JÃ¼rgen Janek

List of Publications by Year
in descending order

326 papers	33,210 citations	3159 92 h-index	4645 170 g-index
335 all docs	335 docs citations	335 times ranked	18430 citing authors

#	Article	IF	Citations
1	A solid future for battery development. Nature Energy, 2016, 1, .	39.5	2,319
2	New horizons for inorganic solid state ion conductors. Energy and Environmental Science, 2018, 11, 1945-1976.	30.8	894
3	A rechargeable room-temperature sodium superoxide (NaO2) battery. Nature Materials, 2013, 12, 228-232.	27.5	706
4	Benchmarking the performance of all-solid-state lithium batteries. Nature Energy, 2020, 5, 259-270.	39.5	662
5	Capacity Fade in Solid-State Batteries: Interphase Formation and Chemomechanical Processes in Nickel-Rich Layered Oxide Cathodes and Lithium Thiophosphate Solid Electrolytes. Chemistry of Materials, 2017, 29, 5574-5582.	6.7	655
6	Tuning Transition Metal Oxideâ€“Sulfur Interactions for Long Life Lithium Sulfur Batteries: The â€œGoldilocksâ€• Principle. Advanced Energy Materials, 2016, 6, 1501636.	19.5	623
7	Direct Observation of the Interfacial Instability of the Fast Ionic Conductor Li₁₀GeP₂S₁₂ at the Lithium Metal Anode. Chemistry of Materials, 2016, 28, 2400-2407.	6.7	619
8	Structure and dynamics of the fast lithium ion conductor â€œLi7La3Zr2O12â€• Physical Chemistry Chemical Physics, 2011, 13, 19378.	2.8	559
9	Recent Progress and Perspective in Electrode Materials for Kâ€Ion Batteries. Advanced Energy Materials, 2018, 8, 1702384.	19.5	549
10	Chemo-mechanical expansion of lithium electrode materials â€“ on the route to mechanically optimized all-solid-state batteries. Energy and Environmental Science, 2018, 11, 2142-2158.	30.8	512
11	Room-temperature sodium-ion batteries: Improving the rate capability of carbon anode materials by templating strategies. Energy and Environmental Science, 2011, 4, 3342.	30.8	491
12	Anisotropic Lattice Strain and Mechanical Degradation of High- and Low-Nickel NCM Cathode Materials for Li-Ion Batteries. Journal of Physical Chemistry C, 2017, 121, 3286-3294.	3.1	472
13	Physicochemical Concepts of the Lithium Metal Anode in Solid-State Batteries. Chemical Reviews, 2020, 120, 7745-7794.	47.7	468
14	TEMPO: A Mobile Catalyst for Rechargeable Li-O₂ Batteries. Journal of the American Chemical Society, 2014, 136, 15054-15064.	13.7	466
15	Toward a Fundamental Understanding of the Lithium Metal Anode in Solid-State Batteriesâ€"An Electrochemo-Mechanical Study on the Garnet-Type Solid Electrolyte Li_{6.25}Al_{0.25}La₃Zr₂O₁₂. ACS Applied Materials & Interfaces, 2019, 11, 14463-14477.	8.0	461
16	Influence of Lattice Polarizability on the Ionic Conductivity in the Lithium Superionic Argyrodites Li₆PS₅X (X = Cl, Br, I). Journal of the American Chemical Society, 2017, 139, 10909-10918.	13.7	446
17	Interphase formation on lithium solid electrolytesâ€"An in situ approach to study interfacial reactions by photoelectron spectroscopy. Solid State Ionics, 2015, 278, 98-105.	2.7	428
18	Degradation of NASICON-Type Materials in Contact with Lithium Metal: Formation of Mixed Conducting Interphases (MCI) on Solid Electrolytes. Journal of Physical Chemistry C, 2013, 117, 21064-21074.	3.1	411

