

Superior thermoelectric performance in PbTe/PbS p-n junctions with high conductivity and modulated carrier concentration

Energy and Environmental Science

8, 2056-2068

DOI: 10.1039/c5ee01147g

Citation Report

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 1 | Influence of melt overheating treatment on solidification behavior of BiTe-based alloys at different cooling rates. <i>Materials and Design</i> , 2015, 88, 743-750. | 3.3 | 19 |
| 2 | Heterogeneous Distribution of Sodium for High Thermoelectric Performance of α -type Multiphase Lead-Chalcogenides. <i>Advanced Energy Materials</i> , 2015, 5, 1501047. | 10.2 | 63 |
| 3 | Valence band engineering and thermoelectric performance optimization in SnTe by Mn-alloying via a zone-melting method. <i>Journal of Materials Chemistry A</i> , 2015, 3, 19974-19979. | 5.2 | 141 |
| 4 | Fabrication of thermoelectric materials – thermal stability and repeatability of achieved efficiencies. <i>Journal of Materials Chemistry C</i> , 2015, 3, 10610-10615. | 2.7 | 17 |
| 5 | Thermoelectric Enhancement of Different Kinds of Metal Chalcogenides. <i>Advanced Energy Materials</i> , 2016, 6, 1600498. | 10.2 | 145 |
| 6 | Progressive Regulation of Electrical and Thermal Transport Properties to High-Performance $\text{CuInTe}_{2-x}\text{S}_x$ Thermoelectric Materials. <i>Advanced Energy Materials</i> , 2016, 6, 1600007. | 10.2 | 118 |
| 7 | Spinodally Decomposed PbSe-PbTe Nanoparticles for High-Performance Thermoelectrics: Enhanced Phonon Scattering and Unusual Transport Behavior. <i>ACS Nano</i> , 2016, 10, 7197-7207. | 7.3 | 44 |
| 8 | Electronic structure of some complex thermoelectrics – role of dimensional confinement and nanostructuring. <i>Proceedings of SPIE</i> , 2016, , . | 0.8 | 0 |
| 9 | Te-Doped Cu_{2-x}Se nanoplates with a high average thermoelectric figure of merit. <i>Journal of Materials Chemistry A</i> , 2016, 4, 9213-9219. | 5.2 | 91 |
| 10 | A chemists view: Metal oxides with adaptive structures for thermoelectric applications. <i>Physica Status Solidi (A) Applications and Materials Science</i> , 2016, 213, 808-823. | 0.8 | 54 |
| 11 | Rationally Designing High-Performance Bulk Thermoelectric Materials. <i>Chemical Reviews</i> , 2016, 116, 12123-12149. | 23.0 | 1,624 |
| 12 | Revisiting $\text{AgCrSe}_{2-x}\text{S}_x$ as a promising thermoelectric material. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 23872-23878. | 1.3 | 48 |
| 13 | Extremely Low Thermal Conductivity in Thermoelectric $\text{Ge}_{0.55-x}\text{Pb}_{0.45-x}\text{Te}$ Solid Solutions via Se Substitution. <i>Chemistry of Materials</i> , 2016, 28, 6367-6373. | 3.2 | 42 |
| 14 | Schottky-ohmic converted contact, fast-response, infrared PbTe photodetector with stable photoresponse in air. <i>RSC Advances</i> , 2016, 6, 107878-107885. | 1.7 | 5 |
| 15 | Understanding Nanostructuring Processes in Thermoelectrics and Their Effects on Lattice Thermal Conductivity. <i>Advanced Materials</i> , 2016, 28, 2737-2743. | 11.1 | 54 |
| 16 | Evolution of microstructure and lattice thermal conductivity in Na doped $\text{PbTe}_{1-x}\text{S}_x$ pseudo-binary system. <i>Journal of Materiomics</i> , 2016, 2, 150-157. | 2.8 | 4 |
| 17 | Enhancement of thermoelectric properties by effective K-doping and nano precipitation in quaternary compounds of $(\text{Pb}_{1-x}\text{K}_x\text{Te})_{0.70}(\text{PbSe})_{0.25}(\text{PbS})_{0.05}$. <i>RSC Advances</i> , 2016, 6, 62958-62967. | 1.7 | 10 |
| 18 | Enhanced mid-temperature thermoelectric performance of textured SnSe polycrystals made of solvothermally synthesized powders. <i>Journal of Materials Chemistry C</i> , 2016, 4, 2047-2055. | 2.7 | 122 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 19 | High thermoelectric performance of n-type PbTe _{1-x} S due to deep lying states induced by indium doping and spinodal decomposition. Nano Energy, 2016, 22, 572-582. | 8.2 | 59 |
