Ambient electrosynthesis of ammonia with efficient de

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#	Article	IF	Citations
1	Dynamic evolution of isolated Ruâ€“FeP atomic interface sites for promoting the electrochemical hydrogen evolution reaction. Journal of Materials Chemistry A, 2020, 8, 22607-22612.	5.2	36
2	Rh nanoparticle functionalized heteroatom-doped hollow carbon spheres for efficient electrocatalytic hydrogen evolution. Materials Chemistry Frontiers, 2021, 5, 3125-3131.	3.2	24
3	Metalâ€Free Bifunctional Ordered Mesoporous Carbon for Reversible Znâ€CO₂ Batteries. Small Methods, 2021, 5, e2001039.	4.6	60
4	Bifunctional single-atomic Mn sites for energy-efficient hydrogen production. Nanoscale, 2021, 13, 4767-4773.	2.8	26
5	Atomically Structural Regulations of Carbonâ€Based Singleâ€Atom Catalysts for Electrochemical CO₂Reduction. Small Methods, 2021, 5, e2100102.	4.6	61
6	A Feasible Strategy for Identifying Singleâ€Atom Catalysts Toward Electrochemical NOâ€toâ€NH₃ Conversion. Small, 2021, 17, e2102396.	5.2	89
7	Porous Materials Confining Single Atoms for Catalysis. Frontiers in Chemistry, 2021, 9, 717201.	1.8	9
8	Unveiling Potential Dependence in NO Electroreduction to Ammonia. Journal of Physical Chemistry Letters, 2021, 12, 6988-6995.	2.1	56
9	Coupling Electrocatalytic Nitric Oxide Oxidation over Carbon Cloth with Hydrogen Evolution Reaction for Nitrate Synthesis. Angewandte Chemie - International Edition, 2021, 60, 24605-24611.	7.2	59
10	Coupling Electrocatalytic Nitric Oxide Oxidation over Carbon Cloth with Hydrogen Evolution Reaction for Nitrate Synthesis. Angewandte Chemie, 2021, 133, 24810-24816.	1.6	16
11	Highâ€Performance Electrochemical NO Reduction into NH₃ by MoS₂ Nanosheet. Angewandte Chemie, 2021, 133, 25467-25472.	1.6	102
12	Thermally activated epoxy-functionalized carbon as an electrocatalyst for efficient NOx reduction. Carbon, 2021, 182, 516-524.	5.4	16
13	Highâ€Performance Electrochemical NO Reduction into NH₃ by MoS₂ Nanosheet. Angewandte Chemie - International Edition, 2021, 60, 25263-25268.	7.2	180
14	Palladium-based single atom catalysts for high-performance electrochemical production of hydrogen peroxide. Chemical Engineering Journal, 2022, 428, 131112.	6.6	29
15	Single-atom niobium doped BCN nanotubes for highly sensitive electrochemical detection of nitrobenzene. RSC Advances, 2021, 11, 28988-28995.	1.7	19
16	High-efficiency electrohydrogenation of nitric oxide to ammonia on a Ni₂P nanoarray under ambient conditions. Journal of Materials Chemistry A, 2021, 9, 24268-24275.	5.2	68
17	Ammonia electrosynthesis on single-atom catalysts: Mechanistic understanding and recent progress. Chemical Physics Reviews, 2021, 2, .	2.6	17
18	Boosting oxygen-reduction catalysis over mononuclear CuN2+2 moiety for rechargeable Zn-air battery. Chemical Engineering Journal, 2022, 430, 133105.	6.6	12

#	Article	IF	Citations
19	MnO2 nanoarray with oxygen vacancies: An efficient catalyst for NO electroreduction to NH3 at ambient conditions. Materials Today Physics, 2022, 22, 100586.	2.9	54
20	Electrochemical Reduction of Gaseous Nitrogen Oxides on Transition Metals at Ambient Conditions. Journal of the American Chemical Society, 2022, 144, 1258-1266.	6.6	110
21	Oxygen Vacancy-Governed Opposite Catalytic Performance for C₃H₆ and C₃H₈ Combustion: The Effect of the Pt Electronic Structure and Chemisorbed Oxygen Species. Environmental Science & Technology, 2022, 56, 3245-3257.	4.6	44
22	Pd Nanocrystals Embedded in BC2N for Efficient Electrochemical Conversion of Nitrate to Ammonia. SSRN Electronic Journal, 0, , .	0.4	0
