Xinbing Zhao

List of Publications by Year
in descending order

#	Article	IF	Citations
1	Compromise and Synergy in Highâ€Efficiency Thermoelectric Materials. Advanced Materials, 2017, 29, 1605884.	11.1	1,098
2	Realizing high figure of merit in heavy-band p-type half-Heusler thermoelectric materials. Nature Communications, 2015, 6, 8144.	5.8	893
3	Point Defect Engineering of Highâ€Performance Bismuthâ€Tellurideâ€Based Thermoelectric Materials. Advanced Functional Materials, 2014, 24, 5211-5218.	7.8	619
4	Band engineering of high performance p-type FeNbSb based half-Heusler thermoelectric materials for figure of merit zT > 1. Energy and Environmental Science, 2015, 8, 216-220.	15.6	469
5	High Efficiency Halfâ€Heusler Thermoelectric Materials for Energy Harvesting. Advanced Energy Materials, 2015, 5, 1500588.	10.2	380
6	Tuning Multiscale Microstructures to Enhance Thermoelectric Performance of nâ€Type Bismuthâ€Tellurideâ€Based Solid Solutions. Advanced Energy Materials, 2015, 5, 1500411.	10.2	379
7	Beneficial Contribution of Alloy Disorder to Electron and Phonon Transport in Halfâ€Heusler Thermoelectric Materials. Advanced Functional Materials, 2013, 23, 5123-5130.	7.8	349
8	New Insights into Intrinsic Point Defects in V₂VI₃ Thermoelectric Materials. Advanced Science, 2016, 3, 1600004.	5.6	317
9	Shifting up the optimum figure of merit of p-type bismuth telluride-based thermoelectric materials for power generation by suppressing intrinsic conduction. NPG Asia Materials, 2014, 6, e88-e88.	3.8	272
10	High Band Degeneracy Contributes to High Thermoelectric Performance in pâ€Type Halfâ€Heusler Compounds. Advanced Energy Materials, 2014, 4, 1400600.	10.2	261
11	Recent Advances in Inorganic Solid Electrolytes for Lithium Batteries. Frontiers in Energy Research, 2014, 2, .	1.2	249
12	Low Electron Scattering Potentials in High Performance Mg₂Si_{0.45}Sn_{0.55} Based Thermoelectric Solid Solutions with Band Convergence. Advanced Energy Materials, 2013, 3, 1238-1244.	10.2	220
13	The intrinsic disorder related alloy scattering in ZrNiSn half-Heusler thermoelectric materials. Scientific Reports, 2014, 4, 6888.	1.6	213
14	Hierarchical Chemical Bonds Contributing to the Intrinsically Low Thermal Conductivity in Î±â€MgAgSb Thermoelectric Materials. Advanced Functional Materials, 2017, 27, 1604145.	7.8	195
15	Unique Role of Refractory Ta Alloying in Enhancing the Figure of Merit of NbFeSb Thermoelectric Materials. Advanced Energy Materials, 2018, 8, 1701313.	10.2	181
16	Recrystallization induced in situ nanostructures in bulk bismuth antimony tellurides: a simple top down route and improved thermoelectric properties. Energy and Environmental Science, 2010, 3, 1519.	15.6	174
17	Direct Growth of Flowerâ€Like Î´â€MnO₂ on Threeâ€Dimensional Graphene for Highâ€Performance Rechargeable Liâ€O₂ Batteries. Advanced Energy Materials, 2014, 4, 1301960.	10.2	154
18	Enhancing the Figure of Merit of Heavyâ€Band Thermoelectric Materials Through Hierarchical Phonon Scattering. Advanced Science, 2016, 3, 1600035.	5.6	147

