1553	Single-atom catalysts for electrocatalytic carbon dioxide reduction. , 2024, , 175-197.		0
1569	Free-Standing Single-Atom Catalyst-Based Electrodes for CO ₂ Reduction. <i>Electrochemical Energy Reviews</i> , 2024, 7, .	13.1	0