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19	Fast Charging of Lithiumâ€Ion Batteries: A Review of Materials Aspects. Advanced Energy Materials, 2021, 11, 2101126.	19.5	407
20	There and Back Againâ€"The Journey of LiNiO₂ as a Cathode Active Material. Angewandte Chemie - International Edition, 2019, 58, 10434-10458.	13.8	400
21	Interphase formation and degradation of charge transfer kinetics between a lithium metal anode and highly crystalline Li7P3S11 solid electrolyte. Solid State Ionics, 2016, 286, 24-33.	2.7	379
22	Interfacial Processes and Influence of Composite Cathode Microstructure Controlling the Performance of All-Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2017, 9, 17835-17845.	8.0	353
23	Dynamic formation of a solid-liquid electrolyte interphase and its consequences for hybrid-battery concepts. Nature Chemistry, 2016, 8, 426-434.	13.6	340
24	Chemical, Structural, and Electronic Aspects of Formation and Degradation Behavior on Different Length Scales of Niâ€Rich NCM and Liâ€Rich HEâ€NCM Cathode Materials in Liâ€Ion Batteries. Advanced Materials, 2019, 31, e1900985.	21.0	319
25	Lithium-Metal Growth Kinetics on LLZO Garnet-Type Solid Electrolytes. Joule, 2019, 3, 2030-2049.	24.0	292
26	The Detrimental Effects of Carbon Additives in Li₁₀GeP₂S₁₂-Based Solid-State Batteries. ACS Applied Materials & Interfaces, 2017, 9, 35888-35896.	8.0	257
27	Volume Changes of Graphite Anodes Revisited: A Combined <i>Operando</i> X-ray Diffraction and <i>In Situ</i> Pressure Analysis Study. Journal of Physical Chemistry C, 2018, 122, 8829-8835.	3.1	256
28	A comprehensive study on the cell chemistry of the sodium superoxide (NaO2) battery. Physical Chemistry Chemical Physics, 2013, 15, 11661.	2.8	253
29	Degradation Mechanisms at the Li₁₀GeP₂S₁₂/LiCoO₂ Cathode Interface in an All-Solid-State Lithium-Ion Battery. ACS Applied Materials & Interfaces, 2018, 10, 22226-22236.	8.0	250
30	High areal capacity, long cycle life 4â€‰V ceramic all-solid-state Li-ion batteries enabled by chloride solid electrolytes. Nature Energy, 2022, 7, 83-93.	39.5	249
31	Visualization of the Interfacial Decomposition of Composite Cathodes in Argyrodite-Based All-Solid-State Batteries Using Time-of-Flight Secondary-Ion Mass Spectrometry. Chemistry of Materials, 2019, 31, 3745-3755.	6.7	246
32	Charge-Transfer-Induced Lattice Collapse in Ni-Rich NCM Cathode Materials during Delithiation. Journal of Physical Chemistry C, 2017, 121, 24381-24388.	3.1	242
33	Diffusion Limitation of Lithium Metal and Liâ€“Mg Alloy Anodes on LLZO Type Solid Electrolytes as a Function of Temperature and Pressure. Advanced Energy Materials, 2019, 9, 1902568.	19.5	240
34	Polycrystalline and Single Crystalline NCM Cathode Materialsâ€"Quantifying Particle Cracking, Active Surface Area, and Lithium Diffusion. Advanced Energy Materials, 2021, 11, 2003400.	19.5	237
35	Between Scylla and Charybdis: Balancing Among Structural Stability and Energy Density of Layered NCM Cathode Materials for Advanced Lithium-Ion Batteries. Journal of Physical Chemistry C, 2017, 121, 26163-26171.	3.1	233
36	Lithium ion conductivity in Li₂Sâ€“P₂S₅ glasses â€“ building units and local structure evolution during the crystallization of superionic conductors Li₃PS₄, Li₇P₃S₁₁ and Li₄P₂S₇. Journal of Materials Chemistry A, 2017, 5, 18111-18119.	10.3	233

