Ling Huang

List of Publications by Year
in descending order

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109 papers	5,000 citations	71102 41 h-index	106344 65 g-index
109 all docs	109 docs citations	109 times ranked	5550 citing authors

#	Article	IF	Citations
1	A Robust Ionâ€Conductive Biopolymer as a Binder for Si Anodes of Lithiumâ€Ion Batteries. Advanced Functional Materials, 2015, 25, 3599-3605.	14.9	329
2	Water Soluble Binder, an Electrochemical Performance Booster for Electrode Materials with High Energy Density. Advanced Energy Materials, 2017, 7, 1701185.	19.5	248
3	Synthesis of single crystalline hexagonal nanobricks of LiNi1/3Co1/3Mn1/3O2 with high percentage of exposed {010} active facets as high rate performance cathode material for lithium-ion battery. Journal of Materials Chemistry A, 2013, 1, 3860.	10.3	195
4	Structure Design and Performance Tuning of Nanomaterials for Electrochemical Energy Conversion and Storage. Accounts of Chemical Research, 2016, 49, 2569-2577.	15.6	131
5	Graphitized porous carbon materials with high sulfur loading for lithium-sulfur batteries. Nano Energy, 2017, 32, 503-510.	16.0	118
6	XPS and ToF-SIMS study of Snâ€“Co alloy thin films as anode for lithium ion battery. Journal of Power Sources, 2010, 195, 8251-8257.	7.8	111
7	Layered/spinel heterostructured Li-rich materials synthesized by a one-step solvothermal strategy with enhanced electrochemical performance for Li-ion batteries. Journal of Materials Chemistry A, 2016, 4, 257-263.	10.3	111
8	Ultralowâ€Strain Znâ€Substituted Layered Oxide Cathode with Suppressed P2â€“O2 Transition for Stable Sodium Ion Storage. Advanced Functional Materials, 2020, 30, 1910327.	14.9	110
9	Cu²⁺ Dual-Doped Layer-Tunnel Hybrid Na_{0.6}Mn_{1â€“x}Cu_xO₂ as a Cathode of Sodium-Ion Battery with Enhanced Structure Stability, Electrochemical Property, and Air Stability. ACS Applied Materials & Interfaces, 2018, 10, 10147-10156.	8.0	98
10	Facile Synthesis of The Li-Rich Layered Oxide Li_{1.23}Ni_{0.09}Co_{0.12}Mn_{0.56}O₂ with Superior Lithium Storage Performance and New Insights into Structural Transformation of the Layered Oxide Material during Chargeâ€“Discharge Cycle: In Situ XRD Characterization. ACS Applied Materials & Interfaces, 2014, 6, 5516-5524.	8.0	96
11	Facile Synthesis of Hierarchical Micro/Nanostructured MnO Material and Its Excellent Lithium Storage Property and High Performance as Anode in a MnO/LiNi_{0.5}Mn_{1.5}O_{4-Î´} Lithium Ion Battery. ACS Applied Materials & Interfaces, 2013, 5, 6316-6323.	8.0	91
12	XPS and ToF-SIMS Study of Electrode Processes on Snâ€“Ni Alloy Anodes for Li-Ion Batteries. Journal of Physical Chemistry C, 2011, 115, 7012-7018.	3.1	89
13	A special enabler for boosting cyclic life and rate capability of LiNi0.8Co0.1Mn0.1O2: Green and simple additive. Nano Energy, 2019, 65, 104084.	16.0	88
14	Suppressing the voltage-fading of layered lithium-rich cathode materials via an aqueous binder for Li-ion batteries. Chemical Communications, 2016, 52, 4683-4686.	4.1	85
15	Synergetic Effect of Ru and NiO in the Electrocatalytic Decomposition of Li₂CO₃ to Enhance the Performance of a Li-CO₂/O₂ Battery. ACS Catalysis, 2020, 10, 1640-1651.	11.2	85
16	Engineering the interface between LiCoO₂ and Li₁₀GeP₂S₁₂ solid electrolytes with an ultrathin Li₂CoTi₃O₈ interlayer to boost the performance of all-solid-state batteries. Energy and Environmental Science, 2021, 14, 437-450.	30.8	82
