Lu Wang

List of Publications by Year
in descending order

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Version: 2024-02-01

68 papers	5,156 citations	87888 38 h-index	91884 69 g-index
71 all docs	71 docs citations	71 times ranked	6634 citing authors

#	Article	IF	Citations
1	A photo-assisted electrochemical-based demonstrator for green ammonia synthesis. Journal of Energy Chemistry, 2022, 68, 826-834.	12.9	7
2	Solar CO2hydrogenation by photocatalytic foams. Chemical Engineering Journal, 2022, 435, 134864.	12.7	16
3	Single Pdâ€“S<i>_x</i> Sites <i>In Situ</i> Coordinated on CdS Surface as Efficient Hydrogen Autotransfer Shuttles for Highly Selective Visible-Light-Driven Câ€“N Coupling. ACS Catalysis, 2022, 12, 4481-4490.	11.2	28
4	New black indium oxideâ€”tandem photothermal CO2-H2 methanol selective catalyst. Nature Communications, 2022, 13, 1512.	12.8	47
5	Extraterrestrial photosynthesis by Changâ€™E-5 lunar soil. Joule, 2022, 6, 1008-1014.	24.0	15
6	Shedding light on <scp>CO₂</scp>: Catalytic synthesis of solar methanol. EcoMat, 2021, 3, e12078.	11.9	13
7	Enhanced CO₂ Photocatalysis by Indium Oxide Hydroxide Supported on TiN@TiO₂ Nanotubes. Nano Letters, 2021, 21, 1311-1319.	9.1	35
8	Greenhouse-inspired supra-photothermal CO2 catalysis. Nature Energy, 2021, 6, 807-814.	39.5	198
9	Largeâ€Area Vertically Aligned Bismuthene Nanosheet Arrays from Galvanic Replacement Reaction for Efficient Electrochemical CO₂ Conversion. Advanced Materials, 2021, 33, e2100910.	21.0	81
10	Construction of New Active Sites: Cu Substitution Enabled Surface Frustrated Lewis Pairs over Calcium Hydroxyapatite for CO₂ Hydrogenation. Advanced Science, 2021, 8, e2101382.	11.2	25
11	High-performance light-driven heterogeneous CO2 catalysis with near-unity selectivity on metal phosphides. Nature Communications, 2020, 11, 5149.	12.8	82
12	Plasmonic Titanium Nitride Facilitates Indium Oxide CO₂ Photocatalysis. Small, 2020, 16, e2005754.	10.0	32
13	Bismuth atom tailoring of indium oxide surface frustrated Lewis pairs boosts heterogeneous CO2 photocatalytic hydrogenation. Nature Communications, 2020, 11, 6095.	12.8	129
14	High-Performance, Scalable, and Low-Cost Copper Hydroxyapatite for Photothermal CO2 Reduction. ACS Catalysis, 2020, 10, 13668-13681.	11.2	55
15	Shining light on CO₂: from materials discovery to photocatalyst, photoreactor and process engineering. Chemical Society Reviews, 2020, 49, 5648-5663.	38.1	91
16	How to make an efficient gas-phase heterogeneous CO₂ hydrogenation photocatalyst. Energy and Environmental Science, 2020, 13, 3054-3063.	30.8	52
17	Hydrogen Spillover to Oxygen Vacancy of TiO_{2â€“<i>x</i>}H_{<i>y</i>}/Fe: Breaking the Scaling Relationship of Ammonia Synthesis. Journal of the American Chemical Society, 2020, 142, 17403-17412.	13.7	91
18	Cobalt Plasmonic Superstructures Enable Almost 100% Broadband Photon Efficient CO₂ Photocatalysis. Advanced Materials, 2020, 32, e2000014.	21.0	109