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19	Carrier grain boundary scattering in thermoelectric materials. Energy and Environmental Science, 2022, 15, 1406-1422.	15.6	145
20	Demonstration of a phonon-glass electron-crystal strategy in (Hf,Zr)NiSn half-Heusler thermoelectric materials by alloying. Journal of Materials Chemistry A, 2015, 3, 22716-22722.	5.2	137
21	High Performance Î±-MgAgSb Thermoelectric Materials for Low Temperature Power Generation. Chemistry of Materials, 2015, 27, 909-913.	3.2	124
22	Enhanced Thermoelectric Performance in 18â€Electron Nb_{0.8}CoSb Halfâ€Heusler Compound with Intrinsic Nb Vacancies. Advanced Functional Materials, 2018, 28, 1705845.	7.8	124
23	Attaining high mid-temperature performance in (Bi,Sb)2Te3 thermoelectric materials via synergistic optimization. NPG Asia Materials, 2016, 8, e302-e302.	3.8	119
24	Mg vacancy and dislocation strains as strong phonon scatterers in Mg 2 Si 1âˆ’x Sb x thermoelectric materials. Nano Energy, 2017, 34, 428-436.	8.2	116
25	Enhancement in thermoelectric performance of bismuth telluride based alloys by multi-scale microstructural effects. Journal of Materials Chemistry, 2012, 22, 16484.	6.7	110
26	Hot deformation induced bulk nanostructuring of unidirectionally grown p-type (Bi,Sb)2Te3 thermoelectric materials. Journal of Materials Chemistry A, 2013, 1, 11589.	5.2	110
27	Lanthanide Contraction as a Design Factor for Highâ€Performance Halfâ€Heusler Thermoelectric Materials. Advanced Materials, 2018, 30, e1800881.	11.1	101
28	Grain Boundary Scattering of Charge Transport in nâ€Type (Hf,Zr)CoSb Halfâ€Heusler Thermoelectric Materials. Advanced Energy Materials, 2019, 9, 1803447.	10.2	88
29	Short-range order in defective half-Heusler thermoelectric crystals. Energy and Environmental Science, 2019, 12, 1568-1574.	15.6	86
30	Halfâ€Heusler Thermoelectric Module with High Conversion Efficiency and High Power Density. Advanced Energy Materials, 2020, 10, 2000888.	10.2	85
31	Enhancing room temperature thermoelectric performance of n -type polycrystalline bismuth-telluride-based alloys via Ag doping and hot deformation. Materials Today Physics, 2017, 2, 62-68.	2.9	76
32	Liquidâ€Phase Hot Deformation to Enhance Thermoelectric Performance of nâ€type Bismuthâ€Tellurideâ€Based Solid Solutions. Advanced Science, 2019, 6, 1901702.	5.6	71
33	Tips-Bundled Pt/Co₃O₄ Nanowires with Directed Peripheral Growth of Li₂O₂ as Efficient Binder/Carbon-Free Catalytic Cathode for Lithiumâ€“Oxygen Battery. ACS Catalysis, 2015, 5, 241-245.	5.5	69
34	Demonstration of valley anisotropy utilized to enhance the thermoelectric power factor. Nature Communications, 2021, 12, 5408.	5.8	66
35	High performance p-type half-Heusler thermoelectric materials. Journal Physics D: Applied Physics, 2018, 51, 113001.	1.3	65
36	High performance n-type bismuth telluride based alloys for mid-temperature power generation. Journal of Materials Chemistry C, 2015, 3, 10597-10603.	2.7	64

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37	Na-Rich Prussian White Cathodes for Long-Life Sodium-Ion Batteries. ACS Sustainable Chemistry and Engineering, 2018, 6, 16121-16129.	3.2	63
38	High-Performance Mg ₃ Sb _{2- <i>x</i>} Bi <i> _x </i> Thermoelectrics: Progress and Perspective. Research, 2020, 2020, 1934848.	2.8	63
39	Half-Heusler thermoelectric materials. Applied Physics Letters, 2021, 118, .	1.5	60
40	Reduced Grain Size and Improved Thermoelectric Properties of Melt Spun (Hf,Zr)NiSn Half-Heusler Alloys. Journal of Electronic Materials, 2010, 39, 2008-2012.	1.0	58
41	Electron and phonon transport in Co-doped FeV0.6Nb0.4Sb half-Heusler thermoelectric materials. Journal of Applied Physics, 2013, 114, 134905.	1.1	54
42	Graphene-like Î´-MnO₂decorated with ultrafine CeO₂as a highly efficient catalyst for long-life lithiumâ€“oxygen batteries. Journal of Materials Chemistry A, 2017, 5, 6747-6755.	5.2	51
43	Revealing the Intrinsic Electronic Structure of 3D Halfâ€Heusler Thermoelectric Materials by Angleâ€Resolved Photoemission Spectroscopy. Advanced Science, 2020, 7, 1902409.	5.6	49
44	Mushroom-like Au/NiCo₂O₄nanohybrids as high-performance binder-free catalytic cathodes for lithiumâ€“oxygen batteries. Journal of Materials Chemistry A, 2015, 3, 5714-5721.	5.2	48
45	Potassium manganese hexacyanoferrate/graphene as a high-performance cathode for potassium-ion batteries. New Journal of Chemistry, 2019, 43, 11618-11625.	1.4	48
46	Highâ€Performance Liâ€“O₂ Batteries with Controlled Li₂O₂ Growth in Graphene/Auâ€Nanoparticles/Auâ€Nanosheets Sandwich. Advanced Science, 2016, 3, 1500339.	5.6	45
47	Thermoelectric properties of n-type half-Heusler NbCoSn with heavy-element Pt substitution. Journal of Materials Chemistry A, 2020, 8, 14822-14828.	5.2	44
48	Low-cost and long-life Zn/Prussian blue battery using a water-in-ethanol electrolyte with a normal salt concentration. Energy Storage Materials, 2022, 48, 192-204.	9.5	43
49	Understanding Moisture and Carbon Dioxide Involved Interfacial Reactions on Electrochemical Performance of Lithiumâ€“Air Batteries Catalyzed by Gold/Manganese-Dioxide. ACS Applied Materials & Interfaces, 2015, 7, 23876-23884.	4.0	42
50	Nanostructured porous RuO₂/MnO₂as a highly efficient catalyst for high-rate Liâ€“O₂batteries. Nanoscale, 2015, 7, 20614-20624.	2.8	42
51	Two-dimensional IrO2/MnO2 enabling conformal growth of amorphous Li2O2 for high-performance Liâ€“O2 batteries. Energy Storage Materials, 2017, 9, 206-213.	9.5	32
52	Tunable Optimum Temperature Range of High-Performance Zone Melted Bismuth-Telluride-Based Solid Solutions. Crystal Growth and Design, 2018, 18, 4646-4652.	1.4	29
53	Highly-efficient MnO2/carbon array-type catalytic cathode enabling confined Li2O2 growth for long-life Liâ€“O2 batteries. Energy Storage Materials, 2017, 6, 164-170.	9.5	27
54	<i>A</i>₁₄MgBi₁₁ (<i>A</i> = Ca, Sr, Eu): Magnesium Bismuth Based Zintl Phases as Potential Thermoelectric Materials. Inorganic Chemistry, 2017, 56, 10576-10583.	1.9	26

