Xingchen Shen

List of Publications by Year
in descending order

74 papers	3,274 citations	172457 29 h-index	149698 56 g-index
75 all docs	75 docs citations	75 times ranked	2921 citing authors

#	Article	IF	Citations
1	High Performance Thermoelectricity in Earthâ€Abundant Compounds Based on Natural Mineral Tetrahedrites. Advanced Energy Materials, 2013, 3, 342-348.	19.5	455
2	Broad temperature plateau for high ZTs in heavily doped p-type SnSe single crystals. Energy and Environmental Science, 2016, 9, 454-460.	30.8	396
3	Routes for high-performance thermoelectric materials. Materials Today, 2018, 21, 974-988.	14.2	265
4	Simultaneous Large Enhancements in Thermopower and Electrical Conductivity of Bulk Nanostructured Half-Heusler Alloys. Journal of the American Chemical Society, 2011, 133, 18843-18852.	13.7	236
5	Facile in situ solution synthesis of SnSe/rGO nanocomposites with enhanced thermoelectric performance. Journal of Materials Chemistry A, 2020, 8, 1394-1402.	10.3	117
6	Enhanced thermoelectric properties of Ba-filled skutterudites by grain size reduction and Ag nanoparticle inclusion. Journal of Materials Chemistry, 2012, 22, 2958-2964.	6.7	87
7	Sodiumâ€Doped Tin Sulfide Single Crystal: A Nontoxic Earthâ€Abundant Material with High Thermoelectric Performance. Advanced Energy Materials, 2018, 8, 1800087.	19.5	80
8	Cr₂Ge₂Te₆: High Thermoelectric Performance from Layered Structure with High Symmetry. Chemistry of Materials, 2016, 28, 1611-1615.	6.7	78
9	Ultra-high average figure of merit in synergistic band engineered Sn Na1â”Se0.9S0.1 single crystals. Materials Today, 2018, 21, 501-507.	14.2	71
10	Microstructure and thermoelectric properties of CoSb2.75Ge0.25â”Te prepared by rapid solidification. Acta Materialia, 2012, 60, 3536-3544.	7.9	62
11	Grain size optimization for high-performance polycrystalline SnSe thermoelectrics. Journal of Materials Chemistry A, 2017, 5, 14053-14060.	10.3	53
12	Dopant Induced Impurity Bands and Carrier Concentration Control for Thermoelectric Enhancement in p-Type Cr₂Ge₂Te₆. Chemistry of Materials, 2017, 29, 7401-7407.	6.7	53
13	Twin Engineering in Solutionâ€Synthesized Nonstoichiometric Cu₅FeS₄ Icosahedral Nanoparticles for Enhanced Thermoelectric Performance. Advanced Functional Materials, 2018, 28, 1705117.	14.9	53
14	Ultrahigh Photocatalytic Rate at a Singleâ€Metalâ€Atomâ€Oxide. Advanced Materials, 2019, 31, e1903491.	21.0	53
15	High-Temperature Structural and Thermoelectric Study of Argyrodite Ag₈GeSe₆. ACS Applied Materials & Interfaces, 2019, 11, 2168-2176.	8.0	51
16	Entropy Engineered Cubic nâ€Type AgBiSe₂ Alloy with High Thermoelectric Performance in Fully Extended Operating Temperature Range. Advanced Energy Materials, 2021, 11, 2003304.	19.5	51
17	Hierarchically structured TiO₂ for Ba-filled skutterudite with enhanced thermoelectric performance. Journal of Materials Chemistry A, 2014, 2, 20629-20635.	10.3	50
18	Grain boundary scattering effects on mobilities in p-type polycrystalline SnSe. Journal of Materials Chemistry C, 2017, 5, 10191-10200.	5.5	50

