Xuning Feng

List of Publications by Year in descending order

143 papers	15,524 citations	25031 57 h-index	17588 121 g-index
144 all docs	144 docs citations	144 times ranked	5811 citing authors

#	Article	IF	Citations
1	Thermal runaway mechanism of lithium ion battery for electric vehicles: A review. Energy Storage Materials, 2018, 10, 246-267.	18.0	1,939
2	A review on the key issues of the lithium ion battery degradation among the whole life cycle. ETransportation, 2019, 1, 100005.	14.8	854
3	Lithium-ion battery fast charging: A review. ETransportation, 2019, 1, 100011.	14.8	835
4	Mitigating Thermal Runaway of Lithium-Ion Batteries. Joule, 2020, 4, 743-770.	24.0	676
5	Thermal runaway features of large format prismatic lithium ion battery using extended volume accelerating rate calorimetry. Journal of Power Sources, 2014, 255, 294-301.	7.8	591
6	Thermal Runaway of Lithium-Ion Batteries without Internal Short Circuit. Joule, 2018, 2, 2047-2064.	24.0	442
7	Characterization of penetration induced thermal runaway propagation process within a large format lithium ion battery module. Journal of Power Sources, 2015, 275, 261-273.	7.8	372
8	The Co-estimation of State of Charge, State of Health, and State of Function for Lithium-Ion Batteries in Electric Vehicles. IEEE Transactions on Vehicular Technology, 2018, 67, 92-103.	6.3	369
9	Investigating the thermal runaway mechanisms of lithium-ion batteries based on thermal analysis database. Applied Energy, 2019, 246, 53-64.	10.1	358
10	An electrochemical-thermal coupled overcharge-to-thermal-runaway model for lithium ion battery. Journal of Power Sources, 2017, 364, 328-340.	7.8	294
11	Thermal runaway propagation model for designing a safer battery pack with 25 Ah LiNi Co Mn O2 large format lithium ion battery. Applied Energy, 2015, 154, 74-91.	10.1	293
12	A 3D thermal runaway propagation model for a large format lithium ion battery module. Energy, 2016, 115, 194-208.	8.8	279
13	Online State-of-Health Estimation for Li-Ion Battery Using Partial Charging Segment Based on Support Vector Machine. IEEE Transactions on Vehicular Technology, 2019, 68, 8583-8592.	6.3	265
14	Investigating the relationship between internal short circuit and thermal runaway of lithium-ion batteries under thermal abuse condition. Energy Storage Materials, 2021, 34, 563-573.	18.0	264
15	Online internal short circuit detection for a large format lithium ion battery. Applied Energy, 2016, 161, 168-180.	10.1	251
16	Low temperature aging mechanism identification and lithium deposition in a large format lithium iron phosphate battery for different charge profiles. Journal of Power Sources, 2015, 286, 309-320.	7.8	246
17	Model-based thermal runaway prediction of lithium-ion batteries from kinetics analysis of cell components. Applied Energy, 2018, 228, 633-644.	10.1	241
18	State-of-health monitoring of lithium-ion battery modules and packs via incremental capacity peak tracking. Applied Energy, 2016, 180, 360-368.	10.1	235

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19	A comparative investigation of aging effects on thermal runaway behavior of lithium-ion batteries. ETransportation, 2019, 2, 100034.	14.8	230
20	Overcharge-induced capacity fading analysis for large format lithium-ion batteries with Li Ni1/3Co1/3Mn1/3O2+ Li Mn2O4 composite cathode. Journal of Power Sources, 2015, 279, 626-635.	7.8	197
21	Internal short circuit detection for battery pack using equivalent parameter and consistency method. Journal of Power Sources, 2015, 294, 272-283.	7.8	191
22	A dynamic capacity degradation model and its applications considering varying load for a large format Li-ion battery. Applied Energy, 2016, 165, 48-59.	10.1	170
23	Using probability density function to evaluate the state of health ofÂlithium-ion batteries. Journal of Power Sources, 2013, 232, 209-218.	7.8	169
24	Mechanism, modeling, detection, and prevention of the internal short circuit in lithium-ion batteries: Recent advances and perspectives. Energy Storage Materials, 2021, 35, 470-499.	18.0	169
