

Yao-bin Xu

List of Publications by Year in descending order

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71
papers

5,198
citations

101543

36
h-index

102487

66
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72
all docs

72
docs citations

72
times ranked

6123
citing authors

#	ARTICLE	IF	CITATIONS
1	Electrolyte design for LiF-rich solidâ€electrolyte interfaces to enable high-performance micro-sized alloy anodes for batteries. <i>Nature Energy</i> , 2020, 5, 386-397.	39.5	621
2	Reversible planar gliding and microcracking in a single-crystalline Ni-rich cathode. <i>Science</i> , 2020, 370, 1313-1317.	12.6	472
3	Observation of a periodic array of flux-closure quadrants in strained ferroelectric PbTiO ₃ films. <i>Science</i> , 2015, 348, 547-551.	12.6	430
4	Two-dimensional copper nanosheets for electrochemical reduction of carbon monoxide to acetate. <i>Nature Catalysis</i> , 2019, 2, 423-430.	34.4	368
5	Origin of lithium whisker formation and growth under stress. <i>Nature Nanotechnology</i> , 2019, 14, 1042-1047.	31.5	211
6	The passivity of lithium electrodes in liquid electrolytes for secondary batteries. <i>Nature Reviews Materials</i> , 2021, 6, 1036-1052.	48.7	201
7	Advanced Electrolytes for Fastâ€Charging Highâ€Voltage Lithiumâ€Ion Batteries in Wideâ€Temperature Range. <i>Advanced Energy Materials</i> , 2020, 10, 2000368.	19.5	159
8	Strategies towards enabling lithium metal in batteries: interphases and electrodes. <i>Energy and Environmental Science</i> , 2021, 14, 5289-5314.	30.8	156
9	Progressive growth of the solidâ€electrolyte interphase towards the Si anode interior causes capacity fading. <i>Nature Nanotechnology</i> , 2021, 16, 1113-1120.	31.5	147
10	Low-solvation electrolytes for high-voltage sodium-ion batteries. <i>Nature Energy</i> , 2022, 7, 718-725.	39.5	137
11	Meltâ€Centrifuged (Bi,Sb) ₂ Te ₃ : Engineering Microstructure toward High Thermoelectric Efficiency. <i>Advanced Materials</i> , 2018, 30, e1802016.	21.0	133
12	Sodium storage in hard carbon with curved graphene platelets as the basic structural units. <i>Journal of Materials Chemistry A</i> , 2019, 7, 3327-3335.	10.3	113
13	Nonflammable Electrolytes for Lithium Ion Batteries Enabled by Ultraconformal Passivation Interphases. <i>ACS Energy Letters</i> , 2019, 4, 2529-2534.	17.4	112
14	Shape regulation of high-index facet nanoparticles by dealloying. <i>Science</i> , 2019, 365, 1159-1163.	12.6	108
15	Atomic to Nanoscale Origin of Vinylene Carbonate Enhanced Cycling Stability of Lithium Metal Anode Revealed by Cryo-Transmission Electron Microscopy. <i>Nano Letters</i> , 2020, 20, 418-425.	9.1	102
16	Highly Reversible Sodium Ion Batteries Enabled by Stable Electrolyte-Electrode Interphases. <i>ACS Energy Letters</i> , 2020, 5, 3212-3220.	17.4	97
17	Morphological Engineering of Winged Au@MoS ₂ Heterostructures for Electrocatalytic Hydrogen Evolution. <i>Nano Letters</i> , 2018, 18, 7104-7110.	9.1	96
18	Superior Oxygen Reduction Reaction on Phosphorusâ€Doped Carbon Dot/Graphene Aerogel for Allâ€Solidâ€State Flexible Alâ€Air Batteries. <i>Advanced Energy Materials</i> , 2020, 10, 1902736.	19.5	93

