The origin of low thermal conductivity in Sn<sub>1â^’x
scattering via layered intergrowth nanostructures

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Citation Report

#	Article	IF	Citations
2	Strontium Cobalt Oxide Misfit Nanotubes. Chemistry of Materials, 2016, 28, 9150-9157.	3.2	9
3	Soft phonon modes driven reduced thermal conductivity in self-compensated Sn1.03Te with Mn doping. Applied Physics Letters, 2016, 109, .	1.5	69
4	Fewâ€Layer Nanosheets of nâ€Type SnSe₂. Chemistry - A European Journal, 2016, 22, 15634-15638.	1.7	78
5	High Power Factor and Enhanced Thermoelectric Performance of SnTe-AgInTe₂: Synergistic Effect of Resonance Level and Valence Band Convergence. Journal of the American Chemical Society, 2016, 138, 13068-13075.	6.6	214
6	Systhesizing SnTe nanocrystals leading to thermoelectric performance enhancement via an ultra-fast microwave hydrothermal method. Nano Energy, 2016, 28, 78-86.	8.2	79
7	Nonmagnetic In Substituted CuFe_{1â€“<i>x</i>}In_{<i>x</i>}S₂ Solid Solution Thermoelectric. Journal of Physical Chemistry C, 2016, 120, 27895-27902.	1.5	42
8	Promising bulk nanostructured Cu₂Se thermoelectrics via high throughput and rapid chemical synthesis. RSC Advances, 2016, 6, 111457-111464.	1.7	38
9	High performance thermoelectric materials and devices based on GeTe. Journal of Materials Chemistry C, 2016, 4, 7520-7536.	2.7	194
10	Extraordinary Off-Stoichiometric Bismuth Telluride for Enhanced n-Type Thermoelectric Power Factor. Journal of the American Chemical Society, 2016, 138, 14458-14468.	6.6	85
11	Strategy to optimize the overall thermoelectric properties of SnTe via compositing with its property-counter CuInTe2. Acta Materialia, 2017, 125, 542-549.	3.8	56
12	Ultrahigh Thermoelectric Figure of Merit and Enhanced Mechanical Stability of <i>p</i>-type AgSb_{1â€“<i>x</i>}Zn_{<i>x</i>}Te₂. ACS Energy Letters, 2017, 2, 349-356.	8.8	76
13	Promoting SnTe as an Ecoâ€Friendly Solution for pâ€PbTe Thermoelectric via Band Convergence and Interstitial Defects. Advanced Materials, 2017, 29, 1605887.	11.1	317
14	An enhanced Seebeck coefficient and high thermoelectric performance in p-type In and Mg co-doped Sn_{1âˆ’x}Pb_xTe via the co-adjuvant effect of the resonance level and heavy hole valence band. Journal of Materials Chemistry C, 2017, 5, 5737-5748.	2.7	54
15	Ultrahigh Average Thermoelectric Figure of Merit, Low Lattice Thermal Conductivity and Enhanced Microhardness in Nanostructured (GeTe)_{<i>x</i>}(AgSbSe₂)_{100âˆ’<i>x</i>}. Chemistry - A European Journal, 2017, 23, 7438-7443.	1.7	60
16	Synergistic effect by Na doping and S substitution for high thermoelectric performance of p-type MnTe. Journal of Materials Chemistry C, 2017, 5, 5076-5082.	2.7	40
17	Possible Mechanism for Hole Conductivity in Cuâ€“Asâ€“Te Thermoelectric Glasses: A XANES and EXAFS Study. Journal of Physical Chemistry C, 2017, 121, 14045-14050.	1.5	24
18	Low Thermal Conductivity and High Thermoelectric Performance in (GeTe)_{1â€“2<i>x</i>}(GeSe)_{<i>x</i>}(GeS)_{<i>x</i>}: Competition between Solid Solution and Phase Separation. Journal of the American Chemical Society, 2017, 139, 9382-9391.	6.6	190
19	Enhancement of the thermoelectric performance of bulk SnTe alloys via the synergistic effect of band structure modification and chemical bond softening. Journal of Materials Chemistry A, 2017, 5, 14165-14173.	5.2	65

#	Article	IF	Citations
20	Solubility limits in quaternary SnTe-based alloys. RSC Advances, 2017, 7, 24747-24753.	1.7	14
21	Transport Properties and High Thermopower of SnSe₂: A Full Ab-Initio Investigation. Journal of Physical Chemistry C, 2017, 121, 225-236.	1.5	103
22	Ultralow Lattice Thermal Conductivity and Enhanced Thermoelectric Performance in SnTe:Ga Materials. Chemistry of Materials, 2017, 29, 612-620.	3.2	89
23	Crystal Structure and Thermoelectric Properties of the ^{7,7}L Lillianite Homologue Pb₆Bi₂Se₉. Inorganic Chemistry, 2017, 56, 261-268.	1.9	26
24	Improved Thermoelectric Properties in Melt-Spun SnTe. ACS Omega, 2017, 2, 7106-7111.	1.6	22
25	Simultaneously enhancing the power factor and reducing the thermal conductivity of SnTe via introducing its analogues. Energy and Environmental Science, 2017, 10, 2420-2431.	15.6	116
26	Structural Complexity and Thermoelectric Properties of Quaternary and Quinary Tellurides (Ge<i>_x</i>Sn_{1â€“<i>x</i>})_{0.8}(In<i>_y</i>Sb_{1â€“<i>y</i>})<sub>0.13< with 0 â‰ <i>x</i>,<i>y</i> â‰ 1. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2017, 643, 1962-1970.	0.6	2
