

Guoying Chen

List of Publications by Year in descending order

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58
papers

5,023
citations

109137

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docs citations

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times ranked

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#	ARTICLE	IF	CITATIONS
1	Single-Crystal $\text{LiNi}_{1-x}\text{Mn}_y\text{Co}_{1-x-y}\text{O}_2$ Cathodes for Extreme Fast Charging. <i>Small</i> , 2022, 18, e2105833.	5.2	11
2	Fluorination-Enhanced Surface Stability of Disordered Rocksalt Cathodes. <i>Advanced Materials</i> , 2022, 34, e2106256.	11.1	11
3	Improving LiNiO_2 cathode performance through particle design and optimization. <i>Journal of Materials Chemistry A</i> , 2022, 10, 12890-12899.	5.2	16
4	Exceptional Cycling Performance Enabled by Local Structural Rearrangements in Disordered Rocksalt Cathodes. <i>Advanced Energy Materials</i> , 2022, 12, .	10.2	15
5	Understanding cation-disordered rocksalt oxyfluoride cathodes. <i>Journal of Materials Chemistry A</i> , 2021, 9, 7826-7837.	5.2	21
6	Fluorination-Enhanced Surface Stability of Cation-Disordered Rocksalt Cathodes for Li -Ion Batteries. <i>Advanced Functional Materials</i> , 2021, 31, 2101888.	7.8	28
7	Formation of LiF Surface Layer During Direct Fluorination of High-Capacity Co-Free Disordered Rocksalt Cathodes. <i>ACS Applied Materials & Interfaces</i> , 2021, 13, 38221-38228.	4.0	13
8	Role of Fluorine in Chemomechanics of Cation-Disordered Rocksalt Cathodes. <i>Chemistry of Materials</i> , 2021, 33, 7028-7038.	3.2	8
9	Exposure History and its Effect Towards Stabilizing Li Exchange Across Disordered Rock Salt Interfaces. <i>ChemElectroChem</i> , 2021, 8, 3982-3991.	1.7	4
10	Scalable Freeze-Tape-Casting Fabrication and Pore Structure Analysis of 3D LLZO Solid-State Electrolytes. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 3494-3501.	4.0	52
11	All-Solid-State Batteries Using Rationally Designed Garnet Electrolyte Frameworks. <i>ACS Applied Energy Materials</i> , 2020, 3, 170-175.	2.5	84
12	Strain-driven surface reconstruction and cation segregation in layered $\text{Li}(\text{Ni}_{1-x}\text{Mn}_x\text{Co}_y)\text{O}_2$ (NMC) cathode materials. <i>Physical Chemistry Chemical Physics</i> , 2020, 22, 24490-24497.	1.3	8
13	Understanding Reactivities of Ni-Rich $\text{Li}[\text{Ni}_{1-x}\text{Mn}_y\text{Co}_{1-x-y}]\text{O}_2$ Single-Crystal Cathode Materials. <i>ACS Applied Energy Materials</i> , 2020, 3, 12238-12245.	2.5	24
14	A Fluorination Method for Improving Cation-Disordered Rocksalt Cathode Performance. <i>Advanced Energy Materials</i> , 2020, 10, 2001671.	10.2	43
15	Li -Ion Batteries: A Fluorination Method for Improving Cation-Disordered Rocksalt Cathode Performance (<i>Adv. Energy Mater.</i> 35/2020). <i>Advanced Energy Materials</i> , 2020, 10, 2070146.	10.2	0
16	Atomic-Level Understanding of Surface Reconstruction Based on $\text{Li}[\text{Ni}_{1-x}\text{Mn}_y\text{Co}_{1-x-y}]\text{O}_2$ Single-Crystal Studies. <i>ACS Applied Energy Materials</i> , 2020, 3, 4799-4811.	2.5	51
17	Role of Redox-Inactive Transition Metals in the Behavior of Cation-Disordered Rocksalt Cathodes. <i>Small</i> , 2020, 16, e2000656.	5.2	37
18	The Role of Secondary Particle Structures in Surface Phase Transitions of Ni-Rich Cathodes. <i>Chemistry of Materials</i> , 2020, 32, 2884-2892.	3.2	60