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37	(Electro)chemical expansion during cycling: monitoring the pressure changes in operating solid-state lithium batteries. Journal of Materials Chemistry A, 2017, 5, 9929-9936.	10.3	222
38	On the Functionality of Coatings for Cathode Active Materials in Thiophosphateâ€Based Allâ€Solidâ€State Batteries. Advanced Energy Materials, 2019, 9, 1900626.	19.5	221
39	Electrochemical stability of non-aqueous electrolytes for sodium-ion batteries and their compatibility with Na_{0.7}CoO₂. Physical Chemistry Chemical Physics, 2014, 16, 1987-1998.	2.8	217
40	Comprehensive Investigation of the Na₃V₂(PO₄)₂F₃â€“NaV₂(PO₄)<sub>2</sub System by Operando High Resolution Synchrotron X-ray Diffraction. Chemistry of Materials, 2015, 27, 3009-3020.	6.7	217
41	Lithium metal electrode kinetics and ionic conductivity of the solid lithium ion conductors â€œLi7La3Zr2O12â€•and Li7â^'La3Zr2â^'Ta O12 with garnet-type structure. Journal of Power Sources, 2012, 206, 236-244.	7.8	214
42	Systematical electrochemical study on the parasitic shuttle-effect inÂlithium-sulfur-cells at different temperatures and different rates. Journal of Power Sources, 2014, 259, 289-299.	7.8	212
43	Redox-active cathode interphases in solid-state batteries. Journal of Materials Chemistry A, 2017, 5, 22750-22760.	10.3	206
44	The critical role of lithium nitrate in the gas evolution of lithiumâ€“sulfur batteries. Energy and Environmental Science, 2016, 9, 2603-2608.	30.8	202
45	Impact of Cathode Material Particle Size on the Capacity of Bulk-Type All-Solid-State Batteries. ACS Energy Letters, 2018, 3, 992-996.	17.4	201
46	Interfacial Reactivity Benchmarking of the Sodium Ion Conductors Na₃PS₄ and Sodium Î²-Alumina for Protected Sodium Metal Anodes and Sodium All-Solid-State Batteries. ACS Applied Materials & Interfaces, 2016, 8, 28216-28224.	8.0	195
47	Na₃V₂(PO₄)₂F₃ Revisited: A High-Resolution Diffraction Study. Chemistry of Materials, 2014, 26, 4238-4247.	6.7	193
48	Origin of Carbon Dioxide Evolved during Cycling of Nickel-Rich Layered NCM Cathodes. ACS Applied Materials & Interfaces, 2018, 10, 38892-38899.	8.0	193
49	Toward Silicon Anodes for Next-Generation Lithium Ion Batteries: A Comparative Performance Study of Various Polymer Binders and Silicon Nanopowders. ACS Applied Materials & Interfaces, 2013, 5, 7299-7307.	8.0	192
50	On the Thermodynamics, the Role of the Carbon Cathode, and the Cycle Life of the Sodium Superoxide (NaO₂) Battery. Advanced Energy Materials, 2014, 4, 1301863.	19.5	184
51	Structural Insights and 3D Diffusion Pathways within the Lithium Superionic Conductor Li₁₀GeP₂S₁₂. Chemistry of Materials, 2016, 28, 5905-5915.	6.7	176
52	Stabilizing Effect of a Hybrid Surface Coating on a Ni-Rich NCM Cathode Material in All-Solid-State Batteries. Chemistry of Materials, 2019, 31, 9664-9672.	6.7	174
53	Design Strategies to Enable the Efficient Use of Sodium Metal Anodes in Highâ€Energy Batteries. Advanced Materials, 2020, 32, e1903891.	21.0	173
54	Stabilization of cubic lithium-stuffed garnets of the type â€œLi7La3Zr2O12â€•by addition of gallium. Journal of Power Sources, 2013, 225, 13-19.	7.8	167

