

Mengqing Xu

List of Publications by Year in descending order

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64
papers

4,241
citations

94381

37
h-index

110317

64
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65
all docs

65
docs citations

65
times ranked

2830
citing authors

#	ARTICLE	IF	CITATIONS
1	Theoretical Investigations on Oxidative Stability of Solvents and Oxidative Decomposition Mechanism of Ethylene Carbonate for Lithium Ion Battery Use. <i>Journal of Physical Chemistry B</i> , 2009, 113, 16596-16602.	1.2	221
2	Designing Low Impedance Interface Films Simultaneously on Anode and Cathode for High Energy Batteries. <i>Advanced Energy Materials</i> , 2018, 8, 1800802.	10.2	212
3	Investigation and application of lithium difluoro(oxalato)borate (LiDFOB) as additive to improve the thermal stability of electrolyte for lithium-ion batteries. <i>Journal of Power Sources</i> , 2011, 196, 6794-6801.	4.0	188
4	Development of novel lithium borate additives for designed surface modification of high voltage $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ cathodes. <i>Energy and Environmental Science</i> , 2016, 9, 1308-1319.	15.6	159
5	A novel electrolyte with the ability to form a solid electrolyte interface on the anode and cathode of a LiMn_2O_4 /graphite battery. <i>Journal of Materials Chemistry A</i> , 2013, 1, 12954.	5.2	135
6	Prop-1-ene-1,3-sultone as SEI formation additive in propylene carbonate-based electrolyte for lithium ion batteries. <i>Electrochemistry Communications</i> , 2012, 17, 92-95.	2.3	124
7	Tris (pentafluorophenyl) phosphine: An electrolyte additive for high voltage Li-ion batteries. <i>Electrochemistry Communications</i> , 2012, 18, 123-126.	2.3	121
8	Tris(trimethylsilyl)phosphite as electrolyte additive for high voltage layered lithium nickel cobalt manganese oxide cathode of lithium ion battery. <i>Electrochimica Acta</i> , 2014, 147, 565-571.	2.6	119
9	Generation of Cathode Passivation Films via Oxidation of Lithium Bis(oxalato) Borate on High Voltage Spinel ($\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$). <i>Journal of Physical Chemistry C</i> , 2014, 118, 7363-7368.	1.5	118
10	Tris(trimethylsilyl)borate as an electrolyte additive for improving interfacial stability of high voltage layered lithium-rich oxide cathode/carbonate-based electrolyte. <i>Journal of Power Sources</i> , 2015, 285, 360-366.	4.0	118
11	Effect of propane sultone on elevated temperature performance of anode and cathode materials in lithium-ion batteries. <i>Journal of Power Sources</i> , 2009, 193, 804-809.	4.0	117
12	Experimental and Theoretical Investigations of Dimethylacetamide (DMAc) as Electrolyte Stabilizing Additive for Lithium Ion Batteries. <i>Journal of Physical Chemistry C</i> , 2011, 115, 6085-6094.	1.5	117
13	Constructing a Protective Interface Film on Layered Lithium-Rich Cathode Using an Electrolyte Additive with Special Molecule Structure. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 30116-30125.	4.0	115
14	Improving the Performance of Graphite/ $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ Cells at High Voltage and Elevated Temperature with Added Lithium Bis(oxalato) Borate (LiBOB). <i>Journal of the Electrochemical Society</i> , 2013, 160, A2005-A2013.	1.3	110
15	Enhanced cyclability of $\text{LiNi}_0.5\text{Mn}_{1.5}\text{O}_4$ cathode in carbonate based electrolyte with incorporation of tris(trimethylsilyl)phosphate (TMSP). <i>Journal of Power Sources</i> , 2014, 261, 148-155.	4.0	110
16	Theoretical Insight into Oxidative Decomposition of Propylene Carbonate in the Lithium Ion Battery. <i>Journal of Physical Chemistry B</i> , 2009, 113, 5181-5187.	1.2	109
17	Diethyl(thiophen-2-ylmethyl)phosphonate: a novel multifunctional electrolyte additive for high voltage batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 10990-11004.	5.2	105
18	Maintaining structural integrity of 4.5V lithium cobalt oxide cathode with fumaronitrile as a novel electrolyte additive. <i>Journal of Power Sources</i> , 2017, 338, 108-116.	4.0	103

