Xi-Qian Yu

List of Publications by Citations

184 papers	17,784 citations	75 h-index	131 g-index
195 ext. papers	21,630 ext. citations	15.1 avg, IF	6.9 L-index

#	Paper	IF	Citations
184	Role of surface structure on Li-ion energy storage capacity of two-dimensional transition-metal carbides. *Journal of the American Chemical Society*, **2014**, 136, 6385-94	16.4	864
183	Origin of additional capacities in metal oxide lithium-ion battery electrodes. *Nature Materials*, **2013**, 12, 1130-6	27	559
182	Structural changes and thermal stability of charged LiNixMnyCozO cathode materials studied by combined in situ time-resolved XRD and mass spectroscopy. *ACS Applied Materials & Interfaces*, **2014**, 6, 22594-601	9.5	473
181	A zero-strain layered metal oxide as the negative electrode for long-life sodium-ion batteries. *Nature Communications*, **2013**, 4, 2365	17.4	468
180	Evolution of redox couples in Li- and Mn-rich cathode materials and mitigation of voltage fade by reducing oxygen release. *Nature Energy*, **2018**, 3, 690-698	62.3	435
179	Sodium Storage and Transport Properties in Layered Na2Ti3O7 for Room-Temperature Sodium-Ion Batteries. *Advanced Energy Materials*, **2013**, 3, 1186-1194	21.8	401
178	Understanding the Rate Capability of High-Energy-Density Li-Rich Layered Li1.2Ni0.15Co0.1Mn0.55O2 Cathode Materials. *Advanced Energy Materials*, **2014**, 4, 1300950	21.8	393
177	Building aqueous K-ion batteries for energy storage. *Nature Energy*, **2019**, 4, 495-503	62.3	381
176	Probing the Mechanism of High Capacitance in 2D Titanium Carbide Using In Situ X-Ray Absorption Spectroscopy. *Advanced Energy Materials*, **2015**, 5, 1500589	21.8	374
175	Approaching Practically Accessible Solid-State Batteries: Stability Issues Related to Solid Electrolytes and Interfaces. *Chemical Reviews*, **2020**, 120, 6820-6877	68.1	373
174	A highly active and stable hydrogen evolution catalyst based on pyrite-structured cobalt phosphosulfide. *Nature Communications*, **2016**, 7, 10771	17.4	363
173	Alumina-coated patterned amorphous silicon as the anode for a lithium-ion battery with high coulombic efficiency. *Advanced Materials*, **2011**, 23, 4938-41	24	348
172	Combining In Situ Synchrotron X-Ray Diffraction and Absorption Techniques with Transmission Electron Microscopy to Study the Origin of Thermal Instability in Overcharged Cathode Materials for Lithium-Ion Batteries. *Advanced Functional Materials*, **2013**, 23, 1047-1063	15.6	336
171	Identifying the Critical Role of Li Substitution in P2 Nax[LiyNizMn1]O2 (0 Chemistry of Materials, **2014**, 26, 1260-1269	9.6	325
170	Kinetic analysis on LiFePO4 thin films by CV, GITT, and EIS. *Electrochimica Acta*, **2011**, 56, 4869-4875	6.7	318
169	Trace doping of multiple elements enables stable battery cycling of LiCoO2 at 4.6 V. *Nature Energy*, **2019**, 4, 594-603	62.3	299
168	Synchrotron X-ray Analytical Techniques for Studying Materials Electrochemistry in Rechargeable Batteries. *Chemical Reviews*, **2017**, 117, 13123-13186	68.1	291

167	Amorphous hierarchical porous GeO(x) as high-capacity anodes for Li ion batteries with very long cycling life. *Journal of the American Chemical Society*, **2011**, 133, 20692-5	16.4	268
166	Ti-substituted tunnel-type Na□MnO□ oxide as a negative electrode for aqueous sodium-ion batteries. *Nature Communications*, **2015**, 6, 6401	17.4	265
165	A long-life lithium-ion battery with a highly porous TiNb2O7 anode for large-scale electrical energy storage. *Energy and Environmental Science*, **2014**, 7, 2220-2226	35.4	257
164	High-Capacity Cathode Material with High Voltage for Li-Ion Batteries. *Advanced Materials*, **2018**, 30, 1705575	24	256
163	Correlating Structural Changes and Gas Evolution during the Thermal Decomposition of Charged LixNi0.8Co0.15Al0.05O2 Cathode Materials. *Chemistry of Materials*, **2013**, 25, 337-351	9.6	246
