Garnet-Type Solid-State Electrolytes: Materials, Interfa

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#	Article	IF	Citations
1	Critical challenges and progress of solid garnet electrolytes for all-solid-state batteries. Materials Today Chemistry, 2020, 18, 100368.	3.5	21
2	A Review of Functional Separators for Lithium Metal Battery Applications. Materials, 2020, 13, 4625.	2.9	84
3	Energy-dense Li metal anodes enabled by thin film electrolytes. Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films, 2020, 38, .	2.1	6
4	Application of polyamide 6 microfiber non-woven fabrics in the large-scale production of all-solid-state lithium metal batteries. Journal of Power Sources, 2020, 475, 228663.	7.8	16
5	Recent Progress in Designing Stable Composite Lithium Anodes with Improved Wettability. Advanced Science, 2020, 7, 2002212.	11.2	95
6	A three dimensional interconnected Li7La3Zr2O12 framework composite solid electrolyte utilizing lignosulfonate/ cellulose nanofiber bio-template for high performance lithium ion batteries. Journal of Power Sources, 2020, 477, 228752.	7.8	26
7	All ceramic cathode composite design and manufacturing towards low interfacial resistance for garnet-based solid-state lithium batteries. Energy and Environmental Science, 2020, 13, 4930-4945.	30.8	108
8	Phase stability and fast ion transport in P2-type layered Na₂X₂TeO₆(X = Mg, Zn) solid electrolytes for sodium batteries. Journal of Materials Chemistry A, 2020, 8, 22816-22827.	10.3	20
9	Fast Charge Transfer across the Li₇La₃Zr₂O₁₂ Solid Electrolyte/LiCoO₂ Cathode Interface Enabled by an Interphase-Engineered All-Thin-Film Architecture. ACS Applied Materials & Interfaces, 2020, 12, 36196-36207.	8.0	67
10	Toward Understanding the Reactivity of Garnet-Type Solid Electrolytes with H₂O/CO₂ in a Glovebox Using X-ray Photoelectron Spectroscopy and Electrochemical Methods. ACS Applied Materials & Interfaces, 2020, 12, 36119-36127.	8.0	20
11	Recycling for All Solid-State Lithium-Ion Batteries. Matter, 2020, 3, 1845-1861.	10.0	38
12	Kinetic versus Thermodynamic Stability of LLZO in Contact with Lithium Metal. Chemistry of Materials, 2020, 32, 10207-10215.	6.7	68
13	Enhanced Performance of Li_{6.4}La₃Zr_{1.4}Ta_{0.6}O₁₂ Solid Electrolyte by the Regulation of Grain and Grain Boundary Phases. ACS Applied Materials & Interfaces, 2020, 12, 56118-56125.	8.0	54
14	3D Coral-like LLZO/PVDF Composite Electrolytes with Enhanced Ionic Conductivity and Mechanical Flexibility for Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2020, 12, 52652-52659.	8.0	81
15	Li/Garnet Interface Optimization: An Overview. ACS Applied Materials & Interfaces, 2020, 12, 52271-52284.	8.0	27
16	Organicâ€"Inorganic Hybrid Materials for Interface Design in All-Solid-State Batteries with a Garnet-Type Solid Electrolyte. ACS Applied Energy Materials, 2020, 3, 11260-11268.	5.1	18
17	Physicochemical Concepts of the Lithium Metal Anode in Solid-State Batteries. Chemical Reviews, 2020, 120, 7745-7794.	47.7	468
18	High Rate Transfer Mechanism of Lithium Ions in Lithiumâ€"Tin and Lithiumâ€"Indium Alloys for Lithium Batteries. Journal of Physical Chemistry C, 2020, 124, 24644-24652.	3.1	23

#	Article	IF	Citations
19	Stabilizing a Lithium Metal Battery by an In Situ Li₂S-modified Interfacial Layer via Amorphous-Sulfide Composite Solid Electrolyte. Nano Letters, 2020, 20, 8273-8281.	9.1	47
20	A Selfâ€Healing Amalgam Interface in Metal Batteries. Advanced Materials, 2020, 32, e2004798.	21.0	34
21	Sulfide and Oxide Inorganic Solid Electrolytes for All-Solid-State Li Batteries: A Review. Nanomaterials, 2020, 10, 1606.	4.1	179
22	Li1.5La1.5MO6 (Mâ€‰=â€‰W6+, Te6+) as a new series of lithium-rich double perovskites for all-solid-state lithium-ion batteries. Nature Communications, 2020, 11, 6392.	12.8	26
23	Effect of Postannealing on the Properties of a Ta-Doped Li₇La₃Zr₂O₁₂ Solid Electrolyte Degraded by Li Dendrite Penetration. ACS Applied Energy Materials, 2020, 3, 12517-12524.	5.1	17
24	Solid Polymer Electrolytes with Flexible Framework of SiO2 Nanofibers for Highly Safe Solid Lithium Batteries. Polymers, 2020, 12, 1324.	4.5	54
25	Interfaces and Interphases in All-Solid-State Batteries with Inorganic Solid Electrolytes. Chemical Reviews, 2020, 120, 6878-6933.	47.7	676
26	Advanced Characterization Techniques for Interface in Allâ€Solidâ€State Batteries. Small Methods, 2020, 4, 2000111.	8.6	35
27	Water-based fabrication of garnet-based solid electrolyte separators for solid-state lithium batteries. Green Chemistry, 2020, 22, 4952-4961.	9.0	23
28	Recent progress and perspective on electrolytes for sodium/potassium-based devices. Energy Storage Materials, 2020, 31, 328-343.	18.0	68
29	A review of composite polymer-ceramic electrolytes for lithium batteries. Energy Storage Materials, 2021, 34, 282-300.	18.0	233
30	Unraveling the limitations of solid oxide electrolytes for all-solid-state electrodes through 3D digital twin structural analysis. Nano Energy, 2021, 79, 105456.	16.0	16
31	Low temperature sintering of fully inorganic all-solid-state batteries â€“ Impact of interfaces on full cell performance. Journal of Power Sources, 2021, 482, 228905.	7.8	58
32	Cathode supported solid lithium batteries enabling high energy density and stable cyclability. Energy Storage Materials, 2021, 35, 512-519.	18.0	80
33	Exploring the relationship between solvent-assisted ball milling, particle size, and sintering temperature in garnet-type solid electrolytes. Journal of Power Sources, 2021, 484, 229252.	7.8	23
34	Inorganic Solid Electrolytes for Allâ€Solidâ€State Sodium Batteries: Fundamentals and Strategies for Battery Optimization. Advanced Functional Materials, 2021, 31, 2008165.	14.9	55
35	Defect engineering of oxide perovskites for catalysis and energy storage: synthesis of chemistry and materials science. Chemical Society Reviews, 2021, 50, 10116-10211.	38.1	140
36	Amorphous Dualâ€Layer Coating: Enabling High Liâ€Ion Conductivity of Nonâ€Sintered Garnetâ€Type Solid Electrolyte. Advanced Functional Materials, 2021, 31, 2009692.	14.9	42

#	Article	IF	Citations
37	Effect of Sm3+ Substitutions on the Lithium Ionic Conduction and Relaxation Dynamics of Li5+2xLa3Nb2â^'xSmxO12 Ceramics. Crystals, 2021, 11, 95.	2.2	0
38	High performance LATP thin film electrolytes for all-solid-state microbattery applications. Journal of Materials Chemistry A, 2021, 9, 17760-17769.	10.3	23
39	Molecular reconfigurations enabling active liquidâ€"solid interfaces for ultrafast Li diffusion kinetics in the 3D framework of a garnet solid-state electrolyte. Journal of Materials Chemistry A, 2021, 9, 17039-17047.	10.3	10
40	Recent advancements in solid electrolytes integrated into all-solid-state 2D and 3D lithium-ion microbatteries. Journal of Materials Chemistry A, 2021, 9, 15140-15178.	10.3	39
41	Highly elastic and mechanically robust polymer electrolytes with high ionic conductivity and adhesiveness for high-performance lithium metal batteries. Journal of Materials Chemistry A, 2021, 9, 13597-13607.	10.3	43
42	The Underlying Mechanism for Reduction Stability of Organic Electrolytes in Lithium Secondary Batteries. Chemical Science, 2021, 12, 9037-9041.	7.4	22
43	<i>In situ</i> generation of a softâ€"tough asymmetric composite electrolyte for dendrite-free lithium metal batteries. Journal of Materials Chemistry A, 2021, 9, 4018-4025.	10.3	34
44	<i>In situ</i> electron holography for characterizing Li ion accumulation in the interface between electrode and solid-state-electrolyte. Journal of Materials Chemistry A, 2021, 9, 15038-15044.	10.3	6
45	Anti-perovskites for solid-state batteries: recent developments, current challenges and future prospects. Journal of Materials Chemistry A, 2021, 9, 18746-18772.	10.3	68
46	Garnet to hydrogarnet: effect of post synthesis treatment on cation substituted LLZO solid electrolyte and its effect on Li ion conductivity. RSC Advances, 2021, 11, 30283-30294.	3.6	8
47	Integrated interface between composite electrolyte and cathode with low resistance enables ultra-long cycle-lifetime in solid-state lithium-metal batteries. Science China Chemistry, 2021, 64, 673-680.	8.2	16
48	Rethinking the Design of Ionic Conductors Using Meyerâ€"Neldelâ€"Conductivity Plot. Advanced Energy Materials, 2021, 11, 2100325.	19.5	24
49	<i>Nido</i>â€Hydroborateâ€Based Electrolytes for Allâ€Solidâ€State Lithium Batteries. Advanced Functional Materials, 2021, 31, 2010046.	14.9	37
50	Processing thin but robust electrolytes for solid-state batteries. Nature Energy, 2021, 6, 227-239.	39.5	328
51	Interface Aspects in Allâ€Solidâ€State Liâ€Based Batteries Reviewed. Advanced Energy Materials, 2021, 11, 2003939.	19.5	66
52	Progress and perspective of interface design in garnet electrolyteâ€based allâ€solidâ€state batteries. , 2021, 3, 385-409.		28
53	Critical Current Density in Solidâ€State Lithium Metal Batteries: Mechanism, Influences, and Strategies. Advanced Functional Materials, 2021, 31, 2009925.	14.9	239
54	Low Resistance and High Stable Solidâ€"Liquid Electrolyte Interphases Enable Highâ€Voltage Solidâ€State Lithium Metal Batteries. Advanced Functional Materials, 2021, 31, 2010611.	14.9	34

#	Article	IF	Citations
55	Enhancing the ionic conductivity and stabilizing cubic structure of garnet-type Li6.25-xAl0.25La3Zr2-xTaxO12 by Al/Ta co-doping. Journal of Solid State Chemistry, 2021, 295, 121949.	2.9	8
56	Dendrites in Solidâ€State Batteries: Ion Transport Behavior, Advanced Characterization, and Interface Regulation. Advanced Energy Materials, 2021, 11, 2003250.	19.5	69
57	Design of High-Voltage Stable Hybrid Electrolyte with an Ultrahigh Li Transference Number. ACS Energy Letters, 0, , 1315-1323.	17.4	50
58	Modulating Nanoinhomogeneity at Electrodeâ€"Solid Electrolyte Interfaces for Dendriteâ€Proof Solidâ€State Batteries and Longâ€Life Memristors. Advanced Energy Materials, 2021, 11, 2003811.	19.5	37
59	Stress Regulation on Atomic Bonding and Ionic Diffusivity: Mechanochemical Effects in Sulfide Solid Electrolytes. Energy & Fuels, 2021, 35, 10210-10218.	5.1	22
60	High-Mass-Loading Electrodes for Advanced Secondary Batteries and Supercapacitors. Electrochemical Energy Reviews, 2021, 4, 382-446.	25.5	181
61	Electrochemical Compatibility of Solidâ€State Electrolytes with Cathodes and Anodes for Allâ€Solidâ€State Lithium Batteries: A Review. Advanced Energy and Sustainability Research, 2021, 2, 2000101.	5.8	16
62	Effects of High and Low Salt Concentrations in Electrolytes at Lithiumâ€"Metal Anode Surfaces Using DFT-ReaxFF Hybrid Molecular Dynamics Method. Journal of Physical Chemistry Letters, 2021, 12, 2922-2929.	4.6	32
64	Benzophenone as indicator detecting lithium metal inside solid state electrolyte. Journal of Power Sources, 2021, 492, 229661.	7.8	6
65	Garnet-Based Solid-State Li Batteries: From Materials Design to Battery Architecture. ACS Energy Letters, 2021, 6, 1920-1941.	17.4	66
66	An integrated solvent-free modification and composite process of Li6.4La3Zr1.4Ta0.6O12/Poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 1 2021, 492, 229672.	7.8	25
67	Atomistic Insights into the Effects of Doping and Vacancy Clustering on Li-Ion Conduction in the Li₃OCl Antiperovskite Solid Electrolyte. ACS Applied Energy Materials, 2021, 4, 5094-5100.	5.1	24
68	Excess Li2O Additives to Promote Grain Boundary Growth and Improve Ionic Conductivity of LiTa2PO8 Solid Electrolytes. Frontiers in Materials, 2021, 8, .	2.4	2
69	Designing inorganic electrolytes for solid-state Li-ion batteries: A perspective of LGPS and garnet. Materials Today, 2021, 50, 418-441.	14.2	59
70	Electrolyte/Electrode Interfaces in All-Solid-State Lithium Batteries: A Review. Electrochemical Energy Reviews, 2021, 4, 169-193.	25.5	147
71	X-ray Nanoimaging of Crystal Defects in Single Grains of Solid-State Electrolyte Li_{7â€"3<i>x</i>}Al_{<i>x</i>}La₃Zr₂O₁₂. Nano Letters, 2021, 21, 4570-4576.	9.1	13
72	Dislocations in ceramic electrolytes for solid-state Li batteries. Scientific Reports, 2021, 11, 8949.	3.3	14
73	Li-ion conductivity of NASICON-type Li1+2xZr2â^'xCax(PO4)3 solid electrolyte prepared by spark plasma sintering. Journal of Alloys and Compounds, 2021, 862, 158641.	5.5	9

