

Future generations of cathode materials: an automotive

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Citation Report

#	ARTICLE	IF	CITATIONS
1	A Hierarchical Particle-Shell Architecture for Long-Term Cycle Stability of Li_2S Cathodes. <i>Advanced Materials</i> , 2015, 27, 5579-5586.	11.1	111
2	Investigating the Mg-Si Binary System via Combinatorial Sputter Deposition As High Energy Density Anodes for Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 20124-20133.	4.0	40
3	Advances in high-capacity Li_2MSiO_4 (M = Mn, Fe, Co, Ni, Al^{III}) cathode materials for lithium-ion batteries. <i>RSC Advances</i> , 2015, 5, 98666-98686.	1.7	63
4	Enabling Green Fabrication of Li-Ion Battery Electrodes by Electrophoretic Deposition: Growth of Thick Binder-Free Mesoporous TiO_2 -Carbon Anode Films. <i>Journal of the Electrochemical Society</i> , 2015, 162, D3013-D3018.	1.3	19
5	Review-“Electromobility: Batteries or Fuel Cells?. <i>Journal of the Electrochemical Society</i> , 2015, 162, A2605-A2622.	1.3	424
6	Effect of LiPF_6 concentration in $\text{Li}[\text{Ni}_0.4\text{Mn}_0.4\text{Co}_0.2]\text{O}_2/\text{graphite}$ pouch cells operated at 4.5ÅV. <i>Journal of Power Sources</i> , 2015, 300, 419-429.	4.0	32
7	PEDOT Encapsulated FeOF Nanorod Cathodes for High Energy Lithium-Ion Batteries. <i>Nano Letters</i> , 2015, 15, 7650-7656.	4.5	96
8	Unraveling the Degradation Process of $\text{LiNi}_{0.8}\text{Co}_{0.15}\text{Al}_{0.05}\text{O}_2$ Electrodes in Commercial Lithium Ion Batteries by Electronic Structure Investigations. <i>ACS Applied Materials & Interfaces</i> , 2015, 7, 19589-19600.	4.0	80
9	Spinel materials for Li-ion batteries: new insights obtained by <i>operando</i> neutron and synchrotron X-ray diffraction. <i>Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials</i> , 2015, 71, 688-701.	0.5	41
10	Aging Analysis of Graphite/ $\text{LiNi}_{1/3}\text{Mn}_{1/3}\text{Co}_{1/3}\text{O}_2$ Cells Using XRD, PGAA, and AC Impedance. <i>Journal of the Electrochemical Society</i> , 2015, 162, A2737-A2746.	1.3	213
11	Operando Lithium Dynamics in the Li-Rich Layered Oxide Cathode Material via Neutron Diffraction. <i>Advanced Energy Materials</i> , 2016, 6, 1502143.	10.2	98
12	In-Situ Coating of $\text{Li}[\text{Ni}_{0.33}\text{Mn}_{0.33}\text{Co}_{0.33}]\text{O}_2$ Particles to Enable Aqueous Electrode Processing. <i>ChemSusChem</i> , 2016, 9, 1112-1117.	3.6	74
13	Liquid-feed flame spray pyrolysis as alternative synthesis for electrochemically active nano-sized $\text{Li}_2\text{MnSiO}_4$. <i>Translational Materials Research</i> , 2016, 3, 025001.	1.2	10
15	Changes of the balancing between anode and cathode due to fatigue in commercial lithium-ion cells. <i>Journal of Power Sources</i> , 2016, 317, 25-34.	4.0	43
16	Facile Synthesis of Carbon-Metal Fluoride Nanocomposites for Lithium-Ion Batteries. <i>Energy Technology</i> , 2016, 4, 201-211.	1.8	14
17	Performance and design considerations for lithium excess layered oxide positive electrode materials for lithium ion batteries. <i>Energy and Environmental Science</i> , 2016, 9, 1931-1954.	15.6	295
18	High-energy-density lithium-ion battery using a carbon-nanotube-Si composite anode and a compositionally graded $\text{Li}[\text{Ni}_{0.85}\text{Co}_{0.05}\text{Mn}_{0.10}]\text{O}_2$ cathode. <i>Energy and Environmental Science</i> , 2016, 9, 2152-2158.	15.6	269
19	Advanced carbon materials/olivine LiFePO_4 composites cathode for lithium ion batteries. <i>Journal of Power Sources</i> , 2016, 318, 93-112.	4.0	171

