Xia-Yin Yao

List of Publications by Year
in descending order

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105 papers	7,871 citations	38660 50 h-index	53109 85 g-index
105 all docs	105 docs citations	105 times ranked	5600 citing authors

#	Article	IF	Citations
1	Sulfide solid electrolytes for all-solid-state lithium batteries: Structure, conductivity, stability and application. Energy Storage Materials, 2018, 14, 58-74.	9.5	403
2	A new solid polymer electrolyte incorporating Li10GeP2S12 into a polyethylene oxide matrix for all-solid-state lithium batteries. Journal of Power Sources, 2016, 301, 47-53.	4.0	371
3	Lithium/Sulfide Allâ€Solidâ€State Batteries using Sulfide Electrolytes. Advanced Materials, 2021, 33, e2000751.	11.1	356
4	Highâ€Performance Allâ€Solidâ€State Lithiumâ€“Sulfur Batteries Enabled by Amorphous Sulfurâ€Coated Reduced Graphene Oxide Cathodes. Advanced Energy Materials, 2017, 7, 1602923.	10.2	331
5	High-Energy All-Solid-State Lithium Batteries with Ultralong Cycle Life. Nano Letters, 2016, 16, 7148-7154.	4.5	309
6	10 Î¼mâ€Thick Highâ€Strength Solid Polymer Electrolytes with Excellent Interface Compatibility for Flexible Allâ€Solidâ€State Lithiumâ€Metal Batteries. Advanced Materials, 2021, 33, e2100353.	11.1	244
7	All-Solid-State Lithium Batteries with Sulfide Electrolytes and Oxide Cathodes. Electrochemical Energy Reviews, 2021, 4, 101-135.	13.1	227
8	Interface Re-Engineering of Li₁₀GeP₂S₁₂ Electrolyte and Lithium anode for All-Solid-State Lithium Batteries with Ultralong Cycle Life. ACS Applied Materials & Interfaces, 2018, 10, 2556-2565.	4.0	220
9	A 3D porous architecture of Si/graphene nanocomposite as high-performance anode materials for Li-ion batteries. Journal of Materials Chemistry, 2012, 22, 7724.	6.7	193
10	All-solid-state lithium batteries with inorganic solid electrolytes: Review of fundamental science. Chinese Physics B, 2016, 25, 018802.	0.7	169
11	An advanced construction strategy of all-solid-state lithium batteries with excellent interfacial compatibility and ultralong cycle life. Journal of Materials Chemistry A, 2017, 5, 16984-16993.	5.2	168
12	Flexible Sulfide Electrolyte Thin Membrane with Ultrahigh Ionic Conductivity for All-Solid-State Lithium Batteries. Nano Letters, 2021, 21, 5233-5239.	4.5	151
13	Quasiâ€Ionic Liquid Enabling Singleâ€Phase Poly(vinylidene fluoride)â€Based Polymer Electrolytes for Solidâ€State LiNi_{0.6}Co_{0.2}Mn_{0.2}O₂||Li Batteries with Rigidâ€Flexible Coupling Interphase. Small Methods, 2021, 5, e2100262.	4.6	147
14	Mechanical and Thermal Properties of Epoxy Resin Nanocomposites Reinforced with Graphene Oxide. Polymer-Plastics Technology and Engineering, 2012, 51, 251-256.	1.9	143
15	Ultrastable All-Solid-State Sodium Rechargeable Batteries. ACS Energy Letters, 2020, 5, 2835-2841.	8.8	142
16	Densified Li₆PS₅Cl Nanorods with High Ionic Conductivity and Improved Critical Current Density for All-Solid-State Lithium Batteries. Nano Letters, 2020, 20, 6660-6665.	4.5	127
17	Bifunctional Interphase-Enabled Li₁₀GeP₂S₁₂ Electrolytes for Lithiumâ€“Sulfur Battery. ACS Energy Letters, 2021, 6, 862-868.	8.8	115
18	High air-stability and superior lithium ion conduction of Li3+3P1-Zn S4-O by aliovalent substitution of ZnO for all-solid-state lithium batteries. Energy Storage Materials, 2019, 17, 266-274.	9.5	114

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19	Toward High Energy Density All Solidâ€State Sodium Batteries with Excellent Flexibility. Advanced Energy Materials, 2020, 10, 1903698.	10.2	111
20	MoS₂ nanoflowers consisting of nanosheets with a controllable interlayer distance as high-performance lithium ion battery anodes. RSC Advances, 2015, 5, 7938-7943.	1.7	109