| 20 | High thermoelectric performance from optimization of hole-doped CuInTe ₂ . Physical Chemistry Chemical Physics, 2016, 18, 5925-5931. | 1.3 | 36 |
| 21 | Enhanced thermoelectric performance in p-type polycrystalline SnSe benefiting from texture modulation. Journal of Materials Chemistry C, 2016, 4, 1201-1207. | 2.7 | 125 |
| 23 | Origin of the enhancement in transport properties on polycrystalline SnSe with compositing two-dimensional material MoSe ₂ . Nanotechnology, 2017, 28, 105708. | 1.3 | 20 |
| 24 | Lattice Dislocations Enhancing Thermoelectric PbTe in Addition to Band Convergence. Advanced Materials, 2017, 29, 1606768. | 11.1 | 365 |
| 25 | Intramolecularly-stabilized Group 14 Alkoxides - Promising Precursors for the Synthesis of Group 14-Chalcogenides by Hot-Injection Method. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2017, 643, 676-682. | 0.6 | 6 |
| 26 | Simultaneous optimization of electrical and thermal transport properties of Bi _{0.5} Sb _{1.5} Te ₃ thermoelectric alloy by twin boundary engineering. Nano Energy, 2017, 37, 203-213. | 8.2 | 164 |
| 27 | High thermoelectric performance due to nano-inclusions and randomly distributed interface potentials in N-type (PbTe) _{0.93-x} (Se) _{0.07} (Cl) _x (PbS) _{0.93} (PbS) _{0.07} composites. Journal of Materials Chemistry A. 2017, 5, 13535-13543. | 5.2 | 27 |
| 28 | Dataset on the electronic and thermal transport properties of quaternary compounds of (PbTe) _{0.95-x} (PbSe) _x (PbS) _{0.05} . Data in Brief, 2017, 13, 233-241. | 0.5 | 1 |
| 29 | Enhanced thermoelectric performance of BiCuSeO via dual-doping in both Bi and Cu sites. Journal of Alloys and Compounds, 2017, 711, 434-439. | 2.8 | 15 |
| 30 | High thermoelectric performance in pseudo quaternary compounds of (PbTe) _{0.95-x} (PbSe) _x (PbS) _{0.05} by simultaneous band convergence and nano precipitation. Acta Materialia, 2017, 131, 98-109. | 3.8 | 34 |
| 31 | Enhanced thermoelectric performance in n-type polycrystalline SnSe by PbBr ₂ doping. RSC Advances, 2017, 7, 17906-17912. | 1.7 | 40 |
| 32 | ZnTe Alloying Effect on Enhanced Thermoelectric Properties of p-Type PbTe. ACS Applied Materials & Interfaces, 2017, 9, 3766-3773. | 4.0 | 23 |
| 33 | Eco-Friendly SnTe Thermoelectric Materials: Progress and Future Challenges. Advanced Functional Materials, 2017, 27, 1703278. | 7.8 | 312 |
| 34 | Extraordinary Thermoelectric Performance Realized in n-Type PbTe through Multiphase Nanostructure Engineering. Advanced Materials, 2017, 29, 1703148. | 11.1 | 209 |
| 35 | High-pressure synthesis of tetragonal iron aluminide FeAl ₂ . Scripta Materialia, 2017, 141, 107-110. | 2.6 | 10 |
| 36 | Processing of advanced thermoelectric materials. Science China Technological Sciences, 2017, 60, 1347-1364. | 2.0 | 79 |
| 37 | Large enhancement of thermoelectric properties in n-type PbTe via dual-site point defects. Energy and Environmental Science, 2017, 10, 2030-2040. | 15.6 | 194 |

| # | ARTICLE | IF | CITATIONS |
|----|---|------|-----------|
| 38 | Remarkable Roles of Cu To Synergistically Optimize Phonon and Carrier Transport in n-Type PbTe-Cu ₂ Te. Journal of the American Chemical Society, 2017, 139, 18732-18738. | 6.6 | 230 |
| 39 | Synergistically optimizing thermoelectric transport properties of n-type PbTe via Se and Sn co-alloying. Journal of Alloys and Compounds, 2017, 724, 208-221. | 2.8 | 59 |
| 40 | Thermoelectric performance of PbSnTeSe high-entropy alloys. Materials Research Letters, 2017, 5, 187-194. | 4.1 | 81 |
