Jian Zhang

List of Publications by Citations

115 papers	2,804 citations	30 h-index	45 g-index
119 ext. papers	3,411 ext. citations	6.9 avg, IF	5.23 L-index

#	Paper	IF	Citations
115	Realizing High Figure of Merit in Phase-Separated Polycrystalline SnPbSe. *Journal of the American Chemical Society*, **2016**, 138, 13647-13654	16.4	162
114	Extraordinary Thermoelectric Performance Realized in n-Type PbTe through Multiphase Nanostructure Engineering. *Advanced Materials*, **2017**, 29, 1703148	24	150
113	Achieving High Thermoelectric Figure of Merit in Polycrystalline SnSe via Introducing Sn Vacancies. *Journal of the American Chemical Society*, **2018**, 140, 499-505	16.4	111
112	Enhanced thermoelectric performance of p-type SnSe doped with Zn. *Scripta Materialia*, **2017**, 126, 6-10	5.6	91
111	Chemical synthesis of nanostructured Cu2Se with high thermoelectric performance. *RSC Advances*, **2014**, 4, 8638	3.7	70
110	A route to phase controllable Cu2ZnSn(S(1-x)Se(x))4 nanocrystals with tunable energy bands. *Scientific Reports*, **2013**, 3, 2733	4.9	68
109	Achieving high thermoelectric performance with Pb and Zn codoped polycrystalline SnSe via phase separation and nanostructuring strategies. *Nano Energy*, **2018**, 53, 683-689	17.1	68
108	Effects of bismuth doping on the thermoelectric properties of Cu3SbSe4 at moderate temperatures. *Journal of Alloys and Compounds*, **2013**, 561, 105-108	5.7	64
107	High thermoelectric performance of n-type Bi2Te2.7Se0.3via nanostructure engineering. *Journal of Materials Chemistry A*, **2018**, 6, 9642-9649	13	58
106	Simultaneous increase in conductivity and phonon scattering in a graphene nanosheets/(Bi 2 Te 3) 0.2 (Sb 2 Te 3) 0.8 thermoelectric nanocomposite. *Journal of Alloys and Compounds*, **2016**, 661, 389-395	5.7	55
105	Enhanced thermopower and energy filtering effect from synergetic scattering at heterojunction potentials in the thermoelectric composites with semiconducting nanoinclusions. *Journal of Alloys and Compounds*, **2013**, 558, 203-211	5.7	51
104	Enhanced thermoelectric performance of □Zn4Sb3 based nanocomposites through combined effects of density of states resonance and carrier energy filtering. *Scientific Reports*, **2015**, 5, 17803	4.9	48
103	Electrode activation via vesiculation: improved reversible capacity of □Fe2O3@C/MWNT composite anodes for lithium-ion batteries. *Journal of Materials Chemistry A*, **2015**, 3, 9682-9688	13	47
102	Enhanced thermoelectric performance of highly oriented polycrystalline SnSe based composites incorporated with SnTe nanoinclusions. *Journal of Alloys and Compounds*, **2016**, 689, 87-93	5.7	46
101	Synergistic band convergence and endotaxial nanostructuring: Achieving ultralow lattice thermal conductivity and high figure of merit in eco-friendly SnTe. *Nano Energy*, **2020**, 67, 104261	17.1	45
100	Extremely low thermal conductivity and enhanced thermoelectric performance of polycrystalline SnSe by Cu doping. *Scripta Materialia*, **2018**, 147, 74-78	5.6	44
99	Co-precipitation synthesis of nanostructured Cu3SbSe4 and its Sn-doped sample with high thermoelectric performance. *Dalton Transactions*, **2014**, 43, 1888-96	4.3	43

98	Enhanced thermoelectric performance of CuGaTe2 based composites incorporated with nanophase Cu2Se. *Journal of Materials Chemistry A*, **2014**, 2, 2891	13	41