27	Ecoâ€Friendly SnTe Thermoelectric Materials: Progress and Future Challenges. Advanced Functional Materials, 2017, 27, 1703278.	7.8	312
28	Synthetic Nanosheets of Natural van der Waals Heterostructures. Angewandte Chemie, 2017, 129, 14753-14758.	1.6	11
29	Synthetic Nanosheets of Natural van der Waals Heterostructures. Angewandte Chemie - International Edition, 2017, 56, 14561-14566.	7.2	33
30	Advances in Environment-Friendly SnTe Thermoelectrics. ACS Energy Letters, 2017, 2, 2349-2355.	8.8	109
31	Atomistic study of the alloying behavior of crystalline SnSe_{1â^'x}S_x. Physical Chemistry Chemical Physics, 2017, 19, 21648-21654.	1.3	17
32	Investigation of microstructural details in low thermal conductivity thermoelectric Sn1-xSbxTe alloy. Journal of Applied Physics, 2017, 122, .	1.1	1
33	Low Thermal Conductivity and High Thermoelectric Performance in Sb and Bi Codoped GeTe: Complementary Effect of Band Convergence and Nanostructuring. Chemistry of Materials, 2017, 29, 10426-10435.	3.2	117
34	Thermoelectric performance of CuFeS2+2x composites prepared by rapid thermal explosion. NPG Asia Materials, 2017, 9, e390-e390.	3.8	38
35	Thermoelectric Performance of Se/Cd Codoped SnTe via Microwave Solvothermal Method. ACS Applied Materials & Interfaces, 2017, 9, 22612-22619.	4.0	51
36	Ultrathin few layer oxychalcogenide BiCuSeO nanosheets. Inorganic Chemistry Frontiers, 2017, 4, 84-90.	3.0	19
37	Thermal and Electrical Conductivity of Ge1Sb4Te7 Chalcogenide Alloy. Journal of Electronic Materials, 2017, 46, 955-960.	1.0	5

#	Article	IF	Citations
38	Large-Scale Surfactant-Free Synthesis of p-Type SnTe Nanoparticles for Thermoelectric Applications. Materials, 2017, 10, 233.	1.3	27
39	Thermoelectric Properties of Highly-Crystallized Ge-Te-Se Glasses Doped with Cu/Bi. Materials, 2017, 10, 328.	1.3	26
40	Enhanced thermoelectric performance of SnTe: High efficient cation - anion Co-doping, hierarchical microstructure and electro-acoustic decoupling. Nano Energy, 2018, 47, 81-88.	8.2	67
41	Electron mean-free-path filtering in Dirac material for improved thermoelectric performance. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 879-884.	3.3	61
42	Rhombohedral to Cubic Conversion of GeTe via MnTe Alloying Leads to Ultralow Thermal Conductivity, Electronic Band Convergence, and High Thermoelectric Performance. Journal of the American Chemical Society, 2018, 140, 2673-2686.	6.6	307
43	Optimization of peak and average figures of merits for In & Se co-doped SnTe alloys. Inorganic Chemistry Frontiers, 2018, 5, 793-801.	3.0	17
44	High-Performance Thermoelectric Bulk Colusite by Process Controlled Structural Disordering. Journal of the American Chemical Society, 2018, 140, 2186-2195.	6.6	98
45	Crystalline Solids with Intrinsically Low Lattice Thermal Conductivity for Thermoelectric Energy Conversion. ACS Energy Letters, 2018, 3, 1315-1324.	8.8	132
46	The journey of tin chalcogenides towards high-performance thermoelectrics and topological materials. Chemical Communications, 2018, 54, 6573-6590.	2.2	84
47	High-Power-Density Skutterudite-Based Thermoelectric Modules with Ultralow Contact Resistivity Using Feâ€“Ni Metallization Layers. ACS Applied Energy Materials, 2018, 1, 1603-1611.	2.5	44
48	Structural variations in indium tin tellurides and their thermoelectric properties. Journal of Solid State Chemistry, 2018, 258, 289-297.	1.4	1
49	Enhancement of Thermoelectric Properties in SnTe with (Ag, In) Co-Doping. Journal of Electronic Materials, 2018, 47, 205-211.	1.0	28
50	Impact of Coinage Metal Insertion on the Thermoelectric Properties of GeTe Solid-State Solutions. Journal of Physical Chemistry C, 2018, 122, 227-235.	1.5	49
51	Enhanced thermoelectric performance of SnTe thin film through designing oriented nanopillar structure. Journal of Alloys and Compounds, 2018, 737, 167-173.	2.8	21
52	Tin Diselenide Molecular Precursor for Solutionâ€Processable Thermoelectric Materials. Angewandte Chemie, 2018, 130, 17309-17314.	1.6	9
53	Rare earth doping and effective band-convergence in SnTe for improved thermoelectric performance. Applied Physics Letters, 2018, 113, .	1.5	25
54	Tin Diselenide Molecular Precursor for Solutionâ€Processable Thermoelectric Materials. Angewandte Chemie - International Edition, 2018, 57, 17063-17068.	7.2	23
55	Designing band engineering for thermoelectrics starting from the periodic table of elements. Materials Today Physics, 2018, 7, 35-44.	2.9	75

