Jue Liu

List of Publications by Year
in descending order

82 papers	6,379 citations	101543 36 h-index	66911 78 g-index
90 all docs	90 docs citations	90 times ranked	6949 citing authors

#	Article	IF	Citations
1	A Superior Lowâ€Cost Cathode for a Naâ€Ion Battery. Angewandte Chemie - International Edition, 2013, 52, 1964-1967.	13.8	698
2	Removal of Interstitial H₂O in Hexacyanometallates for a Superior Cathode of a Sodium-Ion Battery. Journal of the American Chemical Society, 2015, 137, 2658-2664.	13.7	654
3	Analysis of the chemical diffusion coefficient of lithium ions in Li3V2(PO4)3 cathode material. Electrochimica Acta, 2010, 55, 2384-2390.	5.2	574
4	Ti-substituted tunnel-type Na0.44MnO2 oxide as a negative electrode for aqueous sodium-ion batteries. Nature Communications, 2015, 6, 6401.	12.8	316
5	A long-life lithium-ion battery with a highly porous TiNb₂O₇ anode for large-scale electrical energy storage. Energy and Environmental Science, 2014, 7, 2220-2226.	30.8	312
6	Structure-Induced Reversible Anionic Redox Activity in Na Layered Oxide Cathode. Joule, 2018, 2, 125-140.	24.0	311
7	Lithium-Doping Stabilized High-Performance P2â€“Na_{0.66}Li_{0.18}Fe_{0.12}Mn_{0.7}O₂ Cathode for Sodium Ion Batteries. Journal of the American Chemical Society, 2019, 141, 6680-6689.	13.7	187
8	A Novel High Capacity Positive Electrode Material with Tunnelâ€Type Structure for Aqueous Sodiumâ€Ion Batteries. Advanced Energy Materials, 2015, 5, 1501005.	19.5	161
9	Ultrahigh power and energy density in partially ordered lithium-ion cathode materials. Nature Energy, 2020, 5, 213-221.	39.5	158
10	Cobalt Molybdenum Oxynitrides: Synthesis, Structural Characterization, and Catalytic Activity for the Oxygen Reduction Reaction. Angewandte Chemie - International Edition, 2013, 52, 10753-10757.	13.8	139
11	High energy-density and reversibility of iron fluoride cathode enabled via an intercalation-extrusion reaction. Nature Communications, 2018, 9, 2324.	12.8	136
12	A novel P3-type Na_{2/3}Mg_{1/3}Mn_{2/3}O₂ as high capacity sodium-ion cathode using reversible oxygen redox. Journal of Materials Chemistry A, 2019, 7, 1491-1498.	10.3	122
13	Stabilizing the Oxygen Lattice and Reversible Oxygen Redox Chemistry through Structural Dimensionality in Lithiumâ€Rich Cathode Oxides. Angewandte Chemie - International Edition, 2019, 58, 4323-4327.	13.8	114
14	Understanding the Low-Voltage Hysteresis of Anionic Redox in Na₂Mn₃O₇. Chemistry of Materials, 2019, 31, 3756-3765.	6.7	112
15	Highâ€Rate Charging Induced Intermediate Phases and Structural Changes of Layerâ€Structured Cathode for Lithiumâ€Ion Batteries. Advanced Energy Materials, 2016, 6, 1600597.	19.5	110
16	Local structure adaptability through multi cations for oxygen redox accommodation in Li-Rich layered oxides. Energy Storage Materials, 2020, 24, 384-393.	18.0	101
17	The Li3V2(PO4)3/C composites with high-rate capability prepared by a maltose-based solâ€“gel route. Electrochimica Acta, 2010, 55, 6761-6767.	5.2	92
18	Phase transition behavior of NaCrO2 during sodium extraction studied by synchrotron-based X-ray diffraction and absorption spectroscopy. Journal of Materials Chemistry A, 2013, 1, 11130.	10.3	84

