Alkylthiol surface engineering: an effective strategy toward enhanced electrocatalytic N2-to-NH3 fixation by a CoP nanoarray

DOI: 10.1039/d1ta02424h
Journal of Materials Chemistry A, 2021, 9, 13861-13866.

#	Paper	IF	Citations
69	Investigation of the interfacial behavior of organics on sulfide semiconductor surfaces by quantum chemical calculations and molecular dynamics simulations. *New Journal of Chemistry*,	3.6	
68	MoS quantum dots for electrocatalytic N reduction. *Chemical Communications*, **2021**, 57, 9930-9933	5.8	7
67	Electrochemical nitrogen reduction: recent progress and prospects. *Chemical Communications*, **2021**, 57, 7335-7349	5.8	13
66	Enhancing electrocatalytic N2-to-NH3 fixation by suppressing hydrogen evolution with alkylthiols modified Fe3P nanoarrays. *Nano Research*, 1	10	28
65	TiO Nanoparticles with Ti Sites toward Efficient NH Electrosynthesis under Ambient Conditions. *ACS Applied Materials & Interfaces*, **2021**, 13, 41715-41722	9.5	32
64	Isolation of Metalloid Boron Atoms in Intermetallic Carbide Boosts the Catalytic Selectivity for Electrocatalytic N2 Fixation. *Advanced Energy Materials*, **2021**, 11, 2102138	21.8	10
63	MXene Quantum Dots/Copper Heterostructure for Synergistically Enhanced N2 Electroreduction. *Energy and Environmental Materials*,	13	9
62	Fe, Mo-co-doped graphene for electrocatalytic N2-to-NH3 conversion: A DFT investigation. *Applied Surface Science*, **2021**, 569, 150921	6.7	1
61	Catalyst design strategies for aqueous N2 electroreduction. *Applied Materials Today*, **2021**, 25, 101184	6.6	0
60	Single, double, and triple transition metal atoms embedded in defective V3C2O2 for nitrogen reduction reaction: A DFT study. *Applied Surface Science*, **2021**, 569, 151020	6.7	3
59	Metal-free BN quantum dots/graphitic CN heterostructure for nitrogen reduction reaction. *Journal of Colloid and Interface Science*, **2022**, 606, 204-212	9.3	22
58	NiP nanosheet array for high-efficiency electrohydrogenation of nitrite to ammonia at ambient conditions. *Journal of Colloid and Interface Science*, **2022**, 606, 1055-1063	9.3	17
57	An amorphous WC thin film enabled high-efficiency N reduction electrocatalysis under ambient conditions. *Chemical Communications*, **2021**, 57, 7806-7809	5.8	19
56	Directed charge transfer in all solid state heterojunction of Fe doped MoS2 and C□iO2 nanosheet for enhanced nitrogen photofixation. *Materials Today Physics*, **2021**, 21, 100563	8	1
55	MoS -Based Catalysts for N Electroreduction to NH - An Overview of MoS Optimization Strategies. *ChemistryOpen*, **2021**, 10, 1041-1054	2.3	4
54	Uniform octahedral ZrO2@C from carbonized UiO-66 for electrocatalytic nitrogen reduction. *Materials Today Energy*, **2021**, 100884	7	0
53	Metal□rganic Framework Supported Au Nanoparticles With Organosilicone Coating for High-efficiency Electrocatalytic N2 Reduction to NH3. *Applied Catalysis B: Environmental*, **2021**, 120840	21.8	27