25	Detecting the internal short circuit in large-format lithium-ion battery using model-based fault-diagnosis algorithm. Journal of Energy Storage, 2018, 18, 26-39.	8.1	166
26	Overcharge behaviors and failure mechanism of lithium-ion batteries under different test conditions. Applied Energy, 2019, 250, 323-332.	10.1	164
27	Mechanism of the entire overdischarge process and overdischarge-induced internal short circuit in lithium-ion batteries. Scientific Reports, 2016, 6, 30248.	3.3	153
28	Investigation of Lithium Plating-Stripping Process in Li-Ion Batteries at Low Temperature Using an Electrochemical Model. Journal of the Electrochemical Society, 2018, 165, A2167-A2178.	2.9	153
29	Thermal Runaway Triggered by Plated Lithium on the Anode after Fast Charging. ACS Applied Materials & Interfaces, 2019, 11, 46839-46850.	8.0	144
30	Characterization of large format lithium ion battery exposed to extremely high temperature. Journal of Power Sources, 2014, 272, 457-467.	7.8	142
31	Immersion cooling for lithium-ion batteries â€“ A review. Journal of Power Sources, 2022, 525, 231094.	7.8	142
32	Probing the heat sources during thermal runaway process by thermal analysis of different battery chemistries. Journal of Power Sources, 2018, 378, 527-536.	7.8	137
33	Thermal runaway of Lithium-ion batteries employing LiN(SO2F)2-based concentrated electrolytes. Nature Communications, 2020, 11, 5100.	12.8	133
34	Challenges and opportunities toward fast-charging of lithium-ion batteries. Journal of Energy Storage, 2020, 32, 101837.	8.1	127
35	The Application of Data-Driven Methods and Physics-Based Learning for Improving Battery Safety. Joule, 2021, 5, 316-329.	24.0	123
36	Thermal runaway mechanism of lithium-ion battery with LiNi0.8Mn0.1Co0.1O2 cathode materials. Nano Energy, 2021, 85, 105878.	16.0	116

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37	Non-destructive fast charging algorithm of lithium-ion batteries based on the control-oriented electrochemical model. Applied Energy, 2017, 204, 1240-1250.	10.1	106
38	Degradation mechanisms of high capacity 18650 cells containing Si-graphite anode and nickel-rich NMC cathode. Electrochimica Acta, 2019, 297, 1109-1120.	5.2	105
39	A Coupled Electrochemical-Thermal Failure Model for Predicting the Thermal Runaway Behavior of Lithium-Ion Batteries. Journal of the Electrochemical Society, 2018, 165, A3748-A3765.	2.9	98
40	Turning waste into wealth: A systematic review on echelon utilization and material recycling of retired lithium-ion batteries. Energy Storage Materials, 2021, 40, 96-123.	18.0	97
41	Time Sequence Map for Interpreting the Thermal Runaway Mechanism of Lithium-Ion Batteries With LiNixCoyMnzO2 Cathode. Frontiers in Energy Research, 2018, 6, .	2.3	89
42	Thermal-responsive, super-strong, ultrathin firewalls for quenching thermal runaway in high-energy battery modules. Energy Storage Materials, 2021, 40, 329-336.	18.0	85
43	A comparative analysis on thermal runaway behavior of Li (Ni Co Mn) O2 battery with different nickel contents at cell and module level. Journal of Hazardous Materials, 2020, 393, 122361.	12.4	83
44	Model and experiments to investigate thermal runaway characterization of lithium-ion batteries induced by external heating method. Journal of Power Sources, 2021, 504, 230065.	7.8	82
45	Mechanisms for the evolution of cell variations within a LiNixCoyMnzO2/graphite lithium-ion battery pack caused by temperature non-uniformity. Journal of Cleaner Production, 2018, 205, 447-462.	9.3	80
46	Development of cathode-electrolyte-interphase for safer lithium batteries. Energy Storage Materials, 2021, 37, 77-86.	18.0	78
47	An experimental and analytical study of thermal runaway propagation in a large format lithium ion battery module with NCM pouch-cells in parallel. International Journal of Heat and Mass Transfer, 2019, 135, 93-103.	4.8	76