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19	Unlocking the passivation nature of the cathode-air interfacial reactions in lithium ion batteries. Nature Communications, 2020, 11, 3204.	5.8	55
20	Oriented porous LLZO 3D structures obtained by freeze casting for battery applications. Journal of Materials Chemistry A, 2019, 7, 20861-20870.	5.2	65
21	Understanding Performance Degradation in Cation-Disordered Rock-Salt Oxide Cathodes. Advanced Energy Materials, 2019, 9, 1901255.	10.2	84
22	Injection of oxygen vacancies in the bulk lattice of layered cathodes. Nature Nanotechnology, 2019, 14, 602-608.	15.6	321
23	Solid-state electrolyte considerations for electric vehicle batteries. Sustainable Energy and Fuels, 2019, 3, 1647-1659.	2.5	32
24	Evolution of Local Structural Ordering and Chemical Distribution upon Delithiation of a Rock Salt-Structured $\text{Li}_{1.3}\text{Ta}_{0.3}\text{Mn}_{0.4}\text{O}_2$ Cathode. Advanced Functional Materials, 2019, 29, 1808294.	7.8	41
25	Single-crystal based studies for correlating the properties and high-voltage performance of $\text{Li}[\text{Ni}_x\text{Mn}_y\text{Co}_{1-x-y}]\text{O}_2$ cathodes. Journal of Materials Chemistry A, 2019, 7, 5463-5474.	5.2	169
26	Unravelling Solid-State Redox Chemistry in $\text{Li}_{1.3}\text{Nb}_{0.3}\text{Mn}_{0.4}\text{O}_2$ Single-Crystal Cathode Material. Chemistry of Materials, 2018, 30, 1655-1666.	3.2	84
27	Garnet Electrolyte Surface Degradation and Recovery. ACS Applied Energy Materials, 2018, 1, 7244-7252.	2.5	81
28	Alleviating oxygen evolution from Li-excess oxide materials through theory-guided surface protection. Nature Communications, 2018, 9, 4597.	5.8	56
29	Aberration-Corrected Scanning Transmission Electron Microscopy of Single Crystals and Chemically-Gradient NMC Cathodes. Microscopy and Microanalysis, 2018, 24, 1536-1537.	0.2	2
30	Understanding the Effect of Local Short-Range Ordering on Lithium Diffusion in $\text{Li}_{1.3}\text{Nb}_{0.3}\text{Mn}_{0.4}\text{O}_2$ Single-Crystal Cathode. Chem, 2018, 4, 2108-2123.	5.8	80
31	Revealing Anisotropic Spinel Formation on Pristine Li- and Mn-Rich Layered Oxide Surface and Its Impact on Cathode Performance. Advanced Energy Materials, 2017, 7, 1602010.	10.2	57
32	Phase transformation mechanism in lithium manganese nickel oxide revealed by single-crystal hard X-ray microscopy. Nature Communications, 2017, 8, 14309.	5.8	124
33	A New Anion Receptor for Improving the Interface between Lithium- and Manganese-Rich Layered Oxide Cathode and the Electrolyte. Chemistry of Materials, 2017, 29, 2141-2149.	3.2	44
34	Surface Structure, Morphology, and Stability of $\text{Li}(\text{Ni}_{1/3}\text{Mn}_{1/3}\text{Co}_{1/3})\text{O}_2$ Cathode Material. Journal of Physical Chemistry C, 2017, 121, 8290-8299.	1.5	101
35	Crystal Chemistry and Electrochemistry of $\text{Li}_x\text{Mn}_{1.5}\text{Ni}_{0.5}\text{O}_4$ Solid Solution Cathode Materials. Chemistry of Materials, 2017, 29, 6818-6828.	3.2	24
36	Ni and Co Segregations on Selective Surface Facets and Rational Design of Layered Lithium Transition-Metal Oxide Cathodes. Advanced Energy Materials, 2016, 6, 1502455.	10.2	100