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20	Pomegranate-Structured Conversion-Reaction Cathode with a Built-in Li Source for High-Energy Li-Ion Batteries. ACS Nano, 2016, 10, 5567-5577.	7.3	88
21	Characterizing different types of lithium ion cells with an automated measurement system. Journal of Energy Storage, 2016, 7, 244-251.	3.9	9
22	Best Practice: Performance and Cost Evaluation of Lithium Ion Battery Active Materials with Special Emphasis on Energy Efficiency. Chemistry of Materials, 2016, 28, 7203-7217.	3.2	317
23	Silicon Doping of High Voltage Spinel LiNi _{0.5} Mn _{1.5} O ₄ towards Superior Electrochemical Performance of Lithium Ion Batteries. Electrochimica Acta, 2016, 213, 904-910.	2.6	34
24	In situ, operando measurements of rechargeable batteries. Current Opinion in Chemical Engineering, 2016, 13, 170-178.	3.8	23
25	Synthesis of LiNi _{0.5} Mn _{1.5} O ₄ Cathode Materials with Different Additives: Effects on Structural, Morphological and Electrochemical Properties. Journal of the Electrochemical Society, 2016, 163, A2103-A2108.	1.3	15
26	Influence of Battery Cell Components and Water on the Thermal and Chemical Stability of LiPF ₆ Based Lithium Ion Battery Electrolytes. Electrochimica Acta, 2016, 222, 1267-1271.	2.6	72
27	High Voltage LiNi _{0.5} Mn _{1.5} O ₄ /Li ₄ Ti ₅ O ₁₂ Lithium Ion Cells at Elevated Temperatures: Carbonate- versus Ionic Liquid-Based Electrolytes. ACS Applied Materials & Interfaces, 2016, 8, 25971-25978.	4.0	78
28	Mesoporous SiO ₂ /carbon hollow spheres applied towards a high rate-performance Li-battery anode. Inorganic Chemistry Frontiers, 2016, 3, 1398-1405.	3.0	32
29	Synthesis of Fe ₂ O ₃ /carbon nanocomposites as high capacity electrodes for next generation lithium ion batteries: a review. Journal of Materials Chemistry A, 2016, 4, 18223-18239.	5.2	85
30	Enabling High-Energy, High-Voltage Lithium-Ion Cells: Standardization of Coin-Cell Assembly, Electrochemical Testing, and Evaluation of Full Cells. Journal of the Electrochemical Society, 2016, 163, A2999-A3009.	1.3	95
31	Transition metal dissolution and deposition in Li-ion batteries investigated by operando X-ray absorption spectroscopy. Journal of Materials Chemistry A, 2016, 4, 18300-18305.	5.2	226
32	First-cycle defect evolution of Li ^x Ni _{1/3} Mn _{1/3} Co _{1/3} O ₂ lithium ion battery electrodes investigated by positron annihilation spectroscopy. Journal of Power Sources, 2016, 336, 224-230.	4.0	32
33	Learning from Overpotentials in Lithium Ion Batteries: A Case Study on the LiNi _{1/3} Co _{1/3} Mn _{1/3} O ₂ (NCM) Cathode. Journal of the Electrochemical Society, 2016, 163, A2943-A2950.	1.3	109
34	Consumption of Fluoroethylene Carbonate (FEC) on Si-C Composite Electrodes for Li-Ion Batteries. Journal of the Electrochemical Society, 2016, 163, A1705-A1716.	1.3	229
35	Kinetic Study of Parasitic Reactions in Lithium-Ion Batteries: A Case Study on LiNi _{0.6} Mn _{0.2} Co _{0.2} O ₂ . ACS Applied Materials & Interfaces, 2016, 8, 3446-3451.	4.0	88
36	In situ lithiated FeF ₃ /C nanocomposite as high energy conversion-reaction cathode for lithium-ion batteries. Journal of Power Sources, 2016, 307, 435-442.	4.0	64
37	Origin of H ₂ Evolution in LIBs: H ₂ O Reduction vs. Electrolyte Oxidation. Journal of the Electrochemical Society, 2016, 163, A798-A809.	1.3	262