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55	A chemically driven insulatorâ€“metal transition in non-stoichiometric and amorphous gallium oxide. Nature Materials, 2008, 7, 391-398.	27.5	166
56	Bone formation induced by strontium modified calcium phosphate cement in critical-size metaphyseal fracture defects in ovariectomized rats. Biomaterials, 2013, 34, 8589-8598.	11.4	161
57	Thermodynamics and cell chemistry of room temperature sodium/sulfur cells with liquid and liquid/solid electrolyte. Journal of Power Sources, 2013, 243, 758-765.	7.8	160
58	Additional Sodium Insertion into Polyanionic Cathodes for Higherâ€Energy Naâ€Ion Batteries. Advanced Energy Materials, 2017, 7, 1700514.	19.5	157
59	How To Improve Capacity and Cycling Stability for Next Generation Liâ€“O₂ Batteries: Approach with a Solid Electrolyte and Elevated Redox Mediator Concentrations. ACS Applied Materials & Interfaces, 2016, 8, 7756-7765.	8.0	151
60	Phase Transformation Behavior and Stability of LiNiO₂ Cathode Material for Liâ€Ion Batteries Obtained from Inâ€…Situ Gas Analysis and Operando Xâ€Ray Diffraction. ChemSusChem, 2019, 12, 2240-2250.	6.8	146
61	Microstructural Modeling of Composite Cathodes for All-Solid-State Batteries. Journal of Physical Chemistry C, 2019, 123, 1626-1634.	3.1	139
62	<i>In Situ</i> Monitoring of Fast Li-Ion Conductor Li₇P₃S₁₁ Crystallization Inside a Hot-Press Setup. Chemistry of Materials, 2016, 28, 6152-6165.	6.7	138
63	Experimental Assessment of the Practical Oxidative Stability of Lithium Thiophosphate Solid Electrolytes. Chemistry of Materials, 2019, 31, 8328-8337.	6.7	138
64	Lithiumâ€Metal Anode Instability of the Superionic Halide Solid Electrolytes and the Implications for Solidâ€State Batteries. Angewandte Chemie - International Edition, 2021, 60, 6718-6723.	13.8	137
65	Benchmarking Anode Concepts: The Future of Electrically Rechargeable Zincâ€“Air Batteries. ACS Energy Letters, 2019, 4, 1287-1300.	17.4	136
66	Influence of NCM Particle Cracking on Kinetics of Lithium-Ion Batteries with Liquid or Solid Electrolyte. Journal of the Electrochemical Society, 2020, 167, 100532.	2.9	134
67	A New Strategy for Highâ€Voltage Cathodes for Kâ€Ion Batteries: Stoichiometric KVPO₄F. Advanced Energy Materials, 2018, 8, 1801591.	19.5	130
68	The interplay between thermodynamics and kinetics in the solid-state synthesis of layered oxides. Nature Materials, 2020, 19, 1088-1095.	27.5	129
69	Side by Side Battery Technologies with Lithiumâ€Ion Based Batteries. Advanced Energy Materials, 2020, 10, 2000089.	19.5	127
70	Influence of Carbon Additives on the Decomposition Pathways in Cathodes of Lithium Thiophosphate-Based All-Solid-State Batteries. Chemistry of Materials, 2020, 32, 6123-6136.	6.7	126
71	Modeling Effective Ionic Conductivity and Binder Influence in Composite Cathodes for All-Solid-State Batteries. ACS Applied Materials & Interfaces, 2020, 12, 12821-12833.	8.0	126
72	Evolution of Li₂O₂ Growth and Its Effect on Kinetics of Liâ€“O₂ Batteries. ACS Applied Materials & Interfaces, 2014, 6, 12083-12092.	8.0	125