97	Enhanced thermoelectric performance through carrier scattering at heterojunction potentials in BiSbTe based composites with Cu3SbSe4 nanoinclusions. *Journal of Materials Chemistry C*, **2015**, 3, 7045-7052	7.1	39
96	Simultaneous enhancement in thermoelectric power factor and phonon blocking in hierarchical nanostructured □Zn4Sb3-Cu3SbSe4. *Applied Physics Letters*, **2014**, 104, 013904	3.4	39
95	Enhanced thermoelectric performance of Cu2Se/Bi0.4Sb1.6Te3 nanocomposites at elevated temperatures. *Applied Physics Letters*, **2016**, 108, 062104	3.4	39
94	Realizing high thermoelectric performance in eco-friendly SnTe via synergistic resonance levels, band convergence and endotaxial nanostructuring with Cu2Te. *Nano Energy*, **2020**, 73, 104832	17.1	38
93	Enhanced thermoelectric performance of n-type Bi2Se3 doped with Cu. *Journal of Alloys and Compounds*, **2015**, 639, 9-14	5.7	37
92	Transport properties and enhanced thermoelectric performance of aluminum doped Cu3SbSe4. *RSC Advances*, **2015**, 5, 31399-31403	3.7	36
91	Achieving high thermoelectric performance through constructing coherent interfaces and building interface potential barriers in n-type Bi2Te3/Bi2Te2.7Se0.3 nanocomposites. *Journal of Materials Chemistry A*, **2019**, 7, 19120-19129	13	36
90	Enhanced thermoelectric performance via carrier energy filtering effect in □Zn4Sb3 alloy bulk embedded with (Bi2Te3)0.2(Sb2Te3)0.8. *Journal of Applied Physics*, **2014**, 115, 053710	2.5	33
89	Revisiting AgCrSe2 as a promising thermoelectric material. *Physical Chemistry Chemical Physics*, **2016**, 18, 23872-8	3.6	32
88	Enhanced thermoelectric performance in SnSe based composites with PbTe nanoinclusions. *Energy*, **2016**, 116, 861-866	7.9	32
87	Design of Domain Structure and Realization of Ultralow Thermal Conductivity for Record-High Thermoelectric Performance in Chalcopyrite. *Advanced Materials*, **2019**, 31, e1905210	24	32
86	Enhanced thermoelectric performance of nanostructured topological insulator Bi2Se3. *Applied Physics Letters*, **2015**, 106, 053102	3.4	32
85	Co-precipitation synthesis of Sn and/or S doped nanostructured Cu3Sb1□SnxSe4□Sy with a high thermoelectric performance. *CrystEngComm*, **2013**, 15, 7166	3.3	30
84	Enhanced thermoelectric performance of BiCuSeO by increasing Seebeck coefficient through magnetic ion incorporation. *Journal of Materials Chemistry A*, **2017**, 5, 13392-13399	13	28
83	Enhanced thermoelectric performance of a quintuple layer of Bi2Te3. *Journal of Applied Physics*, **2014**, 116, 023706	2.5	28
82	The effect of Mn substitution on thermoelectric properties of Ca3MnxCo4□O9 at low temperatures. *Solid State Communications*, **2005**, 134, 235-238	1.6	28
81	Thermoelectric Properties of Co-Doped TiS2. *Journal of Electronic Materials*, **2011**, 40, 980-986	1.9	27

80	Enhanced thermoelectric performance of BiSbTe-based composites incorporated with amorphous Si3N4 nanoparticles. *RSC Advances*, **2015**, 5, 34251-34256	3.7	25
79	Realizing High Thermoelectric Performance below Phase Transition Temperature in Polycrystalline SnSe via Lattice Anharmonicity Strengthening and Strain Engineering. *ACS Applied Materials & Interfaces*, **2018**, 10, 30558-30565	9.5	25