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38	Development of a water based process for stable conversion cathodes on the basis of FeF ₃ . Journal of Power Sources, 2016, 313, 213-222.	4.0	39
39	Defect Physics and Chemistry in Layered Mixed Transition Metal Oxide Cathode Materials: (Ni,Co,Mn) vs (Ni,Co,Al). Chemistry of Materials, 2016, 28, 1325-1334.	3.2	78
40	Structural Changes in a Li-Rich 0.5Li ₂ MnO ₃ *0.5LiMn _{0.4} Ni _{0.4} Co _{0.2} O ₂ Cathode Material for Li-ion Batteries: A Local Perspective. Journal of the Electrochemical Society, 2016, 163, A811-A820.	1.3	21
41	Synthesis and electrochemical characterization of nano-sized Ag ₄ Sn particles as anode material for lithium-ion batteries. Electrochimica Acta, 2016, 196, 597-602.	2.6	17
42	Optimizing Areal Capacities through Understanding the Limitations of Lithium-Ion Electrodes. Journal of the Electrochemical Society, 2016, 163, A138-A149.	1.3	472
43	Understanding the effects of a multi-functionalized additive on the cathode-electrolyte interfacial stability of Ni-rich materials. Journal of Power Sources, 2016, 302, 431-438.	4.0	82
44	Rusted iron wire waste into high performance anode (Fe ₂ O ₃) for Li-ion batteries: an efficient waste management approach. Green Chemistry, 2016, 18, 1395-1404.	4.6	39
45	A New CuO-Fe ₂ O ₃ -Mesocarbon Microbeads Conversion Anode in a High-Performance Lithium-Ion Battery with a Li _{1.35} Ni _{0.48} Fe _{0.1} Mn _{1.72} O ₄ Spinel Cathode. ChemSusChem, 2017, 10, 1607-1615.	3.6	30
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47	Magnesium-based additives for the cathode slurry to enable high voltage application of lithium-ion batteries. Electrochimica Acta, 2017, 228, 9-17.	2.6	16
48	Quantification of preferred orientation in graphite electrodes for Li-ion batteries with a novel X-ray-diffraction-based method. Journal of Power Sources, 2017, 343, 338-344.	4.0	14
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50	Structural Transformations in High-Capacity Li ₂ Cu _{0.5} Ni _{0.5} O ₂ Cathodes. Chemistry of Materials, 2017, 29, 2997-3005.	3.2	21
51	Learning from Electrochemical Data: Simple Evaluation and Classification of LiMO ₂ -type-based Positive Electrodes for Li-ion Batteries. Energy Technology, 2017, 5, 1670-1679.	1.8	90
52	Aging behavior of lithium iron phosphate based 18650-type cells studied by in situ neutron diffraction. Journal of Power Sources, 2017, 345, 85-96.	4.0	58
53	Odyssey of Multivalent Cathode Materials: Open Questions and Future Challenges. Chemical Reviews, 2017, 117, 4287-4341.	23.0	914
54	Impact of morphological changes of LiNi _{1/3} Mn _{1/3} Co _{1/3} O ₂ on lithium-ion cathode performances. Journal of Power Sources, 2017, 346, 13-23.	4.0	27
55	A Step toward High-Energy Silicon-Based Thin Film Lithium Ion Batteries. ACS Nano, 2017, 11, 4731-4744.	7.3	178

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56	A critical review-promises and barriers of conversion electrodes for Li-ion batteries. Journal of Solid State Electrochemistry, 2017, 21, 1907-1923.	1.2	78
57	Oxygen Release and Its Effect on the Cycling Stability of $\text{LiNi}_{x}\text{Mn}_{y}\text{Co}_{z}\text{O}_{2}$ (NMC) Cathode Materials for Li-Ion Batteries. Journal of the Electrochemical Society, 2017, 164, A1361-A1377.	1.3	813
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59	Challenges Considering the Degradation of Cell Components in Commercial Lithium-Ion Cells: A Review and Evaluation of Present Systems. Topics in Current Chemistry, 2017, 375, 54.	3.0	24
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61	A review of Ni-based layered oxides for rechargeable Li-ion batteries. Journal of Materials Chemistry A, 2017, 5, 874-901.	5.2	394
62	An active core-shell nanoscale design for high voltage cathode of lithium storage devices. Journal of Power Sources, 2017, 360, 409-418.	4.0	21
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64	Toward Low-Cost, High-Energy Density, and High-Power Density Lithium-Ion Batteries. Jom, 2017, 69, 1484-1496.	0.9	186
65	Reduced-Graphene Oxide/Poly(acrylic acid) Aerogels as a Three-Dimensional Replacement for Metal-Foil Current Collectors in Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2017, 9, 22641-22651.	4.0	26
66	Electrochemical and structural study on $\text{LiMn}_{0.8}\text{Fe}_{0.2}\text{PO}_{4}$ and $\text{Mn}_{0.8}\text{Fe}_{0.2}\text{PO}_{4}$ battery cathodes: diffusion limited lithium transport. Journal of Solid State Electrochemistry, 2017, 21, 3221-3228.	1.2	0
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69	Lithium-ion batteries for sustainable energy storage: recent advances towards new cell configurations. Green Chemistry, 2017, 19, 3442-3467.	4.6	205
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71	Review—Practical Challenges Hindering the Development of Solid State Li Ion Batteries. Journal of the Electrochemical Society, 2017, 164, A1731-A1744.	1.3	536
72	<i>Operando</i> Monitoring of Early Ni-mediated Surface Reconstruction in Layered Lithiated NiCoMn Oxides. Journal of Physical Chemistry C, 2017, 121, 13481-13486.	1.5	101
73	Simulation of First-Charge Oxygen-Dimerization and Mn-Migration in Li-Rich Layered Oxides $\text{Li}_{2}\text{MnO}_{3}\text{A}$ ($1 \leq x \leq 1$) $\text{LiM}_{2}\text{O}_{2}$ and Implications for Voltage Fade. Journal of Physical Chemistry C, 2017, 121, 6492-6499.	1.5	26