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55	Enhancing the average thermoelectric figure of merit of elemental Te by suppressing grain boundary scattering. Journal of Materials Chemistry A, 2020, 8, 8455-8461.	5.2	26
56	Manganese hexacyanoferrate/graphene cathodes for sodium-ion batteries with superior rate capability and ultralong cycle life. Inorganic Chemistry Frontiers, 2018, 5, 2914-2920.	3.0	24
57	Realizing discrete growth of thin Li2O2 sheets on black phosphorus quantum dots-decorated Î´-MnO2catalyst for long-life lithiumâ€“oxygen cells. Energy Storage Materials, 2019, 23, 684-692.	9.5	24
58	Stable cycling of a Prussian blue-based Na/Zn hybrid battery in aqueous electrolyte with a wide electrochemical window. New Journal of Chemistry, 2020, 44, 4639-4646.	1.4	24
59	Ni₃S₂ nanosheet-anchored carbon submicron tube arrays as high-performance binder-free anodes for Na-ion batteries. Inorganic Chemistry Frontiers, 2017, 4, 131-138.	3.0	22
60	NiCo₂O₄/MnO₂ core/shell arrays as a binder-free catalytic cathode for high-performance lithiumâ€“oxygen cells. Inorganic Chemistry Frontiers, 2018, 5, 1707-1713.	3.0	21
61	Long-life Na-rich nickel hexacyanoferrate capable of working under stringent conditions. Journal of Materials Chemistry A, 2021, 9, 21228-21240.	5.2	21
62	The effect of texture degree on the anisotropic thermoelectric properties of (Bi,Sb)₂(Te,Se)₃based solid solutions. RSC Advances, 2016, 6, 98646-98651.	1.7	20
63	Defect modulation on CaZn_{1â^’x}Ag_{1â^’y}Sb (0 < <i>x</i> < 1; 0 < <i>y</i>) Tj ETQq1 1 0.784314 rgBT Materials Chemistry A, 2018, 6, 11773-11782.	5.2	20
64	Enhancing the room temperature thermoelectric performance of n-type Bismuth-telluride-based polycrystalline materials by low-angle grain boundaries. Materials Today Physics, 2022, 22, 100573.	2.9	19
65	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.	2.8	16
66	Trace fluorinated-carbon-nanotube-induced lithium dendrite elimination for high-performance lithiumâ€“oxygen cells. Nanoscale, 2020, 12, 3424-3434.	2.8	14
67	Scattering Mechanisms and Compositional Optimization of Highâ€Performance Elemental Te as a Thermoelectric Material. Advanced Electronic Materials, 2020, 6, 2000038.	2.6	13
68	Lithiated carbon cloth as a dendrite-free anode for high-performance lithium batteries. Sustainable Energy and Fuels, 2020, 4, 5773-5782.	2.5	11
69	Nonflammable quasi-solid-state electrolyte for stable lithium-metal batteries. RSC Advances, 2019, 9, 42183-42193.	1.7	8
70	Stable cycling of Prussian blue/Zn battery in a nonflammable aqueous/organic hybrid electrolyte. RSC Advances, 2021, 11, 30383-30391.	1.7	8
71	Two-dimensional lithiophilic YFÎ´ enabled lithium dendrite removal for quasi-solid-state lithium batteries. Journal of Materiomics, 2021, 7, 355-365.	2.8	7
72	Defect control in Ca_{1â^’Î´}Ce_{Î´}Ag_{1â^’Î´}Sb (Î´ â‰ˆ 0.15) through Nb doping. Inorganic Chemistry Frontiers, 2017, 4, 1113-1119.	3.0	4

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73	Ionic liquid/ether-plasticized quasi-solid-state electrolytes for long-life lithiumâ€“oxygen cells. New Journal of Chemistry, 2018, 42, 19521-19527.	1.4	4
74	Tiny amounts of fluorinated carbon nanotubes remove sodium dendrites for high-performance sodiumâ€“oxygen batteries. Sustainable Energy and Fuels, 2020, 4, 4108-4116.	2.5	3