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19	Melt-spun Sn1â^'â^'Sb Mn Te with unique multiscale microstructures approaching exceptional average thermoelectric zT. Nano Energy, 2021, 84, 105879.	16.0	46
20	Band structure engineering in highly degenerate tetrahedrites through isovalent doping. Journal of Materials Chemistry A, 2016, 4, 17096-17103.	10.3	44
21	Ultra rapid fabrication of p-type Li-doped Mg2Si0.4Sn0.6 synthesized by unique melt spinning method. Scripta Materialia, 2016, 115, 52-56.	5.2	40
22	Synergistic Strategy to Enhance the Thermoelectric Properties of CoSbS_{1â€“x}Se_x Compounds via Solid Solution. ACS Applied Materials & Interfaces, 2017, 9, 10595-10601.	8.0	38
23	Enhanced thermoelectric properties of YbZn2Sb2â^'xBix through a synergistic effect via Bi-doping. Chemical Engineering Journal, 2019, 374, 589-595.	12.7	38
24	High Thermoelectric Performance in Sulfideâ€Type Argyrodites Compound Ag₈Sn(S_{1â^'}_xSe_x)₆ Enabled by Ultralow Lattice Thermal Conductivity and Extended Cubic Phase Regime. Advanced Functional Materials, 2020, 30, 2000526.	14.9	38
25	Clustered piperidinium-functionalized poly(terphenylene) anion exchange membranes with well-developed conductive nanochannels. Journal of Colloid and Interface Science, 2022, 608, 1247-1256.	9.4	38
26	High thermoelectric performance of Cu₃SbSe₄ nanocrystals with Cu_{2â^'x}Se in situ inclusions synthesized by a microwave-assisted solvothermal method. Nanoscale, 2018, 10, 14546-14553.	5.6	33
27	Sn vacancy engineering for enhancing the thermoelectric performance of two-dimensional SnS. Journal of Materials Chemistry C, 2019, 7, 3351-3359.	5.5	31
28	High Thermoelectric Performance of Co-Doped P-Type Polycrystalline SnSe via Optimizing Electrical Transport Properties. ACS Applied Materials & Interfaces, 2020, 12, 8446-8455.	8.0	31
29	Synergistic Effect of Bismuth and Indium Codoping for High Thermoelectric Performance of Melt Spinning SnTe Alloys. ACS Applied Materials & Interfaces, 2019, 11, 23337-23345.	8.0	30
30	Large-scale colloidal synthesis of Cu₅FeS₄ compounds and their application in thermoelectrics. Journal of Materials Chemistry C, 2017, 5, 301-308.	5.5	29
31	High thermoelectric performance in complex phosphides enabled by stereochemically active lone pair electrons. Journal of Materials Chemistry A, 2018, 6, 24877-24884.	10.3	28
32	Unconventional Doping Effect Leads to Ultrahigh Average Thermoelectric Power Factor in Cu₃SbSe₄â€Based Composites. Advanced Materials, 2022, 34, e2109952.	21.0	28
33	Enhanced thermoelectric properties of p-type argyrodites Cu8GeS6 through Cu vacancy. Journal of Alloys and Compounds, 2020, 822, 153665.	5.5	27
34	Achieving Enhanced Thermoelectric Performance in (SnTe)_{1-x}(Sb₂Te₃)_x and (SnTe)_{1-y}(Sb₂Se₃)_y Synthesized via Solvothermal Reaction and Sintering. ACS Applied Materials & Interfaces, 2020, 12, 44805-44814.	8.0	26
35	Promoted high temperature carrier mobility and thermoelectric performance of InTe enabled by altering scattering mechanism. Journal of Materials Chemistry A, 2019, 7, 11690-11698.	10.3	25
36	Exceptional Performance Driven by Planar Honeycomb Structure in a New High Temperature Thermoelectric Material BaAgAs. Advanced Functional Materials, 2021, 31, 2100583.	14.9	25

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37	Low temperature thermoelectric properties of p-type doped single-crystalline SnSe. Applied Physics Letters, 2018, 112, .	3.3	24
38	Colloidal synthesis of Cu_{2â^'x}Ag_xCdSnSe₄ nanocrystals: microstructures facilitate high performance thermoelectricity. Journal of Materials Chemistry C, 2015, 3, 12273-12280.	5.5	23
39	Realizing high thermoelectric performance in Te nanocomposite through Sb₂Te₃ incorporation. CrystEngComm, 2018, 20, 7729-7738.	2.6	20
40	Realizing Cd and Ag codoping in p-type Mg3Sb2 toward high thermoelectric performance. Journal of Magnesium and Alloys, 2023, 11, 2486-2494.	11.9	19
41	Controllable synthesis of layered K_{0.296}Mn_{0.926}O₂ to assemble 2.4 V aqueous potassium-ion supercapacitors for double high devices. Journal of Materials Chemistry A, 2020, 8, 17248-17256.	10.3	18
42	Facile microwave-assisted hydrothermal synthesis of SnSe: impurity removal and enhanced thermoelectric properties. Journal of Materials Chemistry C, 2020, 8, 10333-10341.	5.5	18
43	High thermoelectric performance of tellurium-free n-type AgBi1-Sb Se2 with stable cubic structure enabled by entropy engineering. Acta Materialia, 2021, 220, 117291.	7.9	18
44	Phase Composition Manipulation and Twin Boundary Engineering Lead to Enhanced Thermoelectric Performance of Cu₂SnS₃. ACS Applied Energy Materials, 2021, 4, 9240-9247.	5.1	17
45	A Second Amorphous Layer Underneath Surface Oxide. Microscopy and Microanalysis, 2017, 23, 173-178.	0.4	16
46	Rapid preparation of Ge0.9Sb0.1Te1+ via unique melt spinning: Hierarchical microstructure and improved thermoelectric performance. Journal of Alloys and Compounds, 2019, 774, 129-136.	5.5	16
47	A Tunable Structural Family with Ultralow Thermal Conductivity: Copper-Deficient Cu_{1â€“x}â–¡_xPb_{1â€“x}Bi_{1+x}S₃. Journal of the American Chemical Society, 2022, 144, 1846-1860.	13.7	15
48	Enhanced thermoelectric performance of chalcogenide Cu 2 CdSnSe 4 by ex-situ homogeneous nanoinclusions. Journal of Materiomics, 2016, 2, 179-186.	5.7	14
49	Super-rapid Preparation of Nanostructured Nd x Fe3CoSb12 Compounds and Their Improved Thermoelectric Performance. Journal of Electronic Materials, 2016, 45, 1271-1277.	2.2	14
50	The chemistry and structural thermal stability of hole-doped single crystalline SnSe. Journal of Alloys and Compounds, 2016, 688, 1088-1094.	5.5	12
51	Achieving higher thermoelectric performance for p-type Cr2Ge2Te6 via optimizing doping. Applied Physics Letters, 2018, 113, .	3.3	12
52	Super deformability and thermoelectricity of bulk Î³-InSe single crystals*. Chinese Physics B, 2021, 30, 078101.	1.4	12
53	Realizing both n- and p-types of high thermoelectric performance in Fe1â^'xNixTiSb half-Heusler compounds. Journal of Materials Chemistry C, 2020, 8, 3156-3164.	5.5	11
54	Synergistic effect of CuInSe₂alloying on enhancing the thermoelectric performance of Cu₂SnSe₃compounds. Journal of Materials Chemistry A, 2020, 8, 21181-21188.	10.3	10

