

Qihao Zhang

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

117
papers

14,046
citations

44
h-index

118
g-index

125
ext. papers

16,586
ext. citations

13.7
avg, IF

6.66
L-index

#	Paper	IF	Citations
117	A high-efficiency GeTe-based thermoelectric module for low-grade heat recovery. <i>Journal of Materials Chemistry A</i> , 2022 , 10, 7677-7683	13	0
116	Single-Solution Doping Enabling Dominant Integer Charge Transfer for Synergistically Improved Carrier Concentration and Mobility in Donor-Acceptor Polymers. <i>Advanced Functional Materials</i> , 2022 , 32, 2110047	15.6	4
115	In Situ Partial Pyrolysis of Sodium Carboxymethyl Cellulose Constructing Hierarchical Pores in the Silicon Anode for Lithium-Ion Batteries. <i>ACS Applied Energy Materials</i> , 2022 , 5, 380-386	6.1	1
114	Boosting thermoelectric performance of BayCo ₄ Sb ₁₂ by interlinking large aspect-ratio silver nanowires at the triple junction of grain boundaries. <i>Materials Today Energy</i> , 2022 , 101007	7	
113	Optimized Thermoelectric Properties of BiSbTe through AgCuTe Doping for Low-Grade Heat Harvesting. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 57514-57520	9.5	2
112	Unusually high Seebeck coefficient arising from temperature-dependent carrier concentration in PbSe-AgSbSe ₂ alloys. <i>Journal of Materials Chemistry C</i> , 2021 , 9, 17365-17370	7.1	1
111	p-Type Plastic Inorganic Thermoelectric Materials. <i>Advanced Energy Materials</i> , 2021 , 11, 2100883	21.8	11
110	Recent Developments in Flexible Thermoelectric Devices. <i>Small Science</i> , 2021 , 1, 2100005		18
109	Enhanced Thermoelectric and Mechanical Performances in Sintered BiSbTe-AgSbSe Composite. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 24937-24944	9.5	8
108	Ultrahigh energy density in short-range tilted NBT-based lead-free multilayer ceramic capacitors by nanodomain percolation. <i>Energy Storage Materials</i> , 2021 , 38, 113-120	19.4	47
107	Transparent Power-Generating Windows Based on Solar-Thermal-Electric Conversion. <i>Advanced Energy Materials</i> , 2021 , 11, 2101213	21.8	3
106	Thermoelectrics: p-Type Plastic Inorganic Thermoelectric Materials (Adv. Energy Mater. 23/2021). <i>Advanced Energy Materials</i> , 2021 , 11, 2170086	21.8	1
105	In situ poling X-ray diffraction studies of lead-free BiFeO ₃ /SrTiO ₃ ceramics. <i>Materials Today Physics</i> , 2021 , 19, 100426	8	6
104	Design and fabrication of thermoelectric devices 2021 , 221-267		1
103	Segmented modules 2021 , 469-492		
102	High efficiency GeTe-based materials and modules for thermoelectric power generation. <i>Energy and Environmental Science</i> , 2021 , 14, 995-1003	35.4	33
101	Refined band structure plus enhanced phonon scattering realizes thermoelectric performance optimization in Cu _{1-x} Mn _x codoped SnTe. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 13065-13070	13	10

