

# Fundamental understanding and practical challenges of batteries

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Citation Report

#	ARTICLE	IF	CITATIONS
1	Mitigating oxygen release in anionic-redox-active cathode materials by cationic substitution through rational design. Journal of Materials Chemistry A, 2018, 6, 24651-24659.	10.3	18
2	A high-rate aqueous rechargeable zinc ion battery based on the VS <sub>4</sub> @rGO nanocomposite. Journal of Materials Chemistry A, 2018, 6, 23757-23765.	10.3	196
3	Cobalt-Free O <sub>2</sub> -Type Lithium-Rich Layered Oxides. Journal of the Electrochemical Society, 2018, 165, A3630-A3633.	2.9	32
4	Before Li Ion Batteries. Chemical Reviews, 2018, 118, 11433-11456.	47.7	1,492
5	Anionic Redox Activity in a Newly Zn-Doped Sodium Layered Oxide P <sub>2</sub> Na <sub>2/3</sub> Mn <sub>1-x</sub> Zn <sub>x</sub> O <sub>2</sub> (0 < x < 1). Journal of Materials Chemistry A, 2018, 6, 23757-23765.	10.3	196
6	Surface Doping to Enhance Structural Integrity and Performance of Li-Rich Layered Oxide. Advanced Energy Materials, 2018, 8, 1802105.	19.5	228
7	Direct Quantification of Anionic Redox over Long Cycling of Li-Rich NMC via Hard X-ray Photoemission Spectroscopy. ACS Energy Letters, 2018, 3, 2721-2728.	17.4	97
8	Rotating Ring Disk Electrode for Monitoring the Oxygen Release at High Potentials in Li-Rich Layered Oxides. Journal of the Electrochemical Society, 2018, 165, A3326-A3333.	2.9	6
9	Spectroscopic Signature of Oxidized Oxygen States in Peroxides. Journal of Physical Chemistry Letters, 2018, 9, 6378-6384.	4.6	80
10	Aegis of Lithium-Rich Cathode Materials via Heterostructured LiAlF <sub>4</sub> Coating for High-Performance Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 33260-33268.	8.0	74
11	Role of disorder in limiting the true multi-electron redox in $\mu$ -LiVOPO <sub>4</sub> . Journal of Materials Chemistry A, 2018, 6, 20669-20677.	10.3	21
12	Quantitative Analysis of Large Voltage Hysteresis of Lithium Excess Materials by Backstitch Charge and Discharge Method. Journal of the Electrochemical Society, 2018, 165, A2675-A2681.	2.9	4
13	Surface and Subsurface Reactions of Lithium Transition Metal Oxide Cathode Materials: An Overview of the Fundamental Origins and Remedying Approaches. Advanced Energy Materials, 2018, 8, 1802057.	19.5	207
14	Carbodiimides as energy materials: which directions for a reasonable future?. Dalton Transactions, 2018, 47, 10827-10832.	3.3	51
15	Manganese-Oxide-Based Electrode Materials for Energy Storage Applications: How Close Are We to the Theoretical Capacitance?. Advanced Materials, 2018, 30, e1802569.	21.0	94
16	Two-dimensional sulfur-doped Mn <sub>3</sub> O <sub>4</sub> quantum dots/reduced graphene oxide nanosheets as high-rate anode materials for lithium storage. Ceramics International, 2018, 44, 21734-21741.	4.8	14
17	Charge Transport in Single NCM Cathode Active Material Particles for Lithium-Ion Batteries Studied under Well-Defined Contact Conditions. ACS Energy Letters, 2019, 4, 2117-2123.	17.4	48
18	Fast chargeable P <sub>2</sub> K- <sub>2/3</sub> [Ni <sub>1/3</sub> Mn <sub>2/3</sub> ]O <sub>2</sub> for potassium ion battery cathodes. Journal of Power Sources, 2019, 438, 226992.	7.8	31