| 41 | Nanostructural thermoelectric materials and their performance. Frontiers in Energy, 2018, 12, 97-108. | 1.2 | 22 |
| 42 | Excellent thermoelectric performance achieved over broad temperature plateau in indium-doped SnTe-AgSbTe ₂ alloys. Applied Physics Letters, 2018, 112, . | 1.5 | 15 |
| 43 | Recent progress in magnesium-based thermoelectric materials. Journal of Materials Chemistry A, 2018, 6, 3328-3341. | 5.2 | 70 |
| 44 | Thermoelectric transport properties of Pb-Sn-Te-Se system. Rare Metals, 2018, 37, 343-350. | 3.6 | 55 |
| 45 | Recent progress towards high performance of tin chalcogenide thermoelectric materials. Journal of Materials Chemistry A, 2018, 6, 2432-2448. | 5.2 | 101 |
| 46 | The journey of tin chalcogenides towards high-performance thermoelectrics and topological materials. Chemical Communications, 2018, 54, 6573-6590. | 2.2 | 84 |
| 47 | Low-Symmetry Rhombohedral GeTe Thermoelectrics. Joule, 2018, 2, 976-987. | 11.7 | 402 |
| 48 | Enhancement of Thermoelectric Performance in Na-Doped Pb _{0.6} Sn _{0.4} Te _{0.95} Se _x S _{0.05} via Breaking the Inversion Symmetry, Band Convergence, and Nanostructuring by Multiple Elements Doping. ACS Applied Materials & Interfaces, 2018, 10, 11613-11622. | 4.0 | 18 |
| 49 | Functionally Graded (PbTe) _{1-x} (SnTe) _x Thermoelectrics. Chemistry of Materials, 2018, 30, 280-287. | 3.2 | 17 |
| 50 | High Performance Thermoelectric Materials: Progress and Their Applications. Advanced Energy Materials, 2018, 8, 1701797. | 10.2 | 548 |
| 51 | Low thermal conductivity and high figure of merit for rapidly synthesized n-type Pb _{1-x} Bi _x Te alloys. Dalton Transactions, 2018, 47, 15957-15966. | 1.6 | 10 |
| 52 | Dual Alloying Strategy to Achieve a High Thermoelectric Figure of Merit and Lattice Hardening in p-Type Nanostructured PbTe. ACS Energy Letters, 2018, 3, 2593-2601. | 8.8 | 37 |
| 53 | Charge and phonon transport in PbTe-based thermoelectric materials. Npj Quantum Materials, 2018, 3, . | 1.8 | 227 |
| 54 | Effects of Y, GdCu, and Al Addition on the Thermoelectric Behavior of CoCrFeNi High Entropy Alloys. Metals, 2018, 8, 781. | 1.0 | 17 |
| 55 | Enhanced electrical transport properties via Pb vacancies in single crystalline PbTe prepared by Te-flux method. Physica B: Condensed Matter, 2018, 550, 9-14. | 1.3 | 1 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 56 | Weak Electron Phonon Coupling and Deep Level Impurity for High Thermoelectric Performance Pb _{1-x} Ga _x Te. <i>Advanced Energy Materials</i> , 2018, 8, 1800659. | 10.2 | 111 |
| 57 | Absence of Nanostructuring in NaPb _m SbTe _{m+2} : Solid Solutions with High Thermoelectric Performance in the Intermediate Temperature Regime. <i>Journal of the American Chemical Society</i> , 2018, 140, 7021-7031. | 6.6 | 27 |
| 58 | Synergistically optimizing electrical and thermal transport properties of n-type PbSe. <i>Progress in Natural Science: Materials International</i> , 2018, 28, 275-280. | 1.8 | 5 |
| 59 | Broadening the temperature range for high thermoelectric performance of bulk polycrystalline strontium titanate by controlling the electronic transport properties. <i>Journal of Materials Chemistry C</i> , 2018, 6, 7594-7603. | 2.7 | 46 |
| 60 | Strategies for optimizing the thermoelectricity of PbTe alloys. <i>Chinese Physics B</i> , 2018, 27, 047306. | 0.7 | 18 |
| 61 | The Effect of Spark Plasma Sintering on Microstructure Evolution in Thermoelectric Materials. <i>Microscopy and Microanalysis</i> , 2018, 24, 1494-1495. | 0.2 | 0 |
| 62 | Thermoelectric and mechanical properties of Ag and Cu doped (GeTe) _{0.96} (Bi ₂ Te ₃) _{0.04} . <i>MRS Communications</i> , 2018, 8, 1292-1299. | 0.8 | 7 |