#	Article	IF	Citations
19	Black indium oxide a photothermal CO2 hydrogenation catalyst. Nature Communications, 2020, 11, 2432.	12.8	192
20	Synergizing Photo-Thermal H2 and Photovoltaics into a Concentrated Sunlight Use. IScience, 2020, 23, 101012.	4.1	32
21	Will Any Crap We Put into Graphene Increase Its Electrocatalytic Effect?. ACS Nano, 2020, 14, 21-25.	14.6	158
22	ZIF-supported AuCu nanoalloy for ammonia electrosynthesis from nitrogen and thin air. Journal of Materials Chemistry A, 2020, 8, 8868-8874.	10.3	30
23	Heterostructure Engineering of a Reverse Water Gas Shift Photocatalyst. Advanced Science, 2019, 6, 1902170.	11.2	20
24	Cu2O nanocubes with mixed oxidation-state facets for (photo)catalytic hydrogenation of carbon dioxide. Nature Catalysis, 2019, 2, 889-898.	34.4	234
25	Polymorph selection towards photocatalytic gaseous CO2 hydrogenation. Nature Communications, 2019, 10, 2521.	12.8	102
26	Catalytic hydrogen evolution reaction on â€œmetal-freeâ€•graphene: key role of metallic impurities. Nanoscale, 2019, 11, 11083-11085.	5.6	19
27	Nickel@Siloxene catalytic nanosheets for high-performance CO2 methanation. Nature Communications, 2019, 10, 2608.	12.8	104
28	Roomâ€Temperature Activation of H₂ by a Surface Frustrated Lewis Pair. Angewandte Chemie - International Edition, 2019, 58, 9501-9505.	13.8	72
29	Towards Solar Methanol: Past, Present, and Future. Advanced Science, 2019, 6, 1801903.	11.2	63
30	Roomâ€Temperature Activation of H₂ by a Surface Frustrated Lewis Pair. Angewandte Chemie, 2019, 131, 9601-9605.	2.0	18
31	Catalytic CO2 reduction by palladium-decorated siliconâ€“hydride nanosheets. Nature Catalysis, 2019, 2, 46-54.	34.4	116
32	Photocatalytic Hydrogenation of Carbon Dioxide with High Selectivity to Methanol at Atmospheric Pressure. Joule, 2018, 2, 1369-1381.	24.0	148
33	Promoting Charge Separation in Semiconductor Nanocrystal Superstructures for Enhanced Photocatalytic Activity. Advanced Materials Interfaces, 2018, 5, 1701694.	3.7	33
34	Tailoring Surface Frustrated Lewis Pairs of In₂O_{3âˆ’}<i>_x</i>(OH)_y for Gasâ€Phase Heterogeneous Photocatalytic Reduction of CO₂ by Isomorphous Substitution of In³⁺ with Bi³⁺. Advanced Science, 2018, 5, 1700732.	11.2	91
35	Greening Ammonia toward the Solar Ammonia Refinery. Joule, 2018, 2, 1055-1074.	24.0	603
36	Ambient Electrosynthesis of Ammonia: Electrode Porosity and Composition Engineering. Angewandte Chemie, 2018, 130, 12540-12544.	2.0	14

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37	Photocatalytic Hydrogenation of Carbon Dioxide with High Selectivity to Methanol at Atmospheric Pressure. Joule, 2018, 2, 1382.	24.0	9
38	Ambient Electrosynthesis of Ammonia: Electrode Porosity and Composition Engineering. Angewandte Chemie - International Edition, 2018, 57, 12360-12364.	13.8	160
39	Functional Nanosheet Synthons by Covalent Modification of Transition-Metal Dichalcogenides. Chemistry of Materials, 2017, 29, 2066-2073.	6.7	56
40	Sizeâ€Tunable Photothermal Germanium Nanocrystals. Angewandte Chemie, 2017, 129, 6426-6431.	2.0	6
41	Sizeâ€Tunable Photothermal Germanium Nanocrystals. Angewandte Chemie - International Edition, 2017, 56, 6329-6334.	13.8	47
42	Efficient Electrocatalytic Reduction of CO₂ by Nitrogenâ€Doped Nanoporous Carbon/Carbon Nanotube Membranes: A Step Towards the Electrochemical CO₂ Refinery. Angewandte Chemie - International Edition, 2017, 56, 7847-7852.	13.8	252
43	Efficient Electrocatalytic Reduction of CO₂ by Nitrogenâ€Doped Nanoporous Carbon/Carbon Nanotube Membranes: A Step Towards the Electrochemical CO₂ Refinery. Angewandte Chemie, 2017, 129, 7955-7960.	2.0	78
44	Mechanochemical synthesis of COx-free hydrogen and methane fuel mixtures at room temperature from light metal hydrides and carbon dioxide. Applied Energy, 2017, 204, 741-748.	10.1	17
45	Microwave irradiated N- and B,Cl-doped graphene: Oxidation method has strong influence on capacitive behavior. Applied Materials Today, 2017, 9, 204-211.	4.3	25
46	Photothermal Catalyst Engineering: Hydrogenation of Gaseous CO₂ with High Activity and Tailored Selectivity. Advanced Science, 2017, 4, 1700252.	11.2	97
47	Doped Graphene for DNA Analysis: the Electrochemical Signal is Strongly Influenced by the Kind of Dopant and the Nucleobase Structure. Scientific Reports, 2016, 6, 33046.	3.3	25
48	Graphane Nanostripes. Angewandte Chemie, 2016, 128, 14171-14175.	2.0	7
49	Graphane Nanostripes. Angewandte Chemie - International Edition, 2016, 55, 13965-13969.	13.8	10
50	Electrochemical catalysis at low dimensional carbons: Graphene, carbon nanotubes and beyond â€“ A review. Applied Materials Today, 2016, 5, 134-141.	4.3	79
51	Phosphorus and Halogen Coâ€Doped Graphene Materials and their Electrochemistry. Chemistry - A European Journal, 2016, 22, 15444-15450.	3.3	22
52	Valence and oxide impurities in MoS₂ and WS₂ dramatically change their electrocatalytic activity towards proton reduction. Nanoscale, 2016, 8, 16752-16760.	5.6	42
53	Layered rhenium sulfide on free-standing three-dimensional electrodes is highly catalytic for the hydrogen evolution reaction: Experimental and theoretical study. Electrochemistry Communications, 2016, 63, 39-43.	4.7	54
54	Remarkable electrochemical properties of electrochemically reduced graphene oxide towards oxygen reduction reaction are caused by residual metal-based impurities. Electrochemistry Communications, 2016, 62, 17-20.	4.7	30