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19	High Ionic Conductivity Achieved in Li₃Y(Br₃Cl₃) Mixed Halide Solid Electrolyte via Promoted Diffusion Pathways and Enhanced Grain Boundary. ACS Energy Letters, 2021, 6, 298-304.	17.4	84
20	Lithium Ytterbium-Based Halide Solid Electrolytes for High Voltage All-Solid-State Batteries. , 2021, 3, 930-938.		80
21	Boehmite and Gibbsite Nanoplates for the Synthesis of Advanced Alumina Products. ACS Applied Nano Materials, 2018, 1, 7115-7128.	5.0	79
22	Tunable Lithium-Ion Transport in Mixed-Halide Argyrodites Li_{6â€“x}PS_{5â€“x}ClBr_x: An Unusual Compositional Space. Chemistry of Materials, 2021, 33, 1435-1443.	6.7	78
23	Lithium Iron Aluminum Nickelate, LiNi_xFe_yAl_zO₂â€”New Sustainable Cathodes for Nextâ€Generation Cobaltâ€Free Liâ€Ion Batteries. Advanced Materials, 2020, 32, e2002960.	21.0	77
24	Oxygen-Release-Related Thermal Stability and Decomposition Pathways of Li_xNi_{0.5}Mn_{1.5}O₄ Cathode Materials. Chemistry of Materials, 2014, 26, 1108-1118.	6.7	75
25	Ionic Conduction in Cubic Na₃TiP₃O₉N, a Secondary Na-Ion Battery Cathode with Extremely Low Volume Change. Chemistry of Materials, 2014, 26, 3295-3305.	6.7	68
26	Quantitative Analysis of the Morphology of {101} and {001} Faceted Anatase TiO₂ Nanocrystals and Its Implication on Photocatalytic Activity. Chemistry of Materials, 2017, 29, 5591-5604.	6.7	65
27	Dynamic Lithium Distribution upon Dendrite Growth and Shorting Revealed by Operando Neutron Imaging. ACS Energy Letters, 2019, 4, 2402-2408.	17.4	65
28	Explore the Effects of Microstructural Defects on Voltage Fade of Li- and Mn-Rich Cathodes. Nano Letters, 2016, 16, 5999-6007.	9.1	64
29	Nature of Reactive Hydrogen for Ammonia Synthesis over a Ru/C12A7 Electride Catalyst. Journal of the American Chemical Society, 2020, 142, 7655-7667.	13.7	59
30	Oxygen-redox reactions in LiCoO2 cathode without Oâ€“O bonding during charge-discharge. Joule, 2021, 5, 720-736.	24.0	56
31	Dynamics of Hydroxyl Anions Promotes Lithium Ion Conduction in Antiperovskite Li₂OHCl. Chemistry of Materials, 2020, 32, 8481-8491.	6.7	53
32	Crystallographicâ€Siteâ€Specific Structural Engineering Enables Extraordinary Electrochemical Performance of Highâ€Voltage LiNi_{0.5}Mn_{1.5}O₄ Spinel Cathodes for Lithiumâ€Ion Batteries. Advanced Materials, 2021, 33, e2101413.	21.0	52
33	Quantification of Honeycomb Number-Type Stacking Faults: Application to Na₃Ni₂BiO₆ Cathodes for Na-Ion Batteries. Inorganic Chemistry, 2016, 55, 8478-8492.	4.0	51
34	KVOPO₄: A New High Capacity Multielectron Naâ€Ion Battery Cathode. Advanced Energy Materials, 2018, 8, 1800221.	19.5	50
35	Nanoscale Ni/Mn Ordering in the High Voltage Spinel Cathode LiNi_{0.5}Mn_{1.5}O₄. Chemistry of Materials, 2016, 28, 6817-6821.	6.7	42
36	A Series of Ternary Metal Chloride Superionic Conductors for Highâ€Performance Allâ€Solidâ€State Lithium Batteries. Advanced Energy Materials, 2022, 12, .	19.5	42

