Haotian Wang

List of Publications by Year
in descending order

91 papers	31,517 citations	13068 68 h-index	48187 88 g-index
94 all docs	94 docs citations	94 times ranked	27925 citing authors

#	Article	IF	Citations
1	Proton sponge promotion of electrochemical CO2 reduction to multi-carbon products. Joule, 2022, 6, 205-220.	11.7	57
2	Recovering carbon losses in CO2 electrolysis using a solid electrolyte reactor. Nature Catalysis, 2022, 5, 288-299.	16.1	90
3	Cobaltâ€“Copper Nanoparticles on Three-Dimensional Substrate for Efficient Ammonia Synthesis via Electrocatalytic Nitrate Reduction. Journal of Physical Chemistry C, 2022, 126, 6982-6989.	1.5	18
4	Efficient conversion of low-concentration nitrate sources into ammonia on a Ru-dispersed Cu nanowire electrocatalyst. Nature Nanotechnology, 2022, 17, 759-767.	15.6	318
5	CO2/carbonate-mediated electrochemical water oxidation to hydrogen peroxide. Nature Communications, 2022, 13, 2668.	5.8	44
6	Electrochemical oxygen reduction to hydrogen peroxide at practical rates in strong acidic media. Nature Communications, 2022, 13, .	5.8	82
7	Electrochemical Manufacturing of Hydrogen Peroixde. ECS Meeting Abstracts, 2022, MA2022-01, 2356-2356.	0.0	0
8	(Invited) Electrifying CO2 into Fuels and Chemicals in a Solid Electrolyte Reactor. ECS Meeting Abstracts, 2022, MA2022-01, 1763-1763.	0.0	0
9	Solar photoelectrochemical synthesis of electrolyte-free H₂O₂ aqueous solution without needing electrical bias and H₂. Energy and Environmental Science, 2021, 14, 3110-3119.	15.6	37
10	Structural Defects, Mechanical Behaviors, and Properties of Two-Dimensional Materials. Materials, 2021, 14, 1192.	1.3	48
11	Electrochemical ammonia synthesis via nitrate reduction on Fe single atom catalyst. Nature Communications, 2021, 12, 2870.	5.8	605
12	Converting CO2 to liquid fuel on MoS2 vacancies. Joule, 2021, 5, 1038-1040.	11.7	7
13	General synthesis of single-atom catalysts with high metal loading using graphene quantum dots. Nature Chemistry, 2021, 13, 887-894.	6.6	362
14	Room-temperature electrochemical acetylene reduction to ethylene with high conversion and selectivity. Nature Catalysis, 2021, 4, 565-574.	16.1	121
15	Highly active and selective oxygen reduction to H2O2 on boron-doped carbon for high production rates. Nature Communications, 2021, 12, 4225.	5.8	218
16	Stability challenges of electrocatalytic oxygen evolution reaction: From mechanistic understanding to reactor design. Joule, 2021, 5, 1704-1731.	11.7	416
17	Direct and continuous generation of pure acetic acid solutions via electrocatalytic carbon monoxide reduction. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	93
18	High-purity and high-concentration liquid fuels through CO2 electroreduction. Nature Catalysis, 2021, 4, 943-951.	16.1	143