162	□MnO2 as a cathode material for rechargeable Mg batteries. *Electrochemistry Communications*, **2012**, 23, 110-113	5.1	245
161	Ti-Substituted NaNi Mn Ti O Cathodes with Reversible O3-P3 Phase Transition for High-Performance Sodium-Ion Batteries. *Advanced Materials*, **2017**, 29, 1700210	24	233
160	Na/vacancy disordering promises high-rate Na-ion batteries. *Science Advances*, **2018**, 4, eaar6018	14.3	229
159	Suppressing Surface Lattice Oxygen Release of Li-Rich Cathode Materials via Heterostructured Spinel Li Mn O Coating. *Advanced Materials*, **2018**, 30, e1801751	24	222
158	Sodium iron hexacyanoferrate with high Na content as a Na-rich cathode material for Na-ion batteries. *Nano Research*, **2015**, 8, 117-128	10	221
157	Designing Air-Stable O3-Type Cathode Materials by Combined Structure Modulation for Na-Ion Batteries. *Journal of the American Chemical Society*, **2017**, 139, 8440-8443	16.4	219
156	Structure-Induced Reversible Anionic Redox Activity in Na Layered Oxide Cathode. *Joule*, **2018**, 2, 125-140	27.8	216
155	Effects of Mg doping on the remarkably enhanced electrochemical performance of Na3V2(PO4)3 cathode materials for sodium ion batteries. *Journal of Materials Chemistry A*, **2015**, 3, 9578-9586	13	197
154	A size-dependent sodium storage mechanism in Li4Ti5O12 investigated by a novel characterization technique combining in situ X-ray diffraction and chemical sodiation. *Nano Letters*, **2013**, 13, 4721-7	11.5	195
153	In situ/operando synchrotron-based X-ray techniques for lithium-ion battery research. *NPG Asia Materials*, **2018**, 10, 563-580	10.3	167
152	Nanocrystalline MnO thin film anode for lithium ion batteries with low overpotential. *Electrochemistry Communications*, **2009**, 11, 791-794	5.1	164
151	Lithium storage performance in ordered mesoporous MoS2 electrode material. *Microporous and Mesoporous Materials*, **2012**, 151, 418-423	5.3	163
150	Dynamic evolution of cathode electrolyte interphase (CEI) on high voltage LiCoO2 cathode and its interaction with Li anode. *Energy Storage Materials*, **2018**, 14, 1-7	19.4	158

149	A Self-Forming Composite Electrolyte for Solid-State Sodium Battery with Ultralong Cycle Life. *Advanced Energy Materials*, **2017**, 7, 1601196	21.8	158
148	Direct Observation of Sulfur Radicals as Reaction Media in Lithium Sulfur Batteries. *Journal of the Electrochemical Society*, **2015**, 162, A474-A478	3.9	155
147	Anionic Redox Reaction-Induced High-Capacity and Low-Strain Cathode with Suppressed Phase Transition. *Joule*, **2019**, 3, 503-517	27.8	154
146	Tuning charge-discharge induced unit cell breathing in layer-structured cathode materials for lithium-ion batteries. *Nature Communications*, **2014**, 5, 5381	17.4	145
145	Visualizing non-equilibrium lithiation of spinel oxide via in situ transmission electron microscopy. *Nature Communications*, **2016**, 7, 11441	17.4	143
144	Enhanced Li+ ion transport in LiNi0.5Mn1.5O4 through control of site disorder. *Physical Chemistry Chemical Physics*, **2012**, 14, 13515-21	3.6	137
143	Electrochemical properties of P2-phase Na0.74CoO2 compounds as cathode material for rechargeable sodium-ion batteries. *Electrochimica Acta*, **2013**, 87, 388-393	6.7	127
142	A Novel High Capacity Positive Electrode Material with Tunnel-Type Structure for Aqueous Sodium-Ion Batteries. *Advanced Energy Materials*, **2015**, 5, 1501005	21.8	127
141	Reconstructed Orthorhombic V2O5 Polyhedra for Fast Ion Diffusion in K-Ion Batteries. *CheM*, **2019**, 5, 168-179	16.2	123
140	Insight into the Atomic Structure of High-Voltage Spinel LiNi0.5Mn1.5O4 Cathode Material in the First Cycle. *Chemistry of Materials*, **2015**, 27, 292-303	9.6	116
139	In situ Visualization of State-of-Charge Heterogeneity within a LiCoO2 Particle that Evolves upon Cycling at Different Rates. *ACS Energy Letters*, **2017**, 2, 1240-1245	20.1	115