#	Article	IF	Citations
74	Optimization of Tape Casting for Fabrication of Li_{6.25}Al_{0.25}La₃Zr₂O₁₂ Sheets. Energy & Fuels, 2021, 35, 8982-8990.	5.1	16
75	Deciphering Interfacial Chemical and Electrochemical Reactions of Sulfideâ€Based Allâ€Solidâ€State Batteries. Advanced Energy Materials, 2021, 11, 2100210.	19.5	63
76	Smart Construction of an Intimate Lithium | Garnet Interface for Allâ€Solidâ€State Batteries by Tuning the Tension of Molten Lithium. Advanced Functional Materials, 2021, 31, 2101556.	14.9	97
77	Electrochemical Impedance Spectroscopy for Allâ€Solidâ€State Batteries: Theory, Methods and Future Outlook. ChemElectroChem, 2021, 8, 1930-1947.	3.4	176
78	Effect of the 3D Structure and Grain Boundaries on Lithium Transport in Garnet Solid Electrolytes. ACS Applied Energy Materials, 2021, 4, 4786-4804.	5.1	13
79	Revealing the role of the cathodeâ€“electrolyte interface on solid-state batteries. Nature Materials, 2021, 20, 1392-1400.	27.5	106
80	Powder Aerosol Deposition as a Method to Produce Garnetâ€Type Solid Ceramic Electrolytes: A Study on Electrochemical Film Properties and Industrial Applications. Energy Technology, 2021, 9, 2100211.	3.8	14
81	Break-Even Analysis of All-Solid-State Batteries with Li-Garnet Solid Electrolytes. ACS Energy Letters, 2021, 6, 2202-2207.	17.4	32
82	Tailoring inorganicâ€“polymer composites for the mass production of solid-state batteries. Nature Reviews Materials, 2021, 6, 1003-1019.	48.7	409
83	Investigating the Calcination and Sintering of Li₇La₃Zr₂O₁₂ (LLZO) Solid Electrolytes Using Operando Synchrotron X-ray Characterization and Mesoscale Modeling. Chemistry of Materials, 2021, 33, 4337-4352.	6.7	24
84	Improved Li6.5La3Zr1.5Nb0.5O12 electrolyte and effects of atmosphere exposure on conductivities. Journal of Power Sources, 2021, 497, 229845.	7.8	16
85	Flexible, Mechanically Robust, Solid-State Electrolyte Membrane with Conducting Oxide-Enhanced 3D Nanofiber Networks for Lithium Batteries. Nano Letters, 2021, 21, 7070-7078.	9.1	72
86	Aging Behavior of Al- and Ga- Stabilized Li7La3Zr2O12 Garnet-Type, Solid-State Electrolyte Based on Powder and Single Crystal X-ray Diffraction. Crystals, 2021, 11, 721.	2.2	5
87	Organosiliconâ€Based Functional Electrolytes for Highâ€Performance Lithium Batteries. Advanced Energy Materials, 2021, 11, 2101057.	19.5	26
88	Design of safe, long-cycling and high-energy lithium metal anodes in all working conditions: Progress, challenges and perspectives. Energy Storage Materials, 2021, 38, 157-189.	18.0	52
89	TiO₂ Nanofiber-Modified Lithium Metal Composite Anode for Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2021, 13, 28398-28404.	8.0	31
90	Energy Storage Mechanism, Challenge and Design Strategies of Metal Sulfides for Rechargeable Sodium/Potassiumâ€Ion Batteries. Advanced Functional Materials, 2021, 31, 2103912.	14.9	108
91	Modification strategies of Li7La3Zr2O12 ceramic electrolyte for high-performance solid-state batteries. Tungsten, 2021, 3, 260-278.	4.8	17

#	Article	IF	Citations
92	In situ characterizations of solidâ€"solid interfaces in solidâ€state batteries using synchrotron Xâ€ray techniques. , 2021, 3, 762-783.		27
93	Amorphous-Carbon-Coated 3D Solid Electrolyte for an Electro-Chemomechanically Stable Lithium Metal Anode in Solid-State Batteries. Nano Letters, 2021, 21, 6163-6170.	9.1	29
94	Favorable Interfacial Chemomechanics Enables Stable Cycling of High-Li-Content Liâ€"In/Sn Anodes in Sulfide Electrolyte-Based Solid-State Batteries. Chemistry of Materials, 2021, 33, 6029-6040.	6.7	28
95	Blocking lithium dendrite growth in solid-state batteries with an ultrathin amorphous Li-La-Zr-O solid electrolyte. Communications Materials, 2021, 2, .	6.9	45
96	Highâ€Temperature Ultrafast Sintering: Exploiting a New Kinetic Region to Fabricate Porous Solidâ€State Electrolyte Scaffolds. Advanced Materials, 2021, 33, e2100726.	21.0	24
97	Intermetallic interphases in lithium metal and lithium ion batteries. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 1083-1109.	17.3	35
98	PEO Infiltration of Porous Garnet-Type Lithium-Conducting Solid Electrolyte Thin Films. Ceramics, 2021, 4, 421-436.	2.6	7
99	Resolving Grain Boundary Microstructures in Garnet-Type Li7La3Zr2O12 using Model-Based TEM Image Simulation. Microscopy and Microanalysis, 2021, 27, 1758-1759.	0.4	0
100	Microstructure engineering of solid-state composite cathode via solvent-assisted processing. Joule, 2021, 5, 1845-1859.	24.0	42
101	Lithium dendrites suppressed by low temperature in-situ anti-perovskite coated garnet solid-state electrolyte. Journal of Power Sources, 2021, 500, 229982.	7.8	14
102	A homogenous solid polymer electrolyte prepared by facile spray drying method is used for room-temperature solid lithium metal batteries. Nano Research, 2023, 16, 5080-5086.	10.4	20
103	Cu-Doped Alloy Layer Guiding Uniform Li Deposition on a Liâ€"LLZO Interface under High Current Density. ACS Applied Materials & Interfaces, 2021, 13, 42212-42219.	8.0	23
104	Immobilizing Ceramic Electrolyte Particles into a Gel Matrix Formed In Situ for Stable Li-Metal Batteries. ACS Applied Materials & Interfaces, 2021, 13, 38179-38187.	8.0	8
105	Modified Li7La3Zr2O12 (LLZO) and LLZO-polymer composites for solid-state lithium batteries. Energy Storage Materials, 2021, 39, 108-129.	18.0	81
106	Improving Li/garnet interface by amorphous SnO2 interlayerdeposited via solâ€"gel method. Materials Letters, 2021, 297, 129959.	2.6	4
107	Review on the critical issues for the realization of all-solid-state lithium metal batteries with garnet electrolyte: interfacial chemistry, dendrite growth, and critical current densities. Ionics, 2021, 27, 4105-4126.	2.4	24
108	Covalent Organic Frameworks and Their Derivatives for Better Metal Anodes in Rechargeable Batteries. ACS Nano, 2021, 15, 12741-12767.	14.6	71
109	Reviewâ€"Inorganic Solid State Electrolytes: Insights on Current and Future Scope. Journal of the Electrochemical Society, 2021, 168, 080536.	2.9	11

#	Article	IF	Citations
110	Phase transformation and grain-boundary segregation in Al-Doped Li7La3Zr2O12 ceramics. Ceramics International, 2021, 47, 22768-22775.	4.8	50
111	Commercializationâ€Driven Electrodes Design for Lithium Batteries: Basic Guidance, Opportunities, and Perspectives. Small, 2021, 17, e2102233.	10.0	38
112	Lithium garnet-cathode interfacial chemistry: inclusive insights and outlook towardÂpractical solid-state lithium metal batteries. Materials Today Energy, 2021, 21, 100804.	4.7	23
113	Characterizations of dynamic interfaces in all-solid lithium batteries. Journal of Power Sources, 2021, 506, 229871.	7.8	7
114	Garnet-type solid electrolyte: Advances of ionic transport performance and its application in all-solid-state batteries. Journal of Advanced Ceramics, 2021, 10, 933-972.	17.4	64
115	Recent progress of asymmetric solid-state electrolytes for lithium/sodium-metal batteries. EnergyChem, 2021, 3, 100058.	19.1	47
116	Searching for Mechanically Superior Solid-State Electrolytes in Li-Ion Batteries<i>via</i>Data-Driven Approaches. ACS Applied Materials & Interfaces, 2021, 13, 42590-42597.	8.0	20
117	Lithium Oxide Superionic Conductors Inspired by Garnet and NASICON Structures. Advanced Energy Materials, 2021, 11, 2101437.	19.5	33
118	Effects of Gaâ€"Ba Co-doping on the morphology and conductivity of Li7La3Zr2O12 electrolyte synthesized by sol-gel method. Ceramics International, 2022, 48, 963-970.	4.8	15
119	Heavily Tungstenâ€Doped Sodium Thioantimonate Solidâ€State Electrolytes with Exceptionally Low Activation Energy for Ionic Diffusion. Angewandte Chemie, 2021, 133, 26362-26370.	2.0	2
120	3D-printed solid-state electrolytes for electrochemical energy storage devices. Journal of Materials Research, 2021, 36, 4547-4564.	2.6	11
121	From Lithiumâ€Metal toward Anodeâ€Free Solidâ€State Batteries: Current Developments, Issues, and Challenges. Advanced Functional Materials, 2021, 31, 2106608.	14.9	98
122	Heavily Tungstenâ€Doped Sodium Thioantimonate Solidâ€State Electrolytes with Exceptionally Low Activation Energy for Ionic Diffusion. Angewandte Chemie - International Edition, 2021, 60, 26158-26166.	13.8	18
123	Building a Better Liâ€Garnet Solid Electrolyte/Metallic Li Interface with Antimony. Advanced Energy Materials, 2021, 11, 2102086.	19.5	70
124	Li7La3Zr2O12 solid electrolyte sintered by the ultrafast high-temperature method. Journal of the European Ceramic Society, 2021, 41, 6075-6079.	5.7	42
125	Pathway of in situ polymerization of 1,3-dioxolane in LiPF6 electrolyte on Li metal anode. Materials Today Energy, 2021, 21, 100730.	4.7	22
126	Functional additives for solid polymer electrolytes in flexible and highâ€energyâ€density solidâ€state lithiumâ€ion batteries. , 2021, 3, 929-956.		63
127	Polymer electrolytes and interfaces in solid-state lithium metal batteries. Materials Today, 2021, 51, 449-474.	14.2	161

#	Article	IF	Citations
128	Computation-guided discovery of coating materials to stabilize the interface between lithium garnet solid electrolyte and high-energy cathodes for all-solid-state lithium batteries. Energy Storage Materials, 2021, 41, 571-580.	18.0	31
129	Enabling lithium metal battery with flexible polymer/garnet type solid oxide composite electrolyte. Solid State Ionics, 2021, 368, 115710.	2.7	10
130	LiCoO2/Li6.75La3Zr1.75Nb0.25O12 interface modification enables all-solid-state battery. Materials Letters, 2021, 301, 130302.	2.6	10
131	Harnessing artificial intelligence to holistic design and identification for solid electrolytes. Nano Energy, 2021, 89, 106337.	16.0	16
132	A Machine Learning Shortcut for Screening the Spinel Structures of Mg/Zn Ion Battery Cathodes with a High Conductivity and Rapid Ion Kinetics. Energy Storage Materials, 2021, 42, 277-285.	18.0	18
133	Nanostructured ligament and fiber Alâ€"doped Li7La3Zr2O12 scaffolds to mediate cathode-electrolyte interface chemistry. Journal of Power Sources, 2021, 513, 230551.	7.8	9
134	A thin and flexible solid electrolyte templated by controllable porous nanocomposites toward extremely high performance all-solid-state lithium-ion batteries. Chemical Engineering Journal, 2021, 425, 130632.	12.7	30
135	Ultrathin polymer-in-ceramic and ceramic-in-polymer bilayer composite solid electrolyte membrane for high-voltage lithium metal batteries. Journal of Membrane Science, 2021, 640, 119840.	8.2	37
136	Constructing in-situ polymerized electrolyte on lithiophilic anode for high-performance lithiumâ€"air batteries operating in ambient conditions. Energy Storage Materials, 2021, 43, 221-228.	18.0	35
137	Roles of metal element substitutions from the bimetallic solid state electrolytes in lithium batteries. Particuology, 2022, 65, 51-71.	3.6	3
138	Sheet-like garnet structure design for upgrading PEO-based electrolyte. Chemical Engineering Journal, 2022, 429, 132343.	12.7	42
139	Wet-chemical synthesis of Li7P3S11 with tailored particle size for solid state electrolytes. Chemical Engineering Journal, 2022, 429, 132334.	12.7	12
140	Visualization and Control of Chemically Induced Crack Formation in All-Solid-State Lithium-Metal Batteries with Sulfide Electrolyte. ACS Applied Materials & Interfaces, 2021, 13, 5000-5007.	8.0	50
141	Recent Progress of Porous Materials in Lithiumâ€Metal Batteries. Small Structures, 2021, 2, 2000118.	12.0	61
142	A kinetically stable anode interface for Li₃YCl₆-based all-solid-state lithium batteries. Journal of Materials Chemistry A, 2021, 9, 15012-15018.	10.3	39
143	Single-crystal neutron and X-ray diffraction study of garnet-type solid-state electrolyte Li₆La₃ZrTaO₁₂: an <i>in situ</i> temperature-dependence investigation (2.5 â‰ <i>T</i> â‰ 873â€…K). Acta Crystallographica Section B: Structural Science, Crystal Engineering and Materials, 2021, 77, 123-130.	1.1	6
144	High-Voltage â€œSingle-Crystalâ€•Cathode Materials for Lithium-Ion Batteries. Energy & Fuels, 2021, 35, 1918-1932.	5.1	93
145	Interrelated interfacial issues between a Li₇La₃Zr₂O₁₂-based garnet electrolyte and Li anode in the solid-state lithium battery: a review. Journal of Materials Chemistry A, 2021, 9, 5952-5979.	10.3	50

#	Article	IF	Citations
146	Solid-state electrolytes: Advances and perspectives. Functional Materials Letters, 2021, 14, 2130001.	1.2	11
147	Reviewâ€"Polymer/Ceramic Interface Barriers: The Fundamental Challenge for Advancing Composite Solid Electrolytes for Li-Ion Batteries. Journal of the Electrochemical Society, 2020, 167, 160514.	2.9	45
148	Advance in interface and characterizations of sulfide solid electrolyte materials. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 228803.	0.5	24
149	A Three-Dimensional Electrospun Li6.4La3Zr1.4Ta0.6O12â€"Poly (Vinylidene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 627 Td (Flu Batteries. Frontiers in Chemistry, 2021, 9, 751476.	3.6	4
150	Solvent-Free Process for Blended PVDF-HFP/PEO and LLZTO Composite Solid Electrolytes with Enhanced Mechanical and Electrochemical Properties for Lithium Metal Batteries. ACS Applied Energy Materials, 2021, 4, 11802-11812.	5.1	43
151	A Flexible, Fireproof, Composite Polymer Electrolyte Reinforced by Electrospun Polyimide for Room-Temperature Solid-State Batteries. Polymers, 2021, 13, 3622.	4.5	7
152	Enhanced Al/Ta co-doped Li7La3Zr2O12 ceramic electrolytes with the reduced Ta doping level for solid-state lithium batteries. Journal of Materials Science, 2021, 56, 19614-19622.	3.7	10
153	Insight into the solid-liquid electrolyte interphase between Li6.4La3Zr1.4Ta0.6O12 and LiPF6-based liquid electrolyte. Applied Surface Science, 2022, 575, 151638.	6.1	15
154	Hierarchical porous transition metal oxide nanosheets templated from waste bagasse: General synthesis and Li/Na storage performance. Ceramics International, 2022, 48, 2298-2305.	4.8	10
155	Rapid Ion Transport Induced by the Enhanced Interaction in Composite Polymer Electrolyte for All-Solid-State Lithium-Metal Batteries. Journal of Physical Chemistry Letters, 2021, 12, 10603-10609.	4.6	23
156	Polymerâ€"Ceramic Composite Cathode with Enhanced Storage Capacity Manufactured by Field-Assisted Sintering and Infiltration. ACS Applied Energy Materials, 2021, 4, 10428-10432.	5.1	16
157	Zeolitic imidazolate framework enables practical room-temperature operation of solid-state lithium batteries. Materials Today Physics, 2021, 21, 100554.	6.0	6
158	Chemical Heterogeneity in PAN/LLZTO Composite Electrolytes by Synchrotron Imaging. Journal of the Electrochemical Society, 2021, 168, 110522.	2.9	3
159	Physical issues in solid garnet batteries. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 228804.	0.5	4
160	Brief overview of microscopic physical image of ion transport in electrolytes. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 226601.	0.5	27
161	Facile synthesis and electrochemical properties of Na-rich anti-perovskite solid electrolytes. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 228201-228201.	0.5	2
162	Additive manufacturing of novel 3D ceramic electrodes for highâ€powerâ€density batteries. International Journal of Applied Ceramic Technology, 2022, 19, 979-991.	2.1	1
163	Calcium-doping effects on structure and electric performances of garnet-type Li6.6La3Zr1.6Sb0.4O12 solid-state electrolytes. Solid State Ionics, 2022, 374, 115812.	2.7	12