48	Analysis on the Fault Features for Internal Short Circuit Detection Using an Electrochemical-Thermal Coupled Model. Journal of the Electrochemical Society, 2018, 165, A155-A167.	2.9	75
49	Unlocking the self-supported thermal runaway of high-energy lithium-ion batteries. Energy Storage Materials, 2021, 39, 395-402.	18.0	74
50	Toward a high-voltage fast-charging pouch cell with TiO2 cathode coating and enhanced battery safety. Nano Energy, 2020, 71, 104643.	16.0	72
51	Virtual-battery based droop control and energy storage system size optimization of a DC microgrid for electric vehicle fast charging station. Applied Energy, 2020, 259, 114146.	10.1	71
52	A reliable approach of differentiating discrete sampled-data for battery diagnosis. ETransportation, 2020, 3, 100051.	14.8	71
53	Questions and Answers Relating to Lithium-Ion Battery Safety Issues. Cell Reports Physical Science, 2021, 2, 100285.	5.6	68
54	Fire and explosion characteristics of vent gas from lithium-ion batteries after thermal runaway: A comparative study. ETransportation, 2022, 13, 100190.	14.8	62

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55	Comparative study on substitute triggering approaches for internal short circuit in lithium-ion batteries. Applied Energy, 2020, 259, 114143.	10.1	61
56	Experimental study on thermal runaway propagation of lithium-ion battery modules with different parallel-series hybrid connections. Journal of Cleaner Production, 2021, 284, 124749.	9.3	61
57	Internal short circuit detection for lithium-ion battery pack with parallel-series hybrid connections. Journal of Cleaner Production, 2020, 255, 120277.	9.3	60
58	A review of the internal short circuit mechanism in lithiumâ€ion batteries: Inducement, detection and prevention. International Journal of Energy Research, 2021, 45, 15797-15831.	4.5	60
59	Key Characteristics for Thermal Runaway of Li-ion Batteries. Energy Procedia, 2019, 158, 4684-4689.	1.8	59
60	Highâ€Voltage and Highâ€Safety Practical Lithium Batteries with Ethylene Carbonateâ€Free Electrolyte. Advanced Energy Materials, 2021, 11, 2102299.	19.5	59
61	Multi-objective optimization design for a double-direction liquid heating system-based Cell-to-Chassis battery module. International Journal of Heat and Mass Transfer, 2022, 183, 122184.	4.8	59
62	An Experimental Study on Preventing Thermal Runaway Propagation in Lithium-Ion Battery Module Using Aerogel and Liquid Cooling Plate Together. Fire Technology, 2020, 56, 2579-2602.	3.0	58
63	Origin and regulation of oxygen redox instability in high-voltage battery cathodes. Nature Energy, 2022, 7, 808-817.	39.5	55
64	Remaining discharge energy estimation for lithium-ion batteries based on future load prediction considering temperature and ageing effects. Energy, 2022, 238, 121754.	8.8	52
65	Investigation of thermal runaway propagation characteristics of lithium-ion battery modules under different trigger modes. International Journal of Heat and Mass Transfer, 2021, 171, 121080.	4.8	50
66	In-built ultraconformal interphases enable high-safety practical lithium batteries. Energy Storage Materials, 2021, 43, 248-257.	18.0	49
67	Investigating the thermal runaway features of lithium-ion batteries using a thermal resistance network model. Applied Energy, 2021, 295, 117038.	10.1	48
68	Internal short circuit evaluation and corresponding failure mode analysis for lithium-ion batteries. Journal of Energy Chemistry, 2021, 61, 269-280.	12.9	48
69	A Comparative Study of Charging Voltage Curve Analysis and State of Health Estimation of Lithium-ion Batteries in Electric Vehicle. Automotive Innovation, 2019, 2, 263-275.	5.1	47
70	Cloud-based health-conscious energy management of hybrid battery systems in electric vehicles with deep reinforcement learning. Applied Energy, 2021, 293, 116977.	10.1	47
71	Influence of aging paths on the thermal runaway features of lithium-ion batteries in accelerating rate calorimetry tests. International Journal of Electrochemical Science, 2019, 14, 44-58.	1.3	46
