Hansen Wang

List of Publications by Year in Descending Order

35 papers	2,625 citations	27 h-index	40 g-index
40 ext. papers	4,108 ext. citations	26.5 avg, IF	5.45 L-index

#	Paper	IF	Citations
35	Liquid electrolyte: The nexus of practical lithium metal batteries. *Joule*, **2022**,	27.8	19
34	Capturing the swelling of solid-electrolyte interphase in lithium metal batteries.. *Science*, **2022**, 375, 66-70	33.3	40
33	Rational solvent molecule tuning for high-performance lithium metal battery electrolytes. *Nature Energy*, **2022**, 7, 94-106	62.3	49
32	Corrosion of lithium metal anodes during calendar ageing and its microscopic origins. *Nature Energy* , **2021**, 6, 487-494	62.3	49
31	Dual-Solvent Li-Ion Solvation Enables High-Performance Li-Metal Batteries. *Advanced Materials*, **2021**, 33, e2008619	24	39
30	Free-standing ultrathin lithium metal–graphene oxide host foils with controllable thickness for lithium batteries. *Nature Energy*, **2021**, 6, 790-798	62.3	56
29	Potentiometric Measurement to Probe Solvation Energy and Its Correlation to Lithium Battery Cyclability. *Journal of the American Chemical Society*, **2021**, 143, 10301-10308	16.4	21
28	Cathode-Electrolyte Interphase in Lithium Batteries Revealed by Cryogenic Electron Microscopy. *Matter*, **2021**, 4, 302-312	12.7	57
27	Organic wastewater treatment by a single-atom catalyst and electrolytically produced HO. *Nature Sustainability*, **2021**, 4, 233-241	22.1	105
26	Correlating Li-Ion Solvation Structures and Electrode Potential Temperature Coefficients. *Journal of the American Chemical Society*, **2021**, 143, 2264-2271	16.4	22
25	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	20.1	25
24	Resolve cathode electrolyte interphase in lithium batteries with cryo-EM. *Microscopy and Microanalysis*, **2021**, 27, 2188-2190	0.5	
23	Dynamic spatial progression of isolated lithium during battery operations.. *Nature*, **2021**, 600, 659-663	50.4	25
22	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	11.5	30
21	Electrode Design with Integration of High Tortuosity and Sulfur-Philicity for High-Performance Lithium-Sulfur Battery. *Matter*, **2020**, 2, 1605-1620	12.7	48
20	Molecular design for electrolyte solvents enabling energy-dense and long-cycling lithium metal batteries. *Nature Energy*, **2020**, 5, 526-533	62.3	258
19	Resolving Nanoscopic and Mesoscopic Heterogeneity of Fluorinated Species in Battery Solid-Electrolyte Interphases by Cryogenic Electron Microscopy. *ACS Energy Letters*, **2020**, 5, 1128-1135	20.1	112

18	Tortuosity Effects in Lithium-Metal Host Anodes. *Joule*, **2020**, 4, 938-952	27.8	69
17	Improving Lithium Metal Composite Anodes with Seeding and Pillaring Effects of Silicon Nanoparticles. *ACS Nano*, **2020**, 14, 4601-4608	16.7	34
16	Ultralight and fire-extinguishing current collectors for high-energy and high-safety lithium-ion batteries. *Nature Energy*, **2020**, 5, 786-793	62.3	63
15	Revealing and Elucidating ALD-Derived Control of Lithium Plating Microstructure. *Advanced Energy Materials*, **2020**, 10, 2002736	21.8	12
14	Designing a Nanoscale Three-phase Electrochemical Pathway to Promote Pt-catalyzed Formaldehyde Oxidation. *Nano Letters*, **2020**, 20, 8719-8724	11.5	4
13	Unravelling Atomic Structure and Degradation Mechanisms of Organic-Inorganic Halide Perovskites by Cryo-EM. *Joule*, **2019**, 3, 2854-2866	27.8	69
12	Monolithic solid–electrolyte interphases formed in fluorinated orthoformate-based electrolytes minimize Li depletion and pulverization. *Nature Energy*, **2019**, 4, 796-805	62.3	325
11	A Dynamic, Electrolyte-Blocking, and Single-Ion-Conductive Network for Stable Lithium-Metal Anodes. *Joule*, **2019**, 3, 2761-2776	27.8	103
10	Wrinkled Graphene Cages as Hosts for High-Capacity Li Metal Anodes Shown by Cryogenic Electron Microscopy. *Nano Letters*, **2019**, 19, 1326-1335	11.5	136
9	Cryo-EM structures of atomic surfaces and host-guest chemistry in metal-organic frameworks. *Matter*, **2019**, 1, 428-438	12.7	59
8	Fast lithium growth and short circuit induced by localized-temperature hotspots in lithium batteries. *Nature Communications*, **2019**, 10, 2067	17.4	104
7	Uniform High Ionic Conducting Lithium Sulfide Protection Layer for Stable Lithium Metal Anode. *Advanced Energy Materials*, **2019**, 9, 1900858	21.8	186
6	Composite lithium electrode with mesoscale skeleton via simple mechanical deformation. *Science Advances*, **2019**, 5, eaau5655	14.3	57
5	Evolution of the Solid-Electrolyte Interphase on Carbonaceous Anodes Visualized by Atomic-Resolution Cryogenic Electron Microscopy. *Nano Letters*, **2019**, 19, 5140-5148	11.5	72
4	Lithium Metal Anode Materials Design: Interphase and Host. *Electrochemical Energy Reviews*, **2019**, 2, 509-517	29.3	94
3	An ultrathin ionomer interphase for high efficiency lithium anode in carbonate based electrolyte. *Nature Communications*, **2019**, 10, 5824	17.4	37
2	An Interconnected Channel-Like Framework as Host for Lithium Metal Composite Anodes. *Advanced Energy Materials*, **2019**, 9, 1802720	21.8	70
1	Ultrahigh-current density anodes with interconnected Li metal reservoir through overlithiation of mesoporous AlF framework. *Science Advances*, **2017**, 3, e1701301	14.3	158