138	Na-Ion Intercalation and Charge Storage Mechanism in 2D Vanadium Carbide. *Advanced Energy Materials*, **2017**, 7, 1700959	21.8	113
137	In Situ Atomic-Scale Observation of Electrochemical Delithiation Induced Structure Evolution of LiCoO Cathode in a Working All-Solid-State Battery. *Journal of the American Chemical Society*, **2017**, 139, 4274-4277	16.4	109
136	A highly reversible, low-strain Mg-ion insertion anode material for rechargeable Mg-ion batteries. *NPG Asia Materials*, **2014**, 6, e120-e120	10.3	105
135	Interfaces Between Cathode and Electrolyte in Solid State Lithium Batteries: Challenges and Perspectives. *Frontiers in Chemistry*, **2018**, 6, 616	5	105
134	Chemomechanical interplay of layered cathode materials undergoing fast charging in lithium batteries. *Nano Energy*, **2018**, 53, 753-762	17.1	105
133	Shape evolution of patterned amorphous and polycrystalline silicon microarray thin film electrodes caused by lithium insertion and extraction. *Journal of Power Sources*, **2012**, 216, 131-138	8.9	104
132	TiS2 as a high performance potassium ion battery cathode in ether-based electrolyte. *Energy Storage Materials*, **2018**, 12, 216-222	19.4	102

131	Sodiation Kinetics of Metal Oxide Conversion Electrodes: A Comparative Study with Lithiation. *Nano Letters*, **2015**, 15, 5755-63	11.5	100
130	Exposing {010} Active Facets by Multiple-Layer Oriented Stacking Nanosheets for High-Performance Capacitive Sodium-Ion Oxide Cathode. *Advanced Materials*, **2018**, 30, e1803765	24	92
129	Transitions from near-surface to interior redox upon lithiation in conversion electrode materials. *Nano Letters*, **2015**, 15, 1437-44	11.5	92
128	Increasing Poly(ethylene oxide) Stability to 4.5 V by Surface Coating of the Cathode. *ACS Energy Letters*, **2020**, 5, 826-832	20.1	91
127	Al2O3 surface coating on LiCoO2 through a facile and scalable wet-chemical method towards high-energy cathode materials withstanding high cutoff voltages. *Journal of Materials Chemistry A*, **2017**, 5, 24361-24370	13	89
126	Feasibility of Using Li2MoO3 in Constructing Li-Rich High Energy Density Cathode Materials. *Chemistry of Materials*, **2014**, 26, 3256-3262	9.6	89
125	Advanced Characterization Techniques for Sodium-Ion Battery Studies. *Advanced Energy Materials*, **2018**, 8, 1702588	21.8	88
124	The Thermal Stability of Lithium Solid Electrolytes with Metallic Lithium. *Joule*, **2020**, 4, 812-821	27.8	87
123	An In Situ Formed Surface Coating Layer Enabling LiCoO2 with Stable 4.6 V High-Voltage Cycle Performances. *Advanced Energy Materials*, **2020**, 10, 2001413	21.8	87
122	A P2/P3 composite layered cathode for high-performance Na-ion full batteries. *Nano Energy*, **2019**, 55, 143-150	17.1	85
121	High-Rate Charging Induced Intermediate Phases and Structural Changes of Layer-Structured Cathode for Lithium-Ion Batteries. *Advanced Energy Materials*, **2016**, 6, 1600597	21.8	84
120	Surface-protected LiCoO2 with ultrathin solid oxide electrolyte film for high-voltage lithium ion batteries and lithium polymer batteries. *Journal of Power Sources*, **2018**, 388, 65-70	8.9	82
119	An Abnormal 3.7 Volt O3-Type Sodium-Ion Battery Cathode. *Angewandte Chemie - International Edition*, **2018**, 57, 8178-8183	16.4	82
118	Tuning the electrochemical performances of anthraquinone organic cathode materials for Li-ion batteries through the sulfonic sodium functional group. *RSC Advances*, **2014**, 4, 19878-19882	3.7	82
117	Stabilizing the Oxygen Lattice and Reversible Oxygen Redox Chemistry through Structural Dimensionality in Lithium-Rich Cathode Oxides. *Angewandte Chemie - International Edition*, **2019**, 58, 4323-4327	16.4	81
116	Electrochemical decomposition of Li2CO3 in NiO□Li2CO3 nanocomposite thin film and powder electrodes. *Journal of Power Sources*, **2012**, 218, 113-118	8.9	81