#	Article	IF	Citations
56	Advances in thermoelectrics. Advances in Physics, 2018, 67, 69-147.	35.9	383
57	High Thermoelectric Performance in Sintered Octahedron-Shaped Sn(CdIn)_{<i>x</i>}Te_{1+2<i>x</i>} Microcrystals. ACS Applied Materials & Interfaces, 2018, 10, 38944-38952.	4.0	31
58	Entropy Engineering of SnTe: Multiâ€Principalâ€Element Alloying Leading to Ultralow Lattice Thermal Conductivity and Stateâ€ofâ€theâ€Art Thermoelectric Performance. Advanced Energy Materials, 2018, 8, 1802116.	10.2	157
59	Coupling of charge carriers with magnetic entropy for power factor enhancement in Mn doped Sn_{1.03}Te for thermoelectric applications. Journal of Materials Chemistry C, 2018, 6, 6489-6493.	2.7	56
60	Weak Electron Phonon Coupling and Deep Level Impurity for High Thermoelectric Performance Pb_{1âˆ’}<i>_x</i>Ga<i>_x</i>Te. Advanced Energy Materials, 2018, 8, 1800659.	10.2	111
61	Thermoelectric performance of codoped (Bi, In)-GeTe and (Ag, In, Sb)-SnTe materials processed by Spark Plasma Sintering. Materials Letters, 2018, 230, 191-194.	1.3	30
62	An <i>in situ</i> eutectic remelting and oxide replacement reaction for superior thermoelectric performance of InSb. Journal of Materials Chemistry A, 2018, 6, 17049-17056.	5.2	20
63	Right Heterogeneous Microstructure for Achieving Excellent Thermoelectric Performance in Ca_{0.9}R_{0.1}MnO_{3âˆ’Î´} (R = Dy, Yb) Ceramics. Inorganic Chemistry, 2018, 57, 9133-9141.	1.9	13
64	Manipulation of Solubility and Interstitial Defects for Improving Thermoelectric SnTe Alloys. ACS Energy Letters, 2018, 3, 1969-1974.	8.8	69
65	The critical role of boron doping in the thermoelectric and mechanical properties of nanostructured Î±-MgAgSb. Journal of Materials Chemistry C, 2018, 6, 9821-9827.	2.7	13
66	Promising cubic MnGeTe2 thermoelectrics. Science China Materials, 2019, 62, 379-388.	3.5	16
67	High thermoelectric performance of Ag doped SnTe polycrystalline bulks <i>via</i> the synergistic manipulation of electrical and thermal transport. Physical Chemistry Chemical Physics, 2019, 21, 17978-17984.	1.3	35
68	Thermoelectric properties of Mn, Bi, and Sb co-doped SnTe with a low lattice thermal conductivity. Journal of Alloys and Compounds, 2019, 806, 361-369.	2.8	35
69	Simultaneous Boost of Power Factor and Figureâ€ofâ€Merit in Inâ€“Cu Codoped SnTe. Small, 2019, 15, e1902493.	5.2	43
70	Thermoelectric Properties of Cu2SnSe3-SnS Composite. Materials, 2019, 12, 2040.	1.3	3
71	Effect of In and Cd co-doping on the thermoelectric properties of Sn_{1âˆ’x}Pb_xTe. Materials Research Express, 2019, 6, 104010.	0.8	12
72	High Thermoelectric Performance of SnTe by the Synergistic Effect of Alloy Nanoparticles with Elemental Elements. ACS Applied Energy Materials, 2019, 2, 7354-7363.	2.5	25
73	Superior Thermoelectric Performance of Ordered Double Transition Metal MXenes: Cr₂TiC₂T₂ (T = âˆ’OH or âˆ’F). Journal of Physical Chemistry Letters, 2019, 10, 5721-5728.	2.1	49

#	Article	IF	Citations
74	Realizing high thermoelectric properties of SnTe via synergistic band engineering and structure engineering. Nano Energy, 2019, 65, 104056.	8.2	116
75	Tuning the Thermoelectric Performance of SnTe via Dual-Site Electronic Donation and Super-Saturation Solution. ACS Applied Energy Materials, 2019, 2, 7490-7496.	2.5	11
76	Effect of single metal doping on the thermoelectric properties of SnTe. Sustainable Energy and Fuels, 2019, 3, 251-263.	2.5	21
77	Engineering ferroelectric instability to achieve ultralow thermal conductivity and high thermoelectric performance in Sn_{1âˆ’x}Ge_xTe. Energy and Environmental Science, 2019, 12, 589-595.	15.6	155
78	Phonon Localization and Entropy-Driven Point Defects Lead to Ultralow Thermal Conductivity and Enhanced Thermoelectric Performance in (SnTe)_{1â€“2<i>x</i>}(SnSe)_{<i>x</i>}(SnS)_{<i>x</i>}. ACS Energy Letters, 2019, 4, 1658-1662.	8.8	70
79	Synergistic Effect of Bismuth and Indium Codoping for High Thermoelectric Performance of Melt Spinning SnTe Alloys. ACS Applied Materials & Interfaces, 2019, 11, 23337-23345.	4.0	30
80	Approaching the minimum lattice thermal conductivity of p-type SnTe thermoelectric materials by Sb and Mg alloying. Science Bulletin, 2019, 64, 1024-1030.	4.3	53
81	Microstructure and enhanced thermoelectric performance of Teâ€“SnTe eutectic composites with self-assembled rod and lamellar morphology. Intermetallics, 2019, 112, 106499.	1.8	12
82	Ultralow Lattice Thermal Conductivity in SnTe by Manipulating the Electronâ€“Phonon Coupling. Journal of Physical Chemistry C, 2019, 123, 15996-16002.	1.5	36