21	Rational design of multi-channel continuous electronic/ionic conductive networks for room temperature vanadium tetrasulfide-based all-solid-state lithium-sulfur batteries. Nano Energy, 2019, 57, 771-782.	8.2	104
22	Lithium Superionic Conducting Oxysulfide Solid Electrolyte with Excellent Stability against Lithium Metal for All-Solid-State Cells. Journal of the Electrochemical Society, 2016, 163, A96-A101.	1.3	103
23	Co3O4 nanowires as high capacity anode materials for lithium ion batteries. Journal of Alloys and Compounds, 2012, 521, 95-100.	2.8	101
24	Ultra-thin free-standing sulfide solid electrolyte film for cell-level high energy density all-solid-state lithium batteries. Energy Storage Materials, 2021, 38, 249-254.	9.5	97
25	In-situ preparation of poly(ethylene oxide)/Li3PS4 hybrid polymer electrolyte with good nanofiller distribution for rechargeable solid-state lithium batteries. Journal of Power Sources, 2018, 387, 72-80.	4.0	95
26	Highly Crystalline Layered VS₂ Nanosheets for All-Solid-State Lithium Batteries with Enhanced Electrochemical Performances. ACS Applied Materials & Interfaces, 2018, 10, 10053-10063.	4.0	94
27	High ion conductive Sb2O5-doped Î²-Li3PS4 with excellent stability against Li for all-solid-state lithium batteries. Journal of Power Sources, 2018, 389, 140-147.	4.0	90
28	Poly(ethylene glycol) brush on Li6.4La3Zr1.4Ta0.6O12 towards intimate interfacial compatibility in composite polymer electrolyte for flexible all-solid-state lithium metal batteries. Journal of Power Sources, 2021, 498, 229934.	4.0	88
29	Cu2ZnSnS4/graphene nanocomposites for ultrafast, long life all-solid-state lithium batteries using lithium metal anode. Energy Storage Materials, 2016, 4, 59-65.	9.5	85
30	CNTs@S composite as cathode for all-solid-state lithium-sulfur batteries with ultralong cycle life. Journal of Energy Chemistry, 2020, 40, 151-155.	7.1	83
31	Harnessing the Volume Expansion of MoS₃ Anode by Structure Engineering to Achieve High Performance Beyond Lithiumâ€Based Rechargeable Batteries. Advanced Materials, 2021, 33, e2106232.	11.1	83
32	Engineering the interface between LiCoO₂ and Li₁₀GeP₂S₁₂ solid electrolytes with an ultrathin Li₂CoTi₃O₈ interlayer to boost the performance of all-solid-state batteries. Energy and Environmental Science, 2021, 14, 437-450.	15.6	82
33	Superior lithium ion conduction of polymer electrolyte with comb-like structure via solvent-free copolymerization for bipolar all-solid-state lithium battery. Journal of Materials Chemistry A, 2018, 6, 13438-13447.	5.2	80
34	Grain-boundary-resistance-less Na3SbS4-Se solid electrolytes for all-solid-state sodium batteries. Nano Energy, 2019, 66, 104109.	8.2	77
35	Na₃Zr₂Si₂PO₁₂: A Stable Na⁺-Ion Solid Electrolyte for Solid-State Batteries. ACS Applied Energy Materials, 2020, 3, 7427-7437.	2.5	77
36	Nickel sulfide anchored carbon nanotubes for all-solid-state lithium batteries with enhanced rate capability and cycling stability. Journal of Materials Chemistry A, 2018, 6, 12098-12105.	5.2	76

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37	Sulfur-Embedded FeS₂ as a High-Performance Cathode for Room Temperature All-Solid-State Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2020, 12, 18519-18525.	4.0	76
38	Porous hematite (Î±-Fe2O3) nanorods as an anode material with enhanced rate capability in lithium-ion batteries. Electrochemistry Communications, 2011, 13, 1439-1442.	2.3	75
39	Synthesis and electrochemical properties of layered lithium transition metal oxides. Journal of Materials Chemistry, 2011, 21, 2544-2549.	6.7	74
40	Influence of the Liâ€“Geâ€“Pâ€“S based solid electrolytes on NCA electrochemical performances in all-solid-state lithium batteries. Solid State Ionics, 2015, 274, 8-11.	1.3	70
41	Fe₃S₄@Li₇P₃S₁₁ nanocomposites as cathode materials for all-solid-state lithium batteries with improved energy density and low cost. Journal of Materials Chemistry A, 2017, 5, 23919-23925.	5.2	69