115	Homogeneous Interface Conductivity for Lithium Dendrite-Free Anode. *ACS Energy Letters*, **2018**, 3, 2259-2266	20.1	81
114	In-situ visualization of lithium plating in all-solid-state lithium-metal battery. *Nano Energy*, **2019**, 63, 103895	17.1	78

113	Enabling Stable Cycling of 4.2 V High-Voltage All-Solid-State Batteries with PEO-Based Solid Electrolyte. *Advanced Functional Materials*, **2020**, 30, 1909392	15.6	77
112	O3-type layered transition metal oxide Na(NiCoFeTi)1/4O2 as a high rate and long cycle life cathode material for sodium ion batteries. *Journal of Materials Chemistry A*, **2015**, 3, 23261-23267	13	76
111	Investigations on the Fundamental Process of Cathode Electrolyte Interphase Formation and Evolution of High-Voltage Cathodes. *ACS Applied Materials & Interfaces*, **2020**, 12, 2319-2326	9.5	76
110	Machine-learning-revealed statistics of the particle-carbon/binder detachment in lithium-ion battery cathodes. *Nature Communications*, **2020**, 11, 2310	17.4	75
109	Local structure adaptability through multi cations for oxygen redox accommodation in Li-Rich layered oxides. *Energy Storage Materials*, **2020**, 24, 384-393	19.4	75
108	Direct Observation of the Redistribution of Sulfur and Polysufides in Li-S Batteries During the First Cycle by In Situ X-Ray Fluorescence Microscopy. *Advanced Energy Materials*, **2015**, 5, 1500072	21.8	74
107	Phase transition behavior of NaCrO2 during sodium extraction studied by synchrotron-based X-ray diffraction and absorption spectroscopy. *Journal of Materials Chemistry A*, **2013**, 1, 11130	13	74
106	Excellent Comprehensive Performance of Na-Based Layered Oxide Benefiting from the Synergetic Contributions of Multimetal Ions. *Advanced Energy Materials*, **2017**, 7, 1700189	21.8	69
105	Structural and mechanistic revelations on high capacity cation-disordered Li-rich oxides for rechargeable Li-ion batteries. *Energy Storage Materials*, **2019**, 16, 354-363	19.4	67
104	Oxygen-Release-Related Thermal Stability and Decomposition Pathways of LixNi0.5Mn1.5O4 Cathode Materials. *Chemistry of Materials*, **2014**, 26, 1108-1118	9.6	64
103	Probing the Complexities of Structural Changes in Layered Oxide Cathode Materials for Li-Ion Batteries during Fast Charge-Discharge Cycling and Heating. *Accounts of Chemical Research*, **2018**, 51, 290-298	24.3	63
102	Ionic Conduction in Cubic Na3TiP3O9N, a Secondary Na-Ion Battery Cathode with Extremely Low Volume Change. *Chemistry of Materials*, **2014**, 26, 3295-3305	9.6	60
101	Challenges and Recent Advances in High Capacity Li-Rich Cathode Materials for High Energy Density Lithium-Ion Batteries. *Advanced Materials*, **2021**, e2005937	24	58
100	Reversible lithium storage in LiF/Ti nanocomposites. *Physical Chemistry Chemical Physics*, **2009**, 11, 9497-503	3.0	55
99	Explore the Effects of Microstructural Defects on Voltage Fade of Li- and Mn-Rich Cathodes. *Nano Letters*, **2016**, 16, 5999-6007	11.5	55
98	Honeycomb-Ordered Na3Ni1.5M0.5BiO6 (M = Ni, Cu, Mg, Zn) as High-Voltage Layered Cathodes for Sodium-Ion Batteries. *ACS Energy Letters*, **2017**, 2, 2715-2722	20.1	54
97	Electro-plating and stripping behavior on lithium metal electrode with ordered three-dimensional structure. *Nano Energy*, **2018**, 45, 463-470	17.1	54
96	Advanced Characterization Techniques in Promoting Mechanism Understanding for Lithium-Sulfur Batteries. *Advanced Functional Materials*, **2018**, 28, 1707543	15.6	53

95	Lithium metal batteries capable of stable operation at elevated temperature. *Energy Storage Materials*, **2019**, 23, 646-652	19.4	50
94	Effects of structural defects on the electrochemical activation of Li2MnO3. *Nano Energy*, **2015**, 16, 143-151	17.1	50
93	FeO0.7F1.3/C Nanocomposite as a High-Capacity Cathode Material for Sodium-Ion Batteries. *Advanced Functional Materials*, **2015**, 25, 696-703	15.6	50