17	Studies of the Interfacial Properties of an Electroplated Sn Thin Film Electrode/Electrolyte Using in Situ MFTIRS and EQCM. Langmuir, 2007, 23, 13174-13180.	3.5	79
18	Layered/Spinel Heterostructured and Hierarchical Micro/Nanostructured Li-Rich Cathode Materials with Enhanced Electrochemical Properties for Li-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 21065-21070.	8.0	79

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19	Origin of Structural Evolution in Capacity Degradation for Overcharged NMC622 via Operando Coupled Investigation. ACS Applied Materials & Interfaces, 2017, 9, 24731-24742.	8.0	78
20	Synthesis and Operando Sodiation Mechanistic Study of Nitrogenâ€Doped Porous Carbon Coated Bimetallic Sulfide Hollow Nanocubes as Advanced Sodium Ion Battery Anode. Advanced Energy Materials, 2019, 9, 1902312.	19.5	74
21	Tuning Electrochemical Properties of Li-Rich Layered Oxide Cathodes by Adjusting Co/Ni Ratios and Mechanism Investigation Using in situ X-ray Diffraction and Online Continuous Flow Differential Electrochemical Mass Spectrometry. ACS Applied Materials & Interfaces, 2018, 10, 12666-12677.	8.0	72
22	Three-dimensional nanoarchitecture of Snâ€“Sbâ€“Co alloy as an anode of lithium-ion batteries with excellent lithium storage performance. Journal of Materials Chemistry, 2012, 22, 17511.	6.7	70
23	Effect of synthetic routes on the rate performance of Li-rich layered Li_{1.2}Mn_{0.56}Ni_{0.12}Co_{0.12}O₂. Journal of Materials Chemistry A, 2015, 3, 5197-5203.	10.3	65
24	In Situ Multitechnical Investigation into Capacity Fading of High-Voltage LiNi_{0.5}Co_{0.2}Mn_{0.3}O₂. ACS Applied Materials & Interfaces, 2016, 8, 35323-35335.	8.0	63
25	New Insights into the Structure Changes and Interface Properties of Li₃VO₄ Anode for Lithium-Ion Batteries during the Initial Cycle by in-Situ Techniques. ACS Applied Materials & Interfaces, 2016, 8, 23739-23745.	8.0	61
26	A Natural Biopolymer Film as a Robust Protective Layer to Effectively Stabilize Lithiumâ€Metal Anodes. Small, 2018, 14, e1801054.	10.0	61
27	Entropy and crystal-facet modulation of P2-type layered cathodes for long-lasting sodium-based batteries. Nature Communications, 2022, 13, .	12.8	61
28	Mn-Based Cathode with Synergetic Layered-Tunnel Hybrid Structures and Their Enhanced Electrochemical Performance in Sodium Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 21267-21275.	8.0	60
29	Kinetics and Structural Changes of Li-Rich Layered Oxide 0.5Li₂MnO₃·0.5LiNi_{0.292}Co_{0.375}Mn_{0.333}O₂ Material Investigated by a Novel Technique Combining in Situ XRD and a Multipotential Step. ACS Applied Materials & Interfaces, 2014, 6, 13271-13279.	8.0	59
30	High-performance rechargeable Li-CO2/O2 battery with Ru/N-doped CNT catalyst. Chemical Engineering Journal, 2019, 363, 224-233.	12.7	58
31	New insight into structural transformation in Li-rich layered oxide during the initial charging. Journal of Materials Chemistry A, 2015, 3, 12220-12229.	10.3	57
32	Tuning the structure and property of nanostructured cathode materials of lithium ion and lithium sulfur batteries. Journal of Materials Chemistry A, 2014, 2, 19941-19962.	10.3	56
33	Origin and regulation of oxygen redox instability in high-voltage battery cathodes. Nature Energy, 2022, 7, 808-817.	39.5	55
34	Novel Sulfur Host Composed of Cobalt and Porous Graphitic Carbon Derived from MOFs for the High-Performance Liâ€“S Battery. ACS Applied Materials & Interfaces, 2018, 10, 13499-13508.	8.0	54