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19	Unraveling the anionic oxygen loss and related structural evolution within O3-type Na layered oxide cathodes. Journal of Materials Chemistry A, 2019, 7, 20405-20413.	10.3	23
20	Lattice doping regulated interfacial reactions in cathode for enhanced cycling stability. Nature Communications, 2019, 10, 3447.	12.8	116
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22	Manganese oxidation as the origin of the anomalous capacity of Mn-containing Li-excess cathode materials. Nature Energy, 2019, 4, 639-646.	39.5	164
23	Alkali-Glass Behavior in Honeycomb-Type Layered $\text{Li}_{0.3}\text{Na}_{0.7}\text{Ni}_{0.2}\text{SbO}_6$ Solid Solution. Inorganic Chemistry, 2019, 58, 11546-11552.	4.0	15
24	Surface-to-Bulk Redox Coupling through Thermally Driven Li Redistribution in Li- and Mn-Rich Layered Cathode Materials. Journal of the American Chemical Society, 2019, 141, 12079-12086.	13.7	47
25	Understanding Performance Degradation in Cation-Disordered Rock-Salt Oxide Cathodes. Advanced Energy Materials, 2019, 9, 1901255.	19.5	84
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28	A 3D Trilayered $\text{CNT}/\text{MoSe}_2/\text{C}$ Heterostructure with an Expanded $\text{MoSe}_2$ Interlayer Spacing for an Efficient Sodium Storage. Advanced Energy Materials, 2019, 9, 1900567.	19.5	218
29	Probing the thermal effects of voltage hysteresis in anionic redox-based lithium-rich cathodes using isothermal calorimetry. Nature Energy, 2019, 4, 647-656.	39.5	126
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32	Unraveling the Cationic and Anionic Redox Reactions in a Conventional Layered Oxide Cathode. ACS Energy Letters, 2019, 4, 2836-2842.	17.4	111
33	Elucidating and Mitigating the Degradation of Cationic-Anionic Redox Processes in $\text{Li}_{1.2}\text{Mn}_{0.4}\text{Ti}_{0.4}\text{O}_2$ Cation-Disordered Cathode Materials. ACS Applied Materials & Interfaces, 2019, 11, 45674-45682.	8.0	31
34	Exploring the bottlenecks of anionic redox in Li-rich layered sulfides. Nature Energy, 2019, 4, 977-987.	39.5	123
35	Optimization for statistical tolerance allocation. Computer Aided Geometric Design, 2019, 75, 101788.	1.2	7
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37	Enhanced electrochemical performance of $\text{Li}_{1.18}\text{Ni}_{0.15}\text{Co}_{0.15}\text{Mn}_{0.52}\text{O}_2$ cathode modified with aluminosilicate solid acid. Journal of Materials Science: Materials in Electronics, 2019, 30, 21240-21249.	2.2	1
38	Improved ability of artificial photosynthesis by using InGaN/AlGaIn/GaN electrode. Applied Physics Express, 2019, 12, 111003.	2.4	3
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47	Stabilizing Low-Coordinated O Ions To Operate Cationic and Anionic Redox Chemistry of Li-Ion Battery Materials. ACS Applied Materials & Interfaces, 2019, 11, 37768-37778.	8.0	13
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56	Revealing the Electrochemical Mechanism of Cationic/Anionic Redox on Li-Rich Layered Oxides via Controlling the Distribution of Primary Particle Size. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 25796-25803.	8.0	8
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58	Atomic-scale Insights into Surface Lattice Oxygen Activation at the Spinel/Perovskite interface of $\text{Co}_{0.3}\text{O}_{0.4}\text{La}_{0.3}\text{Sr}_{0.7}\text{CoO}_3$ . <i>Angewandte Chemie - International Edition</i> , 2019, 58, 11720-11725.	13.8	140
59	Ethylene Carbonate-Free Electrolytes for High-Nickel Layered Oxide Cathodes in Lithium-Ion Batteries. <i>Advanced Energy Materials</i> , 2019, 9, 1901152.	19.5	78
60	Atomic-scale Insights into Surface Lattice Oxygen Activation at the Spinel/Perovskite interface of $\text{Co}_3\text{O}_4/\text{La}_{0.3}\text{Sr}_{0.7}\text{CoO}_3$ . <i>Angewandte Chemie</i> , 2019, 131, 11846-11851.	2.0	26
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65	Probing the Structural Transition Kinetics and Charge Compensation of the $\text{P2-Na}_{0.78}\text{Al}_{0.05}\text{Ni}_{0.33}\text{Mn}_{0.60}\text{O}_2$ Cathode for Sodium Ion Batteries. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 24122-24131.	8.0	51
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75	The Synergic Effects of Zr Doping and $\text{Li}_{2-x}\text{TiO}_3$ Coating on the Crystal Structure and Electrochemical Performances of Li-Rich $\text{Li}_{1.2-x}\text{Ni}_{0.2-x}\text{Mn}_{0.6-x}\text{O}_2$ . <i>Journal of the Electrochemical Society</i> , 2019, 166, A1323-A1329.	2.9	19
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78	Morphology inheritance synthesis of carbon-coated $\text{Li}_3\text{VO}_4$ rods as anode for lithium-ion battery. <i>Science China Materials</i> , 2019, 62, 1105-1114.	6.3	16
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87	Understanding the Discrepancy of Defect Kinetics on Anionic Redox in Lithium-Rich Cathode Oxides. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 14023-14034.	8.0	30
88	Chemical and structural origin of lattice oxygen oxidation in $\text{Co-Zn}$ oxyhydroxide oxygen evolution electrocatalysts. <i>Nature Energy</i> , 2019, 4, 329-338.	39.5	977
89	DABCONium: An Efficient and High-Voltage Stable Singlet Oxygen Quencher for Metal-O <sub>2</sub> Cells. <i>Angewandte Chemie - International Edition</i> , 2019, 58, 6535-6539.	13.8	72
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91	Stabilization of O-O Bonds by $d^0$ Cations in $\text{Li}_{4-x}\text{Ni}_{1-x}\text{WO}_6$ (0 ≤ x ≤ 0.25) Rock Salt Oxides as the Origin of Large Voltage Hysteresis. <i>Journal of the American Chemical Society</i> , 2019, 141, 7333-7346.	3.7	61

