Haotian Wang

List of Publications by Year
in descending order

91	31,517	13068 68	48187 88
papers	citations	h-index	g-index

94	94	94	27925
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Synthesis of MoS₂ and MoSe₂ Films with Vertically Aligned Layers. Nano Letters, 2013, 13, 1341-1347.	4.5	2,036
2	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
3	Interconnected hollow carbon nanospheres for stable lithium metal anodes. Nature Nanotechnology, 2014, 9, 618-623.	15.6	1,535
4	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
5	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
6	Bifunctional non-noble metal oxide nanoparticle electrocatalysts through lithium-induced conversion for overall water splitting. Nature Communications, 2015, 6, 7261.	5.8	1,006
7	First-row transition metal dichalcogenide catalysts for hydrogen evolution reaction. Energy and Environmental Science, 2013, 6, 3553.	15.6	946
8	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
9	Isolated Ni single atoms in graphene nanosheets for high-performance CO₂ reduction. Energy and Environmental Science, 2018, 11, 893-903.	15.6	811
10	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
11	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
12	Porous MoO₂ Nanosheets as Nonâ€noble Bifunctional Electrocatalysts for Overall Water Splitting. Advanced Materials, 2016, 28, 3785-3790.	11.1	729
13	Physical and chemical tuning of two-dimensional transition metal dichalcogenides. Chemical Society Reviews, 2015, 44, 2664-2680.	18.7	694
14	Rapid water disinfection using vertically aligned MoS2 nanofilms and visible light. Nature Nanotechnology, 2016, 11, 1098-1104.	15.6	681
15	Large-Scale and Highly Selective CO2 Electrocatalytic Reduction on Nickel Single-Atom Catalyst. Joule, 2019, 3, 265-278.	11.7	663
16	Ultrathin Two-Dimensional Atomic Crystals as Stable Interfacial Layer for Improvement of Lithium Metal Anode. Nano Letters, 2014, 14, 6016-6022.	4.5	656
17	MoSe₂ and WSe₂ Nanofilms with Vertically Aligned Molecular Layers on Curved and Rough Surfaces. Nano Letters, 2013, 13, 3426-3433.	4.5	653
18	Electrochemical ammonia synthesis via nitrate reduction on Fe single atom catalyst. Nature Communications, 2021, 12, 2870.	5.8	605

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19	Metal ion cycling of Cu foil for selective Câ€“C coupling in electrochemical CO2 reduction. Nature Catalysis, 2018, 1, 111-119.	16.1	600
20	Transition-metal doped edge sites in vertically aligned MoS2 catalysts for enhanced hydrogen evolution. Nano Research, 2015, 8, 566-575.	5.8	594
21	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
22	Electrochemical Tuning of MoS₂ Nanoparticles on Three-Dimensional Substrate for Efficient Hydrogen Evolution. ACS Nano, 2014, 8, 4940-4947.	7.3	566
23	Two-dimensional layered transition metal disulphides for effective encapsulation of high-capacity lithium sulphide cathodes. Nature Communications, 2014, 5, 5017.	5.8	530
24	Highly selective oxygen reduction to hydrogen peroxide on transition metal single atom coordination. Nature Communications, 2019, 10, 3997.	5.8	528
25	Direct and continuous strain control of catalysts with tunable battery electrode materials. Science, 2016, 354, 1031-1036.	6.0	512
26	Strategies in catalysts and electrolyzer design for electrochemical CO ₂ reduction toward C ₂₊ products. Science Advances, 2020, 6, eaay3111.	4.7	477
27	Continuous production of pure liquid fuel solutions via electrocatalytic CO2 reduction using solid-electrolyte devices. Nature Energy, 2019, 4, 776-785.	19.8	458
28	Stability challenges of electrocatalytic oxygen evolution reaction: From mechanistic understanding to reactor design. Joule, 2021, 5, 1704-1731.	11.7	416
29	Electrochemical tuning of layered lithium transition metal oxides for improvement of oxygen evolution reaction. Nature Communications, 2014, 5, 4345.	5.8	411
30	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
31	Recent Advances in Electrochemical CO₂â€toâ€CO Conversion on Heterogeneous Catalysts. Advanced Materials, 2018, 30, e1802066.	11.1	397
32	A half-wave rectified alternating current electrochemical method for uranium extraction from seawater. Nature Energy, 2017, 2, .	19.8	388
33	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
34	General synthesis of single-atom catalysts with high metal loading using graphene quantum dots. Nature Chemistry, 2021, 13, 887-894.	6.6	362
35	Transition-Metal Single Atoms in a Graphene Shell as Active Centers for Highly Efficient Artificial Photosynthesis. CheM, 2017, 3, 950-960.	5.8	326
36	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