83	Formation of a partially ordered CuPt-type structure and twinning in Zn-doped SnTe-based thermoelectric materials. Materials Letters, 2019, 249, 189-192.	1.3	6
84	Facile Route to High-Performance SnTe-Based Thermoelectric Materials: Synergistic Regulation of Electrical and Thermal Transport by In Situ Chemical Reactions. Chemistry of Materials, 2019, 31, 3491-3497.	3.2	31
85	Enhancing Thermoelectric Properties of InTe Nanoprecipitate-Embedded Sn_{1â€“<i>x</i>}In_{<i>x</i>}Te Microcrystals through Anharmonicity and Strain Engineering. ACS Applied Energy Materials, 2019, 2, 2965-2971.	2.5	43
86	Thermoelectric energy conversion and topological materials based on heavy metal chalcogenides. Journal of Solid State Chemistry, 2019, 275, 103-123.	1.4	33
87	Maximization of transporting bands for high-performance SnTe alloy thermoelectrics. Materials Today Physics, 2019, 9, 100091.	2.9	45
88	Understanding the Chemical Nature of the Buried Nanostructures in Low Thermal Conductive Sb-Doped SnTe by Variable-Energy Photoelectron Spectroscopy. Journal of Physical Chemistry C, 2019, 123, 10272-10279.	1.5	10
89	Thermoelectric performance of SnTe alloys with In and Sb co-doped near critical solubility limit. Journal of Materials Science, 2019, 54, 9049-9062.	1.7	18
90	Tailoring the Carrier and Phonon Scattering to Enhanced Thermoelectric Performance of SnTe by Cationâ€“Anion Codoping with Eco-Benign CaI2. ACS Applied Energy Materials, 2019, 2, 1997-2003.	2.5	25
91	Promising thermoelectric properties and anisotropic electrical and thermal transport of monolayer SnTe. Applied Physics Letters, 2019, 114, .	1.5	25

#	Article	IF	Citations
92	Achieving a fine balance between the strong mechanical and high thermoelectric properties of n-type PbTeâ€“3% Sb materials by alloying with PbS. Journal of Materials Chemistry A, 2019, 7, 6304-6311.	5.2	24
93	Thermoelectric performance of (GeTe)_{1âˆ’x}(Sb₂Te₃)_x fabricated by high pressure sintering method. Materials Research Express, 2019, 6, 1250h5.	0.8	4
94	Hierarchical nanostructuring approaches for thermoelectric materials with high power factors. Physical Review B, 2019, 99, .	1.1	31
95	Tactfully decoupling interdependent electrical parameters via interstitial defects for SnTe thermoelectrics. Nano Energy, 2020, 67, 104292.	8.2	33
96	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.	8.2	72
97	Band structure engineering in Sn_{1.03}Te through an In-induced resonant level. Journal of Materials Chemistry C, 2020, 8, 977-988.	2.7	30
98	Enhancement of thermoelectric performance through synergy of Pb acceptor doping and superstructure modulation for p-type Bi2Te3. Journal of Materials Science: Materials in Electronics, 2020, 31, 1200-1209.	1.1	1
99	Ultralow Thermal Conductivity, Enhanced Mechanical Stability, and High Thermoelectric Performance in (GeTe)_{1â€“2<i>x</i>}(SnSe)_{<i>x</i>}(SnS)_{<i>x</i>}. Journal of the American Chemical Society, 2020, 142, 20502-20508.	6.6	61
100	Hierarchically nanostructured thermoelectric materials: challenges and opportunities for improved power factors. European Physical Journal B, 2020, 93, 1.	0.6	12
101	Improved thermoelectric performance in PbSeâ€“AgSbSe2 by manipulating the spin-orbit coupling effects. Nano Energy, 2020, 78, 105232.	8.2	22
102	Band Convergence and Phonon Scattering Mediated Improved Thermoelectric Performance of SnTeâ€“PbTe Nanocomposites. ACS Applied Energy Materials, 2020, 3, 8882-8891.	2.5	7
103	Anion-exchanged porous SnTe nanosheets for ultra-low thermal conductivity and high-performance thermoelectrics. Chemical Engineering Journal, 2020, 402, 126274.	6.6	20
104	Routes for advancing SnTe thermoelectrics. Journal of Materials Chemistry A, 2020, 8, 16790-16813.	5.2	87
105	Vacancy engineering in rock-salt type (IV-VI)x(V-VI) materials for high thermoelectric performance. Nano Energy, 2020, 78, 105198.	8.2	14
106	Nanostructuring SnTe to improve thermoelectric properties through Zn and Sb co-doping. Sustainable Energy and Fuels, 2020, 4, 5645-5653.	2.5	19
107	Bismuth tellurideâ€“copper telluride nanocomposites from heterostructured building blocks. Journal of Materials Chemistry C, 2020, 8, 14092-14099.	2.7	15
108	Achieving Enhanced Thermoelectric Performance in (SnTe)_{1-<i>x</i>}(Sb₂Te₃)<i>_x</i> and (SnTe)_{1-<i>y</i>}(Sb₂Se₃)<i>_y</i> Synthesized via Solvothermal Reaction and Sintering. ACS Applied Materials & Interfaces, 2020, 12, 44805-44814.	4.0	26