#	Article	IF	Citations
164	Recent advances of composite electrolytes for solid-state Li batteries. Journal of Energy Chemistry, 2022, 67, 524-548.	12.9	47
165	Conductivity enhancement of Al- and Ta-substituted Li7La3Zr2O7 solid electrolytes by nanoparticles. Journal of the European Ceramic Society, 2022, 42, 1033-1041.	5.7	5
166	A₃Aâ€²₃Zn₆Te₄O₂₄ (A = Na, Aâ€² = Rare Earth) Garnets: A-Site Ordered Noncentrosymmetric Structure, Photoluminescence, and Na-Ion Conductivity. Inorganic Chemistry, 2021, 60, 18168-18177.	4.0	5
167	High-purity and high-concentration liquid fuels through CO2 electroreduction. Nature Catalysis, 2021, 4, 943-951.	34.4	143
168	Rapid synthesis of garnet-type Li7La3Zr2O12 solid electrolyte with superior electrochemical performance. Journal of the European Ceramic Society, 2022, 42, 1568-1575.	5.7	9
169	An oxygen vacancy-rich ZnO layer on garnet electrolyte enables dendrite-free solid state lithium metal batteries. Chemical Engineering Journal, 2022, 433, 133665.	12.7	23
170	Designing Lithium Argyrodite Solidâ€State Electrolytes for Highâ€Performance Allâ€Solidâ€State Lithium Batteries. Batteries and Supercaps, 2022, 5, .	4.7	8
171	Computational Screening of Anode Coatings for Garnetâ€type Solidâ€State Batteries. Batteries and Supercaps, 0, , .	4.7	2
172	Recent progress and perspectives on designing high-performance thick electrodes for all-solid-state lithium batteries. ETransportation, 2022, 11, 100152.	14.8	53
173	Interfaces in all solid state Li-metal batteries: A review on instabilities, stabilization strategies, and scalability. Energy Storage Materials, 2022, 45, 969-1001.	18.0	36
174	A lithium-MXene composite anode with high specific capacity and low interfacial resistance for solid-state batteries. Energy Storage Materials, 2022, 45, 934-940.	18.0	34
175	Solvation chemistry of rare earth nitrates in carbonate electrolyte for advanced lithium metal batteries. Chemical Engineering Journal, 2022, 433, 134468.	12.7	18
176	Porous membrane host-derived in-situ polymer electrolytes with double-stabilized electrode interface enable long cycling lithium metal batteries. Chemical Engineering Journal, 2022, 433, 134471.	12.7	40
177	Dendrite-free lithium electrodeposition enabled by 3D porous lithiophilic host toward stable lithium metal anodes. Oxford Open Materials Science, 2020, 1, .	1.8	1
178	The transcendental role of lithium zirconates in the development of modern energy technologies. Ceramics International, 2022, 48, 8930-8959.	4.8	9
179	In-situ constructed lithium-salt lithiophilic layer inducing bi-functional interphase for stable LLZO/Li interface. Energy Storage Materials, 2022, 47, 61-69.	18.0	46
180	<i>In situ</i> formation of circular and branched oligomers in a localized high concentration electrolyte at the lithium-metal solid electrolyte interphase: a hybrid <i>ab initio</i> and reactive molecular dynamics study. Journal of Materials Chemistry A, 2022, 10, 632-639.	10.3	15
181	Perspective on design and technical challenges of Li-garnet solid-state batteries. Science and Technology of Advanced Materials, 2022, 23, 41-48.	6.1	15

#	Article	IF	Citations
182	Room-temperature, all-solid-state lithium metal batteries enabled by a moderate-temperature formation method. Journal of Materials Science, 2022, 57, 1271-1280.	3.7	0
183	Antiperovskite Electrolytes for Solid-State Batteries. Chemical Reviews, 2022, 122, 3763-3819.	47.7	96
184	Chemical stability of sulfide solid-state electrolytes: stability toward humid air and compatibility with solvents and binders. Energy and Environmental Science, 2022, 15, 991-1033.	30.8	100
185	Solid Polymer Electrolyte Reinforced with a Li_{1.3}Al_{0.3}Ti_{1.7}(PO₄)₃-Coated Separator for All-Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2022, 14, 1195-1202.	8.0	33
186	Supramolecular Network Structured Gel Polymer Electrolyte with High Ionic Conductivity for Lithium Metal Batteries. Small, 2022, 18, e2106352.	10.0	19
187	Coordination-Assisted Precise Construction of Metal Oxide Nanofilms for High-Performance Solid-State Batteries. Journal of the American Chemical Society, 2022, 144, 2179-2188.	13.7	38
188	A generalized numerical prediction on ionic conductivity of non-dense solid electrolyte based on finite element modeling. Ionics, 0, , 1.	2.4	1
189	Computational screening of spinel structure cathodes for Li-ion battery with low expansion and rapid ion kinetics. Computational Materials Science, 2022, 204, 111187.	3.0	5
190	An in situ-formed high lithiophilic solid lubricant interface layer for garnet-based solid-state lithium metal batteries. Electrochimica Acta, 2022, 407, 139767.	5.2	6
191	Impacts of 3Li2O-2GeO2 melt on fabrication and electrical performance of novel LLZTO@Li4GeO4/Li2O composite electrolytes. Journal of the European Ceramic Society, 2022, 42, 2290-2298.	5.7	6
192	New Insights into the Effects of Zr Substitution and Carbon Additive on Li_{3â€“<i>x</i>}Er_{1â€“<i>x</i>}Zr_{<i>x</i>}Cl₆ Halide Solid Electrolytes. ACS Applied Materials & Interfaces, 2022, 14, 8095-8105.	8.0	36
193	Application of Advanced Vibrational Spectroscopy in Revealing Critical Chemical Processes and Phenomena of Electrochemical Energy Storage and Conversion. ACS Applied Materials & Interfaces, 2022, 14, 23033-23055.	8.0	12
194	Reducing the crystallinity of PEO-based composite electrolyte for high performance lithium batteries. Composites Part B: Engineering, 2022, 234, 109729.	12.0	25
195	Potential Solid-State Electrolytes with Good Balance between Ionic Conductivity and Electrochemical Stability: Li_{5â€“<i>x</i>}M_{1â€“<i>x</i>}M_{<i>x</i>}â€²O₄ (M = Al) Tj ETQq1 1 0.7843	8.0	5
196	High-Rate and Durable Sulfide-Based All-Solid-State Lithium Battery with <i>in situ</i> Li ₂O Buffering. SSRN Electronic Journal, 0, , .	0.4	0
197	Guidelines to Correctly Measure the Lithium Ion Conductivity of Oxide Ceramic Electrolytes Based on a Round-Robin Test. SSRN Electronic Journal, 0, , .	0.4	0
198	Developing a high-voltage electrolyte based on <i>conjuncto</i>-hydroborates for solid-state sodium batteries. Journal of Materials Chemistry A, 2022, 10, 7186-7194.	10.3	11
199	Crosslinked xylose-based polyester as a bio-derived and degradable solid polymer electrolyte for Li⁺-ion conduction. Journal of Materials Chemistry A, 2022, 10, 6796-6808.	10.3	11

#	Article	IF	Citations
200	Constructing the Lithium Polymeric Salt Interfacial Phase in Composite Solid-State Electrolytes for Enhancing Cycle Performance of Lithium Metal Batteries. SSRN Electronic Journal, 0, , .	0.4	0
201	Dual Interface Design of Ga-Doped Li7la3zr2o12/Polymer Composite Electrolyte for Solid-State Lithium Batteries. SSRN Electronic Journal, 0, , .	0.4	0
202	Pore and grain chemistry during sintering of garnet-type Li_{6.4}La₃Zr_{1.4}Ta_{0.6}O₁₂ solid-state electrolytes. Journal of Materials Chemistry A, 2022, 10, 9080-9090.	10.3	1
203	High-Safety Composite Solid Electrolyte Based on Inorganic Matrix for Solid-State Lithium-Metal Batteries. SSRN Electronic Journal, 0, , .	0.4	0
204	Scalable, Ultrathin, and Highâ€Temperatureâ€Resistant Solid Polymer Electrolytes for Energyâ€Dense Lithium Metal Batteries. Advanced Energy Materials, 2022, 12, .	19.5	132
205	Study of LiCoO₂/Li₇La₃Zr₂O₁₂:Ta Interface Degradation in All-Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2022, 14, 11288-11299.	8.0	36
206	Critical Current Densities for High-Performance All-Solid-State Li-Metal Batteries: Fundamentals, Mechanisms, Interfaces, Materials, and Applications. ACS Energy Letters, 2022, 7, 1492-1527.	17.4	70
207	Ionic Liquid@Metal-Organic Framework as a Solid Electrolyte in a Lithium-Ion Battery: Current Performance and Perspective at Molecular Level. Nanomaterials, 2022, 12, 1076.	4.1	12
208	Review of Multifunctional Separators: Stabilizing the Cathode and the Anode for Alkali (Li, Na, and K) Metalâ€“Sulfur and Selenium Batteries. Chemical Reviews, 2022, 122, 8053-8125.	47.7	132
209	Recent Advances in Interface Engineering for All-Solid-State Batteries. Ceramist, 2022, 25, 104-121.	0.1	0
210	A highly ionic conductive succinonitrile-based composite solid electrolyte for lithium metal batteries. Nano Research, 2022, 15, 5153-5160.	10.4	26
211	Stable All-Solid-State Lithium Metal Batteries Enabled by Machine Learning Simulation Designed Halide Electrolytes. Nano Letters, 2022, 22, 2461-2469.	9.1	32
212	Structural Heterogeneity Induced Li Dendrite Growth in Li_{0.33}La_{0.56}TiO₃ Solid-State Electrolytes. ACS Applied Energy Materials, 2022, 5, 3741-3747.	5.1	6
213	Blade-Coatable Hexagonal Boron Nitride Ionogel Electrolytes for Scalable Production of Lithium Metal Batteries. ACS Energy Letters, 2022, 7, 1558-1565.	17.4	15
214	Review of modification strategies in emerging inorganic solid-state electrolytes for lithium, sodium, and potassium batteries. Joule, 2022, 6, 543-587.	24.0	90
215	Carbon dots for ultrastable solidâ€state batteries. SmartMat, 2022, 3, 286-297.	10.7	19
216	Interface Engineering of a Ceramic Electrolyte by Ta₂O₅ Nanofilms for Ultrastable Lithium Metal Batteries. Advanced Functional Materials, 2022, 32, .	14.9	22
217	The Fluorineâ€Rich Electrolyte as an Interface Modifier to Stabilize Lithium Metal Battery at Ultraâ€Low Temperature. Advanced Functional Materials, 2022, 32, .	14.9	38

#	Article	IF	Citations
218	Li-stuffed garnet electrolytes: structure, ionic conductivity, chemical stability, interface, and applications. Canadian Journal of Chemistry, 2022, 100, 311-319.	1.1	4
219	Teaching Metal-Organic Frameworks to Conduct: Ion and Electron Transport in Metal-Organic Frameworks. Annual Review of Materials Research, 2022, 52, 103-128.	9.3	18
220	Crystal structure of cubic Li7-3xGaxLa3Zr2O12 with space group of I-43d. Ceramics International, 2022, 48, 9371-9377.	4.8	8
221	Guidelines to correctly measure the lithium ion conductivity of oxide ceramic electrolytes based on a harmonized testing procedure. Journal of Power Sources, 2022, 531, 231323.	7.8	4
222	The effect of a Ta, Sr co-doping strategy on physical and electrochemical properties of Li7La3Zr2O12 electrolytes. Solid State Ionics, 2022, 379, 115917.	2.7	8
223	Hydrogen bonds enhanced composite polymer electrolyte for high-voltage cathode of solid-state lithium battery. Nano Energy, 2022, 96, 107105.	16.0	44
224	Constructing the lithium polymeric salt interfacial phase in composite solid-state electrolytes for enhancing cycle performance of lithium metal batteries. Chemical Engineering Journal, 2022, 442, 136154.	12.7	20
225	Single-Ion-Conducting â€œPolymer-in-Ceramicâ€•Hybrid Electrolyte with an Intertwined NASICON-Type Nanofiber Skeleton. ACS Applied Materials & Interfaces, 2021, 13, 61067-61077.	8.0	14
226	Long-Life and High-Rate-Charging Lithium Metal Batteries Enabled by a Flexible Active Solid Electrolyte Interphase Layer. ACS Applied Materials & Interfaces, 2021, 13, 60678-60688.	8.0	9
227	Deep hydration of an Li_{7â€“3<i>x</i>}La₃Zr₂ <i>M</i> ^{III} _{<i>x</i>}O₁₂ solid-state electrolyte material: a case study on Al- and Ga-stabilized LLZO. Acta Crystallographica Section C, Structural Chemistry, 2022, 78, 1-6.	0.5	4
228	Tuning Interface Lithiophobicity for Lithium Metal Solid-State Batteries. ACS Energy Letters, 2022, 7, 131-139.	17.4	56
229	The quest for the holy grail of solid-state lithium batteries. Energy and Environmental Science, 2022, 15, 1840-1860.	30.8	48
230	Stable composite electrolytes of PVDF modified by inorganic particles for solidâ€state lithium batteries. Journal of the American Ceramic Society, 2022, 105, 5262-5273.	3.8	6
231	Recent advances of Li7La3Zr2O12-based solid-state lithium batteries towards high energy density. Energy Storage Materials, 2022, 49, 299-338.	18.0	30
232	Atomic Defect Mediated Li-Ion Diffusion in a Lithium Lanthanum Titanate Solid-State Electrolyte. ACS Nano, 2022, 16, 6898-6905.	14.6	7
233	Vertically Heterostructured Solid Electrolytes for Lithium Metal Batteries. Advanced Functional Materials, 2022, 32, .	14.9	23
234	Experimental and theoretical study on enhanced electrochemistry of aluminum substitution LLZO garnet solid electrolytes. Materials Research Express, 0, , .	1.6	1
235	Storage of Garnet Solid Electrolytes: Insights into Air Stability and Surface Chemistry. ACS Applied Energy Materials, 2022, 5, 5108-5116.	5.1	10