| 63 | Realizing high performance n-type PbTe by synergistically optimizing effective mass and carrier mobility and suppressing bipolar thermal conductivity. <i>Energy and Environmental Science</i> , 2018, 11, 2486-2495. | 15.6 | 200 |
| 64 | Cylindrical thermoelectric generator with water heating system for high solar energy conversion efficiency. <i>Applied Energy</i> , 2018, 226, 381-388. | 5.1 | 44 |
| 65 | Ga-Doping-Induced Carrier Tuning and Multiphase Engineering in n-type PbTe with Enhanced Thermoelectric Performance. <i>ACS Applied Materials & Interfaces</i> , 2018, 10, 22401-22407. | 4.0 | 49 |
| 66 | Integration of multi-scale defects for optimizing thermoelectric properties of n-type Cu _x Cd _x FeS ₂ ($x = 0 \leq 0.1$). <i>Nanoscale</i> , 2019, 11, 17340-17349. | 2.8 | 22 |
| 67 | High thermoelectric performance of Ag doped SnTe polycrystalline bulks via the synergistic manipulation of electrical and thermal transport. <i>Physical Chemistry Chemical Physics</i> , 2019, 21, 17978-17984. | 1.3 | 35 |
| 68 | Local nanostructures enhanced the thermoelectric performance of n-type PbTe. <i>Journal of Materials Chemistry A</i> , 2019, 7, 18458-18467. | 5.2 | 53 |
| 69 | Capturing anharmonic and anisotropic natures in the thermotics and mechanics of Bi ₂ Te ₃ thermoelectric material through an accurate and efficient potential. <i>Journal Physics D: Applied Physics</i> , 2019, 52, 425303. | 1.3 | 10 |
| 70 | Phase stability and thermoelectric properties of semiconductor-like tetragonal FeAl ₂ . <i>Science and Technology of Advanced Materials</i> , 2019, 20, 937-948. | 2.8 | 8 |
| 71 | Comprehensive Investigation on the Thermoelectric Properties of p-type PbTe-PbSe-PbS Alloys. <i>Advanced Electronic Materials</i> , 2019, 5, 1900609. | 2.6 | 29 |
| 72 | Understanding the effects of iodine doping on the thermoelectric performance of n-type PbTe ingot materials. <i>Journal of Applied Physics</i> , 2019, 126, . | 1.1 | 12 |
| 73 | Unusual lattice thermal conductivity in the simple crystalline compounds X_2Te_2 . <i>Physical Review B</i> , 2019, 100, . | | 16 |

| # | ARTICLE | IF | CITATIONS |
|----|--|------|-----------|
| 74 | High efficient nanostructured PbSe _{0.5} Te _{0.5} exhibiting broad figure-of-merit plateau. Journal of Alloys and Compounds, 2019, 785, 862-870. | 2.8 | 8 |
| 75 | Ultra-low thermal conductivity via interfacial phonon scattering in PbTe hoppercubes/PbTeO ₃ microrods for thermoelectric applications. Journal of Alloys and Compounds, 2019, 799, 26-35. | 2.8 | 3 |
| 76 | Data-driven analysis of electron relaxation times in PbTe-type thermoelectric materials. Science and Technology of Advanced Materials, 2019, 20, 511-520. | 2.8 | 42 |
| 77 | Thermoelectric Properties and Chemical Potential Tuning by K- and Se-Coalloying in (Pb _{0.5} Sn _{0.5}) _{1-x} K _x Te _{0.95} Se _{0.05} . Electronic Materials Letters, 2019, 15, 342-349. | 1.0 | 4 |
| 78 | Coherent magnetic nanoinclusions induce charge localization in half-Heusler alloys leading to high-T _c ferromagnetism and enhanced thermoelectric performance. Journal of Materials Chemistry A, 2019, 7, 11095-11103. | 5.2 | 27 |
| 79 | Dislocation Evolution and Migration at Grain Boundaries in Thermoelectric SnTe. ACS Applied Energy Materials, 2019, 2, 2392-2397. | 2.5 | 27 |
| 80 | The importance of phase equilibrium for doping efficiency: iodine doped PbTe. Materials Horizons, 2019, 6, 1444-1453. | 6.4 | 42 |
| 81 | Geometric structural design for lead tellurium thermoelectric power generation application. Renewable Energy, 2019, 141, 88-95. | 4.3 | 29 |
| 82 | Novel Thermoelectric Materials and Device Design Concepts. , 2019, , . | | 12 |
| 83 | Enhanced performance of thermoelectric nanocomposites based on Cu ₁₂ Sb ₄ S ₁₃ tetrahedrite. Nano Energy, 2019, 57, 835-841. | 8.2 | 41 |
