William Huang

List of Publications by Year
in descending order

37 papers	4,934 citations	159358 30 h-index	377514 34 g-index
38 all docs	38 docs citations	38 times ranked	4000 citing authors

#	Article	IF	Citations
1	Molecular design for electrolyte solvents enabling energy-dense and long-cycling lithium metal batteries. Nature Energy, 2020, 5, 526-533.	19.8	642
2	Monolithic solidâ€“electrolyte interphases formed in fluorinated orthoformate-based electrolytes minimize Li depletion and pulverization. Nature Energy, 2019, 4, 796-805.	19.8	621
3	Organic wastewater treatment by a single-atom catalyst and electrolytically produced H2O2. Nature Sustainability, 2021, 4, 233-241.	11.5	350
4	Improving cyclability of Li metal batteries at elevated temperatures and its origin revealed by cryo-electron microscopy. Nature Energy, 2019, 4, 664-670.	19.8	336
5	Correlating Structure and Function of Battery Interphases at Atomic Resolution Using Cryoelectron Microscopy. Joule, 2018, 2, 2167-2177.	11.7	284
6	Resolving Nanoscopic and Mesoscopic Heterogeneity of Fluorinated Species in Battery Solid-Electrolyte Interphases by Cryogenic Electron Microscopy. ACS Energy Letters, 2020, 5, 1128-1135.	8.8	199
7	Capturing the swelling of solid-electrolyte interphase in lithium metal batteries. Science, 2022, 375, 66-70.	6.0	183
8	Fast galvanic lithium corrosion involving a Kirkendall-type mechanism. Nature Chemistry, 2019, 11, 382-389.	6.6	180
9	Suspension electrolyte with modified Li+ solvation environment for lithium metal batteries. Nature Materials, 2022, 21, 445-454.	13.3	155
10	Engineering stable interfaces for three-dimensional lithium metal anodes. Science Advances, 2018, 4, eaat5168.	4.7	153
11	Tortuosity Effects in Lithium-Metal Host Anodes. Joule, 2020, 4, 938-952.	11.7	150
12	Surface-engineered mesoporous silicon microparticles as high-Coulombic-efficiency anodes for lithium-ion batteries. Nano Energy, 2019, 61, 404-410.	8.2	134
13	Evolution of the Solidâ€“Electrolyte Interphase on Carbonaceous Anodes Visualized by Atomic-Resolution Cryogenic Electron Microscopy. Nano Letters, 2019, 19, 5140-5148.	4.5	132
14	Cathode-Electrolyte Interphase in Lithium Batteries Revealed by Cryogenic Electron Microscopy. Matter, 2021, 4, 302-312.	5.0	127
15	Corrosion of lithium metal anodes during calendar ageing and its microscopic origins. Nature Energy, 2021, 6, 487-494.	19.8	124
16	Dualâ€Solvent Liâ€Ion Solvation Enables Highâ€Performance Liâ€Metal Batteries. Advanced Materials, 2021, 33, e2008619.	11.1	123
17	Dynamic Structure and Chemistry of the Silicon Solid-Electrolyte Interphase Visualized by Cryogenic Electron Microscopy. Matter, 2019, 1, 1232-1245.	5.0	107
18	Cryo-EM Structures of Atomic Surfaces and Host-Guest Chemistry in Metal-Organic Frameworks. Matter, 2019, 1, 428-438.	5.0	102

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19	Underpotential lithium plating on graphite anodes caused by temperature heterogeneity. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 29453-29461.	3.3	94
20	Transient Voltammetry with Ultramicroelectrodes Reveals the Electron Transfer Kinetics of Lithium Metal Anodes. ACS Energy Letters, 2020, 5, 701-709.	8.8	91
21	Potentiometric Measurement to Probe Solvation Energy and Its Correlation to Lithium Battery Cyclability. Journal of the American Chemical Society, 2021, 143, 10301-10308.	6.6	83
22	Nanostructural and Electrochemical Evolution of the Solid-Electrolyte Interphase on CuO Nanowires Revealed by Cryogenic-Electron Microscopy and Impedance Spectroscopy. ACS Nano, 2019, 13, 737-744.	7.3	78
23	Coreâ€“Shell Nanofibrous Materials with High Particulate Matter Removal Efficiencies and Thermally Triggered Flame Retardant Properties. ACS Central Science, 2018, 4, 894-898.	5.3	73
24	Scalable synthesis of nanoporous silicon microparticles for highly cyclable lithium-ion batteries. Nano Research, 2020, 13, 1558-1563.	5.8	65
25	Improving Lithium Metal Composite Anodes with Seeding and Pillaring Effects of Silicon Nanoparticles. ACS Nano, 2020, 14, 4601-4608.	7.3	61
26	Microclusters of Kinked Silicon Nanowires Synthesized by a Recyclable Iodide Process for Highâ€Performance Lithiumâ€Ion Battery Anodes. Advanced Energy Materials, 2020, 10, 2002108.	10.2	57
27	Opportunities for Cryogenic Electron Microscopy in Materials Science and Nanoscience. ACS Nano, 2020, 14, 9263-9276.	7.3	55
28	Efficient Lithium Metal Cycling over a Wide Range of Pressures from an Anion-Derived Solid-Electrolyte Interphase Framework. ACS Energy Letters, 2021, 6, 816-825.	8.8	46
29	Revealing and Elucidating ALDâ€Derived Control of Lithium Plating Microstructure. Advanced Energy Materials, 2020, 10, 2002736.	10.2	37
30	A Water Stable, Nearâ€Zeroâ€Strain O3â€Layered Titaniumâ€Based Anode for Long Cycle Sodiumâ€Ion Battery. Advanced Functional Materials, 2020, 30, 1907023.	7.8	36
31	Nickel Impurities in the Solid-Electrolyte Interphase of Lithium-Metal Anodes Revealed by Cryogenic Electron Microscopy. Cell Reports Physical Science, 2020, 1, 100188.	2.8	22
32	Electrical resistance of the current collector controls lithium morphology. Nature Communications, 2022, 13, .	5.8	20
33	Graphene coating on silicon anodes enabled by thermal surface modification for high-energy lithium-ion batteries. MRS Bulletin, 2022, 47, 127-133.	1.7	13
34	Multi-modal Analytical Insights Into Li-Ion Battery Ageing with XFC. Microscopy and Microanalysis, 2019, 25, 2130-2131.	0.2	0
35	Resolve cathode electrolyte interphase in lithium batteries with cryo-EM. Microscopy and Microanalysis, 2021, 27, 2188-2190.	0.2	0
36	Resolving Heterogeneity in Battery Interphases By Cryogenic Electron Microscopy. ECS Meeting Abstracts, 2020, MA2020-02, 2603-2603.	0.0	0

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37	Controlling the Nucleation Morphology of Lithium Using ALD-Grown TiO₂. ECS Meeting Abstracts, 2020, MA2020-02, 730-730.	0.0	0