

Duho Kim

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Intrinsic Origins of Crack Generation in Ni-rich $\text{LiNi}_0.8\text{Co}_0.1\text{Mn}_0.1\text{O}_2$ Layered Oxide Cathode Material. <i>Scientific Reports</i> , 2017, 7, 39669.	3.3	225
2	Manganese based layered oxides with modulated electronic and thermodynamic properties for sodium ion batteries. <i>Nature Communications</i> , 2019, 10, 5203.	12.8	202
3	The origins and mechanism of phase transformation in bulk Li_2MnO_3 : first-principles calculations and experimental studies. <i>Journal of Materials Chemistry A</i> , 2015, 3, 7066-7076.	10.3	91
4	Reversible Anionic Redox Activities in Conventional $\text{LiNi}_{1/3}\text{Co}_{1/3}\text{Mn}_{1/3}\text{O}_2$ Cathodes. <i>Angewandte Chemie - International Edition</i> , 2020, 59, 8681-8688.	13.8	91
5	Rational Design of $\text{Na}(\text{Li}_{1/3}\text{Mn}_{2/3})\text{O}_2$ Operated by Anionic Redox Reactions for Advanced Sodium-Ion Batteries. <i>Advanced Materials</i> , 2017, 29, 1701788.	21.0	78
6	Anti-fluorite Li_6CoO_4 as an alternative lithium source for lithium ion capacitors: an experimental and first principles study. <i>Journal of Materials Chemistry A</i> , 2015, 3, 12377-12385.	10.3	72
7	Critical design factors for kinetically favorable P-based compounds toward alloying with Na ions for high-power sodium-ion batteries. <i>Energy and Environmental Science</i> , 2019, 12, 1326-1333.	30.8	58
8	Design of Nickel-rich Layered Oxides Using <i>d</i> Electronic Donor for Redox Reactions. <i>Chemistry of Materials</i> , 2015, 27, 6450-6456.	6.7	52
9	Critical Role of Titanium in O3-Type Layered Cathode Materials for Sodium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 30894-30901.	8.0	50
10	Mechanism of Oxygen Vacancy on Impeded Phase Transformation and Electrochemical Activation in Inactive Li_2MnO_3 . <i>ChemElectroChem</i> , 2016, 3, 943-949.	3.4	44
11	Structural and Thermodynamic Understandings in Mn-Based Sodium Layered Oxides during Anionic Redox. <i>Advanced Science</i> , 2020, 7, 2001263.	11.2	38
12	Design of Surface Doping for Mitigating Transition Metal Dissolution in $\text{LiNi}_{0.5}\text{Mn}_{1.5}\text{O}_4$ Nanoparticles. <i>ChemSusChem</i> , 2016, 9, 2967-2973.	6.8	35
13	Understanding of Surface Redox Behaviors of Li_2MnO_3 in Li-Ion Batteries: First-Principles Prediction and Experimental Validation. <i>ChemSusChem</i> , 2015, 8, 3255-3262.	6.8	31
14	Anionic Redox Reactions in Manganese-Based Binary Layered Oxides for Advanced Sodium-Ion Batteries. <i>Chemistry of Materials</i> , 2020, 32, 5541-5549.	6.7	30
15	Phase Separation and d Electronic Orbitals on Cyclic Degradation in $\text{Li}^+\text{Mn}^{\text{IV}}\text{O}$ Compounds: First-Principles Multiscale Modeling and Experimental Observations. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 16631-16639.	8.0	22
16	Underlying mechanisms of the synergistic role of Li_2MnO_3 and $\text{LiNi}_{1/3}\text{Co}_{1/3}\text{Mn}_{1/3}\text{O}_2$ in high-Mn, Li-rich oxides. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 11411-11421.	2.8	22
17	Anionic Redox Reactions in Cathodes for Sodium-Ion Batteries. <i>ChemElectroChem</i> , 2021, 8, 625-643.	3.4	22
18	Thermodynamics and Na kinetics in P2-type oxygen redox Mn-Ni binary layered oxides manipulated via Li substitution. <i>Energy Storage Materials</i> , 2021, 42, 97-108.	18.0	22