78	Enhanced thermoelectric properties of neodymium intercalated compounds NdxTiS2. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2006**, 348, 379-385	2.3	25
77	Enhanced thermoelectric performance of SnSe based composites with carbon black nanoinclusions. *Applied Physics Letters*, **2016**, 109, 173902	3.4	25
76	Nanostructured SnSe integrated with Se quantum dots with ultrahigh power factor and thermoelectric performance from magnetic field-assisted hydrothermal synthesis. *Journal of Materials Chemistry A*, **2019**, 7, 15757-15765	13	24
75	Enhanced thermoelectric figure of merit in p-type Zn4Sb3/Bi0.4Sb1.6Te3 nanocomposites. *RSC Advances*, **2016**, 6, 12243-12248	3.7	24
74	Boosting Thermoelectric Performance of SnSe via Tailoring Band Structure, Suppressing Bipolar Thermal Conductivity, and Introducing Large Mass Fluctuation. *ACS Applied Materials & Interfaces*, **2019**, 11, 45133-45141	9.5	24
73	Thermoelectric properties of hydrothermally synthesized Bi2Te3Sex nanocrystals. *Scripta Materialia*, **2012**, 67, 161-164	5.6	24
72	Transport and thermoelectric properties of nanocrystal substitutional semiconductor alloys (Mg1Cdx)3Sb2 doped with Ag. *Journal of Alloys and Compounds*, **2009**, 484, 498-504	5.7	24
71	Enhanced thermoelectric properties of Ag-doped compounds CuAgxGa1Te2 (0?x?0.05). *Journal of Alloys and Compounds*, **2014**, 586, 285-288	5.7	23
70	Thermoelectric properties of nanocrystalline (Mg1Znx)3Sb2isostructural solid solutions fabricated by mechanical alloying. *Journal Physics D: Applied Physics*, **2009**, 42, 165403	3	23
69	Light Element Doping and Introducing Spin Entropy: An Effective Strategy for Enhancement of Thermoelectric Properties in BiCuSeO. *ACS Applied Materials & Interfaces*, **2019**, 11, 15543-15551	9.5	22
68	Enhanced thermoelectric properties of bismuth intercalated compounds BixTiS2. *Solid State Communications*, **2005**, 135, 237-240	1.6	21
67	Lattice Strain Leads to High Thermoelectric Performance in Polycrystalline SnSe. *ACS Nano*, **2021**, 15, 8204-8215	16.7	21
66	Electrical transport behavior of Ca3MnxCo4O9 (0?x?1.28) at low temperatures. *Journal of Applied Physics*, **2006**, 99, 053709	2.5	20
65	Enhancement of thermoelectric performance of Zn4Sb3 through resonant distortion of electronic density of states doped with Gd. *Journal of Materials Chemistry A*, **2015**, 3, 11768-11772	13	19
64	High thermoelectric performance for an Ag2Se-based material prepared by a wet chemical method. *Materials Chemistry Frontiers*, **2020**, 4, 875-880	7.8	19
63	Enhanced thermoelectric performance of Bi0.4Sb1.6Te3 based composites with CuInTe2 inclusions. *Journal of Alloys and Compounds*, **2018**, 758, 72-77	5.7	19

62	Enhanced thermoelectric properties of iron doped compound (Zn1−xFex)4Sb3. *Intermetallics*, **2010**, 18, 1106-1110	3.5	18
61	Self-Powered Filterless Narrow-Band p-n Heterojunction Photodetector for Low Background Limited Near-Infrared Image Sensor Application. *ACS Applied Materials & Interfaces*, **2020**, 12, 21845-21853	9.5	18
60	Preparation and enhanced thermoelectric performance of Pb-doped tetrahedrite Cu12-xPbxSb4S13. *Journal of Alloys and Compounds*, **2018**, 769, 478-483	5.7	17