| 84 | Triple-phase ceramic 2D nanocomposite with enhanced thermoelectric properties. Journal of the European Ceramic Society, 2019, 39, 1237-1244. | 2.8 | 16 |
| 85 | A comprehensive study on improved power materials for high-temperature thermoelectric generators. Journal of Power Sources, 2019, 410-411, 143-151. | 4.0 | 42 |
| 86 | Copper Sulfides: Earthâ€Abundant and Lowâ€Cost Thermoelectric Materials. Energy Technology, 2019, 7, 1800850. | 1.8 | 45 |
| 87 | Thermoelectric transport properties of Pb doped SnSe alloys (Pb _x Sn _{1-x} Se): DFT-BTE simulations. Journal of Solid State Chemistry, 2019, 270, 413-418. | 1.4 | 11 |
| 88 | Synergistically optimizing charge and phonon transport properties in n-type PbTe via introducing ternary compound AgSb(Se, Te) ₂ . Journal of Alloys and Compounds, 2020, 815, 152463. | 2.8 | 15 |
| 89 | Chalcogenide Thermoelectrics Empowered by an Unconventional Bonding Mechanism. Advanced Functional Materials, 2020, 30, 1904862. | 7.8 | 148 |
| 90 | Thermoelectric properties of ZnO ceramics densified through spark plasma sintering. Ceramics International, 2020, 46, 5229-5238. | 2.3 | 25 |
| 91 | Discordant nature of Cd in PbSe: off-centering and coreâ€shell nanoscale CdSe precipitates lead to high thermoelectric performance. Energy and Environmental Science, 2020, 13, 200-211. | 15.6 | 57 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 92 | Synergetic Approach for Superior Thermoelectric Performance in PbTe-PbSe-PbS Quaternary Alloys and Composites. <i>Energies</i> , 2020, 13, 72. | 1.6 | 9 |
| 93 | Rational structural design and manipulation advance SnSe thermoelectrics. <i>Materials Horizons</i> , 2020, 7, 3065-3096. | 6.4 | 73 |
| 94 | Optimized Strategies for Advancing n-Type PbTe Thermoelectrics: A Review. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 49323-49334. | 4.0 | 51 |
| 95 | A review of CoSb ₃ -based skutterudite thermoelectric materials. <i>Journal of Advanced Ceramics</i> , 2020, 9, 647-673. | 8.9 | 105 |
| 96 | A comprehensive analysis on nanostructured materials in a thermoelectric micro-system based on geometric shape, segmentation structure and load resistance. <i>Scientific Reports</i> , 2020, 10, 21659. | 1.6 | 11 |
| 97 | Improvement of Thermoelectric Properties of Evaporated ZnO:Al Films by CNT and Au Nanocomposites. <i>Journal of Physical Chemistry C</i> , 2020, 124, 12713-12722. | 1.5 | 8 |
| 98 | Trace bismuth and iodine co-doping enhanced thermoelectric performance of PbTe alloys. <i>Journal Physics D: Applied Physics</i> , 2020, 53, 245501. | 1.3 | 29 |
| 99 | Thermoelectric Penta-Silicene with a High Room-Temperature Figure of Merit. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 14298-14307. | 4.0 | 71 |
| 100 | Thermoelectric applications of chalcogenides. , 2020, , 31-56. | | 6 |
| 101 | Contrasting roles of small metallic elements M (M = Cu, Zn, Ni) in enhancing the thermoelectric performance of n-type PbM _{0.01} Se. <i>Journal of Materials Chemistry A</i> , 2020, 8, 5699-5708. | 5.2 | 32 |
| 102 | Advanced Thermoelectric Design: From Materials and Structures to Devices. <i>Chemical Reviews</i> , 2020, 120, 7399-7515. | 23.0 | 1,248 |
| 104 | High-Performance Thermoelectric SnSe: Aqueous Synthesis, Innovations, and Challenges. <i>Advanced Science</i> , 2020, 7, 1902923. | 5.6 | 156 |
| 105 | Thermoelectric performance of thermally aged nanostructured bulk materials—a case study of lead chalcogenides. <i>Materials Today Physics</i> , 2020, 13, 100190. | 2.9 | 11 |
| 106 | Solution synthesis ultrathin PbTe _{0.5} Se _{0.5} nanowires and the low lattice thermal conductivity. <i>Journal of Physics and Chemistry of Solids</i> , 2020, 141, 109370. | 1.9 | 3 |