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55	Boosting the thermoelectric performance of p-type polycrystalline SnSe with high doping efficiency via precipitation design. Journal of Materials Chemistry A, 2021, 9, 2991-2998.	10.3	10
56	Exceptional Thermoelectric Performance Enabled by High Carrier Mobility and Intrinsically Low Lattice Thermal Conductivity in Phosphide Cd₃P₂. Chemistry of Materials, 2022, 34, 1620-1626.	6.7	9
57	Investigation of electronic structure, magnetic stability, spin coupling, and thermodynamic properties of novel antiferromagnets XMn2Y2 (XÂ=ÂCa, Sr; YÂ=ÂP, As). Journal of Molecular Structure, 2022, 1268, 133698.	3.6	9
58	Two impurity energy level regulation leads to enhanced thermoelectric performance of Ag_{1â^'x}Cd_xIn₅Se₈. RSC Advances, 2017, 7, 12719-12725.	3.6	8
59	Manipulating the phase transformation temperature to achieve cubic Cu₅FeS_{4â^'x}Se_x and enhanced thermoelectric performance. Journal of Materials Chemistry C, 2020, 8, 17222-17228.	5.5	8
60	A dual mode electronic synapse based on layered SnSe films fabricated by pulsed laser deposition. Nanoscale Advances, 2020, 2, 1152-1160.	4.6	8
61	Thermoelectricity of n-type MnBi4S7-7xSe7x solid solution. Chemical Engineering Journal, 2020, 396, 125219.	12.7	8
62	The unique evolution of transport bands and thermoelectric performance enhancement by extending low-symmetry phase to high temperature in tin selenide. Journal of Materials Chemistry C, 2020, 8, 9345-9351.	5.5	8
63	Multi-Level Resistive Switching in SnSe/SrTiO3 Heterostructure Based Memristor Device. Nanomaterials, 2022, 12, 2128.	4.1	8
64	Thermoelectric performance of binary lithium-based compounds: Li3Sb and Li3Bi. Applied Physics Letters, 2021, 119, .	3.3	7
65	Solvothermal synthesis of wire-like SnxSb2Te3+x with an enhanced thermoelectric performance. Dalton Transactions, 2016, 45, 7483-7491.	3.3	6
66	Super-fast preparation of Nd-filled p-type skutterudite compounds with enhanced thermoelectric properties. Ceramics International, 2017, 43, 7443-7447.	4.8	6
67	High-Temperature Thermoelectric Properties of Ge-Substituted p-Type Nd-Filled Skutterudites. Journal of Electronic Materials, 2017, 46, 2958-2963.	2.2	6
68	Thermoelectric study of Zn-doped n-type AgIn5Se8: Hopping and band electrical conduction along with low lattice thermal conduction in diamond-like structure. Journal of Alloys and Compounds, 2019, 805, 444-453.	5.5	6
69	Synergistically optimized thermoelectric properties of Ag_{1+x}In₅Se₈ alloys. Inorganic Chemistry Frontiers, 2019, 6, 3545-3553.	6.0	5
70	Ultra-small subnano TiO_x clusters as excellent cocatalysts for the photocatalytic degradation of tetracycline on plasmonic Ag/AgCl. Catalysis Science and Technology, 2020, 10, 147-153.	4.1	5
71	The role of electronic affinity for dopants in thermoelectric transport properties of InTe. Journal of Alloys and Compounds, 2021, 869, 159224.	5.5	5
72	Enhanced Thermoelectric Performance and Electronic Transport Properties of Ag-Doped Cu2â€“xS0.5Se0.5. ACS Applied Energy Materials, 0, , .	5.1	3

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73	Tin Sulfide: A New Nontoxic Earth-Abundant Thermoelectric Material. , 2019, , 47-61.		1
74	Strong anharmonicity induced low lattice thermal conductivity and high thermoelectric performance in (CuInTe₂)_{1â^'}_x(AgSbTe₂)_x system. Applied Physics Letters, 2022, 121, 013903.	3.3	1