100	High-energy storage performance in BaTiO ₃ -based lead-free multilayer ceramic capacitors. <i>Journal of Materials Research</i> , 2021 , 36, 1285-1294	2.5	4
99	High-entropy-stabilized chalcogenides with high thermoelectric performance. <i>Science</i> , 2021 , 371, 830-834	35.3	167
98	Investigation on Low-Temperature Thermoelectric Properties of AgSe Polycrystal Fabricated by Using Zone-Melting Method. <i>Journal of Physical Chemistry Letters</i> , 2021 , 12, 8246-8255	6.4	8
97	A low-cost and eco-friendly Br-doped Cu ₇ Sn ₃ S ₁₀ thermoelectric compound with zT around unity. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 7946-7954	13	9
96	Half-Heusler Thermoelectric Module with High Conversion Efficiency and High Power Density. <i>Advanced Energy Materials</i> , 2020 , 10, 2000888	21.8	40
95	Electrode interface optimization advances conversion efficiency and stability of thermoelectric devices. <i>Nature Communications</i> , 2020 , 11, 2723	17.4	38
94	Good stability and high thermoelectric performance of Fe doped CuS. <i>Physical Chemistry Chemical Physics</i> , 2020 , 22, 7374-7380	3.6	12
93	Interfacial behaviors of p-type CeyFexCo ₄ Sb ₁₂ /Nb thermoelectric joints. <i>Functional Materials Letters</i> , 2020 , 13, 2051020	1.2	
92	Semiconducting polymer contributes favorably to the Seebeck coefficient in multi-component, high-performance n-type thermoelectric nanocomposites. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 9797-9805	13	11
91	Thermoelectric Properties of Nano-grained Mooihoekite Cu ₉ Fe ₉ S ₁₆ . <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2020 , 646, 1116-1121	1.3	3
90	Conformal organic/inorganic semiconductor composites for flexible thermoelectrics. <i>Energy and Environmental Science</i> , 2020 , 13, 511-518	35.4	36
89	Enhanced Thermoelectric Performance and Service Stability of Cu ₂ Se Via Tailoring Chemical Compositions at Multiple Atomic Positions. <i>Advanced Functional Materials</i> , 2020 , 30, 1908315	15.6	26
88	High-Efficiency Thermoelectric Power Generation Enabled by Homogeneous Incorporation of MXene in (Bi,Sb) ₂ Te ₃ Matrix. <i>Advanced Energy Materials</i> , 2020 , 10, 1902986	21.8	53
87	Stacking faults modulation for scattering optimization in GeTe-based thermoelectric materials. <i>Nano Energy</i> , 2020 , 68, 104347	17.1	46
86	Conductive Polymers: Synergistically Improved Molecular Doping and Carrier Mobility by Copolymerization of Donor/Acceptor and Donor/Donor Building Blocks for Thermoelectric Application (Adv. Funct. Mater. 40/2020). <i>Advanced Functional Materials</i> , 2020 , 30, 2070270	15.6	4
85	Discovery of high-performance thermoelectric copper chalcogenide using modified diffusion-couple high-throughput synthesis and automated histogram analysis technique. <i>Energy and Environmental Science</i> , 2020 , 13, 3041-3053	35.4	16
84	Novel BaTiO ₃ -Based, Ag/Pd-Compatible Lead-Free Relaxors with Superior Energy Storage Performance. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 43942-43949	9.5	45
83	Synergistically Improved Molecular Doping and Carrier Mobility by Copolymerization of Donor/Acceptor and Donor/Donor Building Blocks for Thermoelectric Application. <i>Advanced Functional Materials</i> , 2020 , 30, 2004378	15.6	23

82	Superior energy density through tailored dopant strategies in multilayer ceramic capacitors. <i>Energy and Environmental Science</i> , 2020 , 13, 2938-2948	35.4	90
81	Recent Advances in Liquid-Like Thermoelectric Materials. <i>Advanced Functional Materials</i> , 2020 , 30, 19038676	6.7	67
80	Ultrahigh power factor and flexible silver selenide-based composite film for thermoelectric devices. <i>Energy and Environmental Science</i> , 2020 , 13, 1240-1249	35.4	94
79	Flexible thermoelectrics: from silver chalcogenides to full-inorganic devices. <i>Energy and Environmental Science</i> , 2019 , 12, 2983-2990	35.4	95
78	Thermoelectric properties of non-stoichiometric $\text{Cu}_{2+x}\text{Sn}_{1-x}\text{S}_3$ compounds. <i>Journal of Applied Physics</i> , 2019 , 126, 085111	2.5	19
77	Flexible Thermoelectric Materials and Generators: Challenges and Innovations. <i>Advanced Materials</i> , 2019 , 31, e1807916	24	255
76	Microstructure and composition engineering Yb single-filled CoSb_3 for high thermoelectric and mechanical performances. <i>Journal of Materiomics</i> , 2019 , 5, 702-710	6.7	17
75	Thermoelectric properties of n-type CuSnS -based compounds.. <i>RSC Advances</i> , 2019 , 9, 7826-7832	3.7	11
74	Superior performance and high service stability for GeTe -based thermoelectric compounds. <i>National Science Review</i> , 2019 , 6, 944-954	10.8	65
73	A high-throughput strategy to screen interfacial diffusion barrier materials for thermoelectric modules. <i>Journal of Materials Research</i> , 2019 , 34, 1179-1187	2.5	11
72	Copper chalcogenide thermoelectric materials. <i>Science China Materials</i> , 2019 , 62, 8-24	7.1	63
71	High performance n-type AgSe film on nylon membrane for flexible thermoelectric power generator. <i>Nature Communications</i> , 2019 , 10, 841	17.4	165
70	High-efficiency half-Heusler thermoelectric modules enabled by self-propagating synthesis and topologic structure optimization. <i>Energy and Environmental Science</i> , 2019 , 12, 3390-3399	35.4	77
69	One-step Synthesis and Enhanced Thermoelectric Properties of Polymer-Quantum Dot Composite Films. <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 8037-8042	16.4	27
68	Optimizing the Thermoelectric Performance of Poly(3-hexylthiophene) through Molecular-Weight Engineering. <i>Chemistry - an Asian Journal</i> , 2018 , 13, 3246-3253	4.5	12
67	Understanding the Intrinsic Carrier Transport in Highly Oriented Poly(3-hexylthiophene): Effect of Side Chain Regioregularity. <i>Polymers</i> , 2018 , 10,	4.5	12
66	Enhanced thermoelectric performance of CNT/P3HT composites with low CNT content.. <i>RSC Advances</i> , 2018 , 8, 33855-33863	3.7	16
65	Realizing a thermoelectric conversion efficiency of 12% in bismuth telluride/skutterudite segmented modules through full-parameter optimization and energy-loss minimized integration. <i>Energy and Environmental Science</i> , 2017 , 10, 956-963	35.4	181