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37	Shell-Induced Ostwald Ripening: Simultaneous Structure, Composition, and Morphology Transformations during the Creation of Hollow Iron Oxide Nanocapsules. ACS Nano, 2018, 12, 9051-9059.	14.6	36
38	Utilizing Environmental Friendly Iron as a Substitution Element in Spinel Structured Cathode Materials for Safer High Energy Lithiumâ€Ion Batteries. Advanced Energy Materials, 2016, 6, 1501662.	19.5	35
39	Structural Evolution and Transition Dynamics in Lithium Ion Battery under Fast Charging: An Operando Neutron Diffraction Investigation. Advanced Science, 2021, 8, e2102318.	11.2	34
40	Anionic redox induced anomalous structural transition in Ni-rich cathodes. Energy and Environmental Science, 2021, 14, 6441-6454.	30.8	33
41	Realizing continuous cation order-to-disorder tuning in a class of high-energy spinel-type Li-ion cathodes. Matter, 2021, 4, 3897-3916.	10.0	32
42	Large-Scale Synthesis and Comprehensive Structure Study of Î´-MnO₂. Inorganic Chemistry, 2018, 57, 6873-6882.	4.0	29
43	Metastable Li_{1+Î´}Mn₂O₄ (0 â‰ Î´ â‰ 1) Spinel Phases Revealed by in Operando Neutron Diffraction and First-Principles Calculations. Chemistry of Materials, 2019, 31, 124-134.	6.7	28
44	Probing Thermal Stability of Li-Ion Battery Ni-Rich Layered Oxide Cathodes by means of Operando Gas Analysis and Neutron Diffraction. ACS Applied Energy Materials, 2020, 3, 7058-7065.	5.1	28
45	Probing Dopant Redistribution, Phase Propagation, and Local Chemical Changes in the Synthesis of Layered Oxide Battery Cathodes. Advanced Energy Materials, 2021, 11, .	19.5	28
46	A numerical method for deriving shape functions of nanoparticles for pair distribution function refinements. Acta Crystallographica Section A: Foundations and Advances, 2018, 74, 322-331.	0.1	26
47	Defect Engineering of Ceria Nanocrystals for Enhanced Catalysis via a High-Entropy Oxide Strategy. ACS Central Science, 2022, 8, 1081-1090.	11.3	25
48	New Insights into the Bulk and Surface Defect Structures of Ceria Nanocrystals from Neutron Scattering Study. Chemistry of Materials, 2021, 33, 3959-3970.	6.7	24
49	Divalent Iron Nitridophosphates: A New Class of Cathode Materials for Li-Ion Batteries. Chemistry of Materials, 2013, 25, 3929-3931.	6.7	23
50	Unified View of the Local Cation-Ordered State in Inverse Spinel Oxides. Inorganic Chemistry, 2019, 58, 14389-14402.	4.0	21
51	Interaction of SO₂ with ZnO Nanoshapes: Impact of Surface Polarity. Journal of Physical Chemistry C, 2019, 123, 11772-11780.	3.1	21
52	Li₃Mo₄P₅O₂₄: A Two-Electron Cathode for Lithium-Ion Batteries with Three-Dimensional Diffusion Pathways. Chemistry of Materials, 2016, 28, 2229-2235.	6.7	20
53	Na_{1+x}Mn_{x/2}Zr_{2â€“x/2}(PO₄)₃ as a Li⁺ and Na⁺ Super Ion Conductor for Solid-State Batteries. ACS Energy Letters, 2021, 6, 429-436.	17.4	20
54	In Situ Neutron Diffraction Studies of the Ion Exchange Synthesis Mechanism of Li₂Mg₂P₃O₉N: Evidence for a Hidden Phase Transition. Journal of the American Chemical Society, 2017, 139, 9192-9202.	13.7	19