42	Construction of 3D Electronic/Ionic Conduction Networks for Allâ€Solidâ€State Lithium Batteries. Small, 2019, 15, e1905849.	5.2	69
43	Coreâ€“Shell Fe_{1â€“x}S@Na_{2.9}PS_{3.95}Se_{0.05} Nanorods for Room Temperature All-Solid-State Sodium Batteries with High Energy Density. ACS Nano, 2018, 12, 2809-2817.	7.3	68
44	Insights on the fundamental lithium storage behavior of all-solid-state lithium batteries containing the LiNi0.8Co0.15Al0.05O2 cathode and sulfide electrolyte. Journal of Power Sources, 2016, 307, 724-730.	4.0	67
45	Bio-inspired Nanoscaled Electronic/Ionic Conduction Networks for Room-Temperature All-Solid-State Sodium-Sulfur Battery. Nano Today, 2020, 33, 100860.	6.2	67
46	Nanoscaled Na₃PS₄ Solid Electrolyte for All-Solid-State FeS₂/Na Batteries with Ultrahigh Initial Coulombic Efficiency of 95% and Excellent Cyclic Performances. ACS Applied Materials & Interfaces, 2018, 10, 12300-12304.	4.0	64
47	NASICON-structured Na3.1Zr1.95Mg0.05Si2PO12 solid electrolyte for solid-state sodium batteries. Rare Metals, 2018, 37, 480-487.	3.6	63
48	Flexible composite solid electrolyte with 80 wt% Na3.4Zr1.9Zn0.1Si2.2P0.8O12 for solid-state sodium batteries. Energy Storage Materials, 2022, 46, 175-181.	9.5	63
49	Synergistic Effects of Plasticizer and 3D Framework toward High-Performance Solid Polymer Electrolyte for Room-Temperature Solid-State Lithium Batteries. ACS Applied Energy Materials, 2021, 4, 4129-4137.	2.5	61
50	Facile synthesis of porous CoFe₂O₄ nanosheets for lithium-ion battery anodes with enhanced rate capability and cycling stability. RSC Advances, 2014, 4, 27488-27492.	1.7	51
51	Molybdenum trisulfide based anionic redox driven chemistry enabling high-performance all-solid-state lithium metal batteries. Energy Storage Materials, 2019, 23, 168-180.	9.5	51
52	20â€‰Î¼ 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, .	4.7	48
53	Polydopamine-assisted synthesis of hollow NiCo₂O₄nanospheres as high-performance lithium ion battery anodes. RSC Advances, 2014, 4, 37928.	1.7	46
54	Transitional Metal Catalytic Pyrite Cathode Enables Ultrastable Four-Electron-Based All-Solid-State Lithium Batteries. ACS Nano, 2019, 13, 9551-9560.	7.3	46

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55	Dopamine-assisted one-pot synthesis of zinc ferrite-embedded porous carbon nanospheres for ultrafast and stable lithium ion batteries. Chemical Communications, 2014, 50, 14597-14600.	2.2	44
56	Poly(vinylidene fluoride) nanofibrous mats with covalently attached SiO₂ nanoparticles as an ionic liquid host: enhanced ion transport for electrochromic devices and lithium-ion batteries. Journal of Materials Chemistry A, 2015, 3, 16040-16049.	5.2	43
57	Structure Integrity Endowed by a Ti-Containing Surface Layer towards Ultrastable LiNi_{0.8}Co_{0.15}Al_{0.05}O₂for All-Solid-State Lithium Batteries. Journal of the Electrochemical Society, 2016, 163, A1530-A1534.	1.3	43
58	Selfâ€Formed Electronic/Ionic Conductive Fe₃S₄â€Šâ€ŠSâ€Šâ€Š0.9Na₃SbS₄â‹…0.1NaI Composite for Highâ€Performance Roomâ€Temperature Allâ€Solidâ€State Sodiumâ€“Sulfur Battery. Small, 2020, 16, e2001574.	8.2	43
59	Polydopamine-derived porous nanofibers as host of ZnFe₂O₄ nanoneedles: towards high-performance anodes for lithium-ion batteries. RSC Advances, 2015, 5, 13315-13323.	1.7	41
60	Co₃S₄@Li₇P₃S₁₁ Hexagonal Platelets as Cathodes with Superior Interfacial Contact for All-Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2020, 12, 14079-14086.	4.0	41
61	NiS Nanorods as Cathode Materials for Allâ€Solidâ€State Lithium Batteries with Excellent Rate Capability and Cycling Stability. ChemElectroChem, 2016, 3, 764-769.	1.7	40
62	Superior lithium-stable Li7P2S8I solid electrolyte for all-solid-state lithium batteries. Journal of Power Sources, 2021, 491, 229565.	4.0	40