59	Enhanced thermoelectric performance of highly dense and fine-grained (Sr1−xGdx)TiO3− ceramics synthesized by sol−gel process and spark plasma sintering. *Journal of Alloys and Compounds*, **2014**, 588, 562-567	5.7	17
58	High thermoelectric properties for Sn-doped AgSbSe 2. *Journal of Alloys and Compounds*, **2015**, 635, 87-91	5.7	16
57	Enhanced thermoelectric performance of −Zn4Sb3 based composites incorporated with large proportion of nanophase Cu3SbSe4. *Journal of Alloys and Compounds*, **2014**, 588, 568-572	5.7	16
56	Thermoelectric anisotropy of n-type Bi2Te3−xSex prepared by spark plasma sintering. *RSC Advances*, **2015**, 5, 43717-43722	3.7	16
55	Synthesis and thermoelectric properties of Zn4Sb3/Bi0.5Sb1.5Te3 bulk nanocomposites. *Journal of Alloys and Compounds*, **2010**, 500, 215-219	5.7	15
54	The transport and thermoelectric properties of Cd doped compounds (CdxTi1−)1+yS2. *Journal of Alloys and Compounds*, **2009**, 479, 816-820	5.7	15
53	Enhanced power factor and thermoelectric performance for n-type Bi2Te2.7Se0.3 based composites incorporated with 3D topological insulator nanoinclusions. *Nano Energy*, **2021**, 80, 105512	17.1	15
52	Thermoelectric properties of TiS2-xPbSnS3 nanocomposites. *Journal of Alloys and Compounds*, **2017** , 696, 1342-1348	5.7	14
51	Oriented Attachment Revisited: Does a Chemical Reaction Occur?. *Matter*, **2019**, 1, 690-704	12.7	14
50	Ultralow Thermal Conductivity and Extraordinary Thermoelectric Performance Realized in Codoped CuSbSe by Plasma Spark Sintering. *ACS Applied Materials & Interfaces*, **2020**, 12, 3886-3892	9.5	14
49	Ultralow Thermal Conductivity and High Thermoelectric Performance of N-type BiTeSe-Based Composites Incorporated with GaAs Nanoinclusions. *ACS Applied Materials & Interfaces*, **2020**, 12, 37155-37163	9.5	14
48	Enhanced thermoelectric performance of n-type SnxBi2Te2.7Se0.3 based composites embedded with in-situ formed SnBi and Te nanoinclusions. *Composites Part B: Engineering*, **2020**, 197, 108151	10	13
47	The effects of elements doping on transport and thermoelectric properties of Sr3Ti2O7. *Journal of Physics and Chemistry of Solids*, **2014**, 75, 629-637	3.9	13
46	Enhanced thermoelectric performance of CuGaTe2 based composites incorporated with graphite nanosheets. *Applied Physics Letters*, **2016**, 108, 073902	3.4	13
45	Achieving high power factor and thermoelectric performance through dual substitution of Zn and Se in tetrahedrites Cu12Sb4S13. *Applied Physics Letters*, **2019**, 115, 182102	3.4	13

44	Realized high power factor and thermoelectric performance in Cu2SnSe3. *Scripta Materialia*, **2019**, 159, 46-50	5.6	13
43	High-performance eco-friendly MnTe thermoelectrics through introducing SnTe nanocrystals and manipulating band structure. *Nano Energy*, **2021**, 81, 105649	17.1	13
42	Achieving a High Thermoelectric Performance of Tetrahedrites by Adjusting the Electronic Density of States and Enhancing Phonon Scattering. *ACS Applied Materials & Interfaces*, **2019**, 11, 23361-23371	9.5	12
41	Mechanical and magnetic properties of □Ni□Fe/Al2O3 composites. *Composites Science and Technology*, **2007**, 67, 1530-1540	8.6	12
40	Synergetic modulation of power factor and thermal conductivity for Cu3SbSe4-based system. *Materials Today Energy*, **2020**, 18, 100491	7	12