92	High rate delithiation behaviour of LiFePO4 studied by quick X-ray absorption spectroscopy. *Chemical Communications*, **2012**, 48, 11537-9	5.8	50
91	Probing Reversible Multielectron Transfer and Structure Evolution of Li1.2Cr0.4Mn0.4O2 Cathode Material for Li-Ion Batteries in a Voltage Range of 1.0–4.8 V. *Chemistry of Materials*, **2015**, 27, 5238-5252	9.6	49
90	Safe Lithium-Metal Anodes for Li–O2 Batteries: From Fundamental Chemistry to Advanced Characterization and Effective Protection. *Batteries and Supercaps*, **2019**, 2, 638-658	5.6	48
89	Remarkably Improved Electrode Performance of Bulk MnS by Forming a Solid Solution with FeS – Understanding the Li Storage Mechanism. *Advanced Functional Materials*, **2014**, 24, 5557-5566	15.6	45
88	Stabilizing Cathode Materials of Lithium-Ion Batteries by Controlling Interstitial Sites on the Surface. *CheM*, **2018**, 4, 1685-1695	16.2	45
87	Quantitative Chromatographic Determination of Dissolved Elemental Sulfur in the Non-Aqueous Electrolyte for Lithium-Sulfur Batteries. *Journal of the Electrochemical Society*, **2015**, 162, A203-A206	3.9	44
86	Anomalous metal segregation in lithium-rich material provides design rules for stable cathode in lithium-ion battery. *Nature Communications*, **2019**, 10, 1650	17.4	42
85	An Ordered Ni -Ring Superstructure Enables a Highly Stable Sodium Oxide Cathode. *Advanced Materials*, **2019**, 31, e1903483	24	42
84	Li–Ti Cation Mixing Enhanced Structural and Performance Stability of Li-Rich Layered Oxide. *Advanced Energy Materials*, **2019**, 9, 1901530	21.8	41
83	Decreasing transition metal triggered oxygen redox activity in Na-deficient oxides. *Energy Storage Materials*, **2019**, 20, 395-400	19.4	41
82	Quantitative and Qualitative Determination of Polysulfide Species in the Electrolyte of a Lithium–Sulfur Battery using HPLC ESI/MS with One-Step Derivatization. *Advanced Energy Materials*, **2015**, 5, 1401888	21.8	40
81	Whole-Voltage-Range Oxygen Redox in P2-Layered Cathode Materials for Sodium-Ion Batteries. *Advanced Materials*, **2021**, 33, e2008194	24	39
80	Quantification of Honeycomb Number-Type Stacking Faults: Application to Na3Ni2BiO6 Cathodes for Na-Ion Batteries. *Inorganic Chemistry*, **2016**, 55, 8478-92	5.1	38
79	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	16.4	38
78	Li-storage in LiFe1/4Mn1/4Co1/4Ni1/4PO4 solid solution. *Electrochemistry Communications*, **2008**, 10, 1347-1350	5.1	38

77	Dual-Defects Adjusted Crystal-Field Splitting of LaCo Ni O Hollow Multishelled Structures for Efficient Oxygen Evolution. *Angewandte Chemie - International Edition*, **2020**, 59, 19691-19695	16.4	37
76	Structural integrity: Searching the key factor to suppress the voltage fade of Li-rich layered cathode materials through 3D X-ray imaging and spectroscopy techniques. *Nano Energy*, **2016**, 28, 164-171	17.1	36
75	Electrochemical performance of LiFePO4 thin films with different morphology and crystallinity. *Electrochimica Acta*, **2009**, 54, 6565-6569	6.7	36
74	Finding a Needle in the Haystack: Identification of Functionally Important Minority Phases in an Operating Battery. *Nano Letters*, **2017**, 17, 7782-7788	11.5	33
73	A new in situ synchrotron X-ray diffraction technique to study the chemical delithiation of LiFePO4. *Chemical Communications*, **2011**, 47, 7170-2	5.8	33
72	Overpotential and electrochemical impedance analysis on Cr2O3 thin film and powder electrode in rechargeable lithium batteries. *Solid State Ionics*, **2008**, 179, 2390-2395	3.3	30
71	Hierarchical Defect Engineering for LiCoO2 through Low-Solubility Trace Element Doping. *CheM*, **2020**, 6, 2759-2769	16.2	29
70	Correlations between Transition-Metal Chemistry, Local Structure, and Global Structure in Li2Ru0.5Mn0.5O3 Investigated in a Wide Voltage Window. *Chemistry of Materials*, **2017**, 29, 9053-9065	9.6	28