72	Synergistic effect of insulation and liquid cooling on mitigating the thermal runaway propagation in lithium-ion battery module. Applied Thermal Engineering, 2021, 199, 117521.	6.0	46

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73	A control-oriented electrochemical model for lithium-ion battery. Part II: Parameter identification based on reference electrode. Journal of Energy Storage, 2020, 27, 101101.	8.1	45
74	Internal temperature detection of thermal runaway in lithium-ion cells tested by extended-volume accelerating rate calorimetry. Journal of Energy Storage, 2020, 31, 101670.	8.1	45
75	Physics-based fractional-order model with simplified solid phase diffusion of lithium-ion battery. Journal of Energy Storage, 2020, 30, 101404.	8.1	44
76	Micro-Short-Circuit Cell Fault Identification Method for Lithium-Ion Battery Packs Based on Mutual Information. IEEE Transactions on Industrial Electronics, 2021, 68, 4373-4381.	7.9	43
77	Multi-objective optimization design and experimental investigation for a parallel liquid cooling-based Lithium-ion battery module under fast charging. Applied Thermal Engineering, 2022, 211, 118503.	6.0	41
78	Heating power and heating energy effect on the thermal runaway propagation characteristics of lithium-ion battery module: Experiments and modeling. Applied Energy, 2022, 312, 118760.	10.1	40
79	Thermal runaway modeling of large format high-nickel/silicon-graphite lithium-ion batteries based on reaction sequence and kinetics. Applied Energy, 2022, 306, 117943.	10.1	38
80	Corrosion resistance mechanism of chromate conversion coated aluminium current collector in lithium-ion batteries. Corrosion Science, 2019, 158, 108100.	6.6	37
81	A method of cell-to-cell variation evaluation for battery packs in electric vehicles with charging cloud data. ETransportation, 2020, 6, 100077.	14.8	37
82	Error Analysis of the Model-Based State-of-Charge Observer for Lithium-Ion Batteries. IEEE Transactions on Vehicular Technology, 2018, 67, 8055-8064.	6.3	36
83	Durability comparison of four different types of high-power batteries in HEV and their degradation mechanism analysis. Applied Energy, 2016, 179, 1123-1130.	10.1	35
84	An experimental study on the thermal characteristics of the Cell-To-Pack system. Energy, 2021, 227, 120338.	8.8	34
85	Foreign matter defect battery and sudden spontaneous combustion. ETransportation, 2022, 12, 100170.	14.8	34
86	Incremental Capacity Analysis on Commercial Lithium-Ion Batteries Using Support Vector Regression: A Parametric Study. Energies, 2018, 11, 2323.	3.1	33
87	Thermal runaway front in failure propagation of long-shape lithium-ion battery. International Journal of Heat and Mass Transfer, 2022, 182, 121928.	4.8	31
88	Battery remaining discharge energy estimation based on prediction of future operating conditions. Journal of Energy Storage, 2019, 25, 100836.	8.1	30
89	Errors in the reference electrode measurements in real lithium-ion batteries. Journal of Power Sources, 2021, 481, 228933.	7.8	30
90	Battery eruption triggered by plated lithium on an anode during thermal runaway after fast charging. Energy, 2022, 239, 122097.	8.8	30

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91	Thermal-Switchable, Trifunctional Ceramicâ€“Hydrogel Nanocomposites Enable Full-Lifecycle Security in Practical Battery Systems. ACS Nano, 2022, 16, 10729-10741.	14.6	30
92	An experimental analysis on thermal runaway and its propagation in Cell-to-Pack lithium-ion batteries. Applied Thermal Engineering, 2022, 211, 118418.	6.0	29
93	A sequential capacity estimation for the lithium-ion batteries combining incremental capacity curve and discrete Arrhenius fading model. Journal of Power Sources, 2021, 484, 229248.	7.8	28
94	Testing Lithium-Ion Battery with the Internal Reference Electrode: An Insight into the Blocking Effect. Journal of the Electrochemical Society, 2018, 165, A3240-A3248.	2.9	27