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37	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
38	Artificial Solid Electrolyte Interphase-Protected Li_xSi Nanoparticles: An Efficient and Stable Prelithiation Reagent for Lithium-Ion Batteries. Journal of the American Chemical Society, 2015, 137, 8372-8375.	6.6	297
39	Electrochemical CO2 reduction to high-concentration pure formic acid solutions in an all-solid-state reactor. Nature Communications, 2020, 11, 3633.	5.8	294
40	Facile synthesis of Li2Sâ€“polypyrrole composite structures for high-performance Li2S cathodes. Energy and Environmental Science, 2014, 7, 672.	15.6	277
41	The Role of Defect Sites in Nanomaterials for Electrocatalytic Energy Conversion. CheM, 2019, 5, 1371-1397.	5.8	273
42	High Electrochemical Selectivity of Edge versus Terrace Sites in Two-Dimensional Layered MoS₂ Materials. Nano Letters, 2014, 14, 7138-7144.	4.5	269
43	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
44	Confined local oxygen gas promotes electrochemical water oxidation to hydrogen peroxide. Nature Catalysis, 2020, 3, 125-134.	16.1	252
45	Highly active and selective oxygen reduction to H2O2 on boron-doped carbon for high production rates. Nature Communications, 2021, 12, 4225.	5.8	218
46	Fluoride-Induced Dynamic Surface Self-Reconstruction Produces Unexpectedly Efficient Oxygen-Evolution Catalyst. Nano Letters, 2019, 19, 530-537.	4.5	210
47	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
48	Vertical Heterostructure of Two-Dimensional MoS₂ and WSe₂ with Vertically Aligned Layers. Nano Letters, 2015, 15, 1031-1035.	4.5	194
49	Electrolessly Deposited Electrospun Metal Nanowire Transparent Electrodes. Journal of the American Chemical Society, 2014, 136, 10593-10596.	6.6	189
50	Catalyst Design for Electrochemical Oxygen Reduction toward Hydrogen Peroxide. Advanced Functional Materials, 2020, 30, 2003321.	7.8	170
51	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
52	Identifying the Active Surfaces of Electrochemically Tuned LiCoO₂for Oxygen Evolution Reaction. Journal of the American Chemical Society, 2017, 139, 6270-6276.	6.6	143
53	High-purity and high-concentration liquid fuels through CO2 electroreduction. Nature Catalysis, 2021, 4, 943-951.	16.1	143
54	Li Electrochemical Tuning of Metal Oxide for Highly Selective CO₂ Reduction. ACS Nano, 2017, 11, 6451-6458.	7.3	123

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55	Room-temperature electrochemical acetylene reduction to ethylene with high conversion and selectivity. Nature Catalysis, 2021, 4, 565-574.	16.1	121
56	Recommended practice to report selectivity in electrochemical synthesis of H2O2. Nature Catalysis, 2020, 3, 605-607.	16.1	112
57	High-capacity Li2Sâ€“graphene oxide composite cathodes with stable cycling performance. Chemical Science, 2014, 5, 1396.	3.7	109
58	An electrochemical thermal transistor. Nature Communications, 2018, 9, 4510.	5.8	105
59	Theoretical Investigations into Defected Graphene for Electrochemical Reduction of CO₂. ACS Sustainable Chemistry and Engineering, 2017, 5, 11080-11085.	3.2	93
60	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
61	Recovering carbon losses in CO2 electrolysis using a solid electrolyte reactor. Nature Catalysis, 2022, 5, 288-299.	16.1	90
62	Insights into Practical-Scale Electrochemical H2O2 Synthesis. Trends in Chemistry, 2020, 2, 942-953.	4.4	85
63	Electrochemical oxygen reduction to hydrogen peroxide at practical rates in strong acidic media. Nature Communications, 2022, 13, .	5.8	82
64	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
65	Engineering Ultra-Low Work Function of Graphene. Nano Letters, 2015, 15, 6475-6480.	4.5	75
66	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
67	Regain Strain-Hardening in High-Strength Metals by Nanofiller Incorporation at Grain Boundaries. Nano Letters, 2018, 18, 6255-6264.	4.5	74
68	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
69	Electrocatalysis over Graphene-Defect-Coordinated Transition-Metal Single-Atom Catalysts. CheM, 2018, 4, 194-195.	5.8	61
70	Silver Nanoparticles with Surface-Bonded Oxygen for Highly Selective CO₂ Reduction. ACS Sustainable Chemistry and Engineering, 2017, 5, 8529-8534.	3.2	58
71	Proton sponge promotion of electrochemical CO2 reduction to multi-carbon products. Joule, 2022, 6, 205-220.	11.7	57
72	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

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73	Morphology and property investigation of primary particulate matter particles from different sources. Nano Research, 2018, 11, 3182-3192.	5.8	54
74	Lithium Electrochemical Tuning for Electrocatalysis. Advanced Materials, 2018, 30, e1800978.	11.1	51
75	Structural Defects, Mechanical Behaviors, and Properties of Two-Dimensional Materials. Materials, 2021, 14, 1192.	1.3	48
76	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
77	CO2/carbonate-mediated electrochemical water oxidation to hydrogen peroxide. Nature Communications, 2022, 13, 2668.	5.8	44
78	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
79	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
80	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
81	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
82	A synthetic dataset for Visual SLAM evaluation. Robotics and Autonomous Systems, 2020, 124, 103336.	3.0	13
83	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
84	Converting CO2 to liquid fuel on MoS2 vacancies. Joule, 2021, 5, 1038-1040.	11.7	7
85	Non-Markovian Dynamics of Quantum and Classical Correlations in the Presence of System-Bath Coherence. Chinese Physics Letters, 2011, 28, 120302.	1.3	6
86	Synthesis and Performance Characterizations of Transition Metal Single Atom Catalyst for Electrochemical CO₂ Reduction. Journal of Visualized Experiments, 2018, , .	0.2	5
87	(Invited) Earth-Abundant Transition Metal Single Atom Electrocatalysts for Selective CO2 Reduction in Water. ECS Meeting Abstracts, 2019, , .	0.0	0
88	Electrifying CO2 into Pure Liquid Fuels. ECS Meeting Abstracts, 2021, MA2021-02, 808-808.	0.0	0
89	Electricity + Air + Water = Hydrogen Peroxide. ECS Meeting Abstracts, 2021, MA2021-02, 838-838.	0.0	0
90	Electrochemical Manufacturing of Hydrogen Peroixde. ECS Meeting Abstracts, 2022, MA2022-01, 2356-2356.	0.0	0

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91	(Invited) Electrifying CO2 into Fuels and Chemicals in a Solid Electrolyte Reactor. ECS Meeting Abstracts, 2022, MA2022-01, 1763-1763.	0.0	0