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73	Employing Plasmas as Gaseous Electrodes at the Free Surface of Ionic Liquids: Deposition of Nanocrystalline Silver Particles. ChemPhysChem, 2007, 8, 50-53.	2.1	123
74	From Liquid- to Solid-State Batteries: Ion Transfer Kinetics of Heteroionic Interfaces. Electrochemical Energy Reviews, 2020, 3, 221-238.	25.5	117
75	The Working Principle of a Li₂CO₃/LiNbO₃ Coating on NCM for Thiophosphate-Based All-Solid-State Batteries. Chemistry of Materials, 2021, 33, 2110-2125.	6.7	116
76	Interphase Formation of PEO₂₀:LiTFSIâ€“Li₆PS₅Cl Composite Electrolytes with Lithium Metal. ACS Applied Materials & Interfaces, 2020, 12, 11713-11723.	8.0	114
77	Observation of Chemomechanical Failure and the Influence of Cutoff Potentials in All-Solid-State Liâ€“S Batteries. Chemistry of Materials, 2019, 31, 2930-2940.	6.7	112
78	Understanding the fundamentals of redox mediators in Liâ€“O₂ batteries: a case study on nitroxides. Physical Chemistry Chemical Physics, 2015, 17, 31769-31779.	2.8	111
79	Local Structural Investigations, Defect Formation, and Ionic Conductivity of the Lithium Ionic Conductor Li₄P₂S₆. Chemistry of Materials, 2016, 28, 8764-8773.	6.7	111
80	The Fast Charge Transfer Kinetics of the Lithium Metal Anode on the Garnetâ€Type Solid Electrolyte Li_{6.25}Al_{0.25}La₃Zr₂O₁₂. Advanced Energy Materials, 2020, 10, 2000945.	19.5	110
81	LiPON thin films with high nitrogen content for application in lithium batteries and electrochromic devices prepared by RF magnetron sputtering. Solid State Ionics, 2015, 282, 63-69.	2.7	108
82	Oneâ€•or Twoâ€Electron Transfer? The Ambiguous Nature of the Discharge Products in Sodiumâ€“Oxygen Batteries. Angewandte Chemie - International Edition, 2016, 55, 4640-4649.	13.8	108
83	Investigation into Mechanical Degradation and Fatigue of High-Ni NCM Cathode Material: A Long-Term Cycling Study of Full Cells. ACS Applied Energy Materials, 2019, 2, 7375-7384.	5.1	106
84	In situ study of electrochemical activation and surface segregation of the SOFC electrode material La_{0.75}Sr_{0.25}Cr_{0.5}Mn_{0.5}O_{3Â±Î´}. Physical Chemistry Chemical Physics, 2012, 14, 751-758.	2.8	105
85	Gas Evolution in Operating Lithium-Ion Batteries Studied In Situ by Neutron Imaging. Scientific Reports, 2015, 5, 15627.	3.3	104
86	Gas Evolution in All-Solid-State Battery Cells. ACS Energy Letters, 2018, 3, 2539-2543.	17.4	100
87	Pressure Dynamics in Metalâ€“Oxygen (Metalâ€“Air) Batteries: A Case Study on Sodium Superoxide Cells. Journal of Physical Chemistry C, 2014, 118, 1461-1471.	3.1	99
88	Synthesis, Structural Characterization, and Lithium Ion Conductivity of the Lithium Thiophosphate Li₂P₂S₆. Inorganic Chemistry, 2017, 56, 6681-6687.	4.0	98
89	Li₄PS₄I: A Li⁺ Superionic Conductor Synthesized by a Solvent-Based Soft Chemistry Approach. Chemistry of Materials, 2017, 29, 1830-1835.	6.7	97
90	The Critical Role of Fluoroethylene Carbonate in the Gassing of Silicon Anodes for Lithium-Ion Batteries. ACS Energy Letters, 2017, 2, 2228-2233.	17.4	97

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91	Editorsâ€™ Choiceâ€”Quantifying the Impact of Charge Transport Bottlenecks in Composite Cathodes of All-Solid-State Batteries. Journal of the Electrochemical Society, 2021, 168, 040537.	2.9	97