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19	Experimental investigation of heat transfer and flow characteristics in finned copper foam heat sinks subjected to jet impingement cooling. <i>Applied Energy</i> , 2019, 241, 433-443.	10.1	70
20	Advanced Low-Flammable Electrolytes for Stable Operation of High-Voltage Lithium-Ion Batteries. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 12999-13006.	13.8	70
21	Dynamic imaging of crystalline defects in lithium-manganese oxide electrodes during electrochemical activation to high voltage. <i>Nature Communications</i> , 2019, 10, 1692.	12.8	68
22	Polymer-Inorganic Quasi-Ionic Liquid Electrolytes for High-Voltage Lithium Metal Batteries. <i>Advanced Energy Materials</i> , 2019, 9, 1902108.	19.5	65
23	Atomic-scale mapping of dipole frustration at 90° charged domain walls in ferroelectric PbTiO ₃ films. <i>Scientific Reports</i> , 2014, 4, 4115.	3.3	56
24	Local Enhancement of Polarization at PbTiO ₃ /BiFeO ₃ Interfaces Mediated by Charge Transfer. <i>Nano Letters</i> , 2017, 17, 3619-3628.	9.1	56
25	Current Density Regulated Atomic to Nanoscale Process on Li Deposition and Solid Electrolyte Interphase Revealed by Cryogenic Transmission Electron Microscopy. <i>ACS Nano</i> , 2020, 14, 8766-8775.	14.6	54
26	A hybrid lithium storage mechanism of hard carbon enhances its performance as anodes for lithium-ion batteries. <i>Carbon</i> , 2021, 178, 443-450.	10.3	53
27	Electrolyte Regulating toward Stabilization of Cobalt-Free Ultrahigh-Nickel Layered Oxide Cathode in Lithium-Ion Batteries. <i>ACS Energy Letters</i> , 2021, 6, 1324-1332.	17.4	53
28	Site-Specific Positioning and Patterning of MoS ₂ Monolayers: The Role of Au Seeding. <i>ACS Nano</i> , 2018, 12, 8970-8976.	14.6	50
29	Single-Crystal Polycationic Polymers Obtained by Single-Crystal-to-Single-Crystal Photopolymerization. <i>Journal of the American Chemical Society</i> , 2020, 142, 6180-6187.	13.7	50
30	Stacking Faults Assist Lithium-Ion Conduction in a Halide-Based Superionic Conductor. <i>Journal of the American Chemical Society</i> , 2022, 144, 5795-5811.	13.7	50
31	Controllable growth of LiMn ₂ O ₄ by carbohydrate-assisted combustion synthesis for high performance Li-ion batteries. <i>Nano Energy</i> , 2019, 64, 103936.	16.0	47
32	Influence of Higher Zn/Y Ratio on the Microstructure and Mechanical Properties of Mg-Zn-Y-Zr Alloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2009, 40, 1727-1740.	2.2	46
33	Atomic mapping of Ruddlesden-Popper faults in transparent conducting BaSnO ₃ -based thin films. <i>Scientific Reports</i> , 2015, 5, 16097.	3.3	42
34	Strain-Induced Metastable Phase Stabilization in Ga ₂ O ₃ Thin Films. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 5536-5543.	8.0	42
35	All solid thick oxide cathodes based on low temperature sintering for high energy solid batteries. <i>Energy and Environmental Science</i> , 2021, 14, 5044-5056.	30.8	41
36	Polymer-ceramic composite electrolytes for all-solid-state lithium batteries: Ionic conductivity and chemical interaction enhanced by oxygen vacancy in ceramic nanofibers. <i>Journal of Power Sources</i> , 2021, 495, 229796.	7.8	40

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37	Enabling Ether-Based Electrolytes for Long Cycle Life of Lithium-Ion Batteries at High Charge Voltage. ACS Applied Materials & Interfaces, 2020, 12, 54893-54903.	8.0	35
38	A Coherently Strained Monoclinic [111]PbTiO ₃ Film Exhibiting Zero Poisson's Ratio State. Advanced Functional Materials, 2019, 29, 1901687.	14.9	30
39	Atomic Level 1D Structural Modulations at the Negatively Charged Domain Walls in BiFeO ₃ Films. Advanced Materials Interfaces, 2015, 2, 1500024.	3.7	29
40	Mapping Hot Spots at Heterogeneities of Few-Layer Ti ₃ C ₂ MXene Sheets. ACS Nano, 2019, 13, 3301-3309.	14.6	29
41	Revealing the Effects of Electrode Crystallographic Orientation on Battery Electrochemistry via the Anisotropic Lithiation and Sodiation of ReS ₂ . ACS Nano, 2018, 12, 7875-7882.	14.6	28
42	Dynamic imaging of metastable reaction pathways in lithiated cobalt oxide electrodes. Nano Energy, 2018, 44, 15-22.	16.0	24
43	Toward the Practical Use of Cobalt-Free Lithium-Ion Batteries by an Advanced Ether-Based Electrolyte. ACS Applied Materials & Interfaces, 2021, 13, 44339-44347.	8.0	24
44	A Hierarchical Nanoporous Diamondoid Superstructure. Chem, 2019, 5, 2353-2364.	11.7	23
45	Unravelling high-temperature stability of lithium-ion battery with lithium-rich oxide cathode in localized high-concentration electrolyte. Journal of Power Sources Advances, 2020, 5, 100024.	5.1	23
46	Large scale arrays of four-state vortex domains in BiFeO ₃ thin film. Applied Physics Letters, 2016, 109, .	3.3	22
47	In Situ, Atomic-Resolution Observation of Lithiation and Sodiation of WS ₂ Nanoflakes: Implications for Lithium-ion and Sodium-ion Batteries. Small, 2021, 17, e2100637.	10.0	22
48	Sulfone-based electrolytes for high energy density lithium-ion batteries. Journal of Power Sources, 2022, 527, 231171.	7.8	21
49	Misfit Strain Relaxation of Ferroelectric PbTiO ₃ /LaAlO ₃ (111) Thin Film System. Scientific Reports, 2016, 6, 35172.	3.3	16
50	Sweeping potential regulated structural and chemical evolution of solid-electrolyte interphase on Cu and Li as revealed by cryo-TEM. Nano Energy, 2020, 76, 105040.	16.0	16
51	Advanced Low-Flammable Electrolytes for Stable Operation of High-Voltage Lithium-ion Batteries. Angewandte Chemie, 2021, 133, 13109-13116.	2.0	16
52	3D polarization texture of a symmetric 4-fold flux closure domain in strained ferroelectric PbTiO ₃ films. Journal of Materials Research, 2017, 32, 957-967.	2.6	13
53	Shear-activated indentation crack in GaAs single crystal. Journal of Materials Research, 2001, 16, 2845-2849.	2.6	12
54	Designing of metallic nanocrystals embedded in non-stoichiometric perovskite nanomaterial and its surface-electronic characteristics. Scientific Reports, 2017, 7, 8343.	3.3	12