35	Cubic MnSâ€“FeS₂ Composites Derived from a Prussian Blue Analogue as Anode Materials for Sodium-Ion Batteries with Long-Term Cycle Stability. ACS Applied Materials & Interfaces, 2020, 12, 43624-43633.	8.0	53
36	Metal Organic Framework Nanorod Doped Solid Polymer Electrolyte with Decreased Crystallinity for Highâ€Performance Allâ€Solidâ€State Lithium Batteries. ChemElectroChem, 2020, 7, 1125-1134.	3.4	49

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37	A â€œBiconcave-Alleviatedâ€•Strategy to Construct Aspergillus niger-Derived Carbon/MoS₂ for Ultrastable Sodium Ion Storage. ACS Nano, 2021, 15, 13814-13825.	14.6	49
38	Si anode for next-generation lithium-ion battery. Current Opinion in Electrochemistry, 2019, 18, 46-54.	4.8	48
39	Probing into the working mechanism of Mg versus Co in enhancing the electrochemical performance of P2-Type layered composite for sodium-ion batteries. Nano Energy, 2019, 60, 162-170.	16.0	48
40	High-Energy Density Li metal Dual-Ion Battery with a Lithium Nitrate-Modified Carbonate-Based Electrolyte. ACS Applied Materials & Interfaces, 2019, 11, 18504-18510.	8.0	47
41	A hierarchical micro/nanostructured 0.5Li2MnO3Â·0.5LiMn0.4Ni0.3Co0.3O2 material synthesized by solvothermal route as high rate cathode of lithium ion battery. Electrochemistry Communications, 2014, 44, 54-58.	4.7	46
42	Superiority of the bi-phasic mixture of a tin-based alloy nanocomposite as the anode for lithium ion batteries. Journal of Materials Chemistry A, 2015, 3, 3794-3800.	10.3	43
43	Achieving high capacity retention in lithium-sulfur batteries with an aqueous binder. Electrochemistry Communications, 2016, 72, 79-82.	4.7	43
44	Synergistic Dualâ€Additive Electrolyte for Interphase Modification to Boost Cyclability of Layered Cathode for Sodium Ion Batteries. Advanced Functional Materials, 2021, 31, 2010500.	14.9	43
45	Nanoâ€/Microstructured Si/C Composite with High Tap Density as an Anode Material for Lithiumâ€Ion Batteries. ChemElectroChem, 2015, 2, 611-616.	3.4	42
46	Biomimetic micro cell cathode for high performance lithiumâ€“sulfur batteries. Nano Energy, 2020, 72, 104680.	16.0	42
47	Rigid and Flexible SEI Layer Formed Over a Crossâ€Linked Polymer for Enhanced Ultrathin Li Metal Anode Performance. Advanced Energy Materials, 2022, 12, .	19.5	42
48	Investigation and Suppression of Oxygen Release by LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂ Cathode under Overcharge Conditions. Advanced Energy Materials, 2022, 12, .	19.5	40
49	Fabrication of multi-shell coated silicon nanoparticles via in-situ electroless deposition as high performance anodes for lithium ion batteries. Journal of Energy Chemistry, 2020, 48, 160-168.	12.9	37
50	High-Voltage LiCoO₂ Material Encapsulated in a Li₄Ti₅O₁₂Ultrathin Layer by High-Speed Solid-Phase Coating Process. ACS Applied Energy Materials, 2020, 3, 2593-2603.	5.1	36
51	Improving the Electrochemical Property of Silicon Anodes through Hydrogen-Bonding Cross-Linked Thiourea-Based Polymeric Binders. ACS Applied Materials & Interfaces, 2021, 13, 639-649.	8.0	36
52	Novel MnOâ€“Graphite Dual-Ion Battery and New Insights into Its Reaction Mechanism during Initial Cycle by Operando Techniques. ACS Applied Materials & Interfaces, 2019, 11, 12570-12577.	8.0	35
53	Coreâ€“Shell Structured S@Co(OH)₂ with a Carbon-Nanofiber Interlayer: A Conductive Cathode with Suppressed Shuttling Effect for High-Performance Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2019, 11, 4065-4073.	8.0	35
54	Facile synthesis of hollow Cu2Sb@C coreâ€“shell nanoparticles as a superior anode material for lithium ion batteries. Journal of Materials Chemistry, 2011, 21, 18517.	6.7	32