#	Article	IF	Citations
236	Enabling Stable Cycling of 4.6 V High-Voltage LiCoO₂ with an In Situ-Modified PEGDA-Based Quasi-Solid Electrolyte. ACS Applied Energy Materials, 2022, 5, 5170-5181.	5.1	7
237	Combining Organic Plastic Salts with a Bicontinuous Electrospun PVDFâ€"HFP/Li₇La₃Zr₂O₁₂ Membrane: LiF-Rich Solid-Electrolyte Interphase Enabling Stable Solid-State Lithium Metal Batteries. ACS Applied Materials & Interfaces, 2022, 14, 18922-18934.	8.0	15
238	Effects of fabrication atmosphere conditions on the physico-chemical properties of garnet electrolyte. Ionics, 2022, 28, 2673-2683.	2.4	1
239	Enhancing ionic conductivity in solid electrolyte by relocating diffusion ions to under-coordination sites. Science Advances, 2022, 8, eabj7698.	10.3	37
240	A Facile and Low-Cost Wet-Chemistry Artificial Interface Engineering for Garnet-Based Solid-State Li Metal Batteries. SSRN Electronic Journal, 0, , .	0.4	1
241	Halogenation of Li₇La₃Zr₂O₁₂ solid electrolytes: a combined solid-state NMR, computational and electrochemical study. Journal of Materials Chemistry A, 2022, 10, 11172-11185.	10.3	6
242	Effect of a self-assembling La₂(Ni_{0.5}Li_{0.5})O₄ and amorphous garnet<i>-</i>type solid electrolyte composite on a layered cathode material in all-solid-state batteries. RSC Advances, 2022, 12, 14209-14222.	3.6	3
243	Organicâ€"Inorganic Composite Electrolytes Optimized with Fluoroethylene Carbonate Additive for Quasi-Solid-State Lithium-Metal Batteries. ACS Applied Materials & Interfaces, 2022, 14, 20962-20971.	8.0	19
244	Transport in Lithium Garnet Oxides as Revealed by Atomistic Simulations. Annual Review of Materials Research, 2022, 52, 305-330.	9.3	2
245	Review of the electrochemical performance and interfacial issues of high-nickel layered cathodes in inorganic all-solid-state batteries. International Journal of Minerals, Metallurgy and Materials, 2022, 29, 1003-1018.	4.9	7
246	Comparative Study of Stability against Moisture for Solid Garnet Electrolytes with Different Dopants. Energies, 2022, 15, 3206.	3.1	8
247	Ionic conductivity and ion transport mechanisms of solidâ€state lithiumâ€ion battery electrolytes: A review. Energy Science and Engineering, 2022, 10, 1643-1671.	4.0	105
248	Plastic Monolithic Mixedâ€Conducting Interlayer for Dendriteâ€Free Solidâ€State Batteries. Advanced Science, 2022, 9, e2105924.	11.2	17
249	Synthesis, Structure, Transport Properties, Electrochemical Stability Window, and Lithium Plating/Stripping of Mg and Nb Codoped Li₇La₃Zr₂O₁₂ Garnet-Type Solid Electrolytes. Journal of Physical Chemistry C, 2022, 126, 7828-7840.	3.1	10
250	Sandwich structured PVDF-HFP-based composite solid electrolytes for solid-state lithium metal batteries. Ionics, 2022, 28, 3243-3253.	2.4	5
251	Sintering of Li-garnets: Impact of Al-incorporation and powder-bed composition on microstructure and ionic conductivity. Open Ceramics, 2022, 10, 100268.	2.0	3
252	Improving the stability of NASICON-type electrolyte with Li metal anode by interfacial modification. Journal of Power Sources, 2022, 536, 231491.	7.8	14
253	Comparative analysis on the thermal, structural, and electrochemical properties of Al-doped Li7La3Zr2O12 solid electrolytes through solid state and sol-gel routes. Solid State Ionics, 2022, 380, 115943.	2.7	16

#	Article	IF	Citations
254	Interfacial optimization between cathode and 20Âµm-thickness solid electrolyte membrane via in-situ polymerization for lithium metal batteries. Journal of Power Sources, 2022, 537, 231517.	7.8	14
255	Elaborate interface design of CoS2/Fe7S8/NG heterojunctions modified on a polypropylene separator for efficient lithium-sulfur batteries. Chemical Engineering Journal, 2022, 446, 136990.	12.7	56
256	Progress, challenges and perspectives of computational studies on glassy superionic conductors for solid-state batteries. Journal of Materials Chemistry A, 2022, 10, 11854-11880.	10.3	11
257	Flexible machine-learning interatomic potential for simulating structural disordering behavior of Li7La3Zr2O12 solid electrolytes. Journal of Chemical Physics, 2022, 156, .	3.0	8
258	Review of room-temperature liquid metals for advanced metal anodes in rechargeable batteries. Energy Storage Materials, 2022, 50, 473-494.	18.0	35
259	A dual-regulation strategy of B/N codoped CNT-encapsulated Ni nanoparticles as a catalytic host and separator coating promises high-performance Li-S batteries. Science China Technological Sciences, 2022, 65, 1567-1577.	4.0	2
260	Processing and characterization of an Li₇La₃Zr_{0.5}Nb_{0.5}Ta_{0.5}Hf_{0.5}O₁₂ highâ€entropy Liâ€“garnet electrolyte. Journal of the American Ceramic Society, 2022, 105, 6175-6183.	3.8	14
261	High-safety composite solid electrolyte based on inorganic matrix for solid-state lithium-metal batteries. Materials Today Energy, 2022, 27, 101052.	4.7	8
262	Interfacial Engineering with a Nanoparticle-Decorated Porous Carbon Structure on Î²â€³-Alumina Solid-State Electrolytes for Molten Sodium Batteries. ACS Applied Materials & Interfaces, 2022, 14, 25534-25544.	8.0	8
263	Electrochemical behaviors in low-cost and environmentally stable SnS2: An alternative cathode with for high-power primary lithium batteries. Journal of Power Sources, 2022, 541, 231717.	7.8	8
264	Ceramic-Based Solid-State Electrolytes. ACS Symposium Series, 0, , 295-318.	0.5	0
265	Computational Elucidation of Mechanical Degradation in NMC Cathodes: Impact on Cell Performance. Journal of Electrochemical Energy Conversion and Storage, 2022, 19, .	2.1	1
266	Enhancing Liâ€Ion Transport in Solid Electrolytes by Confined Water. Small, 2022, 18, .	10.0	2
267	From protonation & Li-rich contamination to grain-boundary segregation: Evaluations of solvent-free vs. wet routes on preparing Li7La3Zr2O12 solid electrolyte. Journal of Energy Chemistry, 2022, 73, 223-239.	12.9	24
268	Recent Advances in Stability Issues of Inorganic Solid Electrolytes and Composite Solid Electrolytes for Allâ€Solidâ€State Batteries. Chemical Record, 2022, 22, .	5.8	26
269	Solid-State Rechargeable Lithium-Ion Batteries: Component Chemistries and Battery Architectures. ACS Symposium Series, 0, , 21-37.	0.5	0
270	Identifying soft breakdown in all-solid-state lithium battery. Joule, 2022, 6, 1770-1781.	24.0	71
271	A cerium-doped NASICON chemically coupled poly(vinylidene fluoride-hexafluoropropylene)-based polymer electrolyte for high-rate and high-voltage quasi-solid-state lithium metal batteries. Journal of Energy Chemistry, 2022, 73, 311-321.	12.9	11

#	Article	IF	Citations
272	In-situ imaging techniques for advanced battery development. Materials Today, 2022, 57, 279-294.	14.2	16
273	Synthesis and characterization of low-temperature lithium-ion conductive phase of LiX (X=Cl,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 1	2.7	3
274	Sandwich-Structural Ionogel Electrolyte with Core-Shell Ionic-Conducting Nanocomposites for Stable Li Metal Battery. SSRN Electronic Journal, 0, , .	0.4	0
275	Application of sol-gel processes to materials and interfaces in oxide-based all-solid-state batteries. Journal of Sol-Gel Science and Technology, 2022, 103, 680-689.	2.4	0
276	Magnetic Actuation Enables Programmable Lithium Metal Engineering. Advanced Energy Materials, 2022, 12, .	19.5	27
277	Phase evolution, structure, and electrochemical performance of Al-, Ga- and Ta- substituted Li7La3Zr2O12 ceramic electrolytes by a modified wet chemical route. Ceramics International, 2022, 48, 31315-31325.	4.8	1
278	20â€‰ <i>Î¼</i> m-Thick Li _{6.4} La ₃ Zr _{1.4} Ta _{0.6} O ₁₂ -Based Flexible Solid Electrolytes for All-Solid-State Lithium Batteries. Energy Material Advances, 2022, 2022, .	11.0	48
279	Highâ€Performance Composite Lithium Anodes Enabled by Electronic/Ionic Dualâ€Conductive Paths for Solidâ€State Li Metal Batteries. Small, 2022, 18, .	10.0	11
280	Developing Preparation Craft Platform for Solid Electrolytes Containing Volatile Components: Experimental Study of Competition between Lithium Loss and Densification in Li₇La₃Zr₂O₁₂. ACS Applied Materials & Interfaces, 2022, 14, 33340-33354.	8.0	20
281	An Unprecedented Fireproof, Anionâ€Immobilized Composite Electrolyte Obtained via Solidifying Carbonate Electrolyte for Safe and Highâ€Power Solidâ€State Lithiumâ€Ion Batteries. Small, 2022, 18, .	10.0	9
282	Spatiotemporal mapping of microscopic strains and defects to reveal Li-dendrite-induced failure in all-solid-state batteries. Materials Today, 2022, 57, 180-191.	14.2	12
283	Application of Ag-based materials in high-performance lithium metal anode: A review. Journal of Materials Science and Technology, 2023, 133, 165-182.	10.7	18
284	Topological control of room temperature conductivity in garnet-type solid electrolytes. Ionics, 2022, 28, 4083-4093.	2.4	1
285	Vanadium Tetrasulfide for Nextâ€Generation Rechargeable Batteries: Advances and Challenges. Chemical Record, 2022, 22, .	5.8	7
286	Li6.4La3Zr1.4Ta0.6O12 Reinforced Polystyrene-Poly(ethylene oxide)-Poly(propylene oxide)-Poly(ethylene) Tj ETQq0 0 0 rgBT /Overlock 1 metal batteries. Journal of Power Sources, 2022, 542, 231797.	7.8	17
287	High-performance garnet solid-state battery enabled by improved interfaces. Journal of Power Sources, 2022, 542, 231798.	7.8	1
288	A facile and low-cost wet-chemistry artificial interface engineering for garnet-based solid-state Li metal batteries. Nano Energy, 2022, 101, 107603.	16.0	26
289	High-rate and durable sulfide-based all-solid-state lithium battery with in situ Li2O buffering. Energy Storage Materials, 2022, 51, 306-316.	18.0	33

#	Article	IF	Citations
290	Dual interface design of Gaâ€doped <scp> Li ₇ La ₃ Zr ₂ O ₁₂ </scp> /polymer composite electrolyte for solidâ€state lithium batteries. International Journal of Energy Research, 2022, 46, 17693-17705.	4.5	3
291	Probing Structure-Property Relations in Garnet-Type Solid Electrolytes for Next-Generation Electrical Energy Storage with Multimode Analytical Scanning and Transmission Electron Microscopy. Microscopy and Microanalysis, 2022, 28, 998-1000.	0.4	0
292	A Simple and Efficient Strategy for Ameliorating Li/LLZO Interfacial Contact. Energy & Fuels, 2022, 36, 8500-8505.	5.1	7
293	Solid Li- and Na-Ion Electrolytes for Next Generation Rechargeable Batteries. Chemistry of Materials, 2022, 34, 6637-6658.	6.7	24
294	Low-cost molten salt coating enabling robust Li/garnet interface for dendrite-free all-solid-state lithium batteries. Chemical Engineering Journal, 2022, 450, 138236.	12.7	11
295	Facile Construction of Nanofilms from a Dip-Coating Process to Enable High-Performance Solid-State Batteries. ACS Applied Materials & Interfaces, 2022, 14, 32026-32034.	8.0	2
296	Electrolytes for Multivalent Metalâ€Ion Batteries: Current Status and Future Prospect. ChemSusChem, 2022, 15, .	6.8	7
297	Composite Polymer Electrolytes for Lithium Batteries. ChemistrySelect, 2022, 7, .	1.5	2
298	Recent advances and challenges in the design of Liâ€"air batteries oriented solidâ€state electrolytes. , 2023, 2, .		12
299	Low electronic conductivity of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Li</mml:mi><mml:mn>7</mml:mn></mm mathvariant="normal">O</mml:mi><mml:mn>12</mml:mn></mml:msub></mml:mrow></mml:math> solid electrolytes from first principles. Physical Review Materials, 2022, 6, .	2.4	8
300	High-performance Ta-doped Li7La3Zr2O12 garnet oxides with AlN additive. Journal of Advanced Ceramics, 2022, 11, 1530-1541.	17.4	26
301	Ionically and Electronically Conductive Phases in a Composite Anode for High-Rate and Stable Lithium Stripping and Plating for Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2022, 14, 38786-38794.	8.0	26
302	Dual Protection of a Liâ€"Ag Alloy Anode for All-Solid-State Lithium Metal Batteries with the Argyrodite Li₆PS₅Cl Solid Electrolyte. ACS Applied Materials & Interfaces, 2022, 14, 37738-37746.	8.0	17
304	Defective Boron Nitride Inducing the Lithiumâ€Ion Migration on the Subâ€Surface of LiBH₄. Advanced Functional Materials, 2022, 32, .	14.9	5
305	Rapid thermal processing of garnet-based composite cathodes. Journal of Power Sources, 2022, 545, 231872.	7.8	16
306	High-throughput screening of protective layers to stabilize the electrolyte-anode interface in solid-state Li-metal batteries. Nano Energy, 2022, 102, 107640.	16.0	12
307	Prospects of halide-based all-solid-state batteries: From material design to practical application. Science Advances, 2022, 8, .	10.3	79
308	In situ transmission electron microscopy for understanding materials and interfaces challenges in all-solid-state lithium batteries. ETransportation, 2022, 14, 100203.	14.8	38

#	Article	IF	Citations
309	Polyimide-reinforced solid polymer electrolyte with outstanding lithium transferability for durable Li metal batteries. Journal of Power Sources, 2022, 548, 232034.	7.8	8
310	Developing practical solid-state rechargeable Li-ion batteries: Concepts, challenges, and improvement strategies. Journal of Energy Storage, 2022, 55, 105688.	8.1	11
311	Stable interface between anode materials and Li1.3Al0.3Ti1.7(PO4)3-based solid-state electrolyte facilitated by graphene coating. Electrochimica Acta, 2022, 431, 141136.	5.2	6
312	Overcoming the trade-off between ion conduction and stability using thin composite solid electrolyte for high performance all-solid-state lithium battery. Electrochimica Acta, 2022, 432, 141226.	5.2	2
313	Enabling an electron/ion conductive composite lithium anode for solid-state lithium-metal batteries with garnet electrolyte. Energy Storage Materials, 2022, 53, 204-211.	18.0	10
314	Sandwich-structural ionogel electrolyte with coreâ€“shell ionic-conducting nanocomposites for stable Li metal battery. Chemical Engineering Journal, 2023, 451, 138993.	12.7	5
315	Fabrication of a Porous Polymer Electrolyte from Poly(Vinylidene Fluoride-Hexafluoropropylene) Via a One-Step Reactive Vapor Induced Phase Separation for Lithium Ion Battery. SSRN Electronic Journal, 0, , .	0.4	0
316	Solid-State Electrolytes for Lithium Batteries. , 2022, , .		0
317	Interdigitated cathodeâ€“electrolyte architectural design for fast-charging lithium metal battery with lithium oxyhalide solid-state electrolyte. Materials Advances, 2022, 3, 8947-8957.	5.4	4
318	Na superionic conductor-type LiZr₂(PO₄)₃ as a promising solid electrolyte for use in all-solid-state Li metal batteries. Chemical Communications, 2022, 58, 9328-9340.	4.1	5
319	Metal oxide engineering. , 2022, , 3-56.		2
320	An amorphous ZnO and oxygen vacancy modified nitrogen-doped carbon skeleton with lithiophilicity and ionic conductivity for stable lithium metal anodes. Journal of Materials Chemistry A, 2022, 10, 17395-17405.	10.3	20
321	Miniaturized lithium-ion batteries for on-chip energy storage. Nanoscale Advances, 2022, 4, 4237-4257.	4.6	3
322	Low-temperature fabrication of NASICON-type LATP with superior ionic conductivity. Ceramics International, 2022, 48, 36961-36967.	4.8	16
323	Reduced synthesis temperature and significantly enhanced ionic conductivity for Li6.1Ga0.3La3Zr2O12 electrolyte prepared with sintering aid CuO. Ionics, 2022, 28, 5071-5080.	2.4	3
324	Engineering Ferroelectric Interlayer between Li_{1.}<scp>₃Al₀</scp>_.<scp>₃Ti₁</scp>_{.7}(and Lithium Metal for Stable <scp>Solidâ€State</scp> Batteries Operating at Room Temperature. Energy and Environmental Materials, 2023, 6, .	12.8	5
325	Agglomeration-Free and Air-Inert Garnet for Upgrading PEO/Garnet Composite Solid State Electrolyte. Batteries, 2022, 8, 141.	4.5	4
326	Single crystal growth and electrochemical studies of garnet-type fast Li-ion conductors. Tungsten, 2022, 4, 263-268.	4.8	8