109	Constructing van der Waals gaps in cubic-structured SnTe-based thermoelectric materials. Energy and Environmental Science, 2020, 13, 5135-5142.	15.6	53

#	Article	IF	Citations
110	Ultralow thermal conductivity and enhanced thermoelectric properties of SnTe based alloys prepared by melt spinning technique. Journal of Alloys and Compounds, 2020, 837, 155568.	2.8	25
111	Crowding-out effect strategy using AgCl for realizing a super low lattice thermal conductivity of SnTe. Sustainable Materials and Technologies, 2020, 25, e00183.	1.7	6
112	Highly Converged Valence Bands and Ultralow Lattice Thermal Conductivity for Highâ€Performance SnTe Thermoelectrics. Angewandte Chemie - International Edition, 2020, 59, 11115-11122.	7.2	71
113	Highly Converged Valence Bands and Ultralow Lattice Thermal Conductivity for Highâ€Performance SnTe Thermoelectrics. Angewandte Chemie, 2020, 132, 11208-11215.	1.6	7
114	Atomic disordering advances thermoelectric group IV telluride alloys with a multiband transport. Materials Today Physics, 2020, 15, 100247.	2.9	22
115	Remarkable Improvement of Thermoelectric Figure-of-Merit in SnTe through In Situ-Created Te Nanoinclusions. ACS Applied Energy Materials, 2020, 3, 7113-7120.	2.5	14
116	Contrasting SnTeâ€“NaSbTe₂ and SnTeâ€“NaBiTe₂ Thermoelectric Alloys: High Performance Facilitated by Increased Cation Vacancies and Lattice Softening. Journal of the American Chemical Society, 2020, 142, 12524-12535.	6.6	51
117	Transport properties of polycrystalline SnTe prepared by saturation annealing. RSC Advances, 2020, 10, 5996-6005.	1.7	8
118	Effects of AgBiSe2 on thermoelectric properties of SnTe. Chemical Engineering Journal, 2020, 390, 124585.	6.6	24
119	Thermoelectric performance of nanostructured In/Pb codoped SnTe with band convergence and resonant level prepared <i>via</i> a green and facile hydrothermal method. Nanoscale, 2020, 12, 5857-5865.	2.8	21
120	Evolutional carrier mobility and power factor of two-dimensional tin telluride due to quantum size effects. Journal of Materials Chemistry C, 2020, 8, 4181-4191.	2.7	11
121	Band Engineering and Thermoelectric Performance Optimization of p-Type GeTe-Based Alloys through Ti/Sb Co-Doping. Journal of Physical Chemistry C, 2020, 124, 5583-5590.	1.5	16
122	GeTe Thermoelectrics. Joule, 2020, 4, 986-1003.	11.7	215
123	High Thermoelectric Performance in SnTe Nanocomposites with All-Scale Hierarchical Structures. ACS Applied Materials & Interfaces, 2020, 12, 23102-23109.	4.0	47
124	In Situ Reaction Induced Coreâ€“Shell Structure to Ultralow Îº_{lat} and High Thermoelectric Performance of SnTe. Advanced Science, 2020, 7, 1903493.	5.6	38
125	Ultralow Lattice Thermal Conductivity in SnTe by Incorporating InSb. ACS Applied Materials & Interfaces, 2020, 12, 21863-21870.	4.0	29
126	Simultaneous enhancement of thermoelectric and mechanical performance for SnTe by nano SiC compositing. Journal of Materials Chemistry C, 2020, 8, 7393-7400.	2.7	35
127	Realizing high thermoelectric performance in eco-friendly SnTe via synergistic resonance levels, band convergence and endotaxial nanostructuring with Cu2Te. Nano Energy, 2020, 73, 104832.	8.2	81

#	Article	IF	Citations
128	Review of experimental approaches for improving zT of thermoelectric materials. Materials Science in Semiconductor Processing, 2021, 121, 105303.	1.9	91
129	Enhancing thermoelectric performance of Sn1-Sb2/3Te via synergistic charge balanced compensation doping. Chemical Engineering Journal, 2021, 404, 126925.	6.6	16
130	Elucidating the role of lattice thermal conductivity in<scp>Ï€â€phases</scp>of<scp>IVâ€VI</scp>monochalcogenides for highly efficient thermoelectric performance. International Journal of Energy Research, 2021, 45, 6369-6382.	2.2	6
131	Realizing widespread resonance effects to enhance thermoelectric performance of SnTe. Journal of Alloys and Compounds, 2021, 852, 156989.	2.8	12
132	Enhanced thermoelectric performance of orientated and defected SnTe. Journal of Alloys and Compounds, 2021, 858, 157634.	2.8	7
133	Gateâ€Tunable Polar Optical Phonon to Piezoelectric Scattering in Fewâ€Layer Bi₂O₂Se for Highâ€Performance Thermoelectrics. Advanced Materials, 2021, 33, e2004786.	11.1	48
134	Complementary effect of co-doping aliovalent elements Bi and Sb in self-compensated SnTe-based thermoelectric materials. Journal of Materials Chemistry C, 2021, 9, 9922-9931.	2.7	33