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55	l-Histidine-assisted template-free hydrothermal synthesis of Î±-Fe2O3 porous multi-shelled hollow spheres with enhanced lithium storage properties. Journal of Materials Chemistry A, 2014, 2, 12361-12367.	10.3	32
56	A solid-state dendrite-free lithium-metal battery with improved electrode interphase and ion conductivity enhanced by a bifunctional solid plasticizer. Journal of Materials Chemistry A, 2019, 7, 19565-19572.	10.3	32
57	NiCo₂O₄/CNF Separator Modifiers for Trapping and Catalyzing Polysulfides for High-Performance Lithiumâ€“Sulfur Batteries with High Sulfur Loadings and Lean Electrolytes. ACS Sustainable Chemistry and Engineering, 2021, 9, 1804-1813.	6.7	31
58	Magnetic Behaviors of Mg- and Zn-Doped Fe₃O₄ Nanoparticles Estimated in Terms of Crystal Domain Size, Dielectric Response, and Application of Fe₃O₄/Carbon Nanotube Composites to Anodes for Lithium Ion Batteries. Journal of Physical Chemistry C, 2015, 119, 26128-26142.	3.1	29
59	Sodiumâ€Alginateâ€Based Binders for Lithiumâ€Rich Cathode Materials in Lithiumâ€Ion Batteries to Suppress Voltage and Capacity Fading. ChemElectroChem, 2018, 5, 1321-1329.	3.4	29
60	Ultrahigh sulfur content up to 93Âwt% encapsulated in multilayer nanoshell of V/V2O5 composite to suppress shuttle effect of lithiumâ€“sulfur battery with high-performance. Materials Today Energy, 2019, 13, 267-276.	4.7	29
61	Boosting Superior Lithium Storage Performance of Alloyâ€Based Anode Materials via Ultraconformal Sb Coatingâ€“Derived Favorable Solidâ€Electrolyte Interphase. Advanced Energy Materials, 2020, 10, 1903186.	19.5	29
62	In Situ Construction of an Ultrarobust and Lithiophilic Li-Enriched Liâ€“N Nanoshield for High-Performance Ge-Based Anode Materials. ACS Energy Letters, 2020, 5, 3490-3497.	17.4	29
63	Suppressing lithium dendrite growth by a synergetic effect of uniform nucleation and inhibition. Journal of Materials Chemistry A, 2020, 8, 4300-4307.	10.3	29
64	Efficient diffusion of superdense lithium via atomic channels for dendrite-free lithiumâ€“metal batteries. Energy and Environmental Science, 2022, 15, 196-205.	30.8	27
65	Aluminum-Based Metalâ€“Organic Frameworks Derived Al₂O₃-Loading Mesoporous Carbon as a Host Matrix for Lithium-Metal Anodes. ACS Applied Materials & Interfaces, 2019, 11, 47939-47947.	8.0	26
66	A fundamental understanding of the Fe/Ti doping induced structure formation process to realize controlled synthesis of layer-tunnel Na0.6MnO2 cathode. Nano Energy, 2020, 70, 104539.	16.0	26
67	Multivalent Amide-Hydrogen-Bond Supramolecular Binder Enhances the Cyclic Stability of Silicon-Based Anodes for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2021, 13, 22567-22576.	8.0	26
68	Succinic anhydride as a deposition-regulating additive for dendrite-free lithium metal anodes. Journal of Materials Chemistry A, 2021, 9, 17317-17326.	10.3	25
69	Stabilizing Liâ€“O₂ Batteries with Multifunctional Fluorinated Graphene. Nano Letters, 2022, 22, 4985-4992.	9.1	24
70	Enhancing Li ion transfer efficacy in PEO-based solid polymer electrolytes to promote cycling stability of Li-metal batteries. Journal of Materials Chemistry A, 2022, 10, 16087-16094.	10.3	24
71	One-step electrodeposition synthesis and electrochemical properties of Cu6Sn5 alloy anodes for lithium-ion batteries. Journal of Applied Electrochemistry, 2009, 39, 1323-1330.	2.9	23