23	High-performance NH₃ production via NO electroreduction over a NiO nanosheet array. Chemical Communications, 2021, 57, 13562-13565.	2.2	51
24	Tuning the Interaction between Ruthenium Single Atoms and the Second Coordination Sphere for Efficient Nitrogen Photofixation. Advanced Functional Materials, 2022, 32, .	7.8	22
25	Bi nanodendrites for highly efficient electrocatalytic NO reduction to NH3 at ambient conditions. Materials Today Physics, 2022, 22, 100611.	2.9	36
26	Pd nanocrystals embedded in BC2N for efficient electrochemical conversion of nitrate to ammonia. Applied Surface Science, 2022, 584, 152556.	3.1	18
27	Efficient nitric oxide electroreduction toward ambient ammonia synthesis catalyzed by a CoP nanoarray. Inorganic Chemistry Frontiers, 2022, 9, 1366-1372.	3.0	58
28	Ferrous-based electrolyte for simultaneous NO absorption and electroreduction to NH3 using Au/rGO electrode. Journal of Hazardous Materials, 2022, 430, 128451.	6.5	26
29	Recent advances in material design and reactor engineering for electrocatalytic ambient nitrogen fixation. Materials Chemistry Frontiers, 2022, 6, 843-879.	3.2	14
30	Nickel nanoparticles wrapped in N-doped carbon nanostructures for efficient electrochemical reduction of NO to NH₃. Journal of Materials Chemistry A, 2022, 10, 6470-6474.	5.2	14
31	An efficient screening strategy towards multifunctional catalysts for the simultaneous electroreduction of NO₃^â, NO₂^â and NO to NH₃. Journal of Materials Chemistry A, 2022, 10, 9707-9716.	5.2	52
32	Coupling denitrification and ammonia synthesis via selective electrochemical reduction of nitric oxide over Fe₂O₃ nanorods. Journal of Materials Chemistry A, 2022, 10, 6454-6462.	5.2	52
33	FeP nanorod array: A high-efficiency catalyst for electroreduction of NO to NH3 under ambient conditions. Nano Research, 2022, 15, 4008-4013.	5.8	61
34	Electrocatalytic Reduction of Low-Concentration Nitric Oxide into Ammonia over Ru Nanosheets. ACS Energy Letters, 2022, 7, 1187-1194.	8.8	68
35	Bi nanoparticles/carbon nanosheet composite: A high-efficiency electrocatalyst for NO reduction to NH3. Nano Research, 2022, 15, 5032-5037.	5.8	32
36	Pollution to solution: A universal electrocatalyst for reduction of all NOx-based species to NH3. Chem Catalysis, 2022, 2, 622-638.	2.9	27

#	Article	IF	Citations
37	Amorphous Boron Carbide on Titanium Dioxide Nanobelt Arrays for Highâ€Efficiency Electrocatalytic NO Reduction to NH ₃. Angewandte Chemie, 0, , .	1.6	6
38	Amorphous Boron Carbide on Titanium Dioxide Nanobelt Arrays for Highâ€Efficiency Electrocatalytic NO Reduction to NH₃. Angewandte Chemie - International Edition, 2022, 61, .	7.2	121
39	Ultrafine Cu nanoparticles decorated porous TiO2 for high-efficient electrocatalytic reduction of NO to synthesize NH3. Ceramics International, 2022, 48, 21151-21161.	2.3	21
40	Coordination environment engineering to boost electrocatalytic CO2 reduction performance by introducing boron into single-Fe-atomic catalyst. Chemical Engineering Journal, 2022, 437, 135294.	6.6	77
41	High-efficiency NO electroreduction to NH3 over honeycomb carbon nanofiber at ambient conditions. Journal of Colloid and Interface Science, 2022, 616, 261-267.	5.0	26
42	S site doped-pyrite by single atom for efficiently catalyzing N2 electrochemical reduction. Chemical Engineering Journal, 2022, 442, 136350.	6.6	4
43	Nitrogen-doped mesoporous carbon supported CuSb for electroreduction of CO₂. RSC Advances, 2022, 12, 12997-13002.	1.7	3