| 107 | Non-Rigid Band Structure in Mg ₂ Ge for Improved Thermoelectric Performance. <i>Advanced Science</i> , 2020, 7, 2000070. | 5.6 | 13 |
| 108 | Elastic thermoelectric sponge for pressure-induced enhancement of power generation. <i>Nano Energy</i> , 2020, 74, 104824. | 8.2 | 17 |
| 109 | Simultaneous enhancement of thermoelectric and mechanical performance for SnTe by nano SiC compositing. <i>Journal of Materials Chemistry C</i> , 2020, 8, 7393-7400. | 2.7 | 35 |
| 110 | Electronic structure modulation strategies in high-performance thermoelectrics. <i>APL Materials</i> , 2020, 8, . | 2.2 | 52 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 111 | On the applicability of the single parabolic band model to advanced thermoelectric materials with complex band structures. <i>Journal of Materiomics</i> , 2021, 7, 603-611. | 2.8 | 11 |
| 112 | Enhanced thermoelectric performance of hot-press Bi-doped n-type polycrystalline PbS. <i>Materials Science in Semiconductor Processing</i> , 2021, 121, 105393. | 1.9 | 13 |
| 113 | Coherent Sb/CuTe Core/Shell Nanostructure with Large Strain Contrast Boosting the Thermoelectric Performance of n-Type PbTe. <i>Advanced Functional Materials</i> , 2021, 31, 2007340. | 7.8 | 30 |
| 114 | Review of inorganic thermoelectric materials. , 2021, , 81-145. | | 1 |
| 115 | The role of electronegativity in the thermoelectric performance of $\text{GeTe}_{1-x}\text{V}_{2x}$ solid solutions. <i>Journal of Materials Chemistry A</i> , 2021, 9, 2385-2393. | 5.2 | 22 |
| 116 | CALPHAD as a powerful technique for design and fabrication of thermoelectric materials. <i>Journal of Materials Chemistry A</i> , 2021, 9, 6634-6649. | 5.2 | 16 |
| 117 | Hierarchical structures lead to high thermoelectric performance in $\text{Cu}_{m+n}\text{Pb}_{100-m}\text{Sb}_m\text{Te}_{100}\text{Se}_{2m}$ (CLAST). <i>Energy and Environmental Science</i> , 2021, 14, 451-461. | 15.6 | 47 |
| 118 | Enhanced thermoelectric performance of hydrothermally synthesized polycrystalline Te-doped SnSe. <i>Chinese Chemical Letters</i> , 2021, 32, 811-815. | 4.8 | 18 |
| 119 | Datos administrativos agregados y estimación a partir de muestras no probabilísticas. <i>Revista Internacional De Sociología</i> , 2021, 79, e180. | 0.0 | 0 |
| 120 | Carbon allotrope hybrids advance thermoelectric development and applications. <i>Renewable and Sustainable Energy Reviews</i> , 2021, 141, 110800. | 8.2 | 87 |
| 121 | Optimization of the Thermoelectric Properties of p-Type $\text{Mg}_{2-x}\text{Li}_x\text{Ge}_{1-x}\text{Sn}_x$ and $\text{Mg}_{2-x}\text{Li}_x\text{Ge}_{1-x}\text{Si}_x$ with $x, z = 0.1$ and 0.2 . <i>ACS Applied Energy Materials</i> , 2021, 4, 5533-5542. | 2.5 | 3 |
| 122 | Contrasting Cu Roles Lead to High Ranged Thermoelectric Performance of PbS. <i>Advanced Functional Materials</i> , 2021, 31, 2102185. | 7.8 | 33 |
| 123 | Anharmonicity and correlated dynamics of PbTe and PbS studied by single crystal x-ray scattering. <i>Physical Review B</i> , 2021, 103, . | 1.1 | 7 |
| 124 | Nano-scale compositional oscillation and phase intergrowth in $\text{Cu}_2\text{S}_{0.5}\text{Se}_{0.5}$ and their role in thermal transport. <i>Journal of Materials Science and Technology</i> , 2021, 79, 222-229. | 5.6 | 3 |
| 125 | Study on the properties of $\text{Ca}_9\text{Co}_{12}\text{O}_{28}$ under high pressure. <i>Ceramics International</i> , 2021, 47, 34388-34388. | 2.3 | 0 |
| 126 | Thermoelectric degrees of freedom determining thermoelectric efficiency. <i>IScience</i> , 2021, 24, 102934. | 1.9 | 15 |
| 127 | Fully printed and flexible carbon nanotube-based thermoelectric generator capable for high-temperature applications. <i>Journal of Power Sources</i> , 2021, 507, 230323. | 4.0 | 18 |
