Lai Chen

List of Publications by Year
in descending order

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Version: 2024-02-01

58	3,765	126907	144013
papers	citations	33 h-index	57 g-index

59	59	59	3351
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Improving the reversibility of the H2-H3 phase transitions for layered Ni-rich oxide cathode towards retarded structural transition and enhanced cycle stability. Nano Energy, 2019, 59, 50-57.	16.0	334
2	Ni-Rich LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ Oxide Coated by Dual-Conductive Layers as High Performance Cathode Material for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 29732-29743.	8.0	309
3	Ultrathin Spinel Membrane-Encapsulated Layered Lithium-Rich Cathode Material for Advanced Li-Ion Batteries. Nano Letters, 2014, 14, 3550-3555.	9.1	227
4	Hierarchical Li_{1.2}Ni_{0.2}Mn_{0.6}O₂ Nanoplates with Exposed {010} Planes as Highâ€Performance Cathode Material for Lithiumâ€Ion Batteries. Advanced Materials, 2014, 26, 6756-6760.	21.0	220
5	Metal-organic frameworks composites threaded on the CNT knitted separator for suppressing the shuttle effect of lithium sulfur batteries. Energy Storage Materials, 2018, 14, 383-391.	18.0	135
6	Competitive effect of KOH activation on the electrochemical performances of carbon nanotubes for EDLC: Balance between porosity and conductivity. Electrochimica Acta, 2008, 53, 7730-7735.	5.2	132
7	Effect of CeO2-coating on the electrochemical performances of LiFePO4/C cathode material. Electrochimica Acta, 2011, 56, 5587-5592.	5.2	127
8	Sufficient Utilization of Zirconium Ions to Improve the Structure and Surface properties of Nickelâ€Rich Cathode Materials for Lithiumâ€Ion Batteries. ChemSusChem, 2018, 11, 1639-1648.	6.8	117
9	The role of yttrium content in improving electrochemical performance of layered lithium-rich cathode materials for Li-ion batteries. Journal of Materials Chemistry A, 2013, 1, 9760.	10.3	116
10	Use of Ce to Reinforce the Interface of Niâ€Rich LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ Cathode Materials for Lithiumâ€Ion Batteries under High Operating Voltage. ChemSusChem, 2019, 12, 935-943.	6.8	113
11	Layer-by-Layer Assembled Architecture of Polyelectrolyte Multilayers and Graphene Sheets on Hollow Carbon Spheres/Sulfur Composite for High-Performance Lithiumâ€“Sulfur Batteries. Nano Letters, 2016, 16, 5488-5494.	9.1	104
12	Exposing the {010} Planes by Oriented Self-Assembly with Nanosheets To Improve the Electrochemical Performances of Ni-Rich Li[Ni_{0.8}Co_{0.1}Mn_{0.1}]O₂ Microspheres. ACS Applied Materials & Interfaces, 2018, 10, 6407-6414.	8.0	98
13	Improving the cycling stability of Ni-rich cathode materials by fabricating surface rock salt phase. Electrochimica Acta, 2018, 292, 217-226.	5.2	90
14	High-voltage and high-safety nickel-rich layered cathode enabled by a self-reconstructive cathode/electrolyte interphase layer. Energy Storage Materials, 2021, 41, 495-504.	18.0	87
15	Pre-oxidizing the precursors of Nickel-rich cathode materials to regulate their Li+/Ni2+ cation ordering towards cyclability improvements. Journal of Power Sources, 2018, 396, 734-741.	7.8	82
16	Ethoxy (pentafluoro) cyclotriphosphazene (PFPN) as a multi-functional flame retardant electrolyte additive for lithium-ion batteries. Journal of Power Sources, 2018, 378, 707-716.	7.8	77
17	High-Rate Structure-Gradient Ni-Rich Cathode Material for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2019, 11, 36697-36704.	8.0	77
18	The nature of irreversible phase transformation propagation in nickel-rich layered cathode for lithium-ion batteries. Journal of Energy Chemistry, 2021, 62, 351-358.	12.9	74