135	Synergistic manifestation of band and scattering engineering in single aliovalent Sb alloyed anharmonic SnTe alloy in concurrence with rule of parsimony. Materials Advances, 0, , .	2.6	4
136	Enhancing the thermoelectric properties of SnTe via introducing PbTe@C coreâ€"shell nanostructures. Dalton Transactions, 2021, 50, 10515-10523.	1.6	8
137	Improvement in structural properties of SnTe by Co doping for thermo-electric applications. Materials Today: Proceedings, 2021, 46, 5857-5860.	0.9	7
138	Mn-In-Cu co-doping to optimize the thermoelectric properties of SnTe-based materials. Wuli Xuebao/Acta Physica Sinica, 2021, .	0.2	3
139	Effect of Refractory Tantalum Metal Filling on the Microstructure and Thermoelectric Properties of Co₄Sb₁₂ Skutterudites. ACS Omega, 2021, 6, 3900-3909.	1.6	7
140	Refined band structure plus enhanced phonon scattering realizes thermoelectric performance optimization in CuIâ€"Mn codoped SnTe. Journal of Materials Chemistry A, 2021, 9, 13065-13070.	5.2	30
141	Evidence of improvement in thermoelectric parameters of <i>n</i>-type Bi2Te3/graphite nanocomposite. Journal of Applied Physics, 2021, 129, .	1.1	14
142	Ultra-high thermoelectric performance in SnTe by the integration of several optimization strategies. Materials Today Physics, 2021, 17, 100350.	2.9	29
143	Enhanced Thermoelectric Performance in High Entropy Alloys Sn_{0.25}Pb_{0.25}Mn_{0.25}Ge_{0.25}Te. ACS Applied Materials & Interfaces, 2021, 13, 18638-18647.	4.0	43
144	Nanostructured Teâ€'SnTe eutectic composites with enhanced thermoelectric performance. Journal of Alloys and Compounds, 2021, 860, 158245.	2.8	3
145	Enhanced Thermoelectric and Mechanical Performances in Sintered Bi_{0.48}Sb_{1.52}Te₃â€"AgSbSe₂ Composite. ACS Applied Materials & Interfaces, 2021, 13, 24937-24944.	4.0	23

#	Article	IF	Citations
146	Enhanced thermoelectric performance of stibium and bismuth co-doped SnTe via melt spinning. Functional Materials Letters, 2021, 14, 2150023.	0.7	0
147	Physical Insights on the Lattice Softening Driven Midâ€Temperature Range Thermoelectrics of Ti/Zrâ€Inserted SnTeâ€"An Outlook Beyond the Horizons of Conventional Phonon Scattering and Excavation of Heikesâ€™ Equation for Estimating Carrier Properties. Advanced Energy Materials, 2021, 11, 2101122.	10.2	39
148	Realizing N-type SnTe Thermoelectrics with Competitive Performance through Suppressing Sn Vacancies. Journal of the American Chemical Society, 2021, 143, 8538-8542.	6.6	51
149	Melt-spun Sn1â^'â^'Sb Mn Te with unique multiscale microstructures approaching exceptional average thermoelectric zT. Nano Energy, 2021, 84, 105879.	8.2	46
150	Optimized Electronic Bands and Ultralow Lattice Thermal Conductivity in Ag and Y Codoped SnTe. ACS Applied Materials & Interfaces, 2021, 13, 32876-32885.	4.0	21
151	Research status and performance optimization of medium-temperature thermoelectric material SnTe. Chinese Physics B, 2022, 31, 047307.	0.7	6
152	Low lattice thermal conductivity and enhanced thermoelectric performance of SnTe via chemical electroless plating of Ag. Rare Metals, 2022, 41, 86-95.	3.6	18
153	Revisiting the Electronic Structures and Phonon Properties of Thermoelectric Antimonide-Tellurides: Spinâ€"Orbit Coupling Induced Gap Opening in ZrSbTe and HfSbTe. Crystals, 2021, 11, 917.	1.0	6
154	Synergistic band convergence and defect engineering boost thermoelectric performance of SnTe. Journal of Materials Science and Technology, 2021, 86, 204-209.	5.6	27
155	Optimized Mn and Bi co-doping in SnTe based thermoelectric material: A case of band engineering and density of states tuning. Journal of Materials Science and Technology, 2021, 85, 76-86.	5.6	43
156	Improvement of thermoelectric properties of SnTe by Mn Bi codoping. Chemical Engineering Journal, 2021, 421, 127795.	6.6	20
157	Band convergence and nanostructure modulations lead to high thermoelectric performance in SnPb0.04Te-y% AgSbTe2. Materials Today Physics, 2021, 21, 100505.	2.9	17
158	Enhanced thermoelectric properties of bismuth and zinc co-doped SnTe by band engineering and all-scale structure defects. Journal of Alloys and Compounds, 2022, 889, 161651.	2.8	8
159	Role of anharmonic strength and number of allowed three-phonon processes in lattice thermal conductivity of SnTe based compounds. Journal of Physics Condensed Matter, 2021, 33, 115701.	0.7	3
160	Comprehensive study of the low-temperature transport properties of polycrystalline <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi mathvariant="normal">S</mml:mi><mml:msub><mml:mi mathvariant="normal">n</mml:mi><mml:mrow><mml:mn>1</mml:mn><mml:mo>+</mml:mo><mml:mi>x</mml:mi></mml:mrow></m		

