Haodong Liu

List of Publications by Year
in descending order

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45 papers	4,459 citations	126708 33 h-index	253896 43 g-index
45 all docs	45 docs citations	45 times ranked	4904 citing authors

#	Article	IF	Citations
1	Narrowing the Gap between Theoretical and Practical Capacities in Liâ€Ion Layered Oxide Cathode Materials. Advanced Energy Materials, 2017, 7, 1602888.	10.2	455
2	Tailoring electrolyte solvation for Li metal batteries cycled at ultra-low temperature. Nature Energy, 2021, 6, 303-313.	19.8	386
3	A disordered rock salt anode for fast-charging lithium-ion batteries. Nature, 2020, 585, 63-67.	13.7	326
4	Performance and design considerations for lithium excess layered oxide positive electrode materials for lithium ion batteries. Energy and Environmental Science, 2016, 9, 1931-1954.	15.6	295
5	Achieving Fast and Durable Lithium Storage through Amorphous FeP Nanoparticles Encapsulated in Ultrathin 3D P-Doped Porous Carbon Nanosheets. ACS Nano, 2020, 14, 9545-9561.	7.3	250
6	Li-rich cathodes for rechargeable Li-based batteries: reaction mechanisms and advanced characterization techniques. Energy and Environmental Science, 2020, 13, 4450-4497.	15.6	219
7	The stability of P2-layered sodium transition metal oxides in ambient atmospheres. Nature Communications, 2020, 11, 3544.	5.8	204
8	High performance columnar-like Fe2O3@carbon composite anode via yolk@shell structural design. Journal of Energy Chemistry, 2020, 41, 126-134.	7.1	191
9	Dendrite Suppression Membranes for Rechargeable Zinc Batteries. ACS Applied Materials & Interfaces, 2018, 10, 38928-38935.	4.0	189
10	Designing and Understanding the Superior Potassium Storage Performance of Nitrogen/Phosphorus Coâ€Đoped Hollow Porous Bowlâ€Like Carbon Anodes. Advanced Functional Materials, 2021, 31, .	7.8	142
11	Durable high-rate capability Na0.44MnO2 cathode material for sodium-ion batteries. Nano Energy, 2016, 27, 602-610.	8.2	126
12	Polymer grafted on carbon nanotubes as a flexible cathode for aqueous zinc ion batteries. Chemical Communications, 2019, 55, 1647-1650.	2.2	117
13	Protective coatings for lithium metal anodes: Recent progress and future perspectives. Journal of Power Sources, 2020, 450, 227632.	4.0	104
14	Mixed-conducting interlayer boosting the electrochemical performance of Ni-rich layered oxide cathode materials for lithium ion batteries. Journal of Power Sources, 2019, 421, 91-99.	4.0	101
15	Electrolyte design implications of ion-pairing in low-temperature Li metal batteries. Energy and Environmental Science, 2022, 15, 1647-1658.	15.6	89
16	Efficient Direct Recycling of Degraded LiMn₂O₄ Cathodes by One-Step Hydrothermal Relithiation. ACS Applied Materials & Interfaces, 2020, 12, 51546-51554.	4.0	88
17	Understanding the Role of NH₄F and Al₂O₃ Surface Co-modification on Lithium-Excess Layered Oxide Li_{1.2}Ni_{0.2}Mn_{0.6}O₂. ACS Applied Materials & Interfaces, 2015, 7, 19189-19200.	4.0	87
18	In-situ neutron diffraction study of the xLi2MnO3Â·(1Ââ^'Âx)LiMO2 (xÂ=Â0,Â0.5; MÂ=ÂNi, Mn, Co) layered oxide compounds during electrochemical cycling. Journal of Power Sources, 2013, 240, 772-778.	4.0	79