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74	Investigating the Mechanism of Reversible Lithium Insertion into Anti-NASICON $\text{Fe}_2(\text{WO}_4)_3$. ACS Applied Materials & Interfaces, 2017, 9, 10813-10819.	4.0	16
75	Optimization of the properties of cathode materials based on lithium manganese silicate compounds using computer simulation. Glass Physics and Chemistry, 2017, 43, 106-110.	0.2	0
76	High Elastic Strain Directly Tunes the Hydrogen Evolution Reaction on Tungsten Carbide. Journal of Physical Chemistry C, 2017, 121, 6177-6183.	1.5	50
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78	Changing Established Belief on Capacity Fade Mechanisms: Thorough Investigation of $\text{LiNi}_{1/3}\text{Co}_{1/3}\text{Mn}_{1/3}\text{O}_2$ (NCM111) under High Voltage Conditions. Journal of Physical Chemistry C, 2017, 121, 1521-1529.	1.5	110
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81	Insight into the interaction between layered lithium-rich oxide and additive-containing electrolyte. Journal of Power Sources, 2017, 341, 348-356.	4.0	67
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84	Role of Crystal Symmetry in the Reversibility of Stacking-Sequence Changes in Layered Intercalation Electrodes. Nano Letters, 2017, 17, 7789-7795.	4.5	76
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89	Tetrafluoroterephthalonitrile: A Novel Electrolyte Additive for High-Voltage Lithium Cobalt Oxide/Graphite Battery. Electrochimica Acta, 2017, 256, 307-315.	2.6	31
90	Evaluating the effect of solid electrolyte interphase formers on lithium depth profiles of the solid electrolyte interphase layer and bulk electrode material in $\text{LiNi}_{0.4}\text{Mn}_{0.4}\text{Co}_{0.2}\text{O}_2$ /graphite pouch cells obtained with lithium nuclear reaction analysis. Journal of Energy Storage, 2017, 14, 106-111.	3.9	3
91	Influence of Inversion on Mg Mobility and Electrochemistry in Spinel. Chemistry of Materials, 2017, 29, 7918-7930.	3.2	75