#	Article	IF	Citations
164	Entropy Engineering Realized Ultralow Thermal Conductivity and High Seebeck Coefficient in Lead-Free SnTe. ACS Applied Energy Materials, 2021, 4, 12738-12744.	2.5	10
165	SnTe-Based Thermoelectrics. , 2019, , 63-81.		1
166	Locally ordered nano-domains as novel microstructure defects suppressing the phonon transport in SnTe thermoelectrics. Journal of the European Ceramic Society, 2022, 42, 1001-1006.	2.8	1
167	Defect engineering in Te rich SnTe via solvothermal method for thermoelectric applications. Materials Today: Proceedings, 2022, 54, 637-641.	0.9	5
168	Raised solubility in SnTe by GeMnTe2 alloying enables converged valence bands, low thermal conductivity, and high thermoelectric performance. Nano Energy, 2022, 94, 106940.	8.2	22
169	Ultralow Lattice Thermal Conductivity and Enhanced Mechanical Properties of Cu and Sb Co-Doped SnTe Thermoelectric Material with a Complex Microstructure Evolution. ACS Sustainable Chemistry and Engineering, 2022, 10, 1367-1372.	3.2	22
170	Regulation of Ge vacancies through Sm doping resulting in superior thermoelectric performance in GeTe. Journal of Materials Chemistry A, 2022, 10, 3698-3709.	5.2	21
171	Key properties of inorganic thermoelectric materialsâ€"tables (version 1). JPhys Energy, 2022, 4, 022002.	2.3	51
172	Boosting Thermoelectric Performance of SnTe by Selective Alloying and Band Tuning. Materials Today Energy, 2022, 25, 100958.	2.5	12
173	Valence band convergence and nanostructured phonon scattering trigger high thermoelectric performance in SnTe. Applied Physics Letters, 2021, 119, 253901.	1.5	7
174	General strategies to improve thermoelectric performance with an emphasis on tin and germanium chalcogenides as thermoelectric materials. Journal of Materials Chemistry A, 2022, 10, 6872-6926.	5.2	26
175	Significantly enhanced power factor for superior thermoelectric conversion efficiency in SnTe by doping elemental Indium. Journal of Alloys and Compounds, 2022, 910, 164827.	2.8	4
176	Compromise of thermoelectric and mechanical properties in LiSbTe2 and LiBiTe2 alloyed SnTe. Acta Materialia, 2022, 231, 117922.	3.8	22
177	Enhanced thermoelectric performance in SnTe due to the energy filtering effect introduced by Bi2O3. Materials Today Energy, 2022, 25, 100985.	2.5	13
178	Structural and morphological studies of Se doped SnTe thermoelectric material. Materials Today: Proceedings, 2022, 62, 6420-6424.	0.9	6
179	Insights into Low Thermal Conductivity in Inorganic Materials for Thermoelectrics. Journal of the American Chemical Society, 2022, 144, 10099-10118.	6.6	57
180	One-step fabrication of bulk SnTe thermoelectric material with excellent performance through self-propagating high-temperature synthesis under high-gravity field. Materials Chemistry Frontiers, 0, , .	3.2	2
181	Highâ€Performance Thermoelectric Material and Module Driven by Mediumâ€Entropy Engineering in SnTe. Advanced Functional Materials, 2022, 32, .	7.8	30

#	Article	IF	Citations
182	Enhanced Thermoelectric Performance of In-Doped and Agcute-Alloyed Snte Through Band Engineering and Endotaxial Nanostructures. SSRN Electronic Journal, 0, , .	0.4	0
183	Enabling High Quality Factor and Enhanced Thermoelectric Performance in BiBr₃-Doped Sn_{0.93}Mn_{0.1}Te via Band Convergence and Band Sharpening. ACS Applied Materials & Interfaces, 2022, 14, 32236-32243.	4.0	9
184	Surface Functionalization of Surfactantâ€Free Particles: a Strategy to Tailor the Properties of Nanocomposites for Enhanced Thermoelectric Performance. Angewandte Chemie, 0, , .	1.6	2
185	Surface Functionalization of Surfactantâ€Free Particles: A Strategy to Tailor the Properties of Nanocomposites for Enhanced Thermoelectric Performance. Angewandte Chemie - International Edition, 2022, 61, .	7.2	15
186	Band engineering and improved thermoelectric performance in p-type SmMg2Sb2: A first-principles study. Materials Today Physics, 2022, 27, 100779.	2.9	1
187	Modular Nanostructures Facilitate Low Thermal Conductivity and Ultraâ€High Thermoelectric Performance in <i>n</i>â€Type SnSe. Advanced Materials, 2022, 34, .	11.1	42
188	Effect of Sb doping on CVT grown SnTe single crystals electrical and thermal properties. Journal of Materials Science: Materials in Electronics, 2022, 33, 20823-20836.	1.1	13
189	Enhanced Thermoelectric Performance of In-Doped and Agcute-Alloyed Snte Through Band Engineering and Endotaxial Nanostructures. SSRN Electronic Journal, 0, , .	0.4	0