72	Revealing of the Activation Pathway and Cathode Electrolyte Interphase Evolution of Li-Rich 0.5Li₂MnO₃·0.5LiNi_{0.3}Co_{0.3}Mn_{0.4}O₂ Cathode by in Situ Electrochemical Quartz Crystal Microbalance. ACS Applied Materials & Interfaces, 2019, 11, 16214-16222.	8.0	23

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73	LiCoO2 electrode/electrolyte interface of Li-ion batteries investigated by electrochemical impedance spectroscopy. Science in China Series B: Chemistry, 2007, 50, 776-783.	0.8	22
74	An electrochemical impedance spectroscopic study of the electronic and ionic transport properties of LiCoO2 cathode. Science Bulletin, 2007, 52, 1187-1195.	1.7	21
75	TiO2â€“MoS2 hybrid nano composites with 3D network architecture as binder-free flexible electrodes for lithium ion batteries. Journal of Materials Science: Materials in Electronics, 2017, 28, 9519-9527.	2.2	21
76	Co/Li-dual-site doping towards LiCoO₂ as a high-voltage, fast-charging, and long-cycling cathode material. Journal of Materials Chemistry A, 2022, 10, 5295-5304.	10.3	21
77	Synthesis of a novel tunnel Na_{0.5}K_{0.1}MnO₂ composite as a cathode for sodium ion batteries. RSC Advances, 2016, 6, 54404-54409.	3.6	20
78	Fabrication of Si Nanoparticles@Conductive Carbon Framework@Polymer Composite as Highâ€Arealâ€Capacity Anode of Lithiumâ€Ion Batteries. ChemElectroChem, 2018, 5, 3258-3265.	3.4	20
79	Enabling Lithium-Metal Anode Encapsulated in a 3D Carbon Skeleton with a Superior Rate Performance and Capacity Retention in Full Cells. ACS Applied Materials & Interfaces, 2018, 10, 35296-35305.	8.0	19
80	Lithiation/delithiation performance of Snâ€“Co alloy anode using rough Cu foil as current collector. Journal of Solid State Electrochemistry, 2009, 13, 1849-1858.	2.5	17
81	Investigation of interfacial processes in graphite thin film anodes of lithium-ion batteries by both in situ and ex situ infrared spectroscopy. Science China Chemistry, 2013, 56, 992-996.	8.2	16
82	Understanding the role of water-soluble guar gum binder in reducing capacity fading and voltage decay of Li-rich cathode for Li-ion batteries. Electrochimica Acta, 2020, 351, 136401.	5.2	16
83	Nonvolatile and Nonflammable Sulfolane-Based Electrolyte Achieving Effective and Safe Operation of the Liâ€“O₂ Battery in Open O₂ Environment. Nano Letters, 2022, 22, 815-821.	9.1	16
84	Studies of the first lithiation of graphite materials by electrochemical impedance spectroscopy. Science Bulletin, 2006, 51, 1055-1059.	1.7	15
85	Studies of Structure and Electrocatalytic Hydrogen Evolution on Electrodeposited Nanocrystalline Ni-Mo Alloy Electrodes. Transactions of the Institute of Metal Finishing, 2001, 79, 136-139.	1.3	14
86	Electrodeposition, Structure and Corrosion Resistance of Nanocrystalline Niâ€W Alloy. Chinese Journal of Chemistry, 2004, 22, 228-231.	4.9	14
87	Influence of Carbonate Solvents on Solid Electrolyte Interphase Composition over Si Electrodes Monitored by In Situ and Ex Situ Spectroscopies. ACS Omega, 2021, 6, 27335-27350.	3.5	14
88	Improving the Electrochemical Performance of Li_{1.14}Ni_{0.18}Mn_{0.62}O₂ by Modulating Structure Defects via a Molten Salt Method. ChemElectroChem, 2016, 3, 98-104.	3.4	13
89	A Synergistic Effect in a Composite Cathode Consisting of Spinel and Layered Structures To Increase the Electrochemical Performance for Li-Ion Batteries. Journal of Physical Chemistry C, 2016, 120, 25647-25656.	3.1	13
90	Low temperature synthesis of LiNiO2@LiCoO2 as cathode materials for lithium ion batteries. Journal of Solid State Electrochemistry, 2010, 14, 1117-1124.	2.5	12