69	Mn Ion Dissolution Mechanism for Lithium-Ion Battery with LiMnO Cathode: Ultraviolet-Visible Spectroscopy and Molecular Dynamics Simulations. *Journal of Physical Chemistry Letters*, **2020**, 11, 3051-3057	6.4	28
68	4.2 V poly(ethylene oxide)-based all-solid-state lithium batteries with superior cycle and safety performance. *Energy Storage Materials*, **2020**, 32, 191-198	19.4	28
67	Needle-like LiFePO4 thin films prepared by an off-axis pulsed laser deposition technique. *Thin Solid Films*, **2009**, 517, 2618-2622	2.2	27
66	Sub-nanometric Manganous Oxide Clusters in Nitrogen Doped Mesoporous Carbon Nanosheets for High-Performance Lithium-Sulfur Batteries. *Nano Letters*, **2021**, 21, 700-708	11.5	26
65	Utilizing Environmental Friendly Iron as a Substitution Element in Spinel Structured Cathode Materials for Safer High Energy Lithium-Ion Batteries. *Advanced Energy Materials*, **2016**, 6, 1501662	21.8	25
64	Suppressing the voltage decay of low-cost P2-type iron-based cathode materials for sodium-ion batteries. *Journal of Materials Chemistry A*, **2018**, 6, 20795-20803	13	25
63	Realizing long-term cycling stability and superior rate performance of 4.5 V LiCoO2 by aluminum doped zinc oxide coating achieved by a simple wet-mixing method. *Journal of Power Sources*, **2020**, 470, 228423	8.9	23
62	Low-temperature fusion fabrication of Li-Cu alloy anode with in situ formed 3D framework of inert LiCu nanowires for excellent Li storage performance. *Science Bulletin*, **2020**, 65, 1907-1915	10.6	23
61	Si-Cu Thin Film Electrode with Kirkendall Voids Structure for Lithium-Ion Batteries. *Journal of the Electrochemical Society*, **2012**, 159, A2076-A2081	3.9	23
60	Interplay between two-phase and solid solution reactions in high voltage spinel cathode material for lithium ion batteries. *Journal of Power Sources*, **2013**, 242, 736-741	8.9	23

59	Insights of the anionic redox in P2Na0.67Ni0.33Mn0.67O2. *Nano Energy*, **2020**, 78, 105285	17.1	22
58	Size effect on the growth and pulverization behavior of Si nanodomains in SiO anode. *Nano Energy*, **2020**, 78, 105101	17.1	22
57	High-capacity lithium-rich cathode oxides with multivalent cationic and anionic redox reactions for lithium ion batteries. *Science China Chemistry*, **2017**, 60, 1483-1493	7.9	21
56	Suppression of Monoclinic Phase Transitions of O3-Type Cathodes Based on Electronic Delocalization for Na-Ion Batteries. *ACS Applied Materials & Interfaces*, **2019**, 11, 22067-22073	9.5	21
55	Boron-doped sodium layered oxide for reversible oxygen redox reaction in Na-ion battery cathodes. *Nature Communications*, **2021**, 12, 5267	17.4	21
54	Electrochromic Behavior of Transparent Li[sub 4]Ti[sub 5]O[sub 12]/FTO Electrode. *Electrochemical and Solid-State Letters*, **2010**, 13, J99		20
53	Neutron-based characterization techniques for lithium-ion battery research. *Chinese Physics B*, **2020** , 29, 018201	1.2	20
52	An Abnormal 3.7 Volt O3-Type Sodium-Ion Battery Cathode. *Angewandte Chemie*, **2018**, 130, 8310-8315	3.6	19
51	Divalent Iron Nitridophosphates: A New Class of Cathode Materials for Li-Ion Batteries. *Chemistry of Materials*, **2013**, 25, 3929-3931	9.6	18
50	Mitigating the Kinetic Hindrance of Single-Crystalline Ni-Rich Cathode via Surface Gradient Penetration of Tantalum. *Angewandte Chemie - International Edition*, **2021**, 60, 26535-26539	16.4	18
49	A stabilized PEO-based solid electrolyte via a facile interfacial engineering method for a high voltage solid-state lithium metal battery. *Chemical Communications*, **2020**, 56, 5633-5636	5.8	18
48	Amorphous anion-rich titanium polysulfides for aluminum-ion batteries. *Science Advances*, **2021**, 7,	14.3	18
47	A dual-phase LiCa alloy with a patternable and lithiophilic 3D framework for improving lithium anode performance. *Journal of Materials Chemistry A*, **2019**, 7, 22377-22384	13	17