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93	Highly Effective Solid Electrolyte Interphase-Forming Electrolyte Additive Enabling High Voltage Lithium-Ion Batteries. Chemistry of Materials, 2017, 29, 7733-7739.	3.2	41
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100	Ex situ XAS investigation of effect of binders on electrochemical performance of Li ₂ Fe(SO ₄) ₂ cathode. Journal of Materials Chemistry A, 2017, 5, 19963-19971.	5.2	4
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102	Computational Identification of a New Form of Li ₂ MnSiO ₄ for Battery Applications. Solid State Phenomena, 2017, 263, 160-164.	0.3	0
103	Future high-energy density anode materials from an automotive application perspective. Journal of Materials Chemistry A, 2017, 5, 17174-17198.	5.2	125
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108	Large scale green production of ultra-high capacity anode consisting of graphene encapsulated silicon nanoparticles. Journal of Materials Chemistry A, 2017, 5, 19126-19135.	5.2	60
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110	Evidence for Considerable Metal Cation Concentrations from Lithium Intercalation Compounds in the Nano-Bio Interface Gap. <i>Journal of Physical Chemistry C</i> , 2017, 121, 27473-27482.	1.5	13
111	Synthesis of Hierarchical Sisal-Like V_2O_5 with Exposed Stable {001} Facets as Long Life Cathode Materials for Advanced Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2017, 9, 43681-43687.	4.0	42
112	Mechanical and Structural Degradation of $LiNi_{0.8}Mn_{0.1}Co_{0.1}O_2$ Cathode in Li-Ion Batteries: An Experimental Study. <i>Journal of the Electrochemical Society</i> , 2017, 164, A3333-A3341.	1.3	134
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114	Advances in electrode materials for Li-based rechargeable batteries. <i>RSC Advances</i> , 2017, 7, 33789-33811.	1.7	30
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116	TiS_3 Magnesium Battery Material: Atomic-Scale Study of Maximum Capacity and Structural Behavior. <i>Journal of Physical Chemistry C</i> , 2017, 121, 15509-15515.	1.5	39
117	Engineering Redox Potential of Lithium Clusters for Electrode Material in Lithium-Ion Batteries. <i>Journal of Cluster Science</i> , 2017, 28, 2779-2793.	1.7	13
118	Conversion cathodes for rechargeable lithium and lithium-ion batteries. <i>Energy and Environmental Science</i> , 2017, 10, 435-459.	15.6	545
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120	Methods and Protocols for Electrochemical Energy Storage Materials Research. <i>Chemistry of Materials</i> , 2017, 29, 90-105.	3.2	141
121	Metal-semiconductor core-shell nanomaterials for energy applications. , 2017, , 99-132.		1
122	Understanding Mn-Based Intercalation Cathodes from Thermodynamics and Kinetics. <i>Crystals</i> , 2017, 7, 221.	1.0	13
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126	Atomic-scale understanding of non-stoichiometry effects on the electrochemical performance of Ni-rich cathode materials. <i>Journal of Power Sources</i> , 2018, 378, 750-758.	4.0	20
127	All-solid-state lithium-ion and lithium metal batteries "paving the way to large-scale production. <i>Journal of Power Sources</i> , 2018, 382, 160-175.	4.0	428
128	Lithium Oxalate as Capacity and Cycle-Life Enhancer in LNMO/Graphite and LNMO/SiC Full Cells. <i>Journal of the Electrochemical Society</i> , 2018, 165, A512-A524.	1.3	56

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129	A Lithium-Ion Battery using a 3D Array Nanostructured Graphene-Sulfur Cathode and a Silicon Oxide-Based Anode. <i>ChemSusChem</i> , 2018, 11, 1512-1520.	3.6	46
130	Elucidating anionic oxygen activity in lithium-rich layered oxides. <i>Nature Communications</i> , 2018, 9, 947.	5.8	241
131	Interfaces and Materials in Lithium Ion Batteries: Challenges for Theoretical Electrochemistry. <i>Topics in Current Chemistry</i> , 2018, 376, 16.	3.0	72
132	Vulcanized polymeric cathode material featuring a polyaniline skeleton for high-rate rechargeability and long-cycle stability lithium-sulfur batteries. <i>Electrochimica Acta</i> , 2018, 276, 111-117.	2.6	33
133	Facilitating the Operation of Lithium-Ion Cells with High-Nickel Layered Oxide Cathodes with a Small Dose of Aluminum. <i>Chemistry of Materials</i> , 2018, 30, 3101-3109.	3.2	119
134	Ethylenediamine-Enabled Sustainable Synthesis of Mesoporous Nanostructured Li ₂ FeSiO ₄ Particles from Fe(III) Aqueous Solution for Li-Ion Battery Application. <i>ACS Sustainable Chemistry and Engineering</i> , 2018, 6, 7458-7467.	3.2	14
135	Singlet oxygen evolution from layered transition metal oxide cathode materials and its implications for lithium-ion batteries. <i>Materials Today</i> , 2018, 21, 825-833.	8.3	307
136	Aging in 18650-type Li-ion cells examined with neutron diffraction, electrochemical analysis and physico-chemical modeling. <i>Journal of Energy Storage</i> , 2018, 17, 383-394.	3.9	28
137	Simple Green Synthesis and Electrochemical Performance of a New Fluorinated Carbonate as Additive for Lithium-Ion Batteries. <i>ChemElectroChem</i> , 2018, 5, 1415-1420.	1.7	5
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276	Synergy effects on blending Li-rich and classical layered cathode oxides with improved electrochemical performance. <i>Ceramics International</i> , 2019, 45, 15097-15107.	2.3	4
277	Study of Immersion of $\text{LiNi}_{0.5}\text{Mn}_{0.3}\text{Co}_{0.2}\text{O}_2$ Material in Water for Aqueous Processing of Positive Electrode for Li-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 18331-18341.	4.0	71
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279	Reversible self-discharge and calendar aging of 18650 nickel-rich, silicon-graphite lithium-ion cells. <i>Journal of Power Sources</i> , 2019, 425, 217-226.	4.0	79
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