52	Recent Advances in MOF-based Materials for Photocatalytic Nitrogen Fixation. *European Journal of Inorganic Chemistry*,	2.3	0
51	Interface hydrophobic tunnel engineering: A general strategy to boost electrochemical conversion of N2 to NH3. *Nano Energy*, **2022**, 92, 106784	17.1	5
50	Porous FeOOH nanotube stabilizing Au single atom for high-efficiency nitrogen fixation. *Nano Research*, 1	10	4
49	Accelerated N2 reduction kinetics in hybrid interfaces of NbTiO4 and nitrogen-doped carbon nanorod via synergistic electronic coupling effect. *Applied Catalysis B: Environmental*, **2021**, 120938	21.8	1
48	Quantifying the photocatalytic role and activity at the edge and surface of Pd co-catalysts using N2 fixation as a case. *Journal of Materials Chemistry A*, **2021**, 9, 26036-26044	13	1
47	Recent advances in MoS-based materials for electrocatalysis.. *Chemical Communications*, **2022**,	5.8	4
46	High-performance NH production NO electroreduction over a NiO nanosheet array. *Chemical Communications*, **2021**,	5.8	14
45	Amorphization engineered VSe2 nanosheets with abundant Se-vacancies for enhanced N2 electroreduction. *Journal of Materials Chemistry A*, **2022**, 10, 1742-1749	13	28
44	A theoretical study on molybdenum and sulfur co-doped graphene for electrocatalytic nitrogen reduction. *Molecular Catalysis*, **2022**, 517, 112048	3.3	0
43	Biomass Juncus derived carbon decorated with cobalt nanoparticles enables high-efficiency ammonia electrosynthesis by nitrite reduction. *Journal of Materials Chemistry A*, **2022**, 10, 2842-2848	13	6
42	High-efficiency ammonia electrosynthesis via selective reduction of nitrate on ZnCo2O4 nanosheet array. *Materials Today Physics*, **2022**, 23, 100619	8	11
41	Nitrogen reduction reaction under ambient conditions by K3Ti8O17 nanorod electrocatalyst. *Sustainable Energy and Fuels*,	5.8	0
40	Boosting electrochemical nitrite-ammonia conversion properties by a Cu foam@CuO catalyst.. *Chemical Communications*, **2021**,	5.8	5
39	Electro-reduction of N2 on nanostructured materials and the design strategies of advanced catalysts based on descriptors. *Materials Today Physics*, **2022**, 22, 100609	8	16
38	Dealloying layered PdBi2 nanoflakes to palladium hydride leads to enhanced electrocatalytic N2 reduction. *Journal of Materials Chemistry A*,	13	2
37	Ru and Fe Alloying on a Two-Dimensional MXene Support for Enhanced Electrochemical Synthesis of Ammonia. *ChemCatChem*,	5.2	0
36	Immersion corrosion behavior, electrochemical performance and corrosion mechanism of subsonic flame sprayed FeCoCrMoSi amorphous coating in 3.5% NaCl solution. *International Journal of Hydrogen Energy*, **2022**, 47, 6911-6923	6.7	5
35	Cobalt doping of porous graphitic carbon nitride with Co N bonds promotes electrocatalytic N2 fixation under ambient conditions. *Journal of Alloys and Compounds*, **2022**, 902, 163862	5.7	3