92	Properties of the Interphase Formed between Argyrodite-Type Li₆PS₅Cl and Polymer-Based PEO₁₀:LiTFSI. ACS Applied Materials & Interfaces, 2019, 11, 42186-42196.	8.0	95
93	In situ study of activation and de-activation of LSM fuel cell cathodes â€“ Electrochemistry and surface analysis of thin-film electrodes. Journal of Catalysis, 2012, 294, 79-88.	6.2	92
94	High Rate Performance for Carbonâ€Coated Na₃V₂(PO₄)₂F₃ in Naâ€Ion Batteries. Small Methods, 2019, 3, 1800215.	8.6	92
95	Discharge and Charge Reaction Paths in Sodiumâ€“Oxygen Batteries: Does NaO₂ Form by Direct Electrochemical Growth or by Precipitation from Solution?. Journal of Physical Chemistry C, 2015, 119, 22778-22786.	3.1	91
96	Gas Evolution in LiNi_{0.5}Mn_{1.5}O₄/Graphite Cells Studied In Operando by a Combination of Differential Electrochemical Mass Spectrometry, Neutron Imaging, and Pressure Measurements. Analytical Chemistry, 2016, 88, 2877-2883.	6.5	91
97	Effect of Low-Temperature Al2O3 ALD Coating on Ni-Rich Layered Oxide Composite Cathode on the Long-Term Cycling Performance of Lithium-Ion Batteries. Scientific Reports, 2019, 9, 5328.	3.3	91
98	Li₂ZrO₃-Coated NCM622 for Application in Inorganic Solid-State Batteries: Role of Surface Carbonates in the Cycling Performance. ACS Applied Materials & Interfaces, 2020, 12, 57146-57154.	8.0	90
99	Online Continuous Flow Differential Electrochemical Mass Spectrometry with a Realistic Battery Setup for High-Precision, Long-Term Cycling Tests. Analytical Chemistry, 2015, 87, 5878-5883.	6.5	89
100	Solid-state batteries enter EV fray. MRS Bulletin, 2014, 39, 1046-1047.	3.5	87
101	Defect Chemistry of Oxide Nanomaterials with High Surface Area: Ordered Mesoporous Thin Films of the Oxygen Storage Catalyst CeO₂â€“ZrO₂. ACS Nano, 2013, 7, 2999-3013.	14.6	85
102	In-Depth Characterization of Lithium-Metal Surfaces with XPS and ToF-SIMS: Toward Better Understanding of the Passivation Layer. Chemistry of Materials, 2021, 33, 859-867.	6.7	82
103	The Interface between Li6.5La3Zr1.5Ta0.5O12 and Liquid Electrolyte. Joule, 2020, 4, 101-108.	24.0	81
104	Nitrogen-doped carbon fibers and membranes by carbonization of electrospun poly(ionic liquid)s. Polymer Chemistry, 2011, 2, 1654.	3.9	79
105	Multiple phases in the Îµ-VPO₄Oâ€“LiVPO₄Oâ€“Li₂VPO₄O system: a combined solid state electrochemistry and diffraction structural study. Journal of Materials Chemistry A, 2014, 2, 10182-10192.	10.3	79
106	The Role of Intragranular Nanopores in Capacity Fade of Nickel-Rich Layered Li(Ni_{1â€“<i>x</i>â€“<i>y</i>}Co_{<i>x</i>}Mn_{<i>y</i>})O₂ Cathode Materials. ACS Nano, 2019, 13, 10694-10704.	14.6	79
107	Room temperature, liquid-phase Al₂O₃ surface coating approach for Ni-rich layered oxide cathode material. Chemical Communications, 2019, 55, 2174-2177.	4.1	79
108	Reversible Compositional Control of Oxide Surfaces by Electrochemical Potentials. Journal of Physical Chemistry Letters, 2012, 3, 40-44.	4.6	78

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109	Guidelines for All-Solid-State Battery Design and Electrode Buffer Layers Based on Chemical Potential Profile Calculation. ACS Applied Materials & Interfaces, 2019, 11, 19968-19976.	8.0	77