#	Article	IF	Citations
327	Two-Dimensional Imide-Based Covalent Organic Frameworks with Tailored Pore Functionality as Separators for High-Performance Liâ€"S Batteries. ACS Applied Materials & Interfaces, 2022, 14, 42018-42029.	8.0	15
328	Zinc as a Promising Anodic Material for All-Solid-State Lithium-Ion Batteries. Batteries, 2022, 8, 113.	4.5	3
329	Role of Interfaces in Solidâ€State Batteries. Advanced Materials, 2023, 35, .	21.0	29
330	Microwave-Assisted Synthesis of Sulfide Solid Electrolytes for All-Solid-State Sodium Batteries. ACS Applied Energy Materials, 2022, 5, 12592-12601.	5.1	5
331	Melt-quenching of artificial metallic interlayer enables a resistance-free garnet/lithium interface for all-solid-state lithium-metal batteries. Energy Storage Materials, 2022, 53, 899-908.	18.0	9
332	A green and sustainable strategy toward lithium resources recycling from spent batteries. Science Advances, 2022, 8, .	10.3	26
333	Future Challenges to Address the Market Demands of All-Solid-State Batteries. Advances in Material Research and Technology, 2022, , 275-295.	0.6	2
334	Preparation of a single-phase all-solid-state battery via the crystallization of the amorphous sodium vanadium phosphate. Physical Chemistry Chemical Physics, 0, , .	2.8	0
335	Effect of Ga2O3 Addition on the Properties of Garnet-Type Ta-Doped Li7La3Zr2O12 Solid Electrolyte. Batteries, 2022, 8, 158.	4.5	5
336	Synergistic effect of Ga and Yb co-doping on the structure and ionic conductivity of Li7La3Zr2O12 ceramics. Ionics, 2022, 28, 5321-5331.	2.4	8
337	Silicon as Emerging Anode in Solid-State Batteries. ACS Energy Letters, 2022, 7, 4005-4016.	17.4	59
338	Influence of the particle size of the Ni-rich cathode material on the electrochemical properties for all solid-state batteries. Ionics, 2022, 28, 5421-5431.	2.4	2
339	Developing Classical Interatomic Potentials for Solid Electrolytes. Accounts of Materials Research, 2022, 3, 1101-1105.	11.7	3
340	Electrochemical Ionic Synapses: Progress and Perspectives. Advanced Materials, 2023, 35, .	21.0	13
341	Bilayer Halide Electrolytes for All-Inorganic Solid-State Lithium-Metal Batteries with Excellent Interfacial Compatibility. ACS Applied Materials & Interfaces, 2022, 14, 48619-48626.	8.0	7
342	Achieving High Performance of Lithium Metal Batteries by Improving the Interfacial Compatibility between Organic and Inorganic Electrolytes Using a Lithium Single-Ion Polymer. ACS Applied Energy Materials, 2022, 5, 14175-14184.	5.1	1
343	Interface functionalization of composite electrolyte by Lix-CeO2 layer on the surface of Li6.4La3Zr1.4Ta0.6O12. Electrochimica Acta, 2022, 435, 141366.	5.2	0
344	Solid-state NMR of energy storage materials. , 2022, , .		0

#	Article	IF	Citations
345	Asymmetrical interface modification between electrodes and garnet-type electrolyte enabling all-solid-state lithium batteries. Journal of Power Sources, 2023, 554, 232335.	7.8	5
346	Rapid discovery of inorganic-organic solid composite electrolytes by unsupervised learning. Chemical Engineering Journal, 2023, 454, 140151.	12.7	8
347	Lithium-Ion Conduction in a Class of Aluminoborates Li MAlB12O24 (Mâ€¯=â€¯Ba, Sr, Ca, or La; nâ€¯=â€¯7 or 6). Materials Research Bulletin, 2023, 159, 112087.	5.2	0
348	A low-cost Al-doped garnet Li7La3Zr2O12 with high ionic conductivity for high-energy solid-state lithium metal batteries. Applied Physics Letters, 2022, 121, .	3.3	5
349	Low-Cost and Scalable Synthesis of High-Purity Li₂S for Sulfide Solid Electrolyte. ACS Sustainable Chemistry and Engineering, 2022, 10, 15365-15371.	6.7	6
350	Prospects of LLZO type solid electrolyte: From material design to battery application. Chemical Engineering Journal, 2023, 454, 140375.	12.7	20
351	Unraveling the LiNbO3 coating layer on battery performances of lithium argyrodite-based all-solid-state batteries under different cut-off voltages. Electrochimica Acta, 2023, 438, 141545.	5.2	17
352	Fluorine Substitution at the O-Site Imparts Enhanced Chemical Stability for Garnet-Structured Electrolytes. ACS Energy Letters, 2023, 8, 48-55.	17.4	10
353	Oxideâ€Based Solidâ€State Batteries: A Perspective on Composite Cathode Architecture. Advanced Energy Materials, 2023, 13, .	19.5	34
354	In situ prepared all-fluorinated polymer electrolyte for energy-dense high-voltage lithium-metal batteries. Energy Storage Materials, 2023, 55, 642-651.	18.0	6
355	Solid electrolyte membrane-containing rechargeable high-temperature molten salt electrolyte-based batteries. Sustainable Energy and Fuels, 2023, 7, 330-354.	4.9	2
356	Solid-state lithium-sulfur battery chemistries achieving excellent room-temperature cycle performance by high-quality Li7La3Zr2O12-based electrolyte. Journal of Alloys and Compounds, 2023, 935, 168112.	5.5	0
357	Liquid metallic Ga as sintering aid to promote the densification of garnet electrolytes for all-solid-state Li-ion batteries. Journal of Power Sources, 2023, 556, 232527.	7.8	4
358	Understanding key limiting factors for the development of all-solid-state-batteries. Chemical Engineering Journal Advances, 2023, 13, 100436.	5.2	3
359	Specific Features of the Formation of Cubic Al-Substituted Li7La3Zr2O12. Russian Journal of Applied Chemistry, 2022, 95, 789-797.	0.5	0
360	A solvent-anchored non-flammable electrolyte. Matter, 2023, 6, 445-459.	10.0	15
361	Effects of fluorination on crystal structure and electrochemical performance of antiperovskite solid electrolytes. Journal of Energy Chemistry, 2023, 77, 521-528.	12.9	11
362	Realization of superior ionic conductivity by manipulating the atomic rearrangement in Al-doped Li7La3Zr2O12. Ceramics International, 2022, , .	4.8	3

#	Article	IF	Citations
363	High cycling stability enabled by Li vacancy regulation in Ta-doped garnet-type solid-state electrolyte. Journal of the European Ceramic Society, 2023, 43, 2023-2032.	5.7	3
364	High-Performance PEO-Based All-Solid-State Battery Achieved by Li-Conducting High Entropy Oxides. ACS Applied Materials & Interfaces, 2022, 14, 57047-57054.	8.0	5
365	Imidazolium-Type Poly(ionic liquid) Endows the Composite Polymer Electrolyte Membrane with Excellent Interface Compatibility for All-Solid-State Lithium Metal Batteries. ACS Applied Materials & Interfaces, 2022, 14, 55664-55673.	8.0	6
366	Characterization of the Solid Electrolyte Interphase at the Li Metalâ€“Ionic Liquid Interface. Advanced Energy Materials, 2023, 13, .	19.5	10
367	Fluorinated Solidâ€State Electrolytes for Lithium Batteries: Interface Design and Ion Conduction Mechanisms. Advanced Engineering Materials, 2023, 25, .	3.5	2
368	Perspectiveâ€”Morphology and Dynamics of Metal Dendrites in Batteries Revealed by X-ray Computed Tomography. Journal of the Electrochemical Society, 0, , .	2.9	0
369	Processing and Properties of Garnetâ€Type Li₇La₃Zr₂O₁₂ Ceramic Electrolytes. Small, 2023, 19, .	10.0	17
370	Grain Boundary Electronic Insulation for Highâ€Performance Allâ€Solidâ€State Lithium Batteries. Angewandte Chemie, 2023, 135, .	2.0	8
371	Grafting of Lithiophilic and Electronâ€Blocking Interlayer for Garnetâ€Based Solidâ€State Li Metal Batteries via Oneâ€Step Anhydrous Polyâ€Phosphoric Acid Postâ€Treatment. Advanced Functional Materials, 2023, 33, .	14.9	27
372	Transforming Interface Chemistry throughout Garnet Electrolyte for Dendrite-Free Solid-State Batteries. ACS Energy Letters, 2023, 8, 537-544.	17.4	16
373	Accelerating Li-ion diffusion in Î²-eucryptite by tuning Liâ€“Li correlation. Applied Physics Letters, 2022, 121, .	3.3	1
374	Grain Boundary Electronic Insulation for Highâ€Performance Allâ€Solidâ€State Lithium Batteries. Angewandte Chemie - International Edition, 2023, 62, .	13.8	19
375	Solidâ€State Li Ion Batteries with Oxide Solid Electrolytes: Progress and Perspective. Energy Technology, 2023, 11, .	3.8	14
376	Vertical aligned solidâ€state electrolyte templated by nanostructured â€œuprightâ€• cellulose film layers for advanced cell performance. EcoMat, 2023, 5, .	11.9	6
377	Large-scale preparation of ultrathin composite polymer electrolytes with excellent mechanical properties and high thermal stability for solid-state lithium-metal batteries. Energy Storage Materials, 2023, 55, 847-856.	18.0	11
378	Review on composite solid electrolytes for solid-state lithium-ion batteries. Materials Today Sustainability, 2023, 21, 100316.	4.1	17
379	Interface Design Enabling Stable Polymer/Thiophosphate Electrolyte Separators for Dendriteâ€Free Lithium Metal Batteries. Angewandte Chemie - International Edition, 2023, 62, .	13.8	15
380	<i>In situ</i> UV-cured composite electrolytes for highly efficient quasi-solid-state lithium ion batteries with wide temperature range applications. Sustainable Energy and Fuels, 2023, 7, 986-995.	4.9	1

#	Article	IF	Citations
381	Design of Solid Electrolytes with Fast Ion Transport: Computation-Driven and Practical Approaches. Energy Material Advances, 2023, 4, .	11.0	16
382	Exploration of Metal Alloys as Zeroâ€Resistance Interfacial Modification Layers for Garnetâ€Type Solid Electrolytes. Advanced Functional Materials, 2023, 33, .	14.9	7
383	Interface Design Enabling Stable Polymer/Thiophosphate Electrolyte Separators for Dendriteâ€Free Lithium Metal Batteries. Angewandte Chemie, 0, , .	2.0	1
384	Thermal Recovery of the Electrochemically Degraded LiCoO₂/Li₇La₃Zr₂O₁₂:Al,Ta Interface in an All-Solid-State Lithium Battery. ACS Applied Materials & Interfaces, 2023, 15, 4101-4112.	8.0	12
385	Inhibiting Formation and Reduction of Li₂CO₃ to LiC_x at Grain Boundaries in Garnet Electrolytes to Prevent Li Penetration. Advanced Materials, 2023, 35, .	21.0	25
386	Highly-concentrated bis(fluorosulfonyl)imide-based ternary gel polymer electrolytes for high-voltage lithium metal batteries. Journal of Power Sources, 2023, 557, 232554.	7.8	8
387	Enhanced Moisture Stability of Lithiumâ€Rich Antiperovskites for Sustainable Allâ€Solidâ€State Lithium Batteries. Advanced Materials, 2023, 35, .	21.0	6
388	Enhanced Proton Conduction with Low Oxygen Vacancy Concentration and Favorable Hydration for Protonic Ceramic Fuel Cells Cathode. ACS Applied Materials & Interfaces, 2023, 15, 1339-1347.	8.0	16
389	Re-investigating the structureâ€"property relationship of the solid electrolytes Li_{3âˆ’<i>x</i>}In_{1âˆ’<i>x</i>}Zr_{<i>x</i>}Cl₆ and the impact of Inâ€"Zr(<scp>iv</scp>) substitution. Journal of Materials Chemistry A, 0, , .	10.3	3
390	Experimental Investigations on the Chemo-Mechanical Coupling in Solid-State Batteries and Electrode Materials. Energies, 2023, 16, 1180.	3.1	1
391	Lithium Batteries with Small-Molecule Quinone Cathode Enabled by Lithium Garnet Separators. ACS Applied Energy Materials, 2023, 6, 745-752.	5.1	2
392	Ionic Conduction in Polymerâ€Based Solid Electrolytes. Advanced Science, 2023, 10, .	11.2	66
393	Achieving Ultraâ€Stable Allâ€Solidâ€State Sodium Metal Batteries with Anionâ€Trapping 3D Fiber Network Enhanced Polymer Electrolyte. Small, 2023, 19, .	10.0	14
394	Influence of LiBF₄ sintering aid on the grain boundary and conductivity of LAGP electrolyte. Functional Materials Letters, 0, , .	1.2	0
395	Built-in superionic conductive phases enabling dendrite-free, long lifespan and high specific capacity composite lithium for stable solid-state lithium batteries. Energy and Environmental Science, 2023, 16, 1049-1061.	30.8	18
396	Accelerated Discovery of Novel Garnet-Type Solid-State Electrolyte Candidates via Machine Learning. ACS Applied Materials & Interfaces, 2023, 15, 5049-5057.	8.0	7
397	Li-richening strategy in Li2ZrCl6 lattice towards enhanced ionic conductivity. Journal of Energy Chemistry, 2023, 79, 348-356.	12.9	14
398	Solidâ€state Liâ€"air batteries: Fundamentals, challenges, and strategies. SmartMat, 2023, 4, .	10.7	2