63	FeS nanosheets as positive electrodes for all-solid-state lithium batteries. Solid State Ionics, 2018, 318, 60-64.	1.3	36
64	Improving the Interfacial Stability between Lithium and Solidâ€State Electrolyte via Dipoleâ€Structured Lithium Layer Deposited on Graphene Oxide. Advanced Science, 2020, 7, 2000237.	5.6	36
65	Na10SnSb2S12: A nanosized air-stable solid electrolyte for all-solid-state sodium batteries. Chemical Engineering Journal, 2021, 420, 127692.	6.6	36
66	A Robust Li-Intercalated Interlayer with Strong Electron Withdrawing Ability Enables Durable and High-Rate Li Metal Anode. ACS Energy Letters, 2022, 7, 1594-1603.	8.8	36
67	Passivation of the Cathodeâ€“Electrolyte Interface for 5 V-Class All-Solid-State Batteries. ACS Applied Materials & Interfaces, 2020, 12, 28083-28090.	4.0	34
68	Catalytic Mo2C decorated N-doped honeycomb-like carbon network for high stable lithium-sulfur batteries. Chemical Engineering Journal, 2022, 433, 133683.	6.6	34
69	Ultrasmall Li₂S-Carbon Nanotube Nanocomposites for High-Rate All-Solid-State Lithiumâ€“Sulfur Batteries. ACS Applied Materials & Interfaces, 2021, 13, 18666-18672.	4.0	33
70	Expansion-Tolerant Lithium Anode with Built-In LiF-Rich Interface for Stable 400 Wh kg^{â€“1} Lithium Metal Pouch Cells. , 2022, 4, 1516-1522.		32
71	Zinc ferrite nanorods coated with polydopamine-derived carbon for high-rate lithium ion batteries. Electrochimica Acta, 2014, 146, 464-471.	2.6	31
72	Selenium-Infused Ordered Mesoporous Carbon for Room-Temperature All-Solid-State Lithiumâ€“Selenium Batteries with Ultrastable Cyclability. ACS Applied Materials & Interfaces, 2020, 12, 16541-16547.	4.0	31

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73	Poly(methyl methacrylate)-Based Gel Polymer Electrolyte for High-Performance Solid State Liâ€“O₂ Battery with Enhanced Cycling Stability. ACS Applied Energy Materials, 2021, 4, 3975-3982.	2.5	30
74	Understanding LiI-LiBr Catalyst Activity for Solid State Li₂S/S Reactions in an All-Solid-State Lithium Battery. Nano Letters, 2021, 21, 8488-8494.	4.5	30
75	PEDOT-PSS coated VS₂ nanosheet anodes for high rate and ultrastable lithium-ion batteries. New Journal of Chemistry, 2019, 43, 1681-1687.	1.4	28
76	In Situ Formed Liâ€“Ag Alloy Interface Enables Li₁₀GeP₂S₁₂-Based All-Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2021, 13, 50076-50082.	4.0	27
77	Intimate triple phase interfaces confined in two-dimensional ordered mesoporous carbon towards high-performance all-solid-state lithium-sulfur batteries. Chemical Engineering Journal, 2022, 448, 137712.	6.6	26
78	Facile synthesis of Co₉S₈ nanosheets for lithium ion batteries with enhanced rate capability and cycling stability. New Journal of Chemistry, 2017, 41, 9184-9191.	1.4	24
79	Air exposure towards stable Li/Li₁₀GeP₂S₁₂ interface for all-solid-state lithium batteries. Materials Futures, 2022, 1, 021001.	3.1	24
80	Non-isothermal crystallization kinetics of poly (lactic acid)/graphene nanocomposites. Journal of Polymer Engineering, 2013, 33, 163-171.	0.6	23
81	Surface Engineered Li Metal Anode for Allâ€Solidâ€State Lithium Metal Batteries with High Capacity. ChemElectroChem, 2021, 8, 386-389.	1.7	23
82	Preparation of new composite polymer electrolyte for long cycling all-solid-state lithium battery. Ionics, 2019, 25, 907-916.	1.2	19
83	In Situ Coating of Li₇P₃S₁₁ Electrolyte on CuCo₂S₄/Graphene Nanocomposite as a High-Performance Cathode for All-Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2020, 12, 33810-33816.	4.0	19
84	Dipolar and catalytic effects of an Fe₃O₄ based nitrogen-doped hollow carbon sphere framework for high performance lithium sulfur batteries. Inorganic Chemistry Frontiers, 2021, 8, 1771-1778.	3.0	19