110	Na₃Zr₂Si₂PO₁₂: A Stable Na⁺-Ion Solid Electrolyte for Solid-State Batteries. ACS Applied Energy Materials, 2020, 3, 7427-7437.	5.1	77
111	Ionic Liquid-Derived Nitrogen-Enriched Carbon/Sulfur Composite Cathodes with Hierarchical Microstructureâ€"A Step Toward Durable High-Energy and High-Performance Lithiumâ€"Sulfur Batteries. Chemistry of Materials, 2015, 27, 1674-1683.	6.7	76
112	On the gassing behavior of lithium-ion batteries with NCM523 cathodes. Journal of Solid State Electrochemistry, 2016, 20, 2961-2967.	2.5	76
113	Molecular Surface Modification of NCM622 Cathode Material Using Organophosphates for Improved Li-Ion Battery Full-Cells. ACS Applied Materials & Interfaces, 2018, 10, 20487-20498.	8.0	76
114	Li⁺-Ion Dynamics in Î²-Li₃PS₄ Observed by NMR: Local Hopping and Long-Range Transport. Journal of Physical Chemistry C, 2018, 122, 15954-15965.	3.1	76
115	Correlating Transport and Structural Properties in Li_{1+<i>x</i>}Al_{<i>x</i>}Ge_{2â€"<i>x</i>}(PO₄)₃ (LAGP) Prepared from Aqueous Solution. ACS Applied Materials & Interfaces, 2018, 10, 10935-10944.	8.0	75
116	Novel anion conductors â€" conductivity, thermodynamic stability and hydration of anion-substituted mayenite-type cage compounds C₁₂A₇:X (X = O, OH, Cl, F, CN, S, N). Physical Chemistry Chemical Physics, 2015, 17, 6844-6857.	2.8	73
117	High electrical conductivity and high porosity in a Guest@MOF material: evidence of TCNQ ordering within Cu₃BTC₂ micropores. Chemical Science, 2018, 9, 7405-7412.	7.4	73
118	Interfacial Stability of Phosphate-NASICON Solid Electrolytes in Ni-Rich NCM Cathode-Based Solid-State Batteries. ACS Applied Materials & Interfaces, 2019, 11, 23244-23253.	8.0	73
119	Analysis of Interfacial Effects in All-Solid-State Batteries with Thiophosphate Solid Electrolytes. ACS Applied Materials & Interfaces, 2020, 12, 9277-9291.	8.0	73
120	An <i>in situ</i> structural study on the synthesis and decomposition of LiNiO₂. Journal of Materials Chemistry A, 2020, 8, 1808-1820.	10.3	72
121	A mechanistic investigation of the Li10GeP2S12|LiNi1-x-yCoxMnyO2 interface stability in all-solid-state lithium batteries. Nature Communications, 2021, 12, 6669.	12.8	72
122	Linking Solid Electrolyte Degradation to Charge Carrier Transport in the Thiophosphateâ€Based Composite Cathode toward Solidâ€State Lithiumâ€Sulfur Batteries. Advanced Functional Materials, 2021, 31, 2010620.	14.9	71
123	Fair performance comparison of different carbon blacks in lithiumâ€"sulfur batteries with practical mass loadings â€" Simple design competes with complex cathode architecture. Journal of Power Sources, 2015, 296, 454-461.	7.8	69
124	Kinetic versus Thermodynamic Stability of LLZO in Contact with Lithium Metal. Chemistry of Materials, 2020, 32, 10207-10215.	6.7	68
125	Oxide nitrides: From oxides to solids with mobile nitrogen ions. Progress in Solid State Chemistry, 2009, 37, 81-131.	7.2	66
126	On the influence of strain on ion transport: microstructure and ionic conductivity of nanoscale YSZ|Sc2O3 multilayers. Physical Chemistry Chemical Physics, 2010, 12, 14596.	2.8	66

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127	Rational Design of Quasi-Zero-Strain NCM Cathode Materials for Minimizing Volume Change Effects in All-Solid-State Batteries. , 2020, 2, 84-88.		66