64	Engineering carrier scattering at the interfaces in polyaniline based nanocomposites for high thermoelectric performances. <i>Materials Chemistry Frontiers</i> , 2017 , 1, 741-748	7.8	90
63	Cu ₈ GeSe ₆ -based thermoelectric materials with an argyrodite structure. <i>Journal of Materials Chemistry C</i> , 2017 , 5, 943-952	7.1	60
62	High thermoelectric performance and low thermal conductivity in Cu ₂ S _{1/3} Se _{1/3} Te _{1/3} liquid-like materials with nanoscale mosaic structures. <i>Nano Energy</i> , 2017 , 42, 43-50	17.1	44
61	Ultrahigh thermoelectric performance in Cu ₂ Se-based hybrid materials with highly dispersed molecular CNTs. <i>Energy and Environmental Science</i> , 2017 , 10, 1928-1935	35.4	215
60	Suppressed intrinsic excitation and enhanced thermoelectric performance in Ag _x Bi _{0.5} Sb _{1.5} Te ₃ . <i>Journal of Materials Chemistry C</i> , 2017 , 5, 12619-12628	7.1	32
59	Skutterudite with graphene-modified grain-boundary complexion enhances zT enabling high-efficiency thermoelectric device. <i>Energy and Environmental Science</i> , 2017 , 10, 183-191	35.4	191
58	High efficiency Bi ₂ Te ₃ -based materials and devices for thermoelectric power generation between 100 and 300 °C. <i>Energy and Environmental Science</i> , 2016 , 9, 3120-3127	35.4	239
57	Quaternary Pseudocubic Cu ₂ TMSnSe ₄ (TM = Mn, Fe, Co) Chalcopyrite Thermoelectric Materials. <i>Advanced Electronic Materials</i> , 2016 , 2, 1600312	6.4	31
56	Thermoelectric materials step up. <i>Nature Materials</i> , 2016 , 15, 691-2	27	172
55	Reduction of thermal conductivity by low energy multi-Einstein optic modes. <i>Journal of Materiomics</i> , 2016 , 2, 187-195	6.7	38
54	Optimized thermoelectric properties in pseudocubic diamond-like CuGaTe ₂ compounds. <i>Journal of Materials Chemistry A</i> , 2016 , 4, 1277-1289	13	42
53	Study on the interfacial stability of p-type Ti/Ce Fe Co ₄ Sb ₁₂ thermoelectric joints at high temperature. <i>Journal of Alloys and Compounds</i> , 2016 , 671, 238-244	5.7	28
52	Quick Fabrication and Thermoelectric Properties of Cu ₁₂ Sb ₄ S ₁₃ Tetrahedrite. <i>Journal of Electronic Materials</i> , 2016 , 45, 2274-2277	1.9	22
51	Cu-based thermoelectric materials. <i>Energy Storage Materials</i> , 2016 , 3, 85-97	19.4	182
50	Highly anisotropic P3HT films with enhanced thermoelectric performance via organic small molecule epitaxy. <i>NPG Asia Materials</i> , 2016 , 8, e292-e292	10.3	101
49	Influence of electronic type of SWNTs on the thermoelectric properties of SWNTs/PANI composite films. <i>Organic Electronics</i> , 2016 , 39, 146-152	3.5	18
48	(001)-oriented Cu _{2-y} Se thin films with tunable thermoelectric performances grown by pulsed laser deposition. <i>Ceramics International</i> , 2015 , 41, 7439-7445	5.1	15
47	Black strontium titanate nanocrystals of enhanced solar absorption for photocatalysis. <i>CrystEngComm</i> , 2015 , 17, 7528-7534	3.3	35