95	Theoretical and experimental analysis of the lithium-ion battery thermal runaway process based on the internal combustion engine combustion theory. Energy Conversion and Management, 2019, 185, 211-222.	9.2	27
96	Volume Deformation of Large-Format Lithium Ion Batteries under Different Degradation Paths. Journal of the Electrochemical Society, 2019, 166, A4106-A4114.	2.9	27
97	Fault Identification and Quantitative Diagnosis Method for Series-Connected Lithium-Ion Battery Packs Based on Capacity Estimation. IEEE Transactions on Industrial Electronics, 2022, 69, 3059-3067.	7.9	27
98	Drive circuitry of an electric vehicle enabling rapid heating of the battery pack at low temperatures. IScience, 2021, 24, 101921.	4.1	26
99	Dynamic thermophysical modeling of thermal runaway propagation and parametric sensitivity analysis for large format lithium-ion battery modules. Journal of Power Sources, 2022, 520, 230724.	7.8	25
100	Supramolecular â€œflame-retardantâ€•electrolyte enables safe and stable cycling of lithium-ion batteries. Energy Storage Materials, 2022, 45, 182-190.	18.0	25
101	Investigation for the effect of side plates on thermal runaway propagation characteristics in battery modules. Applied Thermal Engineering, 2022, 201, 117774.	6.0	23
102	Determination of the Differential Capacity of Lithium-Ion Batteries by the Deconvolution of Electrochemical Impedance Spectra. Energies, 2020, 13, 915.	3.1	22
103	Determination of the battery pack capacity considering the estimation error using a Capacityâ€“Quantity diagram. Applied Energy, 2016, 177, 384-392.	10.1	21
104	Preliminary Study on the Mechanism of Lithium Ion Battery Pack under Water Immersion. ECS Transactions, 2017, 77, 209-216.	0.5	21
105	Thermal kinetics comparison of delithiated Li[Ni Co Mn]O2 cathodes. Journal of Power Sources, 2021, 514, 230582.	7.8	21
106	A graphical model for evaluating the status of series-connected lithium-ion battery pack. International Journal of Energy Research, 2019, 43, 749-766.	4.5	20
107	Overcharge durability of Li4Ti5O12 based lithium-ion batteries at low temperature. Journal of Energy Storage, 2018, 19, 302-310.	8.1	19
108	Thermal Runaway of Lithiumâ€Ion Batteries Employing Flameâ€Retardant Fluorinated Electrolytes. Energy and Environmental Materials, 2023, 6, .	12.8	19

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109	Multi-objective optimization of side plates in a large format battery module to mitigate thermal runaway propagation. International Journal of Heat and Mass Transfer, 2022, 186, 122395.	4.8	19
110	Thermal runaway modeling of LiNi0.6Mn0.2Co0.2O2/graphite batteries under different states of charge. Journal of Energy Storage, 2022, 49, 104090.	8.1	19
111	Battery Internal Short Circuit Detection. ECS Transactions, 2017, 77, 217-223.	0.5	18
112	Rule-based fault diagnosis of hall sensors and fault-tolerant control of PMSM. Chinese Journal of Mechanical Engineering (English Edition), 2013, 26, 813-822.	3.7	17
113	Experimental Investigation on the Feasibility of Heat Pipe-Based Thermal Management System to Prevent Thermal Runaway Propagation. Journal of Electrochemical Energy Conversion and Storage, 2019, 16, .	2.1	17
114	Online internal short circuit detection method considering equalization electric quantity for lithiumâ€ion battery pack in electric vehicles. International Journal of Energy Research, 2021, 45, 7326-7340.	4.5	17
115	A decomposed electrode model for real-time anode potential observation of lithium-ion batteries. Journal of Power Sources, 2021, 513, 230529.	7.8	17
116	Dimensionless normalized concentration based thermal-electric regression model for the thermal runaway of lithium-ion batteries. Journal of Power Sources, 2022, 521, 230958.	7.8	17
117	Progress review of US-China joint research on advanced technologies for plug-in electric vehicles. Science China Technological Sciences, 2018, 61, 1431-1445.	4.0	16