#	Article	IF	Citations
19	Electrifying CO2 into Pure Liquid Fuels. ECS Meeting Abstracts, 2021, MA2021-02, 808-808.	0.0	0
20	Electricity + Air + Water = Hydrogen Peroxide. ECS Meeting Abstracts, 2021, MA2021-02, 838-838.	0.0	0
21	A synthetic dataset for Visual SLAM evaluation. Robotics and Autonomous Systems, 2020, 124, 103336.	3.0	13
22	Insights into Practical-Scale Electrochemical H2O2 Synthesis. Trends in Chemistry, 2020, 2, 942-953.	4.4	85
23	Electrochemical CO2 reduction to high-concentration pure formic acid solutions in an all-solid-state reactor. Nature Communications, 2020, 11, 3633.	5.8	294
24	Recommended practice to report selectivity in electrochemical synthesis of H2O2. Nature Catalysis, 2020, 3, 605-607.	16.1	112
25	Catalyst Design for Electrochemical Oxygen Reduction toward Hydrogen Peroxide. Advanced Functional Materials, 2020, 30, 2003321.	7.8	170
26	A Review on Challenges and Successes in Atomic-Scale Design of Catalysts for Electrochemical Synthesis of Hydrogen Peroxide. ACS Catalysis, 2020, 10, 7495-7511.	5.5	254
27	Strategies in catalysts and electrolyzer design for electrochemical CO ₂ reduction toward C ₂₊ products. Science Advances, 2020, 6, eaay3111.	4.7	477
28	Li-Containing Organic Thin Filmâ€"Structure of Lithium Propane Dioxide via Molecular Layer Deposition. Journal of Physical Chemistry C, 2020, 124, 6830-6837.	1.5	16
29	Structural evolution of oxide-/hydroxide-derived copper electrodes accounts for the enhanced C2+ product selectivity during electrochemical CO2 reduction. Science Bulletin, 2020, 65, 977-979.	4.3	15
30	Confined local oxygen gas promotes electrochemical water oxidation to hydrogen peroxide. Nature Catalysis, 2020, 3, 125-134.	16.1	252
31	Direct electrosynthesis of pure aqueous H ₂ O ₂ solutions up to 20% by weight using a solid electrolyte. Science, 2019, 366, 226-231.	6.0	573
32	Nanosized MoSe₂@Carbon Matrix: A Stable Host Material for the Highly Reversible Storage of Potassium and Aluminum Ions. ACS Applied Materials & Interfaces, 2019, 11, 44333-44341.	4.0	56
33	Highly selective oxygen reduction to hydrogen peroxide on transition metal single atom coordination. Nature Communications, 2019, 10, 3997.	5.8	528
34	Continuous production of pure liquid fuel solutions via electrocatalytic CO2 reduction using solid-electrolyte devices. Nature Energy, 2019, 4, 776-785.	19.8	458
35	The Role of Defect Sites in Nanomaterials for Electrocatalytic Energy Conversion. CheM, 2019, 5, 1371-1397.	5.8	273
36	Large-Scale, Low-Cost, and High-Efficiency Water-Splitting System for Clean H₂ Generation. ACS Applied Materials & Interfaces, 2019, 11, 3971-3977.	4.0	46

#	Article	IF	Citations
37	Large-Scale and Highly Selective CO2 Electrocatalytic Reduction on Nickel Single-Atom Catalyst. Joule, 2019, 3, 265-278.	11.7	663
38	Fluoride-Induced Dynamic Surface Self-Reconstruction Produces Unexpectedly Efficient Oxygen-Evolution Catalyst. Nano Letters, 2019, 19, 530-537.	4.5	210
39	(Invited) Earth-Abundant Transition Metal Single Atom Electrocatalysts for Selective CO2 Reduction in Water. ECS Meeting Abstracts, 2019, , .	0.0	0
40	Synthesis and Performance Characterizations of Transition Metal Single Atom Catalyst for Electrochemical CO₂ Reduction. Journal of Visualized Experiments, 2018, , .	0.2	5
41	Electrocatalysis over Graphene-Defect-Coordinated Transition-Metal Single-Atom Catalysts. CheM, 2018, 4, 194-195.	5.8	61
42	High-throughput theoretical optimization of the hydrogen evolution reaction on MXenes by transition metal modification. Journal of Materials Chemistry A, 2018, 6, 4271-4278.	5.2	198
43	Isolated Ni single atoms in graphene nanosheets for high-performance CO₂ reduction. Energy and Environmental Science, 2018, 11, 893-903.	15.6	811
44	Metal ion cycling of Cu foil for selective Câ€"C coupling in electrochemical CO2 reduction. Nature Catalysis, 2018, 1, 111-119.	16.1	600
45	Morphology and property investigation of primary particulate matter particles from different sources. Nano Research, 2018, 11, 3182-3192.	5.8	54
46	An electrochemical thermal transistor. Nature Communications, 2018, 9, 4510.	5.8	105
47	Regain Strain-Hardening in High-Strength Metals by Nanofiller Incorporation at Grain Boundaries. Nano Letters, 2018, 18, 6255-6264.	4.5	74
48	Lithium Electrochemical Tuning for Electrocatalysis. Advanced Materials, 2018, 30, e1800978.	11.1	51
49	Recent Advances in Electrochemical CO₂â€‡toâ€‡CO Conversion on Heterogeneous Catalysts. Advanced Materials, 2018, 30, e1802066.	11.1	397
50	A half-wave rectified alternating current electrochemical method for uranium extraction from seawater. Nature Energy, 2017, 2, .	19.8	388
51	Identifying the Active Surfaces of Electrochemically Tuned LiCoO₂for Oxygen Evolution Reaction. Journal of the American Chemical Society, 2017, 139, 6270-6276.	6.6	143
52	Li Electrochemical Tuning of Metal Oxide for Highly Selective CO₂ Reduction. ACS Nano, 2017, 11, 6451-6458.	7.3	123
53	Theoretical Investigations into Defected Graphene for Electrochemical Reduction of CO₂. ACS Sustainable Chemistry and Engineering, 2017, 5, 11080-11085.	3.2	93
54	Transition-Metal Single Atoms in a Graphene Shell as Active Centers for Highly Efficient Artificial Photosynthesis. CheM, 2017, 3, 950-960.	5.8	326