128	Towards zinc-oxygen batteries with enhanced cycling stability: The benefit of anion-exchange ionomer for zinc sponge anodes. Journal of Power Sources, 2018, 395, 195-204.	7.8	65
129	Spectroscopic characterization of lithium thiophosphates by XPS and XAS â€“ a model to help monitor interfacial reactions in all-solid-state batteries. Physical Chemistry Chemical Physics, 2018, 20, 20088-20095.	2.8	65
130	In situ and operando atomic force microscopy of high-capacity nano-silicon based electrodes for lithium-ion batteries. Nanoscale, 2016, 8, 14048-14056.	5.6	64
131	Influence of Crystallinity of Lithium Thiophosphate Solid Electrolytes on the Performance of Solidâ€State Batteries. Advanced Energy Materials, 2021, 11, 2100654.	19.5	64
132	Li-Rich Li_{1+<i>x</i>}Mn_{2â€“<i>x</i>}O₄ Spinel Electrode Materials: An <i>Operando</i> Neutron Diffraction Study during Li⁺ Extraction/Insertion. Journal of Physical Chemistry C, 2014, 118, 25947-25955.	3.1	63
133	New Insights into the Instability of Discharge Products in Naâ€“O₂ Batteries. ACS Applied Materials & Interfaces, 2016, 8, 20120-20127.	8.0	63
134	Investigation of Fluorine and Nitrogen as Anionic Dopants in Nickel-Rich Cathode Materials for Lithium-Ion Batteries. ACS Applied Materials & Interfaces, 2018, 10, 44452-44462.	8.0	63
135	Amorphous versus Crystalline Li₃PS₄: Local Structural Changes during Synthesis and Li Ion Mobility. Journal of Physical Chemistry C, 2019, 123, 10280-10290.	3.1	62
136	Gas Evolution in Lithium-Ion Batteries: Solid versus Liquid Electrolyte. ACS Applied Materials & Interfaces, 2020, 12, 20462-20468.	8.0	62
137	Operando analysis of the molten Li|LLZO interface: Understanding how the physical properties of Li affect the critical current density. Matter, 2021, 4, 1947-1961.	10.0	62
138	Homogeneous Coating with an Anion-Exchange Ionomer Improves the Cycling Stability of Secondary Batteries with Zinc Anodes. ACS Applied Materials & Interfaces, 2018, 10, 8640-8648.	8.0	61
139	Reaction Mechanism and Surface Film Formation of Conversion Materials for Lithium- and Sodium-Ion Batteries: An XPS Case Study on Sputtered Copper Oxide (CuO) Thin Film Model Electrodes. Journal of Physical Chemistry C, 2016, 120, 1400-1414.	3.1	60
140	Electrochemical Cross-Talk Leading to Gas Evolution and Capacity Fade in LiNi_{0.5}Mn_{1.5}O₄/Graphite Full-Cells. Journal of Physical Chemistry C, 2017, 121, 211-216.	3.1	57
141	Simultaneous acquisition of differential electrochemical mass spectrometry and infrared spectroscopy data for in situ characterization of gas evolution reactions in lithium-ion batteries. Electrochemistry Communications, 2015, 60, 64-69.	4.7	56
142	Origins of Dendrite Formation in Sodiumâ€“Oxygen Batteries and Possible Countermeasures. Energy Technology, 2017, 5, 2265-2274.	3.8	56
143	Lithium Argyrodite as Solid Electrolyte and Cathode Precursor for Solidâ€State Batteries with Long Cycle Life. Advanced Energy Materials, 2021, 11, 2101370.	19.5	56
144	In Situ Imaging of Electrochemically Induced Oxygen Spillover on Pt/YSZ Catalysts. Angewandte Chemie - International Edition, 2006, 45, 1473-1476.	13.8	55

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