34	Phase Transfer of Mo 2 C Induced by Boron Doping to Boost Nitrogen Reduction Reaction Catalytic Activity. *Advanced Functional Materials*, 2110783	15.6	7
33	Ambient Ammonia Synthesis via Electrochemical Reduction of Nitrate Enabled by NiCo O Nanowire Array.. *Small*, **2022**, e2106961	11	27
32	Ferrous-based electrolyte for simultaneous NO absorption and electroreduction to NH using Au/rGO electrode.. *Journal of Hazardous Materials*, **2022**, 430, 128451	12.8	4
31	Ultrasmall iridium nanoparticles on graphene for efficient nitrogen reduction reaction. *New Journal of Chemistry*, **2022**, 46, 5464-5469	3.6	1
30	Delicate Tuning of the Ni/Co Ratio in Bimetal Layered Double Hydroxides for Efficient N Electroreduction.. *ChemSusChem*, **2022**, e202200127	8.3	0
29	Nitrogen reduction reaction to ammonia at ambient conditions: A short review analysis of the critical factors limiting electrocatalytic performance. *Current Opinion in Green and Sustainable Chemistry*, **2022**, 35, 100604	7.9	1
28	Interface engineered Sb2O3/W18O49 heterostructure for enhanced visible-light-driven photocatalytic N2 reduction. *Chemical Engineering Journal*, **2022**, 438, 135485	14.7	2
27	Boron nitride quantum dots coupled with CoP nanosheet arrays grown on carbon cloth for efficient nitrogen reduction reaction. *Chemical Engineering Journal*, **2022**, 440, 135853	14.7	0
26	Synergy effect of Cu-Ru dual atoms anchored to N-doped phosphorene for nitrogen reduction reaction. *Fuel*, **2022**, 321, 124101	7.1	0
25	Amorphous core/shell Ti-doped SnO2 with synergistically improved N2 adsorption/activation and electrical conductivity for electrochemical N2 reduction. *Chinese Chemical Letters*, **2021**,	8.1	0
24	Self-assembly synthesis of Ni-decorated Nb2C MXene as an efficient and stable catalyst towards electrochemical nitrogen reduction. *Ceramics International*, **2022**,	5.1	1
23	High-Efficiency N Electroreduction Enabled by Se-Vacancy-Rich WSe in Water-in-Salt Electrolytes.. *ACS Nano*, **2022**,	16.7	18
22	Hydrophobicity Modulation on a Ferriporphyrin-Based Metal□Organic Framework for Enhanced Ambient Electrocatalytic Nitrogen Fixation. *SSRN Electronic Journal*,	1	
21	Asymmetric Activation of the Nitro Group over a Ag/Graphene Heterointerface to Boost Highly Selective Electrocatalytic Reduction of Nitrobenzene. *ACS Applied Materials & Interfaces*,	9.5	2
20	Fe-based catalysts for nitrogen reduction toward ammonia electrosynthesis under ambient conditions. *SusMat*,		4
19	Electrocatalytic activity on single atoms catalysts: Synthesis strategies, characterization, classification, and energy conversion applications. *Coordination Chemistry Reviews*, **2022**, 467, 214600	23.2	1
18	Hydrophobicity modulation on a ferriporphyrin-based metal□organic framework for enhanced ambient electrocatalytic nitrogen fixation. *Applied Catalysis B: Environmental*, **2022**, 121673	21.8	2
17	Enhanced N2-to-NH3 conversion efficiency on Cu3P nanoribbon electrocatalyst. *Nano Research*,	10	7

16	Interfacial engineering of metallic rhodium by thiol modification approach for ambient electrosynthesis of ammonia. *Nano Research*,	10	1
15	Porous carbon framework decorated with carbon nanotubes encapsulating cobalt phosphide for efficient overall water splitting. **2022**,		2
14	Electroreduction of nitrate to ammonia on atomically-dispersed Cu-N4 active sites with high efficiency and stability. **2023**, 332, 126106		0
13	Recent Progress in Electrocatalytic Urea Synthesis under Ambient Conditions. **2022**, 10, 12477-12496		1
12	Atomically Fe-doped MoS2 with Fe-Mo dual sites for efficient electrocatalytic NO reduction to NH3. **2023**, 324, 122241		11
11	Spin-engineered CuNi metallic aerogels for enhanced ethylamine electrosynthesis from acetonitrile.		0
10	Polyoxometalate-derived bimetallic catalysts for the nitrogen reduction reaction.		0
9	Electrocatalytic NO Reduction to NH3 on Mo2C Nanosheets. **2023**, 62, 653-658		9
8	Built-in electric field-assisted W-C3/X-C3 van der Waals heterogeneous single-atom catalysts for enhanced electrocatalytic nitrogen reduction. **2023**, 619, 156790		0
7	Modifying the electronic structure of MoS2 via interface engineering to boost intrinsic activity for nitrogen fixation. **2023**, 945, 169201		0
6	Recent developments in heterogeneous electrocatalysts for ambient nitrogen reduction to ammonia: Activity, challenges, and future perspectives. **2023**, 176, 113197		1
5	Efficient N2 electroreduction to ammonia in an isopropanolPBS electrolyte using NiFe2O4in situ grown on nickel foam. **2023**, 2, 547-555		0
4	Enhancing the electrocatalytic performance of nitrate reduction to ammonia by in-situ nitrogen leaching. **2023**, 108341		0
3	Efficient electrocatalytic conversion of N2 to NH3 using oxygen-rich vacancy lithium niobate cubes. **2023**,		0
2	Hydrophobicity Tailoring of Ferric Covalent Organic Framework/MXene Nanosheets for High-Efficiency Nitrogen Electroreduction to Ammonia.		0
1	Advantages and Limitations of Different Electrochemical NH3 Production Methods under Ambient Conditions: A Review. **2023**, 101292		0