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37	Investigating Side Reactions and Coating Effects on High Voltage Layered Cathodes for Lithium Ion Batteries. <i>Microscopy and Microanalysis</i> , 2016, 22, 1312-1313.	0.2	0
38	Cathode Materials: Ni and Co Segregations on Selective Surface Facets and Rational Design of Layered Lithium Transition-Metal Oxide Cathodes (<i>Adv. Energy Mater.</i> 9/2016). <i>Advanced Energy Materials</i> , 2016, 6, .	10.2	2
39	A Multiple-Technique Approach for Resolving the Surface Structure of Lithium and Manganese Rich Transition Metal Oxides. <i>Microscopy and Microanalysis</i> , 2015, 21, 1929-1930.	0.2	0
40	Effect of Surface Microstructure on Electrochemical Performance of Garnet Solid Electrolytes. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 2073-2081.	4.0	347
41	A study of room-temperature $\text{Li}_x\text{Mn}_{1.5}\text{Ni}_{0.5}\text{O}_4$ solid solutions. <i>Scientific Reports</i> , 2015, 5, 8027.	1.6	37
42	Interrelationships among Grain Size, Surface Composition, Air Stability, and Interfacial Resistance of Al-Substituted $\text{Li}_{7-x}\text{La}_3\text{Zr}_2\text{O}_{12}$ Solid Electrolytes. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 17649-17655.	4.0	220
43	Atomic-Resolution Visualization of Distinctive Chemical Mixing Behavior of Ni, Co, and Mn with Li in Layered Lithium Transition-Metal Oxide Cathode Materials. <i>Chemistry of Materials</i> , 2015, 27, 5393-5401.	3.2	108
44	Unravelling structural ambiguities in lithium- and manganese-rich transition metal oxides. <i>Nature Communications</i> , 2015, 6, 8711.	5.8	176
45	Controlling side reactions and self-discharge in high-voltage spinel cathodes: the critical role of surface crystallographic facets. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 26471-26481.	1.3	35
46	Effect of microstructure and surface impurity segregation on the electrical and electrochemical properties of dense Al-substituted $\text{Li}_{7-x}\text{La}_3\text{Zr}_2\text{O}_{12}$. <i>Journal of Materials Chemistry A</i> , 2014, 2, 172-181.	5.2	170
47	Relationships between Mn^{3+} Content, Structural Ordering, Phase Transformation, and Kinetic Properties in $\text{LiNi}_{1-x}\text{Mn}_2\text{O}_4$ Cathode Materials. <i>Chemistry of Materials</i> , 2014, 26, 5374-5382.	3.2	88
48	The origin of high electrolyte-electrode interfacial resistances in lithium cells containing garnet type solid electrolytes. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 18294-18300.	1.3	431
49	The effect of particle surface facets on the kinetic properties of $\text{LiMn}_{1.5}\text{Ni}_{0.5}\text{O}_4$ cathode materials. <i>Journal of Materials Chemistry A</i> , 2013, 1, 759-769.	5.2	159
50	Impact of Initial Li Content on Kinetics and Stabilities of Layered $\text{Li}_{1-x}(\text{Ni}_{0.33}\text{Mn}_{0.33}\text{Co}_{0.33})\text{O}_2$. <i>Journal of the Electrochemical Society</i> , 2012, 159, A1543-A1550.	1.3	11
51	Improved kinetics and stabilities in Mg-substituted LiMnPO_4 . <i>Journal of Materials Chemistry</i> , 2011, 21, 10126.	6.7	57
52	Thermal instability of Olivine-type LiMnPO_4 cathodes. <i>Journal of Power Sources</i> , 2010, 195, 1221-1224.	4.0	121
53	MAS NMR Study of the Metastable Solid Solutions Found in the $\text{LiFePO}_4/\text{FePO}_4$ System. <i>Chemistry of Materials</i> , 2010, 22, 1249-1262.	3.2	57
54	Solid Solution Phases in the Olivine-Type $\text{LiMnPO}_4/\text{MnPO}_4$ System. <i>Journal of the Electrochemical Society</i> , 2009, 156, A756.	1.3	41

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55	Metastable Solid-Solution Phases in the $\text{LiFePO}_4 \cdot \text{FePO}_4$ System. Journal of the Electrochemical Society, 2007, 154, A627.	1.3	79
56	Electron Microscopy Study of the LiFePO_4 to FePO_4 Phase Transition. Electrochemical and Solid-State Letters, 2006, 9, A295.	2.2	532
57	Li_2CO_3 in $\text{LiNi}_{0.8}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_2$ cathodes and its effects on capacity and power. Journal of Power Sources, 2004, 134, 293-297.	4.0	266
58	An Overview of Cation-Disordered Lithium-Excess Rocksalt Cathodes. ACS Energy Letters, 0, , 1358-1376.	8.8	50