#	Article	IF	Citations
399	La₂O₃ Filler's Stabilization of Residual Solvent in Polymer Electrolyte for Advanced Solidâ€State Lithiumâ€Metal Batteries. Small Science, 2023, 3, .	9.9	7
400	Molten lithium metal battery with Li4Ti5O12 cathode and solid electrolyte. ETransportation, 2023, 16, 100235.	14.8	1
401	Critical review on recently developed lithium and non-lithium anode-based solid-state lithium-ion batteries. Journal of Power Sources, 2023, 566, 232914.	7.8	9
402	Composite lithium with high ionic conducting Li3Bi alloy enabled high-performance garnet-type solid-state lithium batteries. Chemical Engineering Journal, 2023, 465, 142895.	12.7	9
403	Directly Using Li₂CO₃ as a Lithiophobic Interlayer to Inhibit Li Dendrites for High-Performance Solid-State Batteries. ACS Energy Letters, 2023, 8, 2221-2231.	17.4	10
404	In-situ construction of multifunctional interlayer enabled dendrite-free garnet-based solid-state batteries. Nano Energy, 2023, 111, 108416.	16.0	13
405	State of the art of lithium-ion battery material potentials: An analytical evaluations, issues and future research directions. Journal of Cleaner Production, 2023, 394, 136246.	9.3	28
406	Designing All-Solid-State Batteries by Theoretical Computation: A Review. Electrochemical Energy Reviews, 2023, 6, .	25.5	17
407	An endâ€toâ€end artificial intelligence platform enables realâ€time assessment of superionic conductors. SmartMat, 2023, 4, .	10.7	1
408	A Review of Polymerâ€based Solidâ€State Electrolytes for Lithiumâ€Metal Batteries: Structure, Kinetic, Interface Stability, and Application. Batteries and Supercaps, 2023, 6, .	4.7	14
409	Electrochemical tailoring MXene terminal to elevate operation voltage of Mo2CTx-protected current collector over 5ÂV. Applied Surface Science, 2023, 619, 156754.	6.1	0
410	Advanced Characterization Techniques for Sulfideâ€Based Solidâ€State Lithium Batteries. Advanced Energy Materials, 2023, 13, .	19.5	12
411	Constructing a Superlithiophilic 3D Burrâ€Microsphere Interface on Garnet for Highâ€Rate and Ultraâ€Stable Solidâ€State Li Batteries. Advanced Science, 2023, 10, .	11.2	13
412	Effect of Zr4+ on Lithium-Ion Conductivity of Garnet-Type Li5+xLa3(Nb2âˆ’xZrx)O12 Solid Electrolytes. Batteries, 2023, 9, 137.	4.5	2
413	Solvent-Free and Long-Cycling Garnet-Based Lithium-Metal Batteries. ACS Energy Letters, 2023, 8, 1468-1476.	17.4	9
414	Towards safe lithium-sulfur batteries from liquid-state electrolyte to solid-state electrolyte. Frontiers of Materials Science, 2023, 17, .	2.2	2
415	Fabrication of a porous polymer electrolyte from poly(vinylidene fluoride-hexafluoropropylene) via one-step reactive vapor-induced phase separation for lithium-ion battery. Journal of Materials Science, 2023, 58, 4865-4881.	3.7	3
416	Development of All-Solid-State Li-Ion Batteries: From Key Technical Areas to Commercial Use. Batteries, 2023, 9, 157.	4.5	9

#	Article	IF	Citations
417	Structural, electronic, and Li-ion mobility properties of garnet-type Li₇La₃Zr₂O₁₂ surface: An insight from first-principles calculations. Chinese Physics B, 2023, 32, 068201.	1.4	1
418	Revealing the mechanisms of lithium-ion transport and conduction in composite solid polymer electrolytes. Cell Reports Physical Science, 2023, 4, 101321.	5.6	6
419	Understanding the evolution of lithium dendrites at Li6.25Al0.25La3Zr2O12 grain boundaries via operando microscopy techniques. Nature Communications, 2023, 14, .	12.8	24
420	Determining the Role of Ion Transport Throughput in Solidâ€State Lithium Batteries. Angewandte Chemie, 2023, 135, .	2.0	0
421	Determining the Role of Ion Transport Throughput in Solidâ€State Lithium Batteries. Angewandte Chemie - International Edition, 2023, 62, .	13.8	8
422	Lithium salt-regulated dual-stabilized elastomeric quasi-solid electrolyte for high-voltage lithium metal batteries. Journal of Materials Chemistry A, 2023, 11, 8308-8319.	10.3	2
423	Lithium-ion transport enhancement with bridged ceramic-polymer interface. Energy Storage Materials, 2023, 58, 40-47.	18.0	3
424	A novel promotion strategy for microstructure and electrical performance of garnet electrolytes via Li4GeO4 additive. Ceramics International, 2023, 49, 19905-19915.	4.8	1
425	Solidâ€State Electrolytes in Lithiumâ€"Sulfur Batteries: Latest Progresses and Prospects. Small, 2023, 19, .	10.0	13
426	The Influences of DMF Content in Composite Polymer Electrolytes on Li⁺â€Conductivity and Interfacial Stability with Liâ€Metal. Advanced Functional Materials, 2023, 33, .	14.9	15
427	Multifunctional Coatings on Sulfideâ€Based Solid Electrolyte Powders with Enhanced Processability, Stability, and Performance for Solidâ€State Batteries. Advanced Materials, 2023, 35, .	21.0	14
428	Achieving high-energy and high-safety lithium metal batteries with high-voltage-stable solid electrolytes. Matter, 2023, 6, 1096-1124.	10.0	26
429	Fast and stable charge transfer at the lithiumâ€"sulfide (electrolyte) interface <i>via</i> an <i>in situ</i> solidified Li⁺-conductive interlayer. Materials Chemistry Frontiers, 2023, 7, 2405-2410.	5.9	1
430	All-Solid-State Thin Film Li-Ion Batteries: New Challenges, New Materials, and New Designs. Batteries, 2023, 9, 186.	4.5	8
431	Local structural features of medium-entropy garnet with ultra-long cycle life. Matter, 2023, 6, 1530-1541.	10.0	8
432	Review of the Developments and Difficulties in Inorganic Solid-State Electrolytes. Materials, 2023, 16, 2510.	2.9	5
433	Using Thermal Interface Resistance for Noninvasive Operando Mapping of Buried Interfacial Lithium Morphology in Solid-State Batteries. ACS Applied Materials & Interfaces, 2023, 15, 17344-17352.	8.0	1
434	Performance-based materials evaluation for Li batteries through impedance spectroscopy: a critical review. Materials Today Energy, 2023, 34, 101283.	4.7	2

#	Article	IF	Citations
435	Interfacial Modification, Electrode/Solid-Electrolyte Engineering, and Monolithic Construction of Solid-State Batteries. Electrochemical Energy Reviews, 2023, 6, .	25.5	26
436	A LaCl3-based lithium superionic conductor compatible with lithium metal. Nature, 2023, 616, 77-83.	27.8	84
437	Mussel inspired Cu-tannic autocatalytic strategy for rapid self-polymerization of conductive and adhesive hydrogel sensors with extreme environmental tolerance. Chemical Engineering Journal, 2023, 465, 142831.	12.7	20
438	Fabrication of porous LLZO solid electrolyte based on modified kapok fiber. Journal of Materials Science: Materials in Electronics, 2023, 34, .	2.2	1
439	Benchmarking the performance of lithiated metal oxide interlayers at the LiCoO₂|LLZO interface. Materials Advances, 2023, 4, 2138-2146.	5.4	2
440	Solid-state electrolytes for safe rechargeable lithium metal batteries: a strategic view. Materials Futures, 2023, 2, 033501.	8.4	16
441	Reaction Kinetics of Carbonation at the Surface of Garnet-Type Li₇La₃Zr₂O₁₂ as Solid Electrolytes for All-Solid-State Li Ion Batteries. Journal of Physical Chemistry C, 0, , .	3.1	2
442	Particle Size-Dependent Degradation Kinetics of Garnet-Type Li_{6.5}La₃Zr_{1.5}Ta_{0.5}O₁₂ Solid Electrolyte Powders in Ambient Air. Journal of Physical Chemistry C, 2023, 127, 8320-8331.	3.1	1
443	Solid-state inorganic electrolytes (oxides, sulfides, and halides). , 2023, , 77-117.		0
444	Screening of Sintering Aids for Oxide Ceramics: A Case of NASICON Electrolyte. Small, 2023, 19, .	10.0	3
445	Polymer-ceramic composite solid-state electrolytes. , 2023, , 119-156.		0
446	The nature and suppression strategies of interfacial reactions in all-solid-state batteries. Energy and Environmental Science, 2023, 16, 2579-2590.	30.8	19
447	Effect of pulse-current-based protocols on the lithium dendrite formation and evolution in all-solid-state batteries. Nature Communications, 2023, 14, .	12.8	9
448	IonML: A physically inspired machine learning platform to directed design superionic conductors. Energy Storage Materials, 2023, 59, 102781.	18.0	3
449	Garnet-type solid-state mixed ionic and electronic conductor. Energy Storage Materials, 2023, 59, 102788.	18.0	3
450	A Chemically Bonded Ultraconformal Layer between the Elastic Solid Electrolyte and Lithium Anode for Highâ€performance Lithium Metal Batteries. Angewandte Chemie - International Edition, 2023, 62, .	13.8	4
451	LiCoO2 sintering aid towards cathode-interface-enhanced garnet electrolytes. Journal of Energy Chemistry, 2023, 84, 181-188.	12.9	2
452	Constructing a Multifunctional Interlayer toward Ultraâ€High Critical Current Density for Garnetâ€Based Solidâ€State Lithium Batteries. Advanced Functional Materials, 2023, 33, .	14.9	5

#	Article	IF	Citations
453	Solving the Li7La3Zr2O12 electrochemical stability window puzzle. Materials Today Energy, 2023, 35, 101320.	4.7	0
454	Increase of the ionic conductivity of perovskite-type lithium-ion conductor by bacterial cellulose templating. Ceramics International, 2023, 49, 24981-24988.	4.8	0
455	Liâ€Laâ€Zrâ€O Garnets with High Liâ€Ion Conductivity and Airâ€Stability by Microstructureâ€Engineering. Advanced Functional Materials, 2023, 33, .	14.9	5
456	A Chemically Bonded Ultraconformal Layer between the Elastic Solid Electrolyte and Lithium Anode for Highâ€performance Lithium Metal Batteries. Angewandte Chemie, 0, , .	2.0	0
457	Hexavalent Ions Insertion in Garnet Li₇La₃Zr₂O₁₂ Toward a Low Temperature Densification Reaction. ChemSusChem, 2023, 16, .	6.8	1
458	Constructing porous nickel-zinc alloy layer on nickel foam for dendritic-free lithium metal anode. Electrochimica Acta, 2023, 460, 142615.	5.2	2
459	Mechanically Robust Ultrathin Solid Electrolyte Membranes Using a Porous Net Template for All-Solid-State Batteries. ACS Applied Materials & Interfaces, 2023, 15, 28064-28072.	8.0	1
460	Experimental Discovery of a Fast and Stable Lithium Thioborate Solid Electrolyte, Li_{6+2<i>x</i>}[B₁₀S₁₈]S_{<i>x</i>} (<i>x</i> â‰ˆ 1). ACS Energy Letters, 2023, 8, 2762-2771.	17.4	5
461	A porous garnet Li7La3Zr2O12 scaffold with interfacial modification for enhancing ionic conductivity in PEO-based composite electrolyte. Journal of Membrane Science, 2023, 683, 121784.	8.2	3
462	Enabling metal substrates for garnet-based composite cathodes by laser sintering. Applied Energy, 2023, 345, 121335.	10.1	6
463	Amorphous Phase Induced Lithium Dendrite Suppression in Glass-Ceramic Garnet-Type Solid Electrolytes. ACS Applied Materials & Interfaces, 2023, 15, 28692-28704.	8.0	5
464	Microstructural parameters governing the mechanical stress and conductivity of all-solid-state lithium-ion-battery cathodes. Journal of Energy Storage, 2023, 68, 107784.	8.1	2
465	Recent Configurational Advances for Solid-State Lithium Batteries Featuring Conversion-Type Cathodes. Molecules, 2023, 28, 4579.	3.8	3
466	3D lithiophilic framework fixed on the surface of LLZTO solid electrolyte shaping the contact between Li metal and ceramic. Chemical Engineering Journal, 2023, 469, 144090.	12.7	3
467	Software for Evaluating Ionic Conductivity of Inorganicâ€"Polymer Composite Solid Electrolytes. Energy Material Advances, 2023, 4, .	11.0	2
468	On High-Temperature Thermal Cleaning of Li₇La₃Zr₂O₁₂ Solid-State Electrolytes. ACS Applied Energy Materials, 2023, 6, 6972-6980.	5.1	3
469	A Guideline to Mitigate Interfacial Degradation Processes in Solidâ€State Batteries Caused by Cross Diffusion. Advanced Functional Materials, 2023, 33, .	14.9	0
470	Highly Conductive Iodine and Fluorine Dual-Doped Argyrodite Solid Electrolyte for Lithium Metal Batteries. Journal of Physical Chemistry C, 2023, 127, 11801-11809.	3.1	1

#	Article	IF	Citations
471	Application of Liquid Metal Electrodes in Electrochemical Energy Storage. , 0, , .		0
472	Recent progress on garnet-type oxide electrolytes for all-solid-state lithium-ion batteries. Ceramics International, 2023, 49, 29375-29390.	4.8	2
473	Bilayer Zwitterionic Metalâ€Organic Framework for Selective Allâ€Solidâ€State Superionic Conduction in Lithium Metal Batteries. Advanced Materials, 2023, 35, .	21.0	13
474	The Riddle of Dark LLZO: Cobalt Diffusion in Garnet Separators of Solidâ€State Lithium Batteries. Advanced Functional Materials, 2023, 33, .	14.9	4
475	Regulating Liâ€Ion Transport through Ultrathin Molecular Membrane to Enable Highâ€Performance Allâ€Solidâ€Stateâ€œBattery. Small, 2023, 19, .	10.0	3
476	An innovative poly(ionic liquid) hydrogel-based anti-freezing electrolyte with high conductivity for supercapacitor. Chemical Engineering Journal, 2023, 466, 143209.	12.7	10
477	Tailoring the electronic conductivity of high-loading cathode electrodes for practical sulfide-based all-solid-state batteries. , 2023, 2, 100136.		5
478	Highâ€Performance Garnetâ€Type Solidâ€State Lithium Metal Batteries Enabled by Scalable Elastic and Li⁺â€Conducting Interlayer. Advanced Functional Materials, 2023, 33, .	14.9	8
479	High Cathode Loading and Lowâ€Temperature Operating Garnetâ€Based Allâ€Solidâ€State Lithium Batteries â€œ Material/Process/Architecture Optimization and Understanding of Cell Failure. Small, 2023, 19, .	10.0	2
480	Fast Li+-conducting Zr4+-based oxychloride electrolyte with good thermal and solvent stability. Science China Materials, 2023, 66, 3123-3128.	6.3	5
481	Uniform Densification of Garnet Electrolyte for Solidâ€State Lithium Batteries. Small Methods, 2023, 7, .	8.6	0
482	Influence of the sintering temperature on LLZO-NCM cathode composites for solid-state batteries studied by transmission electron microscopy. Matter, 2023, 6, 2324-2339.	10.0	7
483	A fiber-reinforced solid polymer electrolyte by in situ polymerization for stable lithium metal batteries. Nano Research, 2023, 16, 9259-9266.	10.4	4
484	Inorganic Composites Improving Conductivities of Solid Polymer Electrolytes for Lithium Batteries: A Review. ChemNanoMat, 2023, 9, .	2.8	1
485	In situ construction of cubic 3D Li+ channels enabling stable electrochemical topology in a Li-rich layered solid-state oxide-based lithium-ion battery. Chemical Engineering Journal, 2023, 470, 144404.	12.7	1
486	Ultrafast-sintered self-standing LLZO membranes for high energy density lithium-garnet solid-state batteries. Cell Reports Physical Science, 2023, 4, 101473.	5.6	5
487	Nanotechnology in solid state batteries, whatâ€™s next?. , 2023, 2, 100011.		1
488	Thin film oxide solid electrolytes towards high energy density batteries: progress of preparation methods and interface optimization. Journal of Materials Chemistry A, 2023, 11, 15122-15139.	10.3	0