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19	Mechanism of cycling degradation and strategy to stabilize a nickel-rich cathode. <i>Journal of Materials Chemistry A</i> , 2018, 6, 16149-16163.	5.2	97
20	Properties of solid electrolyte interphase formed by prop-1-ene-1,3-sultone on graphite anode of Li-ion batteries. <i>Electrochimica Acta</i> , 2013, 105, 1-6.	2.6	95
21	4-(Trifluoromethyl)-benzonitrile: A novel electrolyte additive for lithium nickel manganese oxide cathode of high voltage lithium ion battery. <i>Journal of Power Sources</i> , 2014, 267, 560-565.	4.0	94
22	The reductive mechanism of ethylene sulfite as solid electrolyte interphase film-forming additive for lithium ion battery. <i>Journal of Power Sources</i> , 2011, 196, 7044-7047.	4.0	77
23	Constructing Unique Cathode Interface by Manipulating Functional Groups of Electrolyte Additive for Graphite/LiNi _{0.6} Co _{0.2} Mn _{0.2} O ₂ Cells at High Voltage. <i>Journal of Physical Chemistry Letters</i> , 2018, 9, 3434-3445.	2.1	77
24	Self-discharge suppression of 4.9V LiNi _{0.5} Mn _{1.5} O ₄ cathode by using tris(trimethylsilyl)borate as an electrolyte additive. <i>Journal of Power Sources</i> , 2014, 272, 501-507.	4.0	72
25	Tris (trimethylsilyl) borate (TMSB) as a cathode surface film forming additive for 5V Li/LiNi _{0.5} Mn _{1.5} O ₄ Li-ion cells. <i>Electrochimica Acta</i> , 2014, 147, 31-39.	2.6	71
26	Nonflammable Electrolytes for Lithium-Ion Batteries Containing Dimethyl Methylphosphonate. <i>Journal of the Electrochemical Society</i> , 2010, 157, A1113.	1.3	68
27	Improved Performance of LiNi _{0.5} Mn _{1.5} O ₄ Cathodes with Electrolytes Containing Dimethylmethylphosphonate (DMMP). <i>Journal of the Electrochemical Society</i> , 2012, 159, A2130-A2134.	1.3	65
28	LiFSI and LiDFBOP Dual-Salt Electrolyte Reinforces the Solid Electrolyte Interphase on a Lithium Metal Anode. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 33719-33728.	4.0	65
29	Structural Exfoliation of Layered Cathode under High Voltage and Its Suppression by Interface Film Derived from Electrolyte Additive. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 12021-12034.	4.0	62
30	A novel imidazole-based electrolyte additive for improved electrochemical performance of high voltage nickel-rich cathode coupled with graphite anode lithium ion battery. <i>Journal of Power Sources</i> , 2016, 332, 312-321.	4.0	59
31	Improving high voltage stability of lithium cobalt oxide/graphite battery via forming protective films simultaneously on anode and cathode by using electrolyte additive. <i>Electrochimica Acta</i> , 2014, 141, 263-270.	2.6	58
32	Investigation of Lithium Tetrafluorooxalatophosphate [LiPF ₄ (C ₂ O ₄)] as a Lithium-Ion Battery Electrolyte for Elevated Temperature Performance. <i>Journal of the Electrochemical Society</i> , 2010, 157, A115.	1.3	51
33	Covalent organic framework-regulated ionic transportation for high-performance lithium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2019, 7, 26540-26548.	5.2	48
34	Sulfur loaded in curved graphene and coated with conductive polyaniline: preparation and performance as a cathode for lithium-sulfur batteries. <i>Journal of Materials Chemistry A</i> , 2015, 3, 18098-18104.	5.2	47
35	Insight into self-discharge of layered lithium-rich oxide cathode in carbonate-based electrolytes with and without additive. <i>Journal of Power Sources</i> , 2016, 324, 17-25.	4.0	47
36	Insight into the Mechanism of Improved Interfacial Properties between Electrodes and Electrolyte in the Graphite/LiNi _{0.6} Mn _{0.2} Co _{0.2} O ₂ Cell via Incorporation of 4-Propyl-[1,3,2]dioxathiolane-2,2-dioxide (PDTD). <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 16400-16409.	4.0	47