#	Article	IF	Citations
55	Silver Nanoparticles with Surface-Bonded Oxygen for Highly Selective CO₂ Reduction. ACS Sustainable Chemistry and Engineering, 2017, 5, 8529-8534.	3.2	58
56	Engineering the surface of LiCoO2 electrodes using atomic layer deposition for stable high-voltage lithium ion batteries. Nano Research, 2017, 10, 3754-3764.	5.8	78
57	A Prussian blue route to nitrogen-doped graphene aerogels as efficient electrocatalysts for oxygen reduction with enhanced active site accessibility. Nano Research, 2017, 10, 1213-1222.	5.8	73
58	Porous MoO₂ Nanosheets as Nonâ€noble Bifunctional Electrocatalysts for Overall Water Splitting. Advanced Materials, 2016, 28, 3785-3790.	11.1	729
59	Rapid water disinfection using vertically aligned MoS2 nanofilms and visible light. Nature Nanotechnology, 2016, 11, 1098-1104.	15.6	681
60	Direct and continuous strain control of catalysts with tunable battery electrode materials. Science, 2016, 354, 1031-1036.	6.0	512
61	Balancing surface adsorption and diffusion of lithium-polysulfides on nonconductive oxides for lithiumâ€“sulfur battery design. Nature Communications, 2016, 7, 11203.	5.8	1,136
62	Layered reduced graphene oxide with nanoscale interlayer gaps as a stable host for lithium metal anodes. Nature Nanotechnology, 2016, 11, 626-632.	15.6	1,557
63	Composite lithium metal anode by melt infusion of lithium into a 3D conducting scaffold with lithiophilic coating. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2862-2867.	3.3	755
64	Transition-metal doped edge sites in vertically aligned MoS2 catalysts for enhanced hydrogen evolution. Nano Research, 2015, 8, 566-575.	5.8	594
65	Two-Dimensional Layered Chalcogenides: From Rational Synthesis to Property Control via Orbital Occupation and Electron Filling. Accounts of Chemical Research, 2015, 48, 81-90.	7.6	74
66	Vertical Heterostructure of Two-Dimensional MoS₂ and WSe₂ with Vertically Aligned Layers. Nano Letters, 2015, 15, 1031-1035.	4.5	194
67	Artificial Solid Electrolyte Interphase-Protected Li_{<i>x</i>}Si Nanoparticles: An Efficient and Stable Prelithiation Reagent for Lithium-Ion Batteries. Journal of the American Chemical Society, 2015, 137, 8372-8375.	6.6	297
68	Bifunctional non-noble metal oxide nanoparticle electrocatalysts through lithium-induced conversion for overall water splitting. Nature Communications, 2015, 6, 7261.	5.8	1,006
69	In Situ Electrochemical Oxidation Tuning of Transition Metal Disulfides to Oxides for Enhanced Water Oxidation. ACS Central Science, 2015, 1, 244-251.	5.3	373
70	A high tap density secondary silicon particle anode fabricated by scalable mechanical pressing for lithium-ion batteries. Energy and Environmental Science, 2015, 8, 2371-2376.	15.6	397
71	Electrochemical tuning of olivine-type lithium transition-metal phosphates as efficient water oxidation catalysts. Energy and Environmental Science, 2015, 8, 1719-1724.	15.6	167
72	Engineering Ultra-Low Work Function of Graphene. Nano Letters, 2015, 15, 6475-6480.	4.5	75

