Xiang Liu

List of Publications by Year
in descending order

39 papers	4,919 citations	201674 27 h-index	330143 37 g-index
39 all docs	39 docs citations	39 times ranked	3500 citing authors

#	Article	IF	Citations
1	Multiscale Understanding of Surface Structural Effects on Highâ€Temperature Operational Resiliency of Layered Oxide Cathodes. Advanced Materials, 2022, 34, e2107326.	21.0	21
2	Simultaneously Blocking Chemical Crosstalk and Internal Short Circuit via Gelâ€Stretching Derived Nanoporous Nonâ€Shrinkage Separator for Safe Lithiumâ€Ion Batteries. Advanced Materials, 2022, 34, e2106335.	21.0	51
3	Porous Co2VO4 Nanodisk as a High-Energy and Fast-Charging Anode for Lithium-Ion Batteries. Nano-Micro Letters, 2022, 14, 5.	27.0	93
4	Native lattice strain induced structural earthquake in sodium layered oxide cathodes. Nature Communications, 2022, 13, 436.	12.8	29
5	Suppressing electrolyte-lithium metal reactivity via Li+-desolvation in uniform nano-porous separator. Nature Communications, 2022, 13, 172.	12.8	83
6	In-depth investigation of the exothermic reactions between lithiated graphite and electrolyte in lithium-ion battery. Journal of Energy Chemistry, 2022, 69, 593-600.	12.9	34
7	Entropy and crystal-facet modulation of P2-type layered cathodes for long-lasting sodium-based batteries. Nature Communications, 2022, 13, .	12.8	61
8	Origin and regulation of oxygen redox instability in high-voltage battery cathodes. Nature Energy, 2022, 7, 808-817.	39.5	55
9	Full Concentration Gradientâ€Tailored Liâ€Rich Layered Oxides for Highâ€Energy Lithiumâ€Ion Batteries. Advanced Materials, 2021, 33, e2001358.	21.0	65
10	Kinetic Limitations in Singleâ€Crystal Highâ€Nickel Cathodes. Angewandte Chemie - International Edition, 2021, 60, 17350-17355.	13.8	84
11	Kinetic Limitations in Singleâ€Crystal Highâ€Nickel Cathodes. Angewandte Chemie, 2021, 133, 17490-17495.	2.0	2
12	Solid-State Synthesis of Highly Dispersed Nitrogen-Coordinated Single Iron Atom Electrocatalysts for Proton Exchange Membrane Fuel Cells. Nano Letters, 2021, 21, 3633-3639.	9.1	32
13	Enabling Highâ€Performance NASICONâ€Based Solidâ€State Lithium Metal Batteries Towards Practical Conditions. Advanced Functional Materials, 2021, 31, 2102765.	14.9	32
14	Development of cathode-electrolyte-interphase for safer lithium batteries. Energy Storage Materials, 2021, 37, 77-86.	18.0	78
15	In situ observation of thermal-driven degradation and safety concerns of lithiated graphite anode. Nature Communications, 2021, 12, 4235.	12.8	74
16	Unlocking the self-supported thermal runaway of high-energy lithium-ion batteries. Energy Storage Materials, 2021, 39, 395-402.	18.0	74
17	Electrolytes Polymerizationâ€Induced Cathodeâ€Electrolyteâ€Interphase for High Voltage Lithiumâ€Ion Batteries. Advanced Energy Materials, 2021, 11, 2101956.	19.5	39
18	A general strategy for batch development of high-performance and cost-effective sodium layered cathodes. Nano Energy, 2021, 89, 106371.	16.0	22

#	Article	IF	Citations
19	In-built ultraconformal interphases enable high-safety practical lithium batteries. Energy Storage Materials, 2021, 43, 248-257.	18.0	49
20	Nanomaterials for the electrochemical nitrogen reduction reaction under ambient conditions. Nanoscale Advances, 2021, 3, 5525-5541.	4.6	13
21	Uncommon Behavior of Li Doping Suppresses Oxygen Redox in P2â€Type Manganeseâ€Rich Sodium Cathodes. Advanced Materials, 2021, 33, e2107141.	21.0	34
22	Highâ€Voltage and Highâ€Safety Practical Lithium Batteries with Ethylene Carbonateâ€Free Electrolyte. Advanced Energy Materials, 2021, 11, 2102299.	19.5	59
23	Boosting Superior Lithium Storage Performance of Alloyâ€Based Anode Materials via Ultraconformal Sb Coatingâ€“Derived Favorable Solidâ€Electrolyte Interphase. Advanced Energy Materials, 2020, 10, 1903186.	19.5	29
24	<i>In Situ</i> Construction of an Ultrarobust and Lithiophilic Li-Enriched Liâ€“N Nanoshield for High-Performance Ge-Based Anode Materials. ACS Energy Letters, 2020, 5, 3490-3497.	17.4	29
25	Challenges and Strategies to Advance Highâ€Energy Nickelâ€Rich Layered Lithium Transition Metal Oxide Cathodes for Harsh Operation. Advanced Functional Materials, 2020, 30, 2004748.	14.9	146
26	Probing the Thermal-Driven Structural and Chemical Degradation of Ni-Rich Layered Cathodes by Co/Mn Exchange. Journal of the American Chemical Society, 2020, 142, 19745-19753.	13.7	122
27	Toward a high-voltage fast-charging pouch cell with TiO2 cathode coating and enhanced battery safety. Nano Energy, 2020, 71, 104643.	16.0	72
28	Building ultraconformal protective layers on both secondary and primary particles of layered lithium transition metal oxide cathodes. Nature Energy, 2019, 4, 484-494.	39.5	345
29	Investigating the thermal runaway mechanisms of lithium-ion batteries based on thermal analysis database. Applied Energy, 2019, 246, 53-64.	10.1	358
30	Chemistry Design Towards a Stable Sulfideâ€Based Superionic Conductor Li₄Cu₈Ge₃S₁₂. Angewandte Chemie - International Edition, 2019, 58, 7673-7677.	13.8	37
31	Chemistry Design Towards a Stable Sulfideâ€Based Superionic Conductor Li₄Cu₈Ge₃S₁₂. Angewandte Chemie, 2019, 131, 7755-7759.	2.0	9
32	Thermal runaway mechanism of lithium ion battery for electric vehicles: A review. Energy Storage Materials, 2018, 10, 246-267.	18.0	1,939
33	Model-based thermal runaway prediction of lithium-ion batteries from kinetics analysis of cell components. Applied Energy, 2018, 228, 633-644.	10.1	241
34	Thermal Runaway of Lithium-Ion Batteries without Internal Short Circuit. Joule, 2018, 2, 2047-2064.	24.0	442
35	A Cr₂O₃/MWCNTs composite as a superior electrode material for supercapacitor. RSC Advances, 2017, 7, 25019-25024.	3.6	39
36	â€œRose Flowersâ€•assembled from mesoporous NiFe2O4 nanosheets for energy storage devices. Journal of Materials Science: Materials in Electronics, 2017, 28, 14058-14068.	2.2	20

#	Article	IF	Citations
37	A Study on Anaerobic Biodegradation of BTEX in Soil. , 2009, , .		2
38	Kinetic analysis of anaerobic phosphorus release during biological phosphorus removal process. Frontiers of Environmental Science and Engineering in China, 2007, 1, 233-239.	0.8	5
39	Experiments and modelling of phenanthrene biodegradation in the aqueous phase by a mixed culture. Journal of Environmental Sciences, 2006, 18, 147-53.	6.1	0