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19	The mechanism of side reaction induced capacity fading of Ni-rich cathode materials for lithium ion batteries. Journal of Energy Chemistry, 2021, 58, 1-8.	12.9	73
20	The effects of alkali metal ions with different ionic radii substituting in Li sites on the electrochemical properties of Ni-Rich cathode materials. Journal of Power Sources, 2019, 441, 227195.	7.8	71
21	Stress accumulation in Ni-rich layered oxide cathodes: Origin, impact, and resolution. Journal of Energy Chemistry, 2022, 65, 236-253.	12.9	65
22	An interfacial framework for breaking through the Li-ion transport barrier of Li-rich layered cathode materials. Journal of Materials Chemistry A, 2017, 5, 24292-24298.	10.3	64
23	Improving the Structure Stability of LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ by Surface Perovskite-like La₂Ni_{0.5}Li_{0.5}O₄ Self-Assembling and Subsurface La³⁺ Doping. ACS Applied Materials & Interfaces, 2019, 11, 36751-36762.	8.0	59
24	Strategies of Removing Residual Lithium Compounds on the Surface of <scp>Niâ€Rich</scp> Cathode Materials^{â€}. Chinese Journal of Chemistry, 2021, 39, 189-198.	4.9	52
25	Riveting Dislocation Motion: The Inspiring Role of Oxygen Vacancies in the Structural Stability of Ni-Rich Cathode Materials. ACS Applied Materials & Interfaces, 2020, 12, 37208-37217.	8.0	49
26	Enhanced high-temperature performance of Li-rich layered oxide via surface heterophase coating. Journal of Energy Chemistry, 2020, 51, 39-47.	12.9	48
27	Role of Cobalt Content in Improving the Low-Temperature Performance of Layered Lithium-Rich Cathode Materials for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2015, 7, 17910-17918.	8.0	47
28	High-performance LiFePO4/C electrode with polytetrafluoroethylene as an aqueous-based binder. Journal of Power Sources, 2015, 298, 292-298.	7.8	46
29	Research Progress of Lithium Plating on Graphite Anode in <scp>Lithiumâ€Ion</scp> Batteries. Chinese Journal of Chemistry, 2021, 39, 165-173.	4.9	45
30	Urea-assisted mixed gas treatment on Li-Rich layered oxide with enhanced electrochemical performance. Journal of Energy Chemistry, 2022, 66, 123-132.	12.9	45
31	A Universal Method for Enhancing the Structural Stability of Ni-Rich Cathodes Via the Synergistic Effect of Dual-Element Cosubstitution. ACS Applied Materials & Interfaces, 2021, 13, 24925-24936.	8.0	43
32	Renovating the electrode-electrolyte interphase for layered lithium- & manganese-rich oxides. Energy Storage Materials, 2020, 28, 383-392.	18.0	40
33	Synergistic Effects of Stabilizing the Surface Structure and Lowering the Interface Resistance in Improving the Low-Temperature Performances of Layered Lithium-Rich Materials. ACS Applied Materials & Interfaces, 2017, 9, 8641-8648.	8.0	38
34	Hand-in-Hand Reinforced rGO Film Used as an Auxiliary Functional Layer for High-Performance Liâ€“S Batteries. ACS Applied Materials & Interfaces, 2019, 11, 12544-12553.	8.0	36
35	The Effects of Trace Yb Doping on the Electrochemical Performance of Liâ€Rich Layered Oxides. ChemSusChem, 2019, 12, 2294-2301.	6.8	35
36	Polyacrylonitrile-polyvinylidene fluoride as high-performance composite binder for layered Li-rich oxides. Journal of Power Sources, 2017, 359, 226-233.	7.8	32