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37	Performance improvement of graphite/LiNi _{0.4} Co _{0.2} Mn _{0.4} O ₂ battery at high voltage with added Tris (trimethylsilyl) phosphate. <i>Journal of Power Sources</i> , 2015, 274, 1155-1161.	4.0	44
38	Effect of particle size on rate capability and cyclic stability of LiNi _{0.5} Mn _{1.5} O ₄ cathode for high-voltage lithium ion battery. <i>Journal of Solid State Electrochemistry</i> , 2015, 19, 569-576.	1.2	37
39	Performance improvement of phenyl acetate as propylene carbonate-based electrolyte additive for lithium ion battery by fluorine-substituting. <i>Journal of Power Sources</i> , 2014, 267, 182-187.	4.0	35
40	Application of tris(trimethylsilyl)borate to suppress self-discharge of layered nickel cobalt manganese oxide for high energy battery. <i>Applied Energy</i> , 2016, 175, 505-511.	5.1	34
41	Significance of Electrolyte Additive Molecule Structure in Constructing Robust Interphases on High-Voltage Cathodes. <i>ACS Applied Energy Materials</i> , 2020, 3, 3049-3058.	2.5	34
42	Effect of ethylene glycol bis (propionitrile) ether (EGBE) on the performance and interfacial chemistry of lithium-rich layered oxide cathode. <i>Journal of Power Sources</i> , 2016, 329, 216-224.	4.0	32
43	Design of a novel electrolyte additive for high voltage LiCoO ₂ cathode lithium-ion batteries: Lithium 4-benzonitrile trimethyl borate. <i>Journal of Power Sources</i> , 2021, 503, 230033.	4.0	32
44	Improved cyclic stability of layered lithium cobalt oxide at high potential via cathode electrolyte interphase formed by 4-(trifluoromethyl) benzonitrile. <i>Electrochimica Acta</i> , 2015, 184, 94-101.	2.6	31
45	Understanding Interfacial Properties between Li-Rich Layered Oxide and Electrolyte Containing Triethyl Borate. <i>Journal of Physical Chemistry C</i> , 2016, 120, 26899-26907.	1.5	31
46	Tetrafluoroterephthalonitrile: A Novel Electrolyte Additive for High-Voltage Lithium Cobalt Oxide/Graphite Battery. <i>Electrochimica Acta</i> , 2017, 256, 307-315.	2.6	31
47	Dimethylacetamide as a film-forming additive for improving the cyclic stability of high voltage lithium-rich cathode at room and elevated temperature. <i>Electrochimica Acta</i> , 2016, 204, 192-198.	2.6	30
48	Effects of different electrode materials on the performance of lithium tetrafluoroxyalato phosphate (LiFOP) electrolyte. <i>Journal of Power Sources</i> , 2011, 196, 8073-8084.	4.0	27
49	Improving High Voltage Interfacial and Structural Stability of Layered Lithium-Rich Oxide Cathode by Using a Boracic Electrolyte Additive. <i>Journal of the Electrochemical Society</i> , 2016, 163, A2258-A2264.	1.3	24
50	A self-healing interface on lithium metal with lithium difluoro (bisoxalato) phosphate for enhanced lithium electrochemistry. <i>Journal of Materials Chemistry A</i> , 2019, 7, 26002-26010.	5.2	24
51	Insight into the capacity fading of layered lithium-rich oxides and its suppression via a film-forming electrolyte additive. <i>RSC Advances</i> , 2018, 8, 25794-25801.	1.7	23
52	Dimethoxydiphenylsilane (DDS) as overcharge protection additive for lithium-ion batteries. <i>Journal of Power Sources</i> , 2013, 244, 499-504.	4.0	20
53	Highly effective fabrication of two dimensional metal oxides as high performance lithium storage anodes. <i>Journal of Materials Chemistry A</i> , 2019, 7, 3924-3932.	5.2	19
54	Effect of Butyl Sultone on the Li-ion Battery Performance and Interface of Graphite Electrode. <i>Acta Physico-chimica Sinica</i> , 2006, 22, 335-340.	0.6	18

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55	Enhancing electrochemical performance of Li/LiMn ₂ O ₄ cell at elevated temperature by tailoring cathode interface via diethyl phenylphosphonite (DEPP) incorporation. <i>Journal of Applied Electrochemistry</i> , 2017, 47, 1161-1172.	1.5	17
56	Functionalized N-doped hollow carbon spheres as sulfur host with enhanced electrochemical performances of lithium-sulfur batteries. <i>Ionics</i> , 2019, 25, 503-511.	1.2	17
57	Efficiently suppressing oxygen evolution in high voltage graphite/NCM pouch cell with tributyl borate as electrolyte additive. <i>Electrochimica Acta</i> , 2020, 354, 136722.	2.6	17
58	Formation mechanism of protective interphase for high voltage cathodes by phenyl trifluoromethyl sulfide. <i>Electrochimica Acta</i> , 2020, 352, 136469.	2.6	14
59	Non-woven fabric supported poly(acrylonitrile-vinyl acetate) gel electrolyte for lithium ion battery use. <i>Journal of Applied Electrochemistry</i> , 2010, 40, 2185-2191.	1.5	10
60	Performance of lithium tetrafluorooxalatophosphate in methyl butyrate electrolytes. <i>Journal of Applied Electrochemistry</i> , 2013, 43, 497-505.	1.5	10
61	Optimal concentration of electrolyte additive for cyclic stability improvement of high-voltage cathode of lithium-ion battery. <i>Ionics</i> , 2018, 24, 661-670.	1.2	10
62	Significantly improved cyclability of lithium manganese oxide, simultaneously inhibiting electrochemical and thermal decomposition of the electrolyte by the use of an additive. <i>RSC Advances</i> , 2017, 7, 46594-46603.	1.7	9
63	Dimethoxydiphenylsilane (DDS) as an Electrolyte Additive for High Voltage Li-ion Batteries. <i>Electrochemistry</i> , 2014, 82, 1052-1055.	0.6	3
64	Layered lithium-rich oxide nanoparticles: low-temperature synthesis in mixed molten salt and excellent performance as cathode of lithium-ion battery. <i>Ionics</i> , 2017, 23, 1955-1966.	1.2	3