39	Enhanced thermoelectric performance of CuGaTe2 by Gd-doping and Te incorporation. *Intermetallics*, **2015**, 60, 45-49	3.5	11
38	Fabrication of nanocrystalline Mg3X2 (X=Bi, Sb) with supersaturated solid solubility by mechanical alloying. *Materials Science and Engineering B: Solid-State Materials for Advanced Technology*, **2006**, 128, 192-200	3.1	11
37	Realization of High Thermoelectric Performance in Polycrystalline Tin Selenide through Schottky Vacancies and Endotaxial Nanostructuring. *Chemistry of Materials*, **2020**, 32, 9761-9770	9.6	11
36	Improved Figure of Merit of CuSnSe via Band Structure Modification and Energy-Dependent Carrier Scattering. *ACS Applied Materials & Interfaces*, **2020**, 12, 19693-19700	9.5	11
35	Realized high power factor and thermoelectric performance in Cu3SbSe4. *Intermetallics*, **2019**, 109, 68-73	3.5	10
34	Thermoelectric performance of nanostructured In/Pb codoped SnTe with band convergence and resonant level prepared via a green and facile hydrothermal method. *Nanoscale*, **2020**, 12, 5857-5865	7.7	10
33	The effect of Mg substitution for Ti on transport and thermoelectric properties of TiS2. *Journal of Applied Physics*, **2007**, 102, 073703	2.5	10
32	Boosting Thermoelectric Performance of CuSnSe Comprehensive Band Structure Regulation and Intensified Phonon Scattering by Multidimensional Defects. *ACS Nano*, **2021**, 15, 10532-10541	16.7	10
31	High Thermoelectric Performance of SnTe via In Doping and Cu1.75Se Nanostructuring Approach. *ACS Applied Energy Materials*, **2019**, 2, 8966-8973	6.1	10
30	High temperature thermoelectric properties of Nb-doped ZnO ceramics. *Journal of Physics and Chemistry of Solids*, **2013**, 74, 1811-1815	3.9	9
29	The electrical and thermal conductivity and thermopower of nickel doped compounds (NixTi1□)1+yS2at low temperatures. *Journal Physics D: Applied Physics*, **2006**, 39, 1230-1236	3	9
28	Electrical transport and thermoelectric properties of Y1□CaxCoO3 (0?x?0.1) at high temperatures. *Journal of Applied Physics*, **2007**, 101, 083709	2.5	9
27	Graphene modified Li-rich cathode material Li[Li0.26Ni0.07Co0.07Mn0.56]O2 for lithium ion battery. *Functional Materials Letters*, **2014**, 07, 1440013	1.2	8

26	Enhanced thermoelectric performance of PbTe based materials by Bi doping and introducing MgO nanoparticles. *Applied Physics Letters*, **2020**, 117, 042105	3.4	8
25	Simultaneously enhanced power factor and phonon scattering in Bi0.4Sb1.6Te3 alloy doped with germanium. *Scripta Materialia*, **2018**, 154, 118-122	5.6	7
24	Improved thermoelectric properties of gadolinium intercalated compounds GduxTiSu2 at the temperaturesfrom 5 to 310 K. *Journal of Materials Research*, **2006**, 21, 480-483	2.5	7
23	Effects of Sb Deviation from Its Stoichiometric Ratio on the Micro- and Electronic Structures and Thermoelectric Properties of CuSbS. *ACS Applied Materials & Interfaces*, **2020**, 12, 14145-14153	9.5	6
22	High thermoelectric performance of tetrahedrites through InSb inclusion. *Materialia*, **2018**, 3, 169-173	3.2	6
21	Thermoelectric Performance for SnSe Hot-Pressed at Different Temperature. *Journal of Electronic Materials*, **2017**, 46, 79-84	1.9	6
20	Optimized thermoelectric properties of AgSbTe2 through adjustment of fabrication parameters. *Electronic Materials Letters*, **2015**, 11, 133-137	2.9	6