#	Article	IF	Citations
489	An agglomeration-free and high ion conductive ceramic-in-polymer composite solid electrolyte modified by fluorocarbon surfactant for enhancing performance of all-solid-state lithium batteries. Ionics, 2023, 29, 3129-3142.	2.4	0
490	Isovalent multi-component doping strategy for stabilizing cubic-Li7La3Zr2O12 with excellent Li mobility. Chemical Engineering Journal, 2023, 471, 144552.	12.7	1
491	Optimality guarantees for crystal structure prediction. Nature, 2023, 619, 68-72.	27.8	8
492	Synergized Tricomponent Allâ€Inorganics Solid Electrolyte for Highly Stable Solidâ€State Liâ€Ion Batteries. Advanced Science, 2023, 10, .	11.2	3
493	Optimizing the Composite Cathode Microstructure in Allâ€Solidâ€State Batteries by Structureâ€Resolved Simulations. Batteries and Supercaps, 2023, 6, .	4.7	3
494	The positioning of biofuel cells-based biobatteries for net-zero energy future. Journal of Energy Storage, 2023, 72, 107919.	8.1	3
495	5D Analysis of Capacity Degradation in Battery Electrodes Enabled by <i>Operando</i> CTâ€XANES. Small Methods, 2023, 7, .	8.6	1
496	In situ construction of a multifunctional interlayer for garnet-type electrolytes to suppress lithium dendrite formation in solid-state lithium batteries. Journal of Alloys and Compounds, 2023, 965, 171398.	5.5	2
497	Building better solidâ€state batteries with siliconâ€based anodes. , 2023, 2, 635-663.		15
498	Recent Advances in All-Solid-State Lithiumâ€"Oxygen Batteries: Challenges, Strategies, Future. Batteries, 2023, 9, 380.	4.5	0
499	Understanding the Surface Regeneration and Reactivity of Garnet Solid-State Electrolytes. ACS Energy Letters, 2023, 8, 3476-3484.	17.4	4
500	Versatile Protein and Its Subunit Biomolecules for Advanced Rechargeable Batteries. Advanced Materials, 2023, 35, .	21.0	1
501	Superlithiophilic, Ultrastable, and Ionicâ€Conductive Interface Enabled Long Lifespan Allâ€Solidâ€State Lithiumâ€Metal Batteries under High Mass Loading. Advanced Functional Materials, 2023, 33, .	14.9	4
502	Self assembled electron blocking and lithiophilic interface towards dendrite-free solid-state lithium battery. Chinese Chemical Letters, 2024, 35, 108846.	9.0	1
503	Mechanical properties of threeâ€dimensional trilayered Liâ€"garnet electrolyte for highâ€rate cycling in solidâ€state batteries. Journal of the American Ceramic Society, 0, , .	3.8	0
504	Revealing the Role of Active Fillers in Liâ€ion Conduction of Composite Solid Electrolytes. Small, 2023, 19, .	10.0	8
505	Extreme lithium-metal cycling enabled by a mixed ion- and electron-conducting garnet three-dimensional architecture. Nature Materials, 2023, 22, 1136-1143.	27.5	26
506	Enhanced Li+ conductivity of Li7La3Zr2O12 by increasing lattice entropy and atomic redistribution via Spark Plasma Sintering. Journal of Alloys and Compounds, 2023, 967, 171666.	5.5	1

#	Article	IF	Citations
507	A flame retardant and flexible gel polymer electrolytes for high temperature lithium metal batteries. Journal of Electroanalytical Chemistry, 2023, 945, 117712.	3.8	1
508	Fine and strengthened Li7La3Zr0.5Nb0.5Ta0.5Hf0.5O12 high-entropy Li-garnet: A comparison study with Ta doped Li-garnet. Ceramics International, 2023, , .	4.8	0
509	Challenges and prospects for room temperature solid-state sodium-sulfur batteries. Nano Research, 2024, 17, 1402-1426.	10.4	1
510	Recent Strategies for Lithium-Ion Conductivity Improvement in Li7La3Zr2O12 Solid Electrolytes. International Journal of Molecular Sciences, 2023, 24, 12905.	4.1	3
511	Specific applications of the lanthanides. , 2023, , 649-741.		0
512	Titaniumâ€"Oxygen Clusters Brazing Li with Li_{6.5}La₃Zr_{1.5}Ta_{0.5}O₁₂ for High-Performance All-Solid-State Li Batteries. Nano Letters, 2023, 23, 7934-7940.	9.1	2
513	PVDF-HFP/LiTFSI based composite solid state electrolyte with different micromorphology of Li6.25Ga0.25La3Zr2O12 doping. Journal of Alloys and Compounds, 2023, 968, 171872.	5.5	1
514	Solidâ€State Electrolyteâ€Based Electrochemical Conversion of Carbon Dioxide: Progress and Opportunities. ChemCatChem, 2023, 15, .	3.7	1
515	Contributing to the Revolution of Electrolyte Systems via In Situ Polymerization at Different Scales: A Review. Small, 2024, 20, .	10.0	0
516	Li⁺ selective transport network-assisted high-performance of garnet-based solid electrolyte for Li metal batteries. Journal of Materials Chemistry A, 2023, 11, 20174-20186.	10.3	3
517	Fast-charging batteries based on dual-halogen solid-state electrolytes. Materials Chemistry Frontiers, 2023, 7, 4961-4970.	5.9	1
518	Doping of group IVB elements for nickel-rich cobalt-free cathodes. Journal of Energy Chemistry, 2023, 86, 559-568.	12.9	1
519	High Sulfur Loading and Capacity Retention in Bilayer Garnet Sulfurizedâ€Polyacrylonitrile/Lithiumâ€Metal Batteries with Gel Polymer Electrolytes. Advanced Energy Materials, 2023, 13, .	19.5	11
520	In Situ Gas Analysis by Differential Electrochemical Mass Spectrometry for Advanced Rechargeable Batteries: A Review. Advanced Energy Materials, 2023, 13, .	19.5	3
521	Garnet-type solid-state electrolytes: crystal structure, interfacial challenges and controlling strategies. Rare Metals, 2023, 42, 3177-3200.	7.1	2
522	Potential electrolytes for solid state batteries and its electrochemical analysisâ€"A review. Energy Storage, 2024, 6, .	4.3	2
523	Towards practically accessible high-voltage solid-state lithium batteries: From fundamental understanding to engineering design. Progress in Materials Science, 2023, 140, 101193.	32.8	4
524	Computational Design of Antiperovskite Solid Electrolytes. Journal of Physical Chemistry C, 2023, 127, 18256-18270.	3.1	2

#	Article	IF	Citations
525	Mobile energy storage technologies for boosting carbon neutrality. Innovation(China), 2023, 4, 100518.	9.1	4
526	Advancements, Challenges, and Prospects in Rechargeable Solidâ€State Lithiumâ€Air Batteries. Batteries and Supercaps, 2023, 6, .	4.7	1
527	Direct Recycling for Advancing Sustainable Battery Solutions. Materials Today Energy, 2023, , 101434.	4.7	0
528	A review on ion transport pathways and coordination chemistry between ions and electrolytes in energy storage devices. Journal of Energy Storage, 2023, 74, 109311.	8.1	6
529	Recent Advances in Liquid Metals for Rechargeable Batteries. Advanced Functional Materials, 0, , .	14.9	0
530	Printed Solid-State Batteries. Electrochemical Energy Reviews, 2023, 6, .	25.5	1
531	Local structure and lithium-ion diffusion pathway of cubic Li₇La₃Zr₂O₁₂ studied by total scattering and the Reverse Monte Carlo method. Journal of Materials Chemistry A, 0, , .	10.3	0
532	Defect Strategy in Solidâ€State Lithium Batteries. Small Methods, 2024, 8, .	8.6	0
533	Metalâ€“iodine batteries: achievements, challenges, and future. Energy and Environmental Science, 2023, 16, 4872-4925.	30.8	7
534	Cathode Interface Construction by Rapid Sintering in Solidâ€State Batteries. Small, 2024, 20, .	10.0	0
535	Rapid Li compensation toward highly conductive solid state electrolyte film. Nano Energy, 2023, 116, 108816.	16.0	3
536	Regulating Li deposition behavior at anodic interface induced by SbF3 electrolyte additive in all-solid-state Li metal batteries. Chemical Engineering Journal, 2023, 474, 145593.	12.7	2
537	Porous garnet as filler of solid polymer electrolytes to enhance the performance of solid-state lithium batteries. Nano Research, 2024, 17, 2663-2670.	10.4	1
538	Advancing Particle Dispersion/Interface Design in Composite Solid Electrolytes for Solid-State Batteries. Journal of Physical Chemistry C, 2023, 127, 18291-18300.	3.1	0
539	Softening of PEOâ€“LiTFSI/LLZTO Composite Polymer Electrolytes for Solid-State Batteries under Cyclic Compression. ACS Applied Energy Materials, 2023, 6, 9400-9408.	5.1	1
540	A dynamic database of solid-state electrolyte (DDSE) picturing all-solid-state batteries. Nano Materials Science, 2023, , .	8.8	1
541	Excess Li compensation powder for production of Li-garnet solid electrolytes. Ceramics International, 2023, 49, 38386-38391.	4.8	0
542	Highly Reversible Zincâ€Air Batteries at âˆ’40 Â°C Enabled by Anionâ€Mediated Biomimetic Fat. Advanced Functional Materials, 2024, 34, .	14.9	7

#	Article	IF	Citations
543	Elucidating Phase Transformation and Surface Amorphization of Li₇La₃Zr₂O₁₂ by In Situ Heating TEM. Small, 2024, 20, .	10.0	0
544	New Insights of Infiltration Process of Argyrodite Li6PS5Cl Solid Electrolyte into Conventional Lithium-Ion Electrodes for Solid-State Batteries. Batteries, 2023, 9, 503.	4.5	0
545	Drawing a materials map with an autoencoder for lithium ionic conductors. Scientific Reports, 2023, 13, .	3.3	1
546	Investigation of mechanical properties of garnet structured Li7La3Zr2O12 under Al3+ and Ta5+ co-substitutions. Solid State Ionics, 2023, 402, 116364.	2.7	0
547	MatGPT: A Vane of Materials Informatics from Past, Present, to Future. Advanced Materials, 2024, 36, .	21.0	1
548	Broadening solid ionic conductor selection for sustainable and earth-abundant solid-state lithium metal batteries. Energy and Environmental Science, 2023, 16, 5871-5880.	30.8	1
549	Solidâ€State Electrolytes and Electrode/Electrolyte Interfaces in Rechargeable Batteries. ChemSusChem, 2024, 17, .	6.8	0
550	NaBr-Assisted Sintering of Na₃Zr₂Si₂PO₁₂ Ceramic Electrolyte Stabilizes a Rechargeable Solid-state Sodium Metal Battery. ACS Applied Materials & Interfaces, 2023, 15, 49321-49328.	8.0	1
551	Bilayer Halide Electrolyte Design Enabling Excellent Interface Stability between a Li-Metal Anode and a Halide Solid Electrolyte. Journal of Physical Chemistry C, 0, , .	3.1	0
552	Regulation Mechanism on A Bilayer Li₂Oâ€Rich Interface between Lithium Metal and Garnetâ€Type Solid Electrolytes. Advanced Functional Materials, 2024, 34, .	14.9	1
553	Low-Temperature In Situ Lithiation Construction of a Lithiophilic Particle-Selective Interlayer for Solid-State Lithium Metal Batteries. ACS Applied Materials & Interfaces, 0, , .	8.0	0
554	Boosting lithium ion conductivity of antiperovskite solid electrolyte by potassium ions substitution for cation clusters. Nature Communications, 2023, 14, .	12.8	2
555	Progress and Perspective of Controlling Li Dendrites Growth in Allâ€Solidâ€State Li Metal Batteries via External Physical Fields. Advanced Energy and Sustainability Research, 0, , .	5.8	0
556	Solvent-free fabrication of freestanding inorganic solid electrolyte membranes: Challenges, progress, and perspectives. Energy Storage Materials, 2023, 63, 103030.	18.0	0
557	High ionic conductivity and critical current density of Li7â^'xLa2.95Yb0.05Zr2â^'xTaxO12 solid electrolyte by modulation of Li+ distribution. Journal of the European Ceramic Society, 2024, 44, 1665-1677.	5.7	0
558	Review on Synthesis and Properties of Lithium Lanthanum Titanate. Materials, 2023, 16, 7088.	2.9	1
559	Recent advances in solving Li2CO3 problems in garnet-based solid-state battery: A systematic review (2020â€"2023). Journal of Energy Chemistry, 2024, 90, 58-76.	12.9	0
560	Trigger of the Highly Resistive Layer Formation at the Cathodeâ€"Electrolyte Interface in All-Solid-State Lithium Batteries Using a Garnet-Type Lithium-Ion Conductor. ACS Applied Materials & Interfaces, 0, , .	8.0	0

#	Article	IF	Citations
561	Thin-film deposition techniques in surface and interface engineering of solid-state lithium batteries. , 2023, 3-4, 100028.		0
562	Challenges and strategies towards the interface between lithium anode and Li10GeP2S12 electrolyte in all-solid-state lithium metal batteries. Energy Storage Materials, 2023, 63, 103038.	18.0	0
563	Advanced nano-bifunctional electrocatalysts in Liâ€"air batteries for high coulombic efficiency. Green Chemistry, 2023, 25, 10182-10208.	9.0	2
564	Surface Chemistry of LLZO Garnet Electrolytes with Sulfur in Electron Pair Donor Solvents. ACS Applied Materials & Interfaces, 0, , .	8.0	0
566	From Liquid to Solid-State Lithium Metal Batteries: Fundamental Issues and Recent Developments. Nano-Micro Letters, 2024, 16, .	27.0	1
567	A multifunctional Janus layer for LLZTO/PEO composite electrolyte with enhanced interfacial stability in solid-state lithium metal batteries. Energy Storage Materials, 2024, 65, 103091.	18.0	0
568	Recent Research Progress on All-Solid-State Mg Batteries. Batteries, 2023, 9, 570.	4.5	0
569	Regulating the anion disorder and synthesizing the low-cost and high-performance Li6â^'xPS5â^'xCl1+x solid electrolytes. Journal of Alloys and Compounds, 2024, 971, 172727.	5.5	0
570	The significance of fillers in composite polymer electrolytes for optimizing lithium battery. Ionics, 2024, 30, 647-675.	2.4	0
571	Perspectives on Li Dendrite Penetration in Li₇La₃Zr₂O₁₂â€Based Solidâ€State Electrolytes and Batteries: Materials, Interfaces, and Charge Transfer. Advanced Energy Materials, 2024, 14, .	19.5	0
572	Li+ Conduction in a Polymer/Li1.5Al0.5Ge1.5(PO4)3 Solid Electrolyte and Li-Metal/Electrolyte Interface. Molecules, 2023, 28, 8029.	3.8	0
573	â€œDepo-all-aroundâ€: A novel FIB-based TEM specimen preparation technique for solid state battery composites and other loosely bound samples. Ultramicroscopy, 2024, 257, 113904.	1.9	0
574	Recent Progress on the Airâ€Stable Battery Materials for Solidâ€State Lithium Metal Batteries. Advanced Science, 2024, 11, .	11.2	0
575	Lithium-Ion Battery Thermal Event and Protection: A Review. SAE International Journal of Electrified Vehicles, 0, 13, .	0.0	0
576	A review of composite organic-inorganic electrolytes for lithium batteries. Journal of Energy Storage, 2024, 77, 109912.	8.1	0
577	Clarifying the Dopant Local Structure and Effect on Ionic Conductivity in Garnet Solid-State Electrolytes for Lithium-Ion Batteries. Chemistry of Materials, 2023, 35, 9632-9646.	6.7	0
578	A Tailored Interface Design for Anodeâ€Free Solidâ€State Batteries. Advanced Materials, 2024, 36, .	21.0	0
579	Discovery of high entropy garnet solid-state electrolytes via ultrafast synthesis. Energy Storage Materials, 2023, 63, 103053.	18.0	0