46	Realizing high figure of merit in heavy-band p-type half-Heusler thermoelectric materials. <i>Nature Communications</i> , 2015 , 6, 8144	17.4	658
45	Electrical and thermal transport properties of $\text{Y}_{1-x}\text{Co}_4\text{Sb}_{12}$ filled skutterudites with ultrahigh carrier concentrations. <i>AIP Advances</i> , 2015 , 5, 117239	1.5	24
44	Ultrahigh Thermoelectric Performance in Mosaic Crystals. <i>Advanced Materials</i> , 2015 , 27, 3639-44	24	163
43	Compound defects and thermoelectric properties in ternary CuAgSe -based materials. <i>Journal of Materials Chemistry A</i> , 2015 , 3, 13662-13670	13	45
42	Nitrogen-doped mesoporous carbon of extraordinary capacitance for electrochemical energy storage. <i>Science</i> , 2015 , 350, 1508-13	33.3	1530
41	Oxidation Behavior of Filled Skutterudite $\text{CeFe}_4\text{Sb}_{12}$ in Air. <i>Journal of Electronic Materials</i> , 2014 , 43, 1639-1644	1.9	11
40	Structural evolution and thermoelectric properties of $\text{Cu}_{(3-x)}\text{Sn}_x\text{Se}_4$ compounds with diamond-like crystal structures. <i>Dalton Transactions</i> , 2014 , 43, 16788-94	4.3	20
39	Large thermoelectric power factor in polyaniline/graphene nanocomposite films prepared by solution-assistant dispersing method. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 11107	13	106
38	High-temperature thermoelectric properties of $\text{Cu}_{1.97}\text{Ag}_{0.03}\text{Se}_{1+y}$. <i>Materials for Renewable and Sustainable Energy</i> , 2014 , 3, 1	4.7	34
37	Microstructural evolution of the interfacial layer in the $\text{TiAl}/\text{Yb}_{0.6}\text{Co}_4\text{Sb}_{12}$ thermoelectric joints at high temperature. <i>Journal of Alloys and Compounds</i> , 2014 , 610, 665-670	5.7	34
36	Thermoelectric transport properties of diamond-like $\text{Cu}_1\text{Fe}_{1+x}\text{S}_2$ tetrahedral compounds. <i>Journal of Applied Physics</i> , 2014 , 116, 203705	2.5	78
35	Abnormally enhanced thermoelectric transport properties of SWNT/PANI hybrid films by the strengthened PANI molecular ordering. <i>Energy and Environmental Science</i> , 2014 , 7, 3801-3807	35.4	236
34	Visible-light photocatalytic, solar thermal and photoelectrochemical properties of aluminium-reduced black titania. <i>Energy and Environmental Science</i> , 2013 , 6, 3007	35.4	543
33	Interface Microstructure and Performance of Sb Contacts in Bismuth Telluride-Based Thermoelectric Elements. <i>Journal of Electronic Materials</i> , 2013 , 42, 1219-1224	1.9	8
32	Creation of Yb_2O_3 Nanoprecipitates Through an Oxidation Process in Bulk Yb-Filled Skutterudites. <i>Journal of Electronic Materials</i> , 2013 , 42, 382-388	1.9	12
31	Microstructures and thermoelectric properties of p-type $\text{Bi}_x\text{Sb}_{2-x}\text{Te}_3$ thin films with various compositions. <i>Electronic Materials Letters</i> , 2013 , 9, 709-713	2.9	7
30	H-Doped Black Titania with Very High Solar Absorption and Excellent Photocatalysis Enhanced by Localized Surface Plasmon Resonance. <i>Advanced Functional Materials</i> , 2013 , 23, 5444-5450	15.6	532
29	Evaluating the potential for high thermoelectric efficiency of silver selenide. <i>Journal of Materials Chemistry C</i> , 2013 , 1, 7568	7.1	83