44	Single-Atom Mo Anchored on a Poly(heptazine imide) Nanosheet as a Novel Electrocatalyst Showing Excellent Behavior toward Nitrogen Reduction Reaction. Journal of Physical Chemistry C, 2022, 126, 7859-7869.	1.5	5
45	Enhancing Electrocatalytic NO Reduction to NH₃ by the CoS Nanosheet with Sulfur Vacancies. Inorganic Chemistry, 2022, 61, 8096-8102.	1.9	26
46	Recent advances in nanostructured heterogeneous catalysts for N-cycle electrocatalysis. , 2022, 1, e9120010.		285
47	NiFe layered double hydroxide nanosheet array for high-efficiency electrocatalytic reduction of nitric oxide to ammonia. Chemical Communications, 2022, 58, 8097-8100.	2.2	79
48	Water-Resistant Organic-Inorganic Hybrid Perovskite Quantum Dots Activated by Electron-Deficient d-Orbital of Platinum Atoms for Nitrogen Fixation. Nanoscale, 0, , .	2.8	2
49	High-efficiency electrocatalytic NO reduction to NH₃by nanoporous VN. , 2022, 1, e9120022.		191
50	Interfacial engineering of metallic rhodium by thiol modification approach for ambient electrosynthesis of ammonia. Nano Research, 2022, 15, 8826-8835.	5.8	9
51	Accelerating Protonation Kinetics for Ammonia Electrosynthesis on Single Iron Sites Embedded in Carbon with Intrinsic Defects. Advanced Functional Materials, 2022, 32, .	7.8	45
52	Electrochemical Reduction of Nitric Oxide with 1.7% Solarâ€toâ€Ammonia Efficiency Over Nanostructured Coreâ€Shell Catalyst at Low Overpotentials. Advanced Science, 2022, 9, .	5.6	16
53	MoC nanocrystals confined in N-doped carbon nanosheets toward highly selective electrocatalytic nitric oxide reduction to ammonia. Nano Research, 2022, 15, 8890-8896.	5.8	69
54	Hollow Cu₂O@CoMn₂O₄ Nanoreactors for Electrochemical NO Reduction to NH₃: Elucidating the Voidâ€Confinement Effects on Intermediates. Advanced Functional Materials, 2022, 32, .	7.8	15

#	Article	IF	Citations
55	Main-group metal elements as promising active centers for single-atom catalyst toward nitric oxide reduction reaction. Npj 2D Materials and Applications, 2022, 6, .	3.9	12
56	Anchor single atom in h-BN assist NO synthesis NH3: a computational view. Rare Metals, 2022, 41, 3456-3465.	3.6	23
57	Active-site and interface engineering of cathode materials for aqueous Znâ€”gas batteries. Nano Research, 2023, 16, 2325-2346.	5.8	63
58	Advanced TEM Characterization for Single-atom Catalysts: from Ex-situ Towards In-situ. Chemical Research in Chinese Universities, 2022, 38, 1172-1184.	1.3	11
59	Recent Advances in Upgrading of Lowâ€Cost Oxidants to Valueâ€Added Products by Electrocatalytic Reduction Reaction. Advanced Functional Materials, 2022, 32, .	7.8	20
60	Defect engineering for advanced electrocatalytic conversion of nitrogen-containing molecules. Science China Chemistry, 2023, 66, 1052-1072.	4.2	14
61	Single Transition Metal Atoms Anchored on Defective MoS₂ Monolayers for the Electrocatalytic Reduction of Nitric Oxide into Ammonia and Hydroxylamine. Inorganic Chemistry, 2022, 61, 17448-17458.	1.9	9
62	A defect engineered p-block SnS_{2â^'x}catalyst for efficient electrocatalytic NO reduction to NH₃. Inorganic Chemistry Frontiers, 2022, 10, 280-287.	3.0	54
63	Theoretical investigation of single-atom catalysts anchored on pure carbon substrate for electroreduction of NO to NH₃. Physical Chemistry Chemical Physics, 2022, 24, 29112-29119.	1.3	1
64	Atomically dispersed Co catalyst for electrocatalytic NO reduction to NH3. Chemical Engineering Journal, 2023, 454, 140333.	6.6	57
65	Tuning the Coordination Microenvironment of Central Fe Active Site to Boost Water Electrolysis and Oxygen Reduction Activity. Small, 2023, 19, .	5.2	11