#	Article	IF	Citations
580	Assessing the Thermal Safety of a Li Metal Solid-State Battery Material Set Using Differential Scanning Calorimetry. ACS Applied Materials & Interfaces, 0, , .	8.0	0
581	In-doped Li7La3Zr2O12 nanofibers enhances electrochemical properties and conductivity of PEO-based composite electrolyte in all-solid-state lithium battery. Journal of Energy Storage, 2024, 76, 109784.	8.1	1
582	Developing a Hydrophobic Mixed Conductive Interlayer for Highâ€Performance Solidâ€State Lithium Batteries. Batteries and Supercaps, 2024, 7, .	4.7	0
583	Stable ion transport enabled by self-supported membranes with direct interfacial driving effect for lithium metal batteries. Journal of Energy Storage, 2024, 77, 109907.	8.1	0
584	Numerical Investigation of Immersion Cooling Performance for Lithium-ion Polymer (LiPo) Battery: Effects of Dielectric Fluids and Flow Velocity. Journal of Physics: Conference Series, 2023, 2643, 012015.	0.4	0
585	Inducing spherical Li deposition via an indium layer at the interface between solid electrolyte and Li metal. Cell Reports Physical Science, 2023, 4, 101729.	5.6	0
586	Blacklight Sintering of Garnet-Based Composite Cathodes. Journal of the European Ceramic Society, 2023, , .	5.7	0
587	Characterizing the critical challenges of Li-metal solid-state batteries: From micrometer to centimeter. MRS Bulletin, 0, , .	3.5	2
588	The developments, challenges, and prospects of solid-state Li-Se batteries. Energy Storage Materials, 2024, 65, 103138.	18.0	1
589	Constructing electron-blocking grain boundaries in garnet to suppress lithium dendrite growth. Journal of Advanced Ceramics, 2024, 13, 166-175.	17.4	0
591	Completely Amorphous Poly(ethylene oxide)-Based Electrolyte Enables High Ionic Conductivity for Room-Temperature All-Solid-State Lithium Metal Batteries. ACS Applied Energy Materials, 2023, 6, 12343-12352.	5.1	0
592	Selfâ€Sacrificing Reductive Interphase for Robust and Highâ€Performance Sulfideâ€Based Allâ€Solidâ€State Lithium Batteries. Advanced Energy Materials, 0, , .	19.5	0
593	Experimental and theoretical study on enhanced electrochemical properties of double doped garnet-type solid electrolyte. Materials Chemistry and Physics, 2024, 314, 128851.	4.0	0
594	Electrochemical shock and transverse cracking in solid electrolytes. Acta Materialia, 2024, 265, 119620.	7.9	1
595	Long-Cycle Stability of In Situ Ultraviolet Curable Organic/Inorganic Composite Electrolyte for Solid-State Batteries. Polymers, 2024, 16, 55.	4.5	0
596	Eu3+ doped hydroxyapatite nanowires enabling solid-state electrolytes with enhanced ion transport. Journal of Materials Science and Technology, 2024, 186, 104-109.	10.7	1
597	Improvement of the Li-ion conductivity and air stability of the Ta-doped Li₇La₃Zr₂O₁₂ electrolyte <i>via</i> Ga co-doping and its application in Liâ€"S batteries. Journal of Materials Chemistry A, 2024, 12, 3601-3615.	10.3	1
598	Suppressing Surface Ligand-to-Metal Charge Transfer toward Stable High-Voltage LiCoO₂. ACS Applied Materials & Interfaces, 0, , .	8.0	0

#	Article	IF	Citations
599	Roadmap for rechargeable batteries: present and beyond. Science China Chemistry, 0, , .	8.2	0
600	Growth Process and Removal of Interface Contaminants for Garnet-Based Solid-State Lithium Metal Batteries. ACS Applied Energy Materials, 2023, 6, 12432-12441.	5.1	0
601	Ionogels: Preparation, Properties and Applications. Advanced Functional Materials, 2024, 34, .	14.9	2
602	Application of solid electrolytes in electrochemical reduction of CO2 or O2. Chemical Engineering Journal, 2024, 481, 148452.	12.7	0
603	Melt-casted Li1.5Al0.3Mg0.1Ge1.6(PO4)3 glass ceramic electrolytes: A comparative study on the effect of different oxide doping. Heliyon, 2024, 10, e24493.	3.2	0
604	Integration of a composite polymer electrolyte and Se/C cathodes toward high-performance all-solid-state Liâ€“Se batteries. Journal of Materials Chemistry A, 2024, 12, 1998-2003.	10.3	0
605	Restrained Li|Garnet Interface Contact Deterioration Manipulated by Lithium Modification for Solidâ€State Batteries. Advanced Functional Materials, 0, , .	14.9	0
606	A review of challenges and issues concerning interfaces for garnet-type all-solid-state batteries. Journal of Alloys and Compounds, 2024, 979, 173530.	5.5	1
607	Advancements and Challenges in Solid-State Battery Technology: An In-Depth Review of Solid Electrolytes and Anode Innovations. Batteries, 2024, 10, 29.	4.5	0
608	Solid Interfaces for the Garnet Electrolytes. Advanced Materials, 2024, 36, .	21.0	0
609	Interface Engineering on Constructing Physical and Chemical Stable <scp>Solidâ€State</scp> Electrolyte Toward Practical Lithium Batteries. Energy and Environmental Materials, 0, , .	12.8	1
610	Strategies to regulate the interface between Li metal anodes and all-solid-state electrolytes. Materials Chemistry Frontiers, 2024, 8, 1421-1450.	5.9	0
611	Rationally Designed Conversionâ€Type Lithium Metal Protective Layer for Allâ€Solidâ€State Lithium Metal Batteries. Advanced Energy Materials, 2024, 14, .	19.5	0
612	Room-temperature fabrication of garnet-type solid-electrolyte: Optimizing particle size for high ionic conductivity. Chemical Engineering Journal, 2024, 481, 148645.	12.7	0
613	Lithium iron phosphate cathode supported solid lithium batteries with dual composite solid electrolytes enabling high energy density and stable cyclability. Journal of Energy Storage, 2024, 81, 110444.	8.1	0
614	Impact of impurities on the thermal properties of a Li₂Sâ€“SiS₂â€“LiPO₃ glass. International Journal of Applied Glass Science, 0, , .	2.0	0
615	<i>In Situ</i> Construction of Polymer Electrolytes with Dynamic Covalent Networks via Initiator-Free Thiol-Methacrylate Radical Polymerization. Macromolecules, 2024, 57, 1229-1237.	4.8	0
616	Advances in solid-state batteries: Materials, interfaces, characterizations, and devices. MRS Bulletin, 2023, 48, 1221-1229.	3.5	0

#	Article	IF	Citations
617	In-situ polymerized PEO-based solid electrolytes contribute better Li metal batteries: Challenges, strategies, and perspectives. Journal of Energy Chemistry, 2024, 92, 548-571.	12.9	0
618	Preparation and characterization of hybrid solid-state electrolytes for high performance lithium-ion batteries. Solid State Sciences, 2024, 148, 107444.	3.2	0
619	Advanced Electrolytes for Rechargeable Lithium Metal Batteries with High Safety and Cycling Stability. Accounts of Materials Research, 2024, 5, 184-193.	11.7	1
620	Phonon DOS-Based Machine Learning Model for Designing High-Performance Solid Electrolytes in Li-Ion Batteries. International Journal of Energy Research, 2024, 2024, 1-18.	4.5	0
621	Excellent electrochemical response of Ce stabilized cubic Li7La3Zr2O12. Journal of the European Ceramic Society, 2024, 44, 4606-4611.	5.7	0
622	Mixed Ion-Electron Conducting LixAg Alloy Anode Enabling Stable Li Plating/Stripping in Solid-State Batteries via Enhanced Li Diffusion Kinetic. , 2024, , 100179.		0
623	Nanotrench Superfilling Facilitates Embedded Lithium Anode for High-Areal-Capacity Solid-State Batteries. ACS Nano, 2024, 18, 5068-5078.	14.6	0
624	Recent progress on metalâ€"organic framework/polymer composite electrolytes for solid-state lithium metal batteries: ion transport regulation and interface engineering. Energy and Environmental Science, 2024, 17, 1854-1884.	30.8	0
625	Unlocking Li superionic conductivity in face-centred cubic oxides via face-sharing configurations. Nature Materials, 2024, 23, 535-542.	27.5	0
626	Optimization strategies for key interfaces of LLZO-based solid-state lithium metal batteries. Materials Chemistry Frontiers, 2024, 8, 2109-2134.	5.9	0
627	Polymeric Electronic Shielding Layer Enabling Superior Dendrite Suppression for All-Solid-State Lithium Batteries. ACS Nano, 0, , .	14.6	0
628	Initiation of dendritic failure of LLZTO <i>via</i> sub-surface lithium deposition. Energy and Environmental Science, 2024, 17, 2431-2440.	30.8	0
629	Liquid metal as an efficient protective layer for lithium metal anodes in allâ€solidâ€state batteries. , 0, , .		0
630	Interfacial engineering for highâ€performance garnetâ€based solidâ€state lithium batteries. SusMat, 2024, 4, 72-105.	14.9	0
631	Enhanced High-Temperature Cycling Stability of Garnet-Based All Solid-State Lithium Battery Using a Multi-Functional Catholyte Buffer Layer. Nano-Micro Letters, 2024, 16, .	27.0	0
632	Synthesis and Sintering of Li_{1.3}Al_{0.3}Ti_{1.7}(PO₄)₃@Li₂Oâ€"2B₂O<su Coreâ€"Shell Solid Electrolyte Powders Prepared via Oneâ€Pot Spray Pyrolysis. Advanced Engineering Materials, 2024, 26, .	3.5	0
633	Conflicting roles of conductive additives in controlling cathode performance in all-solid-state batteries. Electrochimica Acta, 2024, 481, 143990.	5.2	0
634	Ga/Ta co-doped LLZO enhanced voltage tolerance and lithium dendrite resistance of composite solid electrolytes. Journal of Energy Storage, 2024, 84, 110809.	8.1	0

#	Article	IF	Citations
635	Scalable Dry Process for Fabricating a Na Superionic Conductor-Type Solid Electrolyte Sheet. ACS Applied Materials & Interfaces, 2024, 16, 10307-10315.	8.0	0
636	Impact of degradation mechanisms at the cathode/electrolyte interface of garnet-based all-solid-state batteries. Energy Storage Materials, 2024, 67, 103262.	18.0	0
637	Review of Garnet-Based Solid Electrolytes for Li-Ion Batteries (LIBs). Journal of Electronic Materials, 2024, 53, 2203-2228.	2.2	0
638	Experimental and Computational Study of Mg and Taâ€Doped Li₇La₃Zr₂O₁₂ Garnetâ€Type Solid Electrolytes for Allâ€Solidâ€State Lithium Batteries. Advanced Sustainable Systems, 0, , .	5.3	0
639	Ionogel hybrid polymer electrolytes encompassing room-temperature ionic liquids for 4V-class Li-metal batteries operating at ambient temperature. Green Chemistry Letters and Reviews, 2024, 17, .	4.7	0
640	In Situ Construction of Elastic Solid-State Polymer Electrolyte with Fast Ionic Transport for Dendrite-Free Solid-State Lithium Metal Batteries. Nanomaterials, 2024, 14, 433.	4.1	0
641	Design of multifunctional interfaces on ceramic solid electrolytes for high-performance lithium-air batteries. Green Energy and Environment, 2024, , .	8.7	0
642	Construction of high-performance solid-state electrolytes for lithium metal batteries by UV-curing technology. Polymer Testing, 2024, 132, 108386.	4.8	0
643	Stabilization of the cubic, fast-ion conducting phase of Li₇La₃Sn₂O₁₂ garnet by gallium doping. RSC Advances, 2024, 14, 7557-7563.	3.6	0
644	Energy ceramic design for robust battery cathodes and solid electrolytes. , 2024, 3, 100185.		0
645	MXenes to MBenes: Latest development and opportunities for energy storage devices. Materials Today, 2024, , .	14.2	0
646	Designing F-doped Li3InCl6 electrolyte with enhanced stability for all-solid-state lithium batteries in a wide voltage window. Chinese Chemical Letters, 2024, , 109741.	9.0	0
647	Optimized Lithium Ion Coordination via Chlorine Substitution to Enhance Ionic Conductivity of Garnetâ€Based Solid Electrolytes. Small, 0, , .	10.0	0
648	Recent progress on inorganic composite electrolytes for all-solid-state lithium batteries. MRS Energy & Sustainability, 0, , .	3.0	0
649	Factors Affecting the Electron Conductivity in Single Crystal Li₇La₃Zr₂O₁₂ and Li₇P₃S₁₁. ACS Applied Energy Materials, 2024, 7, 2392-2404.	5.1	0
650	How Concerted Are Ionic Hops in Inorganic Solid-State Electrolytes?. Journal of the American Chemical Society, 2024, 146, 8269-8279.	13.7	0
651	Enhancement of microstructure and electrochemical properties of LLZTO solid state electrolyte by co-doping with Ga and Y. Solid State Ionics, 2024, 409, 116515.	2.7	0
652	Status and Prospect of Two-Dimensional Materials in Electrolytes for All-Solid-State Lithium Batteries. ACS Nano, 2024, 18, 9285-9310.	14.6	0

#	Article	IF	Citations
653	Interfacial engineering for high-performance garnet-based lithium metal batteries: A perspective on lithiophilicity and lithiophobicity. EnergyChem, 2024, 6, 100122.	19.1	0
654	Correlation between physical properties and the electrochemical behavior in inorganic solid-state electrolytes for lithium and sodium batteries: A comprehensive review. Journal of Energy Storage, 2024, 86, 111254.	8.1	0
655	Challenges to Li7La3Zr2O12 system electrolyte and the modification: From powder to ceramic. Journal of Alloys and Compounds, 2024, 986, 174123.	5.5	0