| 128 | Optimizing thermocouple's ZT through design innovation. <i>Scientific Reports</i> , 2021, 11, 19338. | 1.6 | 2 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|------|-----------|
| 129 | P-Ca ₃ Co ₄ O ₉ /n-Zn _{0.98} Al _{0.02} O module for high temperature thermoelectric generator. Journal of Physics: Conference Series, 2021, 2013, 012022. | 0.3 | 0 |
| 130 | Zn-Induced Defect Complexity for the High Thermoelectric Performance of n-Type PbTe Compounds. ACS Applied Materials & Interfaces, 2021, 13, 43134-43143. | 4.0 | 16 |
| 131 | Enhanced thermoelectric performance in GeTe-Sb ₂ Te ₃ pseudo-binary via lattice symmetry regulation and microstructure stabilization. Materials Today Physics, 2021, 21, 100507. | 2.9 | 12 |
| 132 | High entropy stabilization and band engineering driven high figure of merit in nanostructured PbSn _{0.875} TeSeBi _{0.125} alloy. Journal of Solid State Chemistry, 2021, 303, 122531. | 1.4 | 4 |
| 133 | Thermoelectric performance of nanostructured PbSnTeSe high entropy thermoelectric alloy synthesized via spark plasma sintering. Physica B: Condensed Matter, 2021, 622, 413319. | 1.3 | 11 |
| 134 | Thermoelectric performance of Dy/Y co-doped SrTiO ₃ ceramic composites with submicron A ₂ Ti ₂ O ₇ (A = Dy, Y) pyrochlore. Journal Physics D: Applied Physics, 2021, 54, 155501. | 1.3 | 5 |
| 135 | Defect engineering in thermoelectric materials: what have we learned?. Chemical Society Reviews, 2021, 50, 9022-9054. | 18.7 | 201 |
| 136 | Synergistic Strategies to Boost Lead Telluride as Prospective Thermoelectrics. , 2021, , 155-189. | | 2 |
| 137 | Cu ₂ Se thermoelectrics: property, methodology, and device. Nano Today, 2020, 35, 100938. | 6.2 | 119 |
| 138 | Chalcogenide Thermoelectric Materials. RSC Energy and Environment Series, 2016, , 27-59. | 0.2 | 8 |
| 139 | Defects Engineering with Multiple Dimensions in Thermoelectric Materials. Research, 2020, 2020, 9652749. | 2.8 | 56 |
| 140 | Interface performance of PbTe-based thermoelectric joints. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 246801-246801. | 0.2 | 1 |
| 141 | Quasi-layered Crystal Structure Coupled with Point Defects Leading to Ultralow Lattice Thermal Conductivity in n-Type Cu _{2.83} Bi ₁₀ Se ₁₆ . ACS Applied Energy Materials, 2021, 4, 11325-11335. | 2.5 | 5 |
| 142 | Recent Progress in Multiphase Thermoelectric Materials. Materials, 2021, 14, 6059. | 1.3 | 23 |
| 143 | Strained Endotaxial PbS Nanoprecipitates Boosting Ultrahigh Thermoelectric Quality Factor in n-Type PbTe As-Cast Ingots. Small, 2021, 17, e2104496. | 5.2 | 20 |
| 144 | Lead Chalcogenide Thermoelectric Materials. , 2019, , 83-104. | | 1 |
| 145 | High Thermoelectric Performance due to Nanoprecipitation, Band Convergence, and Interface Potential Barrier in PbTe-PbSe-PbS Quaternary Alloys and Composites. , 2019, , 105-136. | | 0 |
| 146 | Pb-Pb-Cu-S Composites for Thermoelectric Application. ACS Applied Materials & Interfaces, 2021, 13, 51373-51382. | 4.0 | 9 |

| # | ARTICLE | IF | CITATIONS |
|-----|---|------|-----------|
| 147 | Tuning figure of merit in Na doped nanocrystalline PbSnTeSe high entropy alloy via band engineering. <i>Materials Science in Semiconductor Processing</i> , 2022, 138, 106270. | 1.9 | 5 |
| 148 | Performance Optimization for PbTe-Based Thermoelectric Materials. <i>Frontiers in Energy Research</i> , 2021, 9, . | 1.2 | 8 |
| 149 | Room temperature aqueous-based synthesis of copper-doped lead sulfide nanoparticles for thermoelectric application. <i>Chemical Engineering Journal</i> , 2022, 433, 133837. | 6.6 | 8 |
| 150 | An Overview of the Strategies for Tin Selenide Advancement in Thermoelectric Application. <i>Micromachines</i> , 2021, 12, 1463. | 1.4 | 7 |