190	Synergistic Optimizing Thermoelectric Performance of Snte by the Integrated Multi-Strategy. SSRN Electronic Journal, 0, , .	0.4	0
191	Enhanced Thermoelectric Performance in High-Defect Snte Alloys: A Significant Role of Carrier Scattering. SSRN Electronic Journal, 0, , .	0.4	0
192	Contrasting roles of Bi-doping and Bi₂Te₃ alloying on the thermoelectric performance of SnTe. Inorganic Chemistry Frontiers, 2022, 9, 5562-5571.	3.0	2
193	Improvement of thermoelectric performance of SnTe-based solid solution by entropy engineering. Wuli Xuebao/Acta Physica Sinica, 2022, 71, 237302.	0.2	1
194	Influence of In-induced resonant level on the normal-state and superconducting properties of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:msub><mml:mi>Sn</mml:mi><mml:mrow><mml:mn>1.03</ Physical Review B, 2022, 106, .	1.1	3
195	Investigation on halogen-doped n-type SnTe thermoelectrics. Rare Metals, 2022, 41, 3803-3814.	3.6	12
196	Improved Solubility in Metavalently Bonded Solid Leads to Band Alignment, Ultralow Thermal Conductivity, and High Thermoelectric Performance in SnTe. Advanced Functional Materials, 2022, 32, .	7.8	30
197	Enhanced thermoelectric performance of In-doped and AgCuTe-alloyed SnTe through band engineering and endotaxial nanostructures. Physical Chemistry Chemical Physics, 2022, 24, 27105-27113.	1.3	3
198	Enhanced thermoelectric performance in high-defect SnTe alloys: a significant role of carrier scattering. Journal of Materials Chemistry A, 2022, 10, 23521-23530.	5.2	7
199	Synergistic optimizing thermoelectric performance of SnTe by the integrated Multi-strategy. Chemical Engineering Journal, 2023, 453, 139916.	6.6	6

#	Article	IF	Citations
200	Strengthened phonon scattering and band convergence synergistically realize the high-performance SnTe thermoelectric. Journal of Materials Chemistry A, 2023, 11, 649-656.	5.2	3
201	SnTe thermoelectric materials with low lattice thermal conductivity synthesized by a self-propagating method under a high-gravity field. Physical Chemistry Chemical Physics, 2022, 24, 29186-29194.	1.3	1
202	A review on ternary CuFeS2 compound: Fabrication strategies and applications. Journal of Alloys and Compounds, 2023, 938, 168566.	2.8	5
203	Interstitial Defects Facilitate Dense Dislocations and Band Convergence for High Thermoelectric Performance in SnTe. Chemistry of Materials, 2023, 35, 327-336.	3.2	4
204	Effect of Single-Walled Carbon Nanotubes on Thermoelectric Properties of SnTe-Based Composites. Journal of Electronic Materials, 2023, 52, 994-1001.	1.0	0
205	Enhancing the thermoelectric performance of SnTe-CuSbSe₂with an ultra-low lattice thermal conductivity. Journal of Materials Chemistry A, 2023, 11, 4310-4318.	5.2	12
206	Microstructural Manipulation for Enhanced Average Thermoelectric Performance: A Case Study of Tin Telluride. ACS Applied Materials & Interfaces, 2023, 15, 9656-9664.	4.0	8
207	First-principles calculations to investigate probing the influence of Mn and Mg doping concentration on electronic structures and transport properties of SnTe alloys. Results in Physics, 2023, 48, 106443.	2.0	1
208	Optimizing thermoelectric performance of SnTe via alloying with AgSnSe2 and PbTe. Journal of Alloys and Compounds, 2023, 947, 169415.	2.8	0
209	Band Engineering of the Second Phase to Reach High Thermoelectric Performance in Cu₂Seâ€Based Composite Material. Advanced Materials, 2023, 35, .	11.1	11
210	Synergistic band modulation and precipitates: Achieving high quality factor in SnTe. Applied Physics Letters, 2023, 122, 072102.	1.5	2
211	Pushing the limit of synergy in SnTe-based thermoelectric materials leading to an ultra-low lattice thermal conductivity and enhanced <i>ZT</i>. Sustainable Energy and Fuels, 2023, 7, 1916-1929.	2.5	7
212	Fine electron and phonon transports manipulation by Mn compensation for high thermoelectric performance of Sb2Te3(SnTe)n materials. Materials Today Physics, 2023, 33, 101055.	2.9	2
213	Fast fabrication of SnTe <i>via</i> a non-equilibrium method and enhanced thermoelectric properties by medium-entropy engineering. Journal of Materials Chemistry C, 2023, 11, 5363-5370.	2.7	2
214	Physics and technology of thermoelectric materials and devices. Journal Physics D: Applied Physics, 2023, 56, 333001.	1.3	10
215	Origin of improved average power factor and mechanical properties of SnTe with high-dose Bi2Te3 alloying. Ceramics International, 2023, 49, 21916-21922.	2.3	3