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55	Early Failure of Lithium-Sulfur Batteries at Practical Conditions: Crosstalk between Sulfur Cathode and Lithium Anode. <i>Advanced Science</i> , 2022, 9, e2201640.	11.2	12
56	Thin Film RuO ₂ Lithiation: Fast Lithium-Ion Diffusion along the Interface. <i>Advanced Functional Materials</i> , 2018, 28, 1805723.	14.9	11
57	Atomic Structure of Electrochemically Deposited Lithium Metal and Its Solid Electrolyte Interphases Revealed by Cryo-electron Microscopy. <i>Microscopy and Microanalysis</i> , 2019, 25, 2220-2221.	0.4	8
58	Facile Dual-Protection Layer and Advanced Electrolyte Enhancing Performances of Cobalt-free/Nickel-rich Cathodes in Lithium-Ion Batteries. <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 17405-17414.	8.0	8
59	Galvanic Transformation Dynamics in Heterostructured Nanoparticles. <i>Advanced Functional Materials</i> , 2021, 31, 2105866.	14.9	7
60	The Influence of Developed Texture on the Mechanical Anisotropy and Deformation Modes of an As-Extruded Mg-Zn-Zr Alloy. <i>Materials Transactions</i> , 2008, 49, 1011-1014.	1.2	6
61	Lithium Electrochemistry of WS ₂ Nanoflakes Studied by In-situ TEM. <i>Microscopy and Microanalysis</i> , 2018, 24, 1860-1861.	0.4	4
62	Atomically resolved precipitates/matrix interfaces in KTaO ₃ crystals. <i>Philosophical Magazine</i> , 2016, 96, 486-497.	1.6	3
63	Enhanced Long-Term Cathode Stability by Tuning Interfacial Nanocomposite for Intermediate Temperature Solid Oxide Fuel Cells. <i>Advanced Materials Interfaces</i> , 2022, 9, .	3.7	3
64	Anisotropic Lithiation and Sodiation of ReS ₂ Studied by In-situ TEM. <i>Microscopy and Microanalysis</i> , 2018, 24, 1570-1571.	0.4	2
65	Atomic structure and deformation behaviour around the crack tip induced during indentation of GaAs single crystal. <i>Philosophical Magazine Letters</i> , 2008, 88, 19-26.	1.2	1
66	Controllable Nonclassical Conductance Switching in Nanoscale Phase-Separated (PbI ₂) _{1-x} (BiI ₃) _x Layered Crystals. <i>Advanced Materials</i> , 2021, 33, e2103098.	21.0	1
67	A straining test within an SEM and its application. <i>Scanning</i> , 1986, 8, 34-39.	1.5	0
68	1D Modulation: Atomic Level 1D Structural Modulations at the Negatively Charged Domain Walls in BiFeO ₃ Films (Adv. Mater. Interfaces 9/2015). <i>Advanced Materials Interfaces</i> , 2015, 2, .	3.7	0
69	Atomic Level Structural Modulations at the Negatively Charged Domain Walls in BiFeO ₃ Films. <i>Microscopy and Microanalysis</i> , 2017, 23, 1666-1667.	0.4	0
70	Lithium/Sodium-Ion Batteries: In Situ, Atomic-Resolution Observation of Lithiation and Sodiation of WS ₂ Nanoflakes: Implications for Lithium-Ion and Sodium-Ion Batteries (Small 24/2021). <i>Small</i> , 2021, 17, 2170120.	10.0	0
71	Sweeping Potential Regulated Structural and Chemical Evolution of Solid-Electrolyte Interphase on Cu and Li as Revealed by Cryogenic Transmission Electron Microscopy. <i>Microscopy and Microanalysis</i> , 2021, 27, 1250-1253.	0.4	0