19	The effects of high-pressure compression on transport and thermoelectric properties of TiS2 at low temperatures from 5 to 310 K. *Journal of Applied Physics*, **2008**, 103, 123704	2.5	6
18	Achieving High Thermoelectric Performance in p-Type BST/PbSe Nanocomposites through the Scattering Engineering Strategy. *ACS Applied Materials & Interfaces*, **2020**, 12, 46181-46189	9.5	6
17	Synthesis of monodispersed nanometer-sized YAG powders by a modified coprecipitation method. *Journal of Rare Earths*, **2008**, 26, 674-677	3.7	5
16	Ultra-low thermal conductivity and high thermoelectric performance realized in a Cu3SbSe4 based system. *Materials Chemistry Frontiers*, **2021**, 5, 324-332	7.8	5
15	Improving the thermoelectric performance of CuSnSe regulating micro- and electronic structures. *Nanoscale*, **2021**, 13, 4233-4240	7.7	5
14	Synergistically optimized electrical and thermal properties by introducing electron localization and phonon scattering centers in CuGaTe2 with enhanced mechanical properties. *Journal of Materials Chemistry C*, **2020**, 8, 7534-7542	7.1	4
13	Transport and thermoelectric properties of Sr3(Ti0.95R0.05)2O7 (R = Ta, Nb, W) oxides. *Journal of Applied Physics*, **2012**, 112, 124904	2.5	4
12	Introducing PbSe Quantum Dots and Manipulating Lattice Strain Contributing to High Thermoelectric Performance in Polycrystalline SnSe. *Materials Today Physics*, **2021**, 100542	8	4
11	Effects of topological edge states on the thermoelectric properties of Bi nanoribbons. *Physics Letters, Section A: General, Atomic and Solid State Physics*, **2017**, 381, 3167-3172	2.3	3
10	Thermoelectric properties of homogeneously and non-homogeneously doped CdTe15/16M1/16 (M=N, P, As, Sb) and Cd15/16TeM1/16 (M=Na, K, Rb, Cs). *Journal of Physics and Chemistry of Solids*, **2015**, 86, 74-81	3.9	3
9	Transport and thermoelectric properties of n-type Ruddlesden□Popper phase (Sr1□Gdx)3(Ti1□Tay)2O7oxides. *Journal Physics D: Applied Physics*, **2012**, 45, 415401	3	3

8	Ultralow Thermal Conductivity and Enhanced Figure of Merit for CuSbSe2 via Cd-Doping. *ACS Applied Energy Materials*, **2021**, 4, 1637-1643	6.1	3
7	Pressure-induced structural phase transition in wide-gap molecular solid CF4. *Chemical Physics Letters*, **2011**, 512, 223-226	2.5	2
6	Improved Thermoelectric Performance of CuSbS through Gd-Substitution Induced Enhancement of Electronic Density of States and Phonon Scattering. *ACS Applied Materials & Interfaces*, **2021**, 13, 25092-25101	9.5	2
5	Synergistic optimization of electrical and thermal transport in n-type Bi-doped PbTe by introducing coherent nanophase Cu1.75Te. *Journal of Materiomics*, **2021**, 7, 146-155	6.7	2
4	Preparation and thermoelectric properties of rare-earth-metal-doped SrO(SrTiO3)n oxides. *Procedia Engineering*, **2012**, 27, 103-108		1
3	Improving the power factor and figure of merit of p-type CuSbSe2via introducing Sb vacancies. *Journal of Materials Chemistry C*,	7.1	1
2	Electrical and Magnetic Properties for Bulk FeSe and FeSe0.5Te0.5 Superconductors. *Journal of Electronic Materials*, **2021**, 50, 941-946	1.9	0
1	Fabrication and thermoelectric properties of n-type (Sr0.9Gd0.1)TiO3 oxides. *Functional Materials Letters*, **2014**, 07, 1450014	1.2	