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37	Improved Stability of Layered and Porous Nickelâ€Rich Cathode Materials by Relieving the Accumulation of Inner Stress. ChemSusChem, 2020, 13, 426-433.	6.8	31
38	Unrevealing the effects of low temperature on cycling life of 21700-type cylindrical Li-ion batteries. Journal of Energy Chemistry, 2021, 60, 104-110.	12.9	31
39	Electron bridging structure glued yolk-shell hierarchical porous carbon/sulfur composite for high performance Li-S batteries. Electrochimica Acta, 2018, 292, 199-207.	5.2	27
40	Roles of Fastâ€Ion Conductor LiTaO₃ Modifying Niâ€rich Cathode Material for Liâ€Ion Batteries. ChemSusChem, 2021, 14, 1955-1961.	6.8	26
41	Advances and Prospects of Surface Modification on <scp>Nickelâ€Rich</scp> Materials for <scp>Lithiumâ€Ion</scp> Batteries^{â€}. Chinese Journal of Chemistry, 2020, 38, 1817-1831.	4.9	24
42	Effectively stabilizing electrode/electrolyte interface of high-energy LiNi0.9Co0.1O2//Siâ€“C system by simple cathode surface-coating. Nano Energy, 2020, 76, 105065.	16.0	23
43	CF@rGO/PPy-S Hybrid Foam with Paper Window-like Microstructure as Freestanding and Flexible Cathode for the Lithiumâ€“Sulfur Battery. ACS Applied Energy Materials, 2019, 2, 4151-4158.	5.1	20
44	UiO-66 type metal-organic framework as a multifunctional additive to enhance the interfacial stability of Ni-rich layered cathode material. Journal of Energy Chemistry, 2020, 50, 378-386.	12.9	19
45	Enhanced Electrochemical Performance of Ni-Rich Cathode Materials with an In Situ-Formed LiBO₂/B₂O₃ Hybrid Coating Layer. ACS Applied Energy Materials, 2022, 5, 2231-2241.	5.1	19
46	Simultaneously fabricating homogeneous nanostructured ionic and electronic pathways for layered lithium-rich oxides. Journal of Power Sources, 2018, 402, 499-505.	7.8	18
47	Clean the Ni-Rich Cathode Material Surface With Boric Acid to Improve Its Storage Performance. Frontiers in Chemistry, 2020, 8, 573.	3.6	18
48	High-Temperature Storage Deterioration Mechanism of Cylindrical 21700-Type Batteries Using Ni-Rich Cathodes under Different SOCs. ACS Applied Materials & Interfaces, 2021, 13, 6286-6297.	8.0	17
49	Densely Packed 3D Corrugated Papery Electrodes as Polysulfide Reservoirs for Lithiumâ€“Sulfur Battery with Ultrahigh Volumetric Capacity. ACS Sustainable Chemistry and Engineering, 2020, 8, 5648-5661.	6.7	15
50	Synthesizing LiNi0.8Co0.1Mn0.1O2 with novel shell-pore structure for enhanced rate performance. Journal of Alloys and Compounds, 2019, 789, 736-743.	5.5	13
51	Micromixerâ€Assisted Coâ€Precipitation Method for Fast Synthesis of Layered Niâ€Rich Materials for Lithiumâ€Ion Batteries. ChemElectroChem, 2019, 6, 3057-3064.	3.4	12
52	Ultrathin 3 V Spinel Clothed Layered Lithiumâ€Rich Oxides as Heterostructured Cathode for Highâ€Energy and Highâ€Power Liâ€ion Batteries â€. Chinese Journal of Chemistry, 2021, 39, 345-352.	4.9	12
53	Interfacial Degradation and Optimization of Liâ€rich Cathode Materials^{â€}. Chinese Journal of Chemistry, 2021, 39, 402-420.	4.9	11
54	Sublimated Seâ€Induced Formation of Dualâ€Conductive Surface Layers for Highâ€Performance Niâ€Rich Layered Cathodes. ChemElectroChem, 2021, 8, 4207-4217.	3.4	7

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55	Crystal Structure and Electrochemical Performance of Lithium-Rich Cathode Materials xLi₂MnO₃·(1-x)LiNi_{0.5}Mn_{0.5}O₂ (x=0.1-0.8). Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica, 2014, 30, 467-475.	4.9	6
56	Preparation and Characterization of xLi₂MnO₃·(1-x)Li[Ni_{1/3}Mn_{1/3}Co_{1/3}] Cathode Materials for Lithium-Ion Batteries. Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica, 2012, 28, 823-830.	4.9	5
57	Layered Lithium-Rich Cathode Materials Synthesized by an Ethanol-Based One-Step Oxalate Coprecipitation Method. Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica, 2016, 32, 717-722.	4.9	5
58	Dual-Decoration and Mechanism Analysis of Ni-rich LiNi_{0.83}Co_{0.11}Mn_{0.06}O₂ Cathodes by Na₂PO₃F. Acta Chimica Sinica, 2022, 80, 150.	1.4	0