46	Triplite LiFeSO4F as cathode material for Li-ion batteries. *Journal of Power Sources*, **2013**, 244, 716-720	8.9	17
45	Oxygen-redox reactions in LiCoO2 cathode without OO bonding during charge-discharge. *Joule*, **2021**, 5, 720-736	27.8	15
44	Controlling Li deposition below the interface. *EScience*, **2022**,		15
43	In situ synthesis of a nickel concentration gradient structure of Ni-rich LiNiCoAlO with promising superior electrochemical properties at high cut-off voltage. *Nanoscale*, **2020**, 12, 11182-11191	7.7	14
42	In Situ Neutron Diffraction Studies of the Ion Exchange Synthesis Mechanism of LiMgPON: Evidence for a Hidden Phase Transition. *Journal of the American Chemical Society*, **2017**, 139, 9192-9202	16.4	13

41	Depth-dependent valence stratification driven by oxygen redox in lithium-rich layered oxide. *Nature Communications*, **2020**, 11, 6342	17.4	13
40	Strategies to curb structural changes of lithium/transition metal oxide cathode materials & the changes effects on thermal & cycling stability. *Chinese Physics B*, **2016**, 25, 018205	1.2	13
39	Stabilizing the Oxygen Lattice and Reversible Oxygen Redox Chemistry through Structural Dimensionality in Lithium-Rich Cathode Oxides. *Angewandte Chemie*, **2019**, 131, 4367-4371	3.6	12
38	Enhancing cycle stability of Li metal anode by using polymer separators coated with Ti-containing solid electrolytes. *Rare Metals*, **2021**, 40, 1357-1365	5.5	12
37	Improved electrochemical performance of Li(Ni0.6Co0.2Mn0.2)O2 at high charging cut-off voltage with Li1.4Al0.4Ti1.6(PO4)3 surface coating. *Chinese Physics B*, **2019**, 28, 068202	1.2	10
36	Gaseous electrolyte additive BF3 for high-power Li/CFx primary batteries. *Energy Storage Materials*, **2021**, 38, 482-488	19.4	10
35	Structural and chemical evolution in layered oxide cathodes of lithium-ion batteries revealed by synchrotron techniques.. *National Science Review*, **2022**, 9, nwab146	10.8	10
34	Quantifying redox heterogeneity in single-crystalline LiCoO cathode particles. *Journal of Synchrotron Radiation*, **2020**, 27, 713-719	2.4	9
33	Enhancing the Thermal Stability of NASICON Solid Electrolyte Pellets against Metallic Lithium by Defect Modification. *ACS Applied Materials & Interfaces*, **2021**, 13, 18743-18749	9.5	9
32	The Role of Electron Localization in Covalency and Electrochemical Properties of Lithium-Ion Battery Cathode Materials. *Advanced Functional Materials*, **2021**, 31, 2001633	15.6	9
31	A high-performance rechargeable Li 2 battery with quasi-solid-state electrolyte. *Chinese Physics B*, **2018**, 27, 078201	1.2	8
30	Stacking Faults Hinder Lithium Insertion in Li2RuO3. *Advanced Energy Materials*, **2020**, 10, 2002631	21.8	8
29	Improved electrochemical performances of high voltage LiCoO2 with tungsten doping. *Chinese Physics B*, **2018**, 27, 088202	1.2	7
28	Na10SnSb2S12: A nanosized air-stable solid electrolyte for all-solid-state sodium batteries. *Chemical Engineering Journal*, **2021**, 420, 127692	14.7	7
27	Exploring reaction dynamics in lithium-sulfur batteries by time-resolved operando sulfur K-edge X-ray absorption spectroscopy. *Chemical Communications*, **2019**, 55, 4993-4996	5.8	6
26	Mitigating the Kinetic Hindrance of Single-Crystalline Ni-Rich Cathode via Surface Gradient Penetration of Tantalum. *Angewandte Chemie*, **2021**, 133, 26739	3.6	6
25	First-Principles Simulations for the Surface Evolution and Mn Dissolution in the Fully Delithiated Spinel LiMnO. *Langmuir*, **2021**, 37, 5252-5259	4	6
24	Fast Li Plating Behavior Probed by X-ray Computed Tomography. *Nano Letters*, **2021**, 21, 5254-5261	11.5	6

23	The role of structural defects in commercial lithium-ion batteries. *Cell Reports Physical Science*, **2021**, 2, 100554	6.1	6