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92	Fundamental insights about interlayer cation migration in Li-ion electrodes at high states of charge. Journal of Materials Chemistry A, 2019, 7, 11996-12007.	10.3	12
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97	Remarkable electrochemical performance of 0.5Li <sub>2</sub> MnO <sub>3</sub> ·0.5LiNi <sub>0.5</sub> Mn <sub>0.3</sub> Co <sub>0.2</sub> O <sub>2</sub> synthesized by means of a citric acid-aided route. Journal of Solid State Electrochemistry, 2019, 23, 3383-3389.	2.5	3
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100	Tuning surface conductivity and stability for high-performance Li- and Mn-rich cathode materials. New Journal of Chemistry, 2019, 43, 18943-18950.	2.8	9
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105	Structure and electrochemical performance modulation of a LiNi <sub>0.8</sub> Co <sub>0.1</sub> Mn <sub>0.1</sub> O <sub>2</sub> cathode material by anion and cation co-doping for lithium ion batteries. RSC Advances, 2019, 9, 36849-36857.	3.6	26
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107	Electronic Structure and Properties of Lithium-Rich Complex Oxides. ACS Applied Electronic Materials, 2019, 1, 75-81.	4.3	10
108	A Cobalt-Free Li(Li <sub>0.16</sub> Ni <sub>0.19</sub> Fe <sub>0.18</sub> Mn <sub>0.46</sub> )O <sub>2</sub> Cathode for Lithium-Ion Batteries with Anionic Redox Reactions. ChemSusChem, 2019, 12, 1162-1168.	6.8	20
109	Facile construction of two-dimensional coordination polymers with a well-designed redox-active organic linker for improved lithium ion battery performance. Science China Chemistry, 2019, 62, 602-608.	8.2	29