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19	Hexacyanometallates for sodium-ion batteries: insights into higher redox potentials using d electronic spin configurations. <i>Physical Chemistry Chemical Physics</i> , 2017, 19, 10443-10452.	2.8	20
20	Rational design of $\text{Na}(\text{Li}_{1/3}\text{Mn}_{1/2}\text{Cr}_{1/6})\text{O}_2$ exhibiting cation-anion-coupled redox reactions with superior electrochemical, thermodynamic, atomic, and chemomechanical properties for advanced sodium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2018, 6, 18036-18043.	10.3	19
21	Enabling Stable and Nonhysteretic Oxygen Redox Capacity in Li-Excess Na Layered Oxides. <i>Advanced Energy Materials</i> , 2022, 12, .	19.5	18
22	Fundamental interplay between phase-transition kinetics and thermodynamics of manganese-based sodium layered oxides during cationic and anionic redox. <i>Journal of Materials Chemistry A</i> , 2020, 8, 21142-21150.	10.3	15
23	Reversible Anionic Redox Activities in Conventional $\text{LiNi}_{1/3}\text{Co}_{1/3}\text{Mn}_{1/3}\text{O}_2$ Cathodes. <i>Angewandte Chemie</i> , 2020, 132, 8759-8766.	2.0	15
24	Chemomechanical Design Factors for High Performance in Manganese-Based Spinel Cathode Materials for Advanced Sodium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 22789-22797.	8.0	15
25	Unlocking the Intrinsic Origin of the Reversible Oxygen Redox Reaction in Sodium-Based Layered Oxides. <i>ChemElectroChem</i> , 2021, 8, 1464-1472.	3.4	14
26	Importance of metal-oxygen bond for stable oxygen-redox reaction in Li-excess layered oxides. <i>Energy Storage Materials</i> , 2021, 42, 764-772.	18.0	13
27	Cathodes: Rational Design of $\text{Na}(\text{Li}_{1/3}\text{Mn}_{2/3})\text{O}_2$ Operated by Anionic Redox Reactions for Advanced Sodium-Ion Batteries (<i>Adv. Mater.</i> 33(2017)). <i>Advanced Materials</i> , 2017, 29, .	21.0	12
28	Rational design of Ti-based oxygen redox layered oxides for advanced sodium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2021, 9, 11762-11770.	10.3	11
29	Unlocking veiled oxygen redox in Na-based earth-abundant binary layered oxide. <i>Journal of Materials Chemistry A</i> , 2021, 9, 15179-15187.	10.3	10
30	Uncovering the Structural Evolution in Na-Excess Layered Cathodes for Rational Use of an Anionic Redox Reaction. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 29203-29211.	8.0	9
31	Understanding Voltage Hysteresis for High-Energy-Density Li-S Batteries. <i>ACS Applied Energy Materials</i> , 2022, 5, 5219-5226.	5.1	9
32	Unlocking the origin of triggering hysteretic oxygen capacity in divalent species incorporated O-type sodium layered-oxide cathodes. <i>Energy Storage Materials</i> , 2022, 45, 432-441.	18.0	7
33	Physicochemical Design Principles Enabling High-Energy and -Power Low-Cost Na Storage Materials. <i>Journal of Physical Chemistry C</i> , 2021, 125, 3305-3313.	3.1	6
34	Origin of reversible oxygen redox reactions in high energy density layered oxides. <i>Cell Reports Physical Science</i> , 2021, 2, 100508.	5.6	6
35	Chemomechanics in Ni-Mn binary cathode for advanced sodium-ion batteries. <i>Journal of Materials Chemistry A</i> , 2021, 9, 24290-24298.	10.3	6
36	Physicochemical Screen Effect of Li Ions in Oxygen Redox Cathodes for Advanced Sodium-Ion Batteries. <i>Chemistry of Materials</i> , 2022, 34, 5971-5979.	6.7	6

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37	Extending nonhysteretic oxygen capacity in P2-type Ni-Mn binary Na oxides. Chemical Engineering Journal, 2022, 446, 137429.	12.7	6
38	Intrinsic Origin of Nonhysteretic Oxygen Capacity in Conventional Na-Excess Layered Oxides. ACS Applied Materials & Interfaces, 2021, 13, 46620-46626.	8.0	5
39	Unraveling divalent pillar effects for the prolonged cycling of high-energy-density cathodes. Journal of Materials Chemistry A, 2021, 9, 26820-26828.	10.3	5
40	Importance of Chemical Distortion on the Hysteretic Oxygen Capacity in Li-Excess Layered Oxides. ACS Applied Materials & Interfaces, 2022, 14, 9057-9065.	8.0	5
41	Unified Picture of (Non)Hysteretic Oxygen Capacity in O3-type Sodium Layered Oxides. Advanced Energy Materials, 2022, 12, .	19.5	5
42	Theoretical understanding of oxygen stability in Mn-Fe binary layered oxides for sodium-ion batteries. Journal of Materials Chemistry A, 2022, 10, 11101-11109.	10.3	2
43	Determining Factors in Triggering Hysteretic Oxygen Capacities in Lithium-Excess Sodium Layered Oxides. ACS Applied Materials & Interfaces, 2022, 14, 19515-19523.	8.0	1
44	Enabling Stable and Nonhysteretic Oxygen Redox Capacity in Li-Excess Na Layered Oxides (Adv. Energy)	19.5	6