

Haotian Wang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

81
papers

22,405
citations

56
h-index

94
g-index

94
ext. papers

26,813
ext. citations

19.6
avg, IF

7.27
L-index

#	Paper	IF	Citations
81	Proton sponge promotion of electrochemical CO ₂ reduction to multi-carbon products. <i>Joule</i> , 2022 , 6, 205-220	27.8	4
80	CO/carbonate-mediated electrochemical water oxidation to hydrogen peroxide.. <i>Nature Communications</i> , 2022 , 13, 2668	17.4	0
79	High-purity and high-concentration liquid fuels through CO ₂ electroreduction. <i>Nature Catalysis</i> , 2021 , 4, 943-951	36.5	25
78	Direct and continuous generation of pure acetic acid solutions via electrocatalytic carbon monoxide reduction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	24
77	Structural Defects, Mechanical Behaviors, and Properties of Two-Dimensional Materials. <i>Materials</i> , 2021 , 14,	3.5	7
76	Electrochemical ammonia synthesis via nitrate reduction on Fe single atom catalyst. <i>Nature Communications</i> , 2021 , 12, 2870	17.4	136
75	Converting CO ₂ to liquid fuel on MoS ₂ vacancies. <i>Joule</i> , 2021 , 5, 1038-1040	27.8	2
74	General synthesis of single-atom catalysts with high metal loading using graphene quantum dots. <i>Nature Chemistry</i> , 2021 , 13, 887-894	17.6	86
73	Solar photoelectrochemical synthesis of electrolyte-free H ₂ O ₂ aqueous solution without needing electrical bias and H ₂ . <i>Energy and Environmental Science</i> , 2021 , 14, 3110-3119	35.4	12
72	Highly active and selective oxygen reduction to HO on boron-doped carbon for high production rates. <i>Nature Communications</i> , 2021 , 12, 4225	17.4	44
71	Stability challenges of electrocatalytic oxygen evolution reaction: From mechanistic understanding to reactor design. <i>Joule</i> , 2021 , 5, 1704-1731	27.8	62
70	Catalyst Design for Electrochemical Oxygen Reduction toward Hydrogen Peroxide. <i>Advanced Functional Materials</i> , 2020 , 30, 2003321	15.6	65
69	A Review on Challenges and Successes in Atomic-Scale Design of Catalysts for Electrochemical Synthesis of Hydrogen Peroxide. <i>ACS Catalysis</i> , 2020 , 10, 7495-7511	13.1	95
68	Strategies in catalysts and electrolyzer design for electrochemical CO reduction toward C products. <i>Science Advances</i> , 2020 , 6, eaay3111	14.3	229
67	Li-Containing Organic Thin Film Structure of Lithium Propane Dioxide via Molecular Layer Deposition. <i>Journal of Physical Chemistry C</i> , 2020 , 124, 6830-6837	3.8	7
66	Confined local oxygen gas promotes electrochemical water oxidation to hydrogen peroxide. <i>Nature Catalysis</i> , 2020 , 3, 125-134	36.5	106
65	A synthetic dataset for Visual SLAM evaluation. <i>Robotics and Autonomous Systems</i> , 2020 , 124, 103336	3.5	8

64	Insights into Practical-Scale Electrochemical H ₂ O ₂ Synthesis. <i>Trends in Chemistry</i> , 2020 , 2, 942-953	14.8	34
63	Electrochemical CO reduction to high-concentration pure formic acid solutions in an all-solid-state reactor. <i>Nature Communications</i> , 2020 , 11, 3633	17.4	106
62	Structural evolution of oxide-/hydroxide-derived copper electrodes accounts for the enhanced C ₂ + product selectivity during electrochemical CO ₂ reduction. <i>Science Bulletin</i> , 2020 , 65, 977-979	10.6	8
61	Highly selective oxygen reduction to hydrogen peroxide on transition metal single atom coordination. <i>Nature Communications</i> , 2019 , 10, 3997	17.4	264
60	Continuous production of pure liquid fuel solutions via electrocatalytic CO ₂ reduction using solid-electrolyte devices. <i>Nature Energy</i> , 2019 , 4, 776-785	62.3	226
59	The Role of Defect Sites in Nanomaterials for Electrocatalytic Energy Conversion. <i>Chem</i> , 2019 , 5, 1371-1382	17.0	170
58	Direct electrosynthesis of pure aqueous HO solutions up to 20% by weight using a solid electrolyte. <i>Science</i> , 2019 , 366, 226-231	33.3	242
57	Nanosized MoSe@Carbon Matrix: A Stable Host Material for the Highly Reversible Storage of Potassium and Aluminum Ions. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 44333-44341	9.5	35
56	Large-Scale, Low-Cost, and High-Efficiency Water-Splitting System for Clean H ₂ Generation. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 3971-3977	9.5	23
55	Large-Scale and Highly Selective CO ₂ Electrocatalytic Reduction on Nickel Single-Atom Catalyst. <i>Joule</i> , 2019 , 3, 265-278	27.8	408
54	Fluoride-Induced Dynamic Surface Self-Reconstruction Produces Unexpectedly Efficient Oxygen-Evolution Catalyst. <i>Nano Letters</i> , 2019 , 19, 530-537	11.5	134
53	Synthesis and Performance Characterizations of Transition Metal Single Atom Catalyst for Electrochemical CO ₂ Reduction. <i>Journal of Visualized Experiments</i> , 2018 ,	1.6	4
52	Electrocatalysis over Graphene-Defect-Coordinated Transition-Metal Single-Atom Catalysts. <i>Chem</i> , 2018 , 4, 194-195	16.2	36
51	High-throughput theoretical optimization of the hydrogen evolution reaction on MXenes by transition metal modification. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 4271-4278	13	140
50	Isolated Ni single atoms in graphene nanosheets for high-performance CO ₂ reduction. <i>Energy and Environmental Science</i> , 2018 , 11, 893-903	35.4	580
49	Metal ion cycling of Cu foil for selective C ₂ coupling in electrochemical CO ₂ reduction. <i>Nature Catalysis</i> , 2018 , 1, 111-119	36.5	383
48	Recent Advances in Electrochemical CO ₂ -to-CO Conversion on Heterogeneous Catalysts. <i>Advanced Materials</i> , 2018 , 30, e1802066	24	267
47	Morphology and property investigation of primary particulate matter particles from different sources. <i>Nano Research</i> , 2018 , 11, 3182-3192	10	33