#	ARTICLE	IF	CITATIONS
73	Li Intercalation in MoS₂: In Situ Observation of Its Dynamics and Tuning Optical and Electrical Properties. Nano Letters, 2015, 15, 6777-6784.	4.5	312
74	Physical and chemical tuning of two-dimensional transition metal dichalcogenides. Chemical Society Reviews, 2015, 44, 2664-2680.	18.7	694
75	Electrochemical Tuning of MoS₂ Nanoparticles on Three-Dimensional Substrate for Efficient Hydrogen Evolution. ACS Nano, 2014, 8, 4940-4947.	7.3	566
76	Facile synthesis of Li2Sâ€“polypyrrole composite structures for high-performance Li2S cathodes. Energy and Environmental Science, 2014, 7, 672.	15.6	277
77	High Electrochemical Selectivity of Edge versus Terrace Sites in Two-Dimensional Layered MoS₂ Materials. Nano Letters, 2014, 14, 7138-7144.	4.5	269
78	Two-dimensional layered transition metal disulphides for effective encapsulation of high-capacity lithium sulphide cathodes. Nature Communications, 2014, 5, 5017.	5.8	530
79	Electrolessly Deposited Electrospun Metal Nanowire Transparent Electrodes. Journal of the American Chemical Society, 2014, 136, 10593-10596.	6.6	189
80	Interconnected hollow carbon nanospheres for stable lithium metal anodes. Nature Nanotechnology, 2014, 9, 618-623.	15.6	1,535
81	Ultrathin Two-Dimensional Atomic Crystals as Stable Interfacial Layer for Improvement of Lithium Metal Anode. Nano Letters, 2014, 14, 6016-6022.	4.5	656
82	Formation of Stable Phosphorusâ€“Carbon Bond for Enhanced Performance in Black Phosphorus Nanoparticleâ€“Graphite Composite Battery Anodes. Nano Letters, 2014, 14, 4573-4580.	4.5	764
83	High-capacity Li2Sâ€“graphene oxide composite cathodes with stable cycling performance. Chemical Science, 2014, 5, 1396.	3.7	109
84	Electrochemical tuning of layered lithium transition metal oxides for improvement of oxygen evolution reaction. Nature Communications, 2014, 5, 4345.	5.8	411
85	CoSe₂ Nanoparticles Grown on Carbon Fiber Paper: An Efficient and Stable Electrocatalyst for Hydrogen Evolution Reaction. Journal of the American Chemical Society, 2014, 136, 4897-4900.	6.6	1,317
86	First-row transition metal dichalcogenide catalysts for hydrogen evolution reaction. Energy and Environmental Science, 2013, 6, 3553.	15.6	946
87	Electrochemical tuning of vertically aligned MoS ₂ nanofilms and its application in improving hydrogen evolution reaction. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 19701-19706.	3.3	894
88	Synthesis of MoS₂ and MoSe₂ Films with Vertically Aligned Layers. Nano Letters, 2013, 13, 1341-1347.	4.5	2,036
89	MoSe₂ and WSe₂ Nanofilms with Vertically Aligned Molecular Layers on Curved and Rough Surfaces. Nano Letters, 2013, 13, 3426-3433.	4.5	653
90	Non-Markovian entanglement sudden death and rebirth of a two-qubit system in the presence of system-bath coherence. Physica A: Statistical Mechanics and Its Applications, 2011, 390, 3183-3188.	1.2	9

#	Article	IF	Citations
91	Non-Markovian Dynamics of Quantum and Classical Correlations in the Presence of System-Bath Coherence. Chinese Physics Letters, 2011, 28, 120302.	1.3	6