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19	Identifying the Distribution of Al³⁺ in LiNi_{0.8}Co_{0.15}Al_{0.05}O₂. Chemistry of Materials, 2016, 28, 8170-8180.	3.2	77
20	Effect of Morphology and Manganese Valence on the Voltage Fade and Capacity Retention of Li[Li_{2/12}Ni_{3/12}Mn_{7/12}]O₂. ACS Applied Materials & Interfaces, 2014, 6, 18868-18877.	4.0	76
21	Analysis of Rate-Limiting Factors in Thick Electrodes for Electric Vehicle Applications. Journal of the Electrochemical Society, 2018, 165, A525-A533.	1.3	70
22	Draining Over Blocking: Nanoâ€Composite Janus Separators for Mitigating Internal Shorting of Lithium Batteries. Advanced Materials, 2020, 32, e1906836.	11.1	62
23	Enhancing the electrochemical performance of Li-rich layered oxide Li1.13Ni0.3Mn0.57O2 via WO3 doping and accompanying spontaneous surface phase formation. Journal of Power Sources, 2018, 375, 21-28.	4.0	61
24	Toward a durable solid electrolyte film on the electrodes for Li-ion batteries with high performance. Nano Energy, 2019, 63, 103815.	8.2	60
25	Cathode electrolyte interface enabling stable Liâ€“S batteries. Energy Storage Materials, 2019, 21, 474-480.	9.5	59
26	Graphite-Based Lithium-Free 3D Hybrid Anodes for High Energy Density All-Solid-State Batteries. ACS Energy Letters, 2021, 6, 1831-1838.	8.8	56
27	Designing solution chemistries for the low-temperature synthesis of sulfide-based solidÂelectrolytes. Journal of Materials Chemistry A, 2018, 6, 7370-7374.	5.2	53
28	Identifying the chemical and structural irreversibility in LiNi_{0.8}Co_{0.15}Al_{0.05}O₂ â€“ a model compound for classical layered intercalation. Journal of Materials Chemistry A, 2018, 6, 4189-4198.	5.2	48
29	In situ formed polymer gel electrolytes for lithium batteries with inherent thermal shutdown safety features. Journal of Materials Chemistry A, 2019, 7, 16984-16991.	5.2	46
30	Elucidating the Limit of Li Insertion into the Spinel Li₄Ti₅O₁₂. , 2019, 1, 96-102.		45
31	Structure and Solution Dynamics of Lithium Methyl Carbonate as a Protective Layer For Lithium Metal. ACS Applied Energy Materials, 2018, 1, 1864-1869.	2.5	41
32	A Scalable Synthesis Pathway to Nanoporous Metal Structures. ACS Nano, 2018, 12, 432-440.	7.3	39
33	Suppressing Lithium Dendrite Growth with a Single-Component Coating. ACS Applied Materials & Interfaces, 2017, 9, 30635-30642.	4.0	38
34	Hierarchical Design of Mn₂P Nanoparticles Embedded in N,P-Codoped Porous Carbon Nanosheets Enables Highly Durable Lithium Storage. ACS Applied Materials & Interfaces, 2020, 12, 36247-36258.	4.0	36
35	Thin Solid Electrolyte Layers Enabled by Nanoscopic Polymer Binding. ACS Energy Letters, 2020, 5, 955-961.	8.8	36
36	Understanding the Roles of the Electrode/Electrolyte Interface for Enabling Stable Liâˆ¥Sulfurized Polyacrylonitrile Batteries. ACS Applied Materials & Interfaces, 2021, 13, 31733-31740.	4.0	25

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37	Quantifying the reaction mechanisms of a high-capacity CuP₂/C composite anode for potassium ion batteries. Journal of Materials Chemistry A, 2021, 9, 6274-6283.	5.2	19
38	Solvent selection criteria for temperature-resilient lithiumâ€“sulfur batteries. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	17
39	Oxidative Stabilization of Dilute Ether Electrolytes via Anion Modification. ACS Energy Letters, 2022, 7, 675-682.	8.8	15
40	A Fiberâ€Based 3D Lithium Host for Lean Electrolyte Lithium Metal Batteries. Advanced Science, 2022, 9, e2104829.	5.6	15
41	Quantification of the ion transport mechanism in protective polymer coatings on lithium metal anodes. Chemical Science, 2021, 12, 7023-7032.	3.7	7
42	Communicationâ€”Binder Effects on Cycling Performance of High Areal Capacity SPAN Electrodes. Journal of the Electrochemical Society, 2021, 168, 110504.	1.3	4
43	Isoxazole-Based Electrolytes for Lithium Metal Protection and Lithium-Sulfurized Polyacrylonitrile (SPAN) Battery Operating at Low Temperature. Journal of the Electrochemical Society, 2022, 169, 030513.	1.3	4
44	Low-Cost Li||SPAN Batteries Enabled by Sustained Additive Release. ACS Applied Energy Materials, 2021, 4, 6422-6429.	2.5	2
45	Mitigating internal shorting to enhance battery safety with gradient-conductivity cathodes. Journal of Power Sources, 2021, 511, 230412.	4.0	0