46	An electrochemical thermal transistor. <i>Nature Communications</i> , 2018 , 9, 4510	17.4	63
45	Regain Strain-Hardening in High-Strength Metals by Nanofiller Incorporation at Grain Boundaries. <i>Nano Letters</i> , 2018 , 18, 6255-6264	11.5	46
44	Lithium Electrochemical Tuning for Electrocatalysis. <i>Advanced Materials</i> , 2018 , 30, e1800978	24	34
43	A half-wave rectified alternating current electrochemical method for uranium extraction from seawater. <i>Nature Energy</i> , 2017 , 2,	62.3	216
42	Identifying the Active Surfaces of Electrochemically Tuned LiCoO for Oxygen Evolution Reaction. <i>Journal of the American Chemical Society</i> , 2017 , 139, 6270-6276	16.4	115
41	Li Electrochemical Tuning of Metal Oxide for Highly Selective CO Reduction. <i>ACS Nano</i> , 2017 , 11, 6451-6458	10.4	104
40	Theoretical Investigations into Defected Graphene for Electrochemical Reduction of CO ₂ . <i>ACS Sustainable Chemistry and Engineering</i> , 2017 , 5, 11080-11085	8.3	68
39	Transition-Metal Single Atoms in a Graphene Shell as Active Centers for Highly Efficient Artificial Photosynthesis. <i>Chem</i> , 2017 , 3, 950-960	16.2	249
38	Silver Nanoparticles with Surface-Bonded Oxygen for Highly Selective CO ₂ Reduction. <i>ACS Sustainable Chemistry and Engineering</i> , 2017 , 5, 8529-8534	8.3	43
37	Engineering the surface of LiCoO ₂ electrodes using atomic layer deposition for stable high-voltage lithium ion batteries. <i>Nano Research</i> , 2017 , 10, 3754-3764	10	51
36	A Prussian blue route to nitrogen-doped graphene aerogels as efficient electrocatalysts for oxygen reduction with enhanced active site accessibility. <i>Nano Research</i> , 2017 , 10, 1213-1222	10	66
35	Rapid water disinfection using vertically aligned MoS nanofilms and visible light. <i>Nature Nanotechnology</i> , 2016 , 11, 1098-1104	28.7	514
34	Direct and continuous strain control of catalysts with tunable battery electrode materials. <i>Science</i> , 2016 , 354, 1031-1036	33.3	369
33	Balancing surface adsorption and diffusion of lithium-polysulfides on nonconductive oxides for lithium-sulfur battery design. <i>Nature Communications</i> , 2016 , 7, 11203	17.4	866
32	Layered reduced graphene oxide with nanoscale interlayer gaps as a stable host for lithium metal anodes. <i>Nature Nanotechnology</i> , 2016 , 11, 626-32	28.7	1261
31	Composite lithium metal anode by melt infusion of lithium into a 3D conducting scaffold with lithiophilic coating. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016 , 113, 2862-7	11.5	643
30	Porous MoO ₂ Nanosheets as Non-noble Bifunctional Electrocatalysts for Overall Water Splitting. <i>Advanced Materials</i> , 2016 , 28, 3785-90	24	584
29	Two-dimensional layered chalcogenides: from rational synthesis to property control via orbital occupation and electron filling. <i>Accounts of Chemical Research</i> , 2015 , 48, 81-90	24.3	55