118	Thermal Runaway Suppression of High-Energy Lithium-Ion Batteries by Designing the Stable Interphase. Journal of the Electrochemical Society, 2021, 168, 090563.	2.9	16
119	Novel non-destructive detection methods of lithium plating in commercial lithium-ion batteries under dynamic discharging conditions. Journal of Power Sources, 2022, 524, 231075.	7.8	16
120	Parameter identification of fractionalâ€order model with transfer learning for aging lithiumâ€ion batteries. International Journal of Energy Research, 2021, 45, 12825-12837.	4.5	14
121	Synergistic Dual-Salt Electrolyte for Safe and High-Voltage LiNi_{0.8}Co_{0.1}Mn_{0.1}O₂//Graphite Pouch Cells. ACS Applied Materials & Interfaces, 2022, 14, 10467-10477.	8.0	14
122	Modeling of Lithium plating in lithium ion batteries based on Monte Carlo method. Journal of Power Sources, 2022, 541, 231568.	7.8	14
123	Research on a battery test profile based on road test data from hybrid fuel cell buses. Journal of Power Sources, 2012, 209, 30-39.	7.8	13
124	Thermal oxidation characteristics for smoke particles from an abused prismatic Li(Ni0.6Co0.2Mn0.2)O2 battery. Journal of Energy Storage, 2021, 39, 102639.	8.1	12
125	A Test Approach for Evaluating the Safety Considering Thermal Runaway Propagation within the Battery Pack. ECS Transactions, 2017, 77, 225-236.	0.5	11
126	Comparison of the Overcharge Behaviors of Lithium-ion Batteries Under Different Test Conditions. Energy Procedia, 2019, 158, 4921-4926.	1.8	11

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127	In-situ thermography revealing the evolution of internal short circuit of lithium-ion batteries. Journal of Power Sources, 2022, 540, 231602.	7.8	11
128	Thermal Runaway Propagation Assessment of Different Battery Pack Designs Using the TF5 Draft as Framework. Journal of the Electrochemical Society, 2019, 166, A1653-A1659.	2.9	10
129	Optimal charge current of lithium ion battery. Energy Procedia, 2017, 142, 1867-1873.	1.8	8
130	Ultra-high temperature reaction mechanism of LiNi0.8Co0.1Mn0.1O2 electrode. Journal of Energy Storage, 2022, 52, 104870.	8.1	8
131	Degradation Identification of Individual Components in the Li y Ni 1/3 Co 1/3 Mn 1/3 O 2 -Li y Mn 2 O 4 Blended Cathode for Large Format Lithium Ion Battery. Energy Procedia, 2017, 105, 2698-2704.	1.8	6
132	Parameter-independent error correction for potential measurements by reference electrode in lithium-ion batteries. Journal of Energy Chemistry, 2022, 67, 34-45.	12.9	5
133	An Experimental Study on Thermal Runaway Behavior for High-Capacity Li(Ni0.8Co0.1Mn0.1)O2 Pouch Cells at Different State of Charges. Journal of Electrochemical Energy Conversion and Storage, 2021, 18, .	2.1	5
134	Research on simplification of simulating the heat conduction in the lithium-ion battery core. , 2013, , .		4
135	Battery SOH Management Research in the US-China Clean Energy Research Center-Clean Vehicle Consortium. IFAC-PapersOnLine, 2015, 48, 448-453.	0.9	4
136	A novel fast estimation and regroup method of retired lithiumâ€ion battery cells. International Journal of Energy Research, 2020, 44, 11985-11997.	4.5	4
137	Investigation on Thermal Runaway of Li-Ion Cells Based on LiNi1/3Mn1/3Co1/3O2. Journal of Electrochemical Energy Conversion and Storage, 2021, 18, .	2.1	4
138	Thermal Runaway Propagation Within Module Consists of Large Format Li-Ion Cells. Lecture Notes in Electrical Engineering, 2016, , 117-123.	0.4	3
139	Experimental investigation of stateâ€ofâ€power measurement for lithiumâ€ion batteries. International Journal of Energy Research, 2021, 45, 7549-7560.	4.5	3
140	Equivalence of time and frequency domain modeling for lithium ion batteries. , 2021, , .		2
141	Online Weld Breakage Diagnosis for the Battery of Electric Vehicle: A Data-Driven Approach. , 2016, , .		1
142	Kinetic Monte Carlo Simulation of Lithium Dendrite Growth in Lithium-ion Battery. , 2021, , .		1
143	Research on Simplification of Simulating the Heat Conduction in the Lithium-ion Battery Core. World Electric Vehicle Journal, 2013, 6, 611-622.	3.0	0