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91	Submicro-sized Siâ€“Ge solid solutions with high capacity and long cyclability for lithium-ion batteries. Journal of Materials Research, 2018, 33, 1553-1564.	2.6	11
92	High Cycling Performance Liâ€S Battery via Fenugreek Gum Binder Through Chemical Bonding of the Binder with Polysulfides in Nanosulfur@CNFs Cathode. ChemistrySelect, 2020, 5, 8969-8979.	1.5	11
93	Insights into the Li incorporation effect in Ni/Co-free P2-type Na_{0.6}Mn_{0.8}Cu_{0.2}O₂ for sodium-ion batteries. Journal of Materials Chemistry A, 2020, 8, 22346-22355.	10.3	10
94	Electrodeposition and Properties of an Amorphous Ni-W-B Alloy before and after Heat Treatment. Chinese Journal of Chemistry, 2006, 24, 114-118.	4.9	9
95	Layered Li_{1.3}Mn_{0.58}Ni_{0.12}Co_{0.11}O_{2+Î´} Cathode Material for Lithiumâ€ion Batteries with High Reversible Capacity. ChemElectroChem, 2016, 3, 2027-2030.	3.4	9
96	Sulfur Microspheres Encapsulated in Porous Silverâ€Based Shell with Superior Performance for Lithiumâ€Sulfur Batteries. ChemElectroChem, 2018, 5, 1683-1690.	3.4	9
97	Amidinothiourea as a new deposition-regulating additive for dendrite-free lithium metal anodes. Chemical Communications, 2021, 57, 10055-10058.	4.1	9
98	Influence of Chloride and PEG on Electrochemical Nucleation of Copper. Transactions of the Institute of Metal Finishing, 2002, 80, 183-186.	1.3	8
99	RuO2 nanoparticles supported on Ni and N co-doped carbon nanotubes as an efficient bifunctional electrocatalyst of lithium-oxygen battery. Science China Materials, 2021, 64, 2397-2408.	6.3	8
100	Aluminum-sulfur composites for Li S batteries with a high-rate performance. Composites Part B: Engineering, 2019, 164, 740-746.	12.0	7
101	Formulating a New Electrolyte: Synergy between Low-Polar and Non-polar Solvents in Tailoring the Solid Electrolyte Interface for the Silicon Anode. ACS Applied Materials & Interfaces, 2021, 13, 55700-55711.	8.0	7
102	In Operando Investigation of the Structural Evolution during Calcination and Corresponding Enhanced Performance of Three-Dimensional Na₂Ti₆O₁₃@Câ€“N Hierarchical Microflowers. Industrial & Engineering Chemistry Research, 2018, 57, 17430-17436.	3.7	5
103	A novel high-energy-density lithium-free anode dual-ion battery and in situ revealing the interface structure evolution. Chemical Science, 2022, 13, 4058-4069.	7.4	5
104	Regulating the Architecture of a Solid Electrolyte Interface on a Li-Metal Anode of a Liâ€“O₂ Battery by a Dithiobiuret Additive. , 2022, 4, 682-691.		5
105	A Study on the Effect of Bath Composition on the Internal Stress of a Palladium Electrodeposit. Transactions of the Institute of Metal Finishing, 1998, 76, 238-240.	1.3	4
106	Customizing Multifunctional Sulfur Host Materials Via a General Anionâ€Exchange Process with Metalâ€“Organic Solid. Advanced Functional Materials, 2021, 31, 2104513.	14.9	4
107	Copper Substitution in P2-Type Sodium Layered Oxide To Mitigate Phase Transition and Enhance Cyclability of Sodium-Ion Batteries. ACS Applied Materials & Interfaces, 2022, 14, 29813-29821.	8.0	4
108	Study on Some Properties of the Electrolyte Solution in the Electrodeposition of Palladium. Transactions of the Institute of Metal Finishing, 1999, 77, 103-105.	1.3	2

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109	Reducing Safety Hazards by Optimizing the Morphology of the LiNi_{0.5}Co_{0.25}Mn_{0.25}O₂ Cathode Material under Abuse Conditions. ACS Applied Energy Materials, 0, , .	5.1	1