28	Temperature-dependent photoluminescence study of Pb ²⁺ doped strontium iodide 2013 ,		1
27	Microstructure Contact Studies for Skutterudite Thermoelectric Devices. <i>International Journal of Applied Ceramic Technology</i> , 2012 , 9, 733-741	2	50
26	Microstructure and contact resistivity of (Bi, Sb) ₂ Te ₃ /Sb interface 2012 ,		5
25	Copper ion liquid-like thermoelectrics. <i>Nature Materials</i> , 2012 , 11, 422-5	27	1339
24	Post-annealing Effect on Microstructures and Thermoelectric Properties of Bi _{0.45} Sb _{1.55} Te ₃ Thin Films Deposited by Co-sputtering. <i>Journal of Electronic Materials</i> , 2012 , 41, 3068-3072	1.9	8
23	Enhanced thermoelectric properties of CNT/PANI composite nanofibers by highly orienting the arrangement of polymer chains. <i>Journal of Materials Chemistry</i> , 2012 , 22, 17612		204
22	Thermoelectric Properties of Heavy Rare Earth Filled Skutterudites Dy _y Fe _x Co _{4-x} Sb ₁₂ . <i>Journal of Electronic Materials</i> , 2012 , 41, 3402-3410	1.9	1
21	Investigation of the thermal conductivities across metal-insulator transition in polycrystalline VO ₂ . <i>Science Bulletin</i> , 2012 , 57, 3393-3396		12
20	High-Temperature Oxidation Behavior of Filled Skutterudites Yb _y Co ₄ Sb ₁₂ . <i>Journal of Electronic Materials</i> , 2012 , 41, 2225-2231	1.9	19
19	Multiple-filled skutterudites: high thermoelectric figure of merit through separately optimizing electrical and thermal transports. <i>Journal of the American Chemical Society</i> , 2011 , 133, 7837-46	16.4	1071
18	Realization of high thermoelectric performance in n-type partially filled skutterudites. <i>Journal of Materials Research</i> , 2011 , 26, 1745-1754	2.5	95
17	Composition optimization of p-type skutterudites Ce _y FexCo _{4-x} Sb ₁₂ and Yb _y FexCo _{4-x} Sb ₁₂ . <i>Journal of Materials Research</i> , 2011 , 26, 1813-1819	2.5	37
16	Low thermal conductivity and enhanced thermoelectric performance of Gd-filled skutterudites. <i>Journal of Applied Physics</i> , 2011 , 109, 023719	2.5	34
15	A general strategy to bismuth chalcogenide films by chemical vapor transport. <i>Journal of Materials Chemistry</i> , 2011 , 21, 2351-2355		16
14	Enhanced thermoelectric performance in In _{1-x} GaxSb originating from the scattering of point defects and nano-inclusion. <i>Journal of Materials Chemistry</i> , 2011 , 21, 12398		32
13	Convergence of electronic bands for high performance bulk thermoelectrics. <i>Nature</i> , 2011 , 473, 66-9	50.4	2611
12	Nano-scaled top-down of bismuth chalcogenides based on electrochemical lithium intercalation. <i>Journal of Nanoparticle Research</i> , 2011 , 13, 6569-6578	2.3	9
11	Optimized thermoelectric properties of Mo ₃ Sb _{7-x} Tex with significant phonon scattering by electrons. <i>Energy and Environmental Science</i> , 2011 , 4, 4086	35.4	70

10	Low-Temperature Magnetic and Thermoelectric Properties of Layered Ca _{0.33} CoO ₂ Crystals. <i>Journal of the Physical Society of Japan</i> , 2011 , 80, 074802	1.5	8
9	Enhanced thermoelectric performance of single-walled carbon nanotubes/polyaniline hybrid nanocomposites. <i>ACS Nano</i> , 2010 , 4, 2445-51	16.7	531
8	Enhancing thermoelectric performance of bismuth selenide films by constructing a double-layer nanostructure. <i>CrystEngComm</i> , 2010 , 12, 2672	3.3	21
7	Topotactic synthesis of alternately stacked Ca ₃ Co ₄ O ₉ /ENa _{0.66} CoO ₂ composite with nanoscale layer structure. <i>CrystEngComm</i> , 2010 , 12, 4080	3.3	5
6	Effect of antisite defects on band structure and thermoelectric performance of ZrNiSn half-Heusler alloys. <i>Applied Physics Letters</i> , 2010 , 96, 152105	3.4	86
5	Solution Route to PbSe Films with Enhanced Thermoelectric Transport Properties. <i>European Journal of Inorganic Chemistry</i> , 2010 , 2010, 4321-4324	2.3	7
4	Fabrication of a CoSb ₃ -based thermoelectric module. <i>Materials Science in Semiconductor Processing</i> , 2010 , 13, 221-224	4.3	48
3	Enhanced thermoelectric performance by the combination of alloying and doping in TiCoSb-based half-Heusler compounds. <i>Journal of Applied Physics</i> , 2009 , 106, 103703	2.5	69
2	High-energy storage performance in BaTiO ₃ -based lead-free multilayer ceramic capacitors. <i>Journal of Materials Research</i> , 1-10	2.5	
1	Exceptionally Heavy Doping Boosts the Performance of Iron Silicide for Refractory Thermoelectrics. <i>Advanced Energy Materials</i> , 2200247	21.8	4