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55	Size, structure, and luminescence of Nd2Zr2O7 nanoparticles by molten salt synthesis. Journal of Materials Science, 2019, 54, 12411-12423.	3.7	19
56	Effects of charging rates on LiNi0.6Mn0.2Co0.2O2 (NMC622)/graphite Li-ion cells. Journal of Energy Chemistry, 2021, 56, 121-126.	12.9	18
57	Fast Ion-Conducting Thioboracite with a Perovskite Topology and Argyrodite-like Lithium Substructure. Journal of the American Chemical Society, 2021, 143, 6952-6961.	13.7	16
58	Manipulating Copper Dispersion on Ceria for Enhanced Catalysis: A Nanocrystalâ€Based Atomâ€Trapping Strategy. Advanced Science, 2022, 9, e2104749.	11.2	16
59	Effect of the grain arrangements on the thermal stability of polycrystalline nickel-rich lithium-based battery cathodes. Nature Communications, 2022, 13, .	12.8	16
60	Fast Liâ€Ion Conductivity in Superadamantanoid Lithium Thioborate Halides. Angewandte Chemie - International Edition, 2021, 60, 6975-6980.	13.8	15
61	Chemical Modulation of Local Transition Metal Environment Enables Reversible Oxygen Redox in Mn-Based Layered Cathodes. ACS Energy Letters, 2021, 6, 2882-2890.	17.4	15
62	Exceptional Cycling Performance Enabled by Local Structural Rearrangements in Disordered Rocksalt Cathodes. Advanced Energy Materials, 2022, 12, .	19.5	15
63	Tailoring Disordered/Ordered Phases to Revisit the Degradation Mechanism of Highâ€Voltage LiNi_{0.5}Mn_{1.5}O₄ Spinel Cathode Materials. Advanced Functional Materials, 2022, 32, .	14.9	13
64	Capturing the Details of N₂ Adsorption in Zeolite X Using Stroboscopic Isotope Contrasted Neutron Total Scattering. Chemistry of Materials, 2018, 30, 296-302.	6.7	12
65	Li₃VP₃O₉N as a Multielectron Redox Cathode for Li-Ion Battery. Chemistry of Materials, 2018, 30, 4609-4616.	6.7	12
66	Long-Range and Local Structure of Sr_xBa_{1â€“x}Nb₂O₆ (x = 0.33 and) Tj ETQq0 0 0 rgBT /Overlock	10.7	11
67	A high precision gas flow cell for performingin situneutron studies of local atomic structure in catalytic materials. Review of Scientific Instruments, 2017, 88, 034101.	1.3	9
68	Li₁₅P₄S₁₆Cl₃, a Lithium Chlorothiophosphate as a Solid-State Ionic Conductor. Inorganic Chemistry, 2020, 59, 226-234.	4.0	9
69	A Local Atomic Mechanism for Monoclinic-Tetragonal Phase Boundary Creation in Li-Doped Na_{0.5}K_{0.5}NbO₃ Ferroelectric Solid Solution. Inorganic Chemistry, 2022, 61, 4335-4349.	4.0	9
70	New Insights into Structural Evolution of LiNiO₂ Revealed by Operando Neutron Diffraction. Batteries and Supercaps, 2021, 4, 1701-1707.	4.7	8
71	In Situ High-Temperature Synchrotron Diffraction Studies of (Fe,Cr,Al)₃O₄ Spinels. Inorganic Chemistry, 2020, 59, 5949-5957.	4.0	7
72	Solid-State Calcium-Ion Diffusion in Ca_{1.5}Ba_{0.5}Si₅O₃N₆. Chemistry of Materials, 2022, 34, 128-139.	6.7	7

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73	Factors governing Yb magnetism in Yb0.95PtIn2 and other MgCuAl2-type structures. Journal of Solid State Chemistry, 2013, 198, 308-315.	2.9	6
74	Hydrothermal Preparation, Crystal Chemistry, and Redox Properties of Iron Muscovite Clay. ACS Applied Materials & Interfaces, 2017, 9, 34024-34032.	8.0	5
75	A high temperature gas flow environment for neutron total scattering studies of complex materials. Review of Scientific Instruments, 2018, 89, 092906.	1.3	5
76	Calorimetric study of the thermodynamic properties of Mn 5 O 8. Journal of the American Ceramic Society, 2019, 102, 1394-1401.	3.8	5
77	Exploiting the Oxygen Redox Reaction and Crystal-Preferred Orientation in a P3-Type Na_{2/3}Mg_{1/3}Mn_{2/3}O₂ Thin-Film Electrode. Energy & Fuels, 2020, 34, 7692-7699.	5.1	5
78	Access to Ru(IV)â€“Ru(V) and Ru(V)â€“Ru(VI) Redox in Layered Li₇RuO₆ via Intercalation Reactions. Chemistry of Materials, 2022, 34, 3724-3735.	6.7	3
79	Correlation of Oxygen Anion Redox Activity to Inâ€Plane Honeycomb Cation Ordering in Na _x Ni _y Mn _{1â^' y} O ₂ Cathodes. Advanced Energy and Sustainability Research, 0, , 2200027.	5.8	3
80	Fast Liâ€ion Conductivity in Superadamantanoid Lithium Thioborate Halides. Angewandte Chemie, 2021, 133, 7051-7056.	2.0	2
81	Understanding Hollow Metal Oxide Nanomaterial Formation with in situ Transmission Electron Microscopy. Microscopy and Microanalysis, 2017, 23, 2066-2067.	0.4	0
82	New Insights into Structural Evolution of LiNiO 2 Revealed by Operando Neutron Diffraction. Batteries and Supercaps, 0, , .	4.7	0