85	Titanium Dioxide Doping toward High-Lithium-Ion-Conducting Li_{1.5}Al_{0.5}Ge_{1.5}(PO₄)₃ Glass-Ceramics for All-Solid-State Lithium Batteries. ACS Applied Energy Materials, 2019, 2, 7299-7305.	2.5	18
86	High conductivity polymer electrolyte with comb-like structure via a solvent-free UV-cured method for large-area ambient all-solid-sate lithium batteries. Journal of Materiomics, 2019, 5, 195-203.	2.8	16
87	Gravity-driven Poly(ethylene glycol)@Li1.5Al0.5Ge1.5(PO4)3 asymmetric solid polymer electrolytes for all-solid-state lithium batteries. Journal of Power Sources, 2022, 518, 230756.	4.0	16
88	Tungsten and oxygen co-doped stable tetragonal phase Na3SbS4 with ultrahigh ionic conductivity for all-solid-state sodium batteries. Applied Materials Today, 2022, 27, 101448.	2.3	16
89	Cobalt-doped pyrite for Na11Sn2SbS11.5Se0.5 electrolyte based all-solid-state sodium battery with enhanced capacity. Journal of Power Sources, 2020, 449, 227515.	4.0	15
90	Bilayer NASICON/Polymer Hybrid Electrolyte for Stable Solid-State Liâ€“O₂ Batteries. ACS Applied Energy Materials, 2022, 5, 9149-9157.	2.5	15

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91	Si/C nanocomposite anode materials by freeze-drying with enhanced electrochemical performance in lithium-ion batteries. Journal of Solid State Electrochemistry, 2012, 16, 2733-2738.	1.2	14
92	Synthesis and electrochemical properties of LiNi1/3Co1/3Mn1/3O2 cathodes in lithium-ion and all-solid-state lithium batteries. Ionics, 2015, 21, 43-49.	1.2	13
93	Effective Strategy for Enhancing the Performance of Li₄Ti₅O₁₂Anodes in Lithium-Ion Batteries: Magnetron Sputtering Molybdenum Disulfide-Optimized Interface Architecture. ACS Applied Materials & Interfaces, 2019, 11, 26880-26890.	4.0	13
94	Liquid-Phase Synthesis of Nanosized Na₁₁Sn₂PS₁₂ Solid Electrolytes for Room Temperature All-Solid-State Sodium Batteries. ACS Applied Energy Materials, 2021, 4, 1467-1473.	2.5	10
95	High ionic conductivity and stable phase Na11.5Sn2Sb0.5Ti0.5S12 for all-solid-state sodium batteries. Journal of Power Sources, 2021, 512, 230485.	4.0	10
96	Electrochemical Polishing: An Effective Strategy for Eliminating Li Dendrites. Advanced Functional Materials, 2022, 32, .	7.8	9
97	Bimetallic Hexagonal Layered Niâ€“Co Sulfides with High Electrochemical Performance for All-Solid-State Lithium Batteries. ACS Sustainable Chemistry and Engineering, 2021, 9, 17061-17067.	3.2	8
98	Nitrogen doped hollow carbon nanospheres as efficient polysulfide restricted layer on commercial separators for high-performance lithium-sulfur batteries. Chinese Chemical Letters, 2023, 34, 107232.	4.8	7
99	Wet-Milling Synthesis of Superionic Lithium Argyrodite Electrolytes with Different Concentrations of Lithium Vacancy. ACS Applied Materials & Interfaces, 2021, 13, 46644-46649.	4.0	6
100	Amorphous Titanium Polysulfide Composites with Electronic/Ionic Conduction Networks for All-Solid-State Lithium Batteries. ACS Applied Materials & Interfaces, 2022, 14, 17594-17600.	4.0	6
101	Synergistic effect of cobalt, nitrogen-codoped hollow carbon sphere hosts for high performance lithium sulfur batteries. New Journal of Chemistry, 2020, 44, 5965-5971.	1.4	5
102	Oneâ€dimensional NiSâ€CNT@Li7P3S11 nanocomposites as ionic/electronic additives for LiCoO2 based allâ€solidâ€state lithium batteries. Electrochimica Acta, 2021, 398, 139280.	2.6	5
103	Prussian blue analog Co3[Co(CN)6]2 as a cathode material for lithiumâ€“sulfur batteries. Applied Physics Letters, 2020, 117, .	1.5	4
104	Superionic Lithium Argyrodite Electrolytes by Bromine-Doping for All-Solid-State Lithium Batteries. Journal of the Electrochemical Society, 2022, 169, 040553.	1.3	4
105	Sodium Ion Batteries: Toward High Energy Density All Solidâ€State Sodium Batteries with Excellent Flexibility (Adv. Energy Mater. 12/2020). Advanced Energy Materials, 2020, 10, 2070055.	10.2	2