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55	Soâ€•Called â€œMetalâ€•Freeâ€•Oxygen Reduction at Graphene Nanoribbons is in fact Metal Driven. ChemCatChem, 2015, 7, 1650-1654.	3.7	22
56	Mo<i>_x</i>W_{1âˆ’<i>x</i>}S₂ Solid Solutions as 3D Electrodes for Hydrogen Evolution Reaction. Advanced Materials Interfaces, 2015, 2, 1500041.	3.7	49
57	High temperature superconducting materials as bi-functional catalysts for hydrogen evolution and oxygen reduction. Journal of Materials Chemistry A, 2015, 3, 8346-8352.	10.3	25
58	Voltammetry of Layered Black Phosphorus: Electrochemistry of Multilayer Phosphorene. ChemElectroChem, 2015, 2, 324-327.	3.4	97
59	Nitrogen doped graphene: influence of precursors and conditions of the synthesis. Journal of Materials Chemistry C, 2014, 2, 2887-2893.	5.5	61
60	Highly selective uptake of Ba²⁺and Sr²⁺ions by graphene oxide from mixtures of IIA elements. RSC Advances, 2014, 4, 26673-26676.	3.6	21
61	Residual metallic impurities within carbon nanotubes play a dominant role in supposedly â€œmetal-freeâ€• oxygen reduction reactions. Chemical Communications, 2014, 50, 12662-12664.	4.1	60
62	Capacitance of pâ€•and nâ€•Doped Graphenes is Dominated by Structural Defects Regardless of the Dopant Type. ChemSusChem, 2014, 7, 1102-1106.	6.8	45
63	3D-graphene for electrocatalysis of oxygen reduction reaction: Increasing number of layers increases the catalytic effect. Electrochemistry Communications, 2014, 46, 148-151.	4.7	34
64	Boron-Doped Graphene: Scalable and Tunable p-Type Carrier Concentration Doping. Journal of Physical Chemistry C, 2013, 117, 23251-23257.	3.1	108
65	Carbonaceous impurities in carbon nanotubes are responsible for accelerated electrochemistry of acetaminophen. Electrochemistry Communications, 2013, 26, 71-73.	4.7	12
66	â€œMetalâ€•Freeâ€•Catalytic Oxygen Reduction Reaction on Heteroatomâ€•Doped Graphene is Caused by Trace Metal Impurities. Angewandte Chemie - International Edition, 2013, 52, 13818-13821.	13.8	331
67	Carbonaceous Impurities in Carbon Nanotubes are Responsible for Accelerated Electrochemistry of Cytochrome c. Analytical Chemistry, 2013, 85, 6195-6197.	6.5	20
68	Could Carbonaceous Impurities in Reduced Graphenes be Responsible for Some of Their Extraordinary Electrocatalytic Activities?. Chemistry - an Asian Journal, 2013, 8, 1200-1204.	3.3	18