22	A facile electrode preparation method for accurate electrochemical measurements of double-side-coated electrode from commercial Li-ion batteries. *Journal of Power Sources*, **2018**, 384, 172-177	8.9	5
21	Cathode Materials: Combining In Situ Synchrotron X-Ray Diffraction and Absorption Techniques with Transmission Electron Microscopy to Study the Origin of Thermal Instability in Overcharged Cathode Materials for Lithium-Ion Batteries (Adv. Funct. Mater. 8/2013). *Advanced Functional Materials*, **2013**, 23, 1046-1046	15.6	5
20	Topologically protected oxygen redox in a layered manganese oxide cathode for sustainable batteries. *Nature Sustainability*,	22.1	5
19	Raising the intrinsic safety of layered oxide cathodes by surface re-lithiation with LLZTO garnet-type solid electrolytes.. *Advanced Materials*, **2022**, e2200655	24	5
18	Suppressing transition metal dissolution and deposition in lithium-ion batteries using oxide solid electrolyte coated polymer separator. *Chinese Physics B*, **2020**, 29, 088201	1.2	4
17	Dual-Defects Adjusted Crystal-Field Splitting of LaCo1−xNixO3 Hollow Multishelled Structures for Efficient Oxygen Evolution. *Angewandte Chemie*, **2020**, 132, 19859-19863	3.6	4
16	Coordination-Assisted Precise Construction of Metal Oxide Nanofilms for High-Performance Solid-State Batteries.. *Journal of the American Chemical Society*, **2022**,	16.4	3
15	Reaction Mechanisms of Ta-Substituted Cubic LiLaZrO with Solvents During Storage. *ACS Applied Materials & Interfaces*, **2021**, 13, 38384-38393	9.5	3
14	Influence of carbon coating on the electrochemical performance of SiO@C/graphite composite anode materials. *Chinese Physics B*, **2019**, 28, 068201	1.2	2
13	Anionic Redox Reaction-Induced High-Capacity and Low-Strain Cathode with Suppressed Phase Transition. *Joule*, **2019**, 3, 612	27.8	2
12	Local spring effect in titanium-based layered oxides. *Energy and Environmental Science*, **2020**, 13, 4371-4380	39.4	2
11	In Situ X-ray Absorption Near-Edge Structure Calculation and Machine Learning Analysis of the Structural Evolution in Lithium-Ion Battery Cathode Materials. *Journal of Physical Chemistry C*, **2021**, 125, 18979-18987	3.8	2
10	Anomalous Thermal Decomposition Behavior of Polycrystalline LiNi 0.8 Mn 0.1 Co 0.1 O 2 in PEO-Based Solid Polymer Electrolyte. *Advanced Functional Materials*,2200096	15.6	2
9	Challenges and Recent Advances in High Capacity Li-Rich Cathode Materials for High Energy Density Lithium-Ion Batteries (Adv. Mater. 50/2021). *Advanced Materials*, **2021**, 33, 2170395	24	1
8	In Situ Visualization of Li-Whisker with Grating-Interferometry-Based Tricontrast X-ray Microtomography	1786-1792	
7	Synergistic Effect of Temperature and Electrolyte Concentration on Solid-State Interphase for High-Performance Lithium Metal Batteries. *Advanced Energy and Sustainability Research*, **2021**, 2, 2100010	1.6	1
6	Artificial solid electrolyte interphase based on polyacrylonitrile for homogenous and dendrite-free deposition of lithium metal. *Chinese Physics B*, **2019**, 28, 078202	1.2	0

5	All-in-One Ionic-Electronic Dual-Carrier Conducting Framework Thickening All-Solid-State Electrode. *ACS Energy Letters*, **2022**, 7, 766-772	20.1	0
4	Probing lattice defects in crystalline battery cathode using hard X-ray nanoprobe with data-driven modeling. *Energy Storage Materials*, **2022**, 45, 647-655	19.4	0
3	Sodium-Ion Batteries: FeO0.7F1.3/C Nanocomposite as a High-Capacity Cathode Material for Sodium-Ion Batteries (Adv. Funct. Mater. 5/2015). *Advanced Functional Materials*, **2015**, 25, 823-823	15.6	
2	Synchrotron Radiation Nanoscale X-ray Imaging Technology And Scientific Big Data Mining Assist Energy Materials Research. *Microscopy and Microanalysis*, **2018**, 24, 542-543	0.5	
1	Advanced Transmission X-ray Microscopy for Energy Materials and Devices **2021**, 45-64		