28	Vertical heterostructure of two-dimensional MoS ₂ and WSe ₂ with vertically aligned layers. <i>Nano Letters</i> , 2015 , 15, 1031-5	11.5	168
27	Artificial Solid Electrolyte Interphase-Protected Li _x Si Nanoparticles: An Efficient and Stable Prelithiation Reagent for Lithium-Ion Batteries. <i>Journal of the American Chemical Society</i> , 2015 , 137, 8372-5	16.4	232
26	Bifunctional non-noble metal oxide nanoparticle electrocatalysts through lithium-induced conversion for overall water splitting. <i>Nature Communications</i> , 2015 , 6, 7261	17.4	855
25	In Situ Electrochemical Oxidation Tuning of Transition Metal Disulfides to Oxides for Enhanced Water Oxidation. <i>ACS Central Science</i> , 2015 , 1, 244-51	16.8	314
24	A high tap density secondary silicon particle anode fabricated by scalable mechanical pressing for lithium-ion batteries. <i>Energy and Environmental Science</i> , 2015 , 8, 2371-2376	35.4	339
23	Electrochemical tuning of olivine-type lithium transition-metal phosphates as efficient water oxidation catalysis. <i>Energy and Environmental Science</i> , 2015 , 8, 1719-1724	35.4	142
22	Engineering Ultra-Low Work Function of Graphene. <i>Nano Letters</i> , 2015 , 15, 6475-80	11.5	60
21	Li Intercalation in MoS ₂ : In Situ Observation of Its Dynamics and Tuning Optical and Electrical Properties. <i>Nano Letters</i> , 2015 , 15, 6777-84	11.5	236
20	Physical and chemical tuning of two-dimensional transition metal dichalcogenides. <i>Chemical Society Reviews</i> , 2015 , 44, 2664-80	58.5	562
19	Transition-metal doped edge sites in vertically aligned MoS ₂ catalysts for enhanced hydrogen evolution. <i>Nano Research</i> , 2015 , 8, 566-575	10	478
18	Electrochemical tuning of MoS ₂ nanoparticles on three-dimensional substrate for efficient hydrogen evolution. <i>ACS Nano</i> , 2014 , 8, 4940-7	16.7	487
17	Facile synthesis of Li ₂ S/polypyrrole composite structures for high-performance Li ₂ S cathodes. <i>Energy and Environmental Science</i> , 2014 , 7, 672	35.4	237
16	High electrochemical selectivity of edge versus terrace sites in two-dimensional layered MoS ₂ materials. <i>Nano Letters</i> , 2014 , 14, 7138-44	11.5	220
15	Two-dimensional layered transition metal disulfides for effective encapsulation of high-capacity lithium sulphide cathodes. <i>Nature Communications</i> , 2014 , 5, 5017	17.4	461
14	Electrolessly deposited electrospun metal nanowire transparent electrodes. <i>Journal of the American Chemical Society</i> , 2014 , 136, 10593-6	16.4	158
13	Interconnected hollow carbon nanospheres for stable lithium metal anodes. <i>Nature Nanotechnology</i> , 2014 , 9, 618-23	28.7	1304
12	Ultrathin two-dimensional atomic crystals as stable interfacial layer for improvement of lithium metal anode. <i>Nano Letters</i> , 2014 , 14, 6016-22	11.5	545
11	Formation of stable phosphorus-carbon bond for enhanced performance in black phosphorus nanoparticle-graphite composite battery anodes. <i>Nano Letters</i> , 2014 , 14, 4573-80	11.5	627

10	High-capacity Li ₂ S/graphene oxide composite cathodes with stable cycling performance. <i>Chemical Science</i> , 2014 , 5, 1396	9.4	99
9	Electrochemical tuning of layered lithium transition metal oxides for improvement of oxygen evolution reaction. <i>Nature Communications</i> , 2014 , 5, 4345	17.4	350
8	CoSe ₂ nanoparticles grown on carbon fiber paper: an efficient and stable electrocatalyst for hydrogen evolution reaction. <i>Journal of the American Chemical Society</i> , 2014 , 136, 4897-900	16.4	1147
7	First-row transition metal dichalcogenide catalysts for hydrogen evolution reaction. <i>Energy and Environmental Science</i> , 2013 , 6, 3553	35.4	828
6	Electrochemical tuning of vertically aligned MoS ₂ nanofilms and its application in improving hydrogen evolution reaction. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 19701-6	11.5	747
5	Synthesis of MoS ₂ and MoSe ₂ films with vertically aligned layers. <i>Nano Letters</i> , 2013 , 13, 1341-7	11.5	1746
4	MoSe ₂ and WSe ₂ nanofilms with vertically aligned molecular layers on curved and rough surfaces. <i>Nano Letters</i> , 2013 , 13, 3426-33	11.5	579
3	Non-Markovian entanglement sudden death and rebirth of a two-qubit system in the presence of system-bath coherence. <i>Physica A: Statistical Mechanics and Its Applications</i> , 2011 , 390, 3183-3188	3.3	8
2	Non-Markovian Dynamics of Quantum and Classical Correlations in the Presence of System-Bath Coherence. <i>Chinese Physics Letters</i> , 2011 , 28, 120302	1.8	5
1	Room-temperature electrochemical acetylene reduction to ethylene with high conversion and selectivity. <i>Nature Catalysis</i> ,	36.5	27