66	åŒåŠŸèƒ½Nb-N-CåŽŸå†æ•£å‚¬åŒ–å‰‚ç”¨äºŽæº´ç³»é”Œ-ç©ºæ°”ç”µæ±é©±åŠ¨CO2è¿˜åŽŸ. Science China Materials, 2023, 66, 10	8.1	38
67	Redox mediators promote electrochemical oxidation of nitric oxide toward ambient nitrate synthesis. Journal of Materials Chemistry A, 2023, 11, 1098-1107.	5.2	14
68	The progresses in electrochemical reverse artificial nitrogen cycle. Current Opinion in Electrochemistry, 2023, 37, 101179.	2.5	6
69	Engineering sulfur vacancies optimization in Ni3Co6S8 nanospheres toward extraordinarily efficient nitrate electroreduction to ammonia. Applied Catalysis B: Environmental, 2023, 324, 122193.	10.8	13
70	Ionic Liquidâ€Assisted Electrocatalytic NO Reduction to NH₃ by Pâ€Doped MoS₂. ChemCatChem, 2023, 15, .	1.8	35
71	Efficient electrolytic conversion of nitrogen oxyanion and oxides to gaseous ammonia in molten alkali. Chemical Engineering Journal, 2023, 456, 141060.	6.6	2
72	Electrochemical NO reduction to NH3 on Cu single atom catalyst. Nano Research, 2023, 16, 5857-5863.	5.8	59

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73	Single atomic cerium sites anchored on nitrogen-doped hollow carbon spheres for highly selective electroreduction of nitric oxide to ammonia. Journal of Colloid and Interface Science, 2023, 638, 650-657.	5.0	58
74	Electrochemical Câ€“N coupling of CO₂and nitrogenous small molecules for the electrosynthesis of organonitrogen compounds. Chemical Society Reviews, 2023, 52, 2193-2237.	18.7	47
75	Robust Copper-Based Nanosponge Architecture Decorated by Ruthenium with Enhanced Electrocatalytic Performance for Ambient Nitrogen Reduction to Ammonia. ACS Applied Materials & Interfaces, 2023, 15, 11703-11712.	4.0	5
76	The state-of-the-art in the electroreduction of NO_x for the production of ammonia in aqueous and nonaqueous media at ambient conditions: a review. New Journal of Chemistry, 2023, 47, 6018-6040.	1.4	5
77	Electrocatalytic reduction of NO to NH3 in ionic liquids by P-doped TiO2 nanotubes. Frontiers of Chemical Science and Engineering, 2023, 17, 726-734.	2.3	16
78	Hexagonal Cobalt Nanosheets for High-Performance Electrocatalytic NO Reduction to NH₃. Journal of the American Chemical Society, 2023, 145, 6899-6904.	6.6	38
79	Defective TiO_{2â^’}_x for Highâ€Performance Electrocatalytic NO Reduction toward Ambient NH₃ Production. Small, 2023, 19, .	5.2	17
80	Singleâ€atomic Coâ€B₂N₂ sites anchored on carbon nanotube arrays promote lithium polysulfide conversion in lithiumâ€“sulfur batteries. , 2023, 5, .		24
81	Progress of electrochemical synthesis of nitric acid: catalyst design, mechanistic insights, protocol and challenges. Journal of Materials Chemistry A, 2023, 11, 10125-10148.	5.2	12
82	Design of material regulatory mechanism for electrocatalytic converting NO/NO₃^{â^’}to NH₃progress. Natural Sciences, 2023, 3, .	1.0	9
83	The efficient electrocatalytic and photocatalytic reduction of nitric oxide into ammonia over 0D/3D g-C3N4 quantum dots/3DOMM-TiO2-x heterojunction. Ceramics International, 2023, 49, 23129-23139.	2.3	4
86	Recent advances in electrocatalytic NO_x reduction into ammonia. , 2023, 1, 645-664.		2
92	Electrocatalytic upcycling of nitrogenous wastes into green ammonia: advances and perspectives on materials innovation. , 2023, 2, .		8
93	Towards sustainable electrochemical ammonia synthesis. Journal of Materials Chemistry A, 2023, 11, 18626-18645.	5.2	4
98	Electrochemical reduction of gaseousÂnitric oxide into ammonia: a review. Environmental Chemistry Letters, 2024, 22, 189-208.	8.3	3