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110	High Reversibility of Lattice Oxygen Redox Quantified by Direct Bulk Probes of Both Anionic and Cationic Redox Reactions. <i>Joule</i> , 2019, 3, 518-541.	24.0	225
111	Tuning Anionic Redox Activity and Reversibility for a High-Capacity Li-Rich Mn-Based Oxide Cathode via an Integrated Strategy. <i>Advanced Functional Materials</i> , 2019, 29, 1806706.	14.9	121
112	High-Performance Li-Rich Layered Transition Metal Oxide Cathode Materials for Li-Ion Batteries. <i>Journal of the Electrochemical Society</i> , 2019, 166, A5333-A5342.	2.9	33
113	In operando EPR investigation of redox mechanisms in LiCoO <sub>2</sub> . <i>Chemical Physics Letters</i> , 2019, 716, 231-236.	2.6	23
114	Interpreting Abnormal Charge-Discharge Plateau Migration in CuxS during Long-Term Cycling. <i>ACS Applied Materials &amp; Interfaces</i> , 2019, 11, 3961-3970.	8.0	31
115	Fingerprint Oxygen Redox Reactions in Batteries through High-Efficiency Mapping of Resonant Inelastic X-ray Scattering. <i>Condensed Matter</i> , 2019, 4, 5.	1.8	44
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117	Recent progress of mesoscience in design of electrocatalytic materials for hydrogen energy conversion. <i>Particuology</i> , 2020, 48, 19-33.	3.6	12
118	Strategien für kostengünstige und leistungsstarke Dual-Ionen-Batterien. <i>Angewandte Chemie</i> , 2020, 132, 3830-3861.	2.0	40
119	Strategies towards Low-Cost Dual-Ion Batteries with High Performance. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 3802-3832.	13.8	242
120	Achieving high energy density and high power density with pseudocapacitive materials. <i>Nature Reviews Materials</i> , 2020, 5, 5-19.	48.7	1,138
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123	Thermally Induced Structural Reordering in Li- and Mn-Rich Layered Oxide Li Ion Cathode Materials. <i>Chemistry of Materials</i> , 2020, 32, 1210-1223.	6.7	16
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126	The Structural Stability of P2-Layered Na-Based Electrodes during Anionic Redox. <i>Joule</i> , 2020, 4, 420-434.	24.0	89
127	Dual-phase MoS <sub>2</sub> as a high-performance sodium-ion battery anode. <i>Journal of Materials Chemistry A</i> , 2020, 8, 2114-2122.	10.3	160



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128	Elucidation of the origin of voltage hysteresis in $x\text{Li}_2\text{MnO}_3 \cdot (1-x)\text{LiCoO}_2$ using backstitch charge-discharge method. <i>Electrochimica Acta</i> , 2020, 334, 135623.	5.2	6
129	Anionic and Cationic Redox Processes in $\text{Li}_2\text{IrO}_3$ and Their Structural Implications on Electrochemical Cycling in a Li-Ion Cell. <i>Journal of Physical Chemistry C</i> , 2020, 124, 2771-2781.	3.1	17
130	A Redox-Active 2D Metal-Organic Framework for Efficient Lithium Storage with Extraordinary High Capacity. <i>Angewandte Chemie</i> , 2020, 132, 5311-5315.	2.0	34
131	A Redox-Active 2D Metal-Organic Framework for Efficient Lithium Storage with Extraordinary High Capacity. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 5273-5277.	13.8	189
132	Electrode Degradation in Lithium-Ion Batteries. <i>ACS Nano</i> , 2020, 14, 1243-1295.	14.6	484
133	Multifunctional inorganic nanomaterials for energy applications. <i>Nanoscale</i> , 2020, 12, 14-42.	5.6	89
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