| 151 | Stability and effect of PbS nanoinclusions in thermoelectric PbTe. <i>Journal of Materials Chemistry A</i> , 2022, 10, 1473-1480. | 5.2 | 5 |
| 152 | Enhancement of thermoelectric performance for n-type PbS via synergy of CuSbS ₂ alloying and Cl doping. <i>Journal of Alloys and Compounds</i> , 2022, 899, 163362. | 2.8 | 0 |
| 153 | Extraordinary role of Zn in enhancing thermoelectric performance of Ga-doped n-type PbTe. <i>Energy and Environmental Science</i> , 2022, 15, 368-375. | 15.6 | 107 |
| 154 | Phase Modulation Enabled High Thermoelectric Performance in Polycrystalline Ge _{0.75} Te _{0.25} . <i>Advanced Functional Materials</i> , 2022, 32, . | 7.8 | 7 |
| 155 | Imprints of interfaces in thermoelectric materials. <i>Critical Reviews in Solid State and Materials Sciences</i> , 2023, 48, 361-410. | 6.8 | 6 |
| 156 | Thermodynamic approaches to determine the vacancy concentration in defective Nb ₁ -CoSb half-Heusler thermoelectric materials. <i>Acta Materialia</i> , 2022, 228, 117736. | 3.8 | 5 |
| 157 | Abnormally Low Lattice Thermal Conductivity in ABX ₃ Honeycomb Compounds. <i>Physical Review Applied</i> , 2021, 16, . | 1.5 | 11 |
| 158 | Structural, microstructural, magnetic, and thermoelectric properties of bulk and nanostructured n-type CuFeS ₂ Chalcopyrite. <i>Ceramics International</i> , 2022, 48, 29039-29048. | 2.3 | 11 |
| 159 | High Thermoelectric Performance in Chalcopyrite Cu _{1-x} Ag _x GaTe ₂ –ZnTe: Nontrivial Band Structure and Dynamic Doping Effect. <i>Journal of the American Chemical Society</i> , 2022, 144, 9113-9125. | 6.6 | 29 |
| 161 | SnSe nanoparticles with the ultra-low lattice thermal conductivity: synthesis and characterization. <i>Journal of Nanoparticle Research</i> , 2022, 24, . | 0.8 | 3 |
| 162 | Neural network-assisted optimization of segmented thermoelectric power generators using active learning based on a genetic optimization algorithm. <i>Energy Reports</i> , 2022, 8, 6633-6644. | 2.5 | 15 |
| 163 | Iso efficiency in nanostructured thermoelectric materials. <i>Energy Conversion and Management</i> , 2022, 266, 115857. | 4.4 | 3 |
| 164 | Processing High-Performance Thermoelectric Materials in a Green Way: A Proof of Concept in Cold Sintered PbTe _{0.94} Se _{0.06} . <i>ACS Applied Materials & Interfaces</i> , 2022, 14, 37937-37946. | 4.0 | 7 |
| 165 | Synthesis and Characterization of New Multinary Selenides A ₁₀ B ₁₈ Se ₃₇ (A=Sn/Pb; B=In/Sb/Bi). <i>European Journal of Inorganic Chemistry</i> , 0, , . | 1.0 | 1 |

| # | ARTICLE | IF | CITATIONS |
|-----|--|-----|-----------|
| 166 | Intrinsic properties and dopability effects on the thermoelectric performance of binary Sn chalcogenides from first principles. <i>Frontiers in Electronic Materials</i> , 0, 2, . | 1.6 | 0 |
| 167 | Enhanced Thermoelectric Performance and Mechanical Property in Layered Chalcostibite $\text{CuSb}_{1-x}\text{Pb}_x\text{Se}_2$. <i>ACS Applied Energy Materials</i> , 2023, 6, 723-733. | 2.5 | 6 |
| 168 | Enhanced thermoelectric properties of SnTe through core-shell structures and band engineering. <i>Journal of Alloys and Compounds</i> , 2023, 942, 169010. | 2.8 | 1 |
| 169 | High-performance thermoelectrics of p-type PbTe via synergistic regulation of band and microstructure engineering. <i>Materials Today Physics</i> , 2023, 34, 101061. | 2.9 | 5 |
| 170 | Tuning thermoelectric figure of merit in Ag doped nanostructured PbSnTeSe alloy by entropy and band engineering phenomena. <i>Materials Today Communications</i> , 2023, 35, 105880. | 0.9 | 0 |
| 171 | In-situ construction of all-scale hierarchical microstructure and thermoelectric properties of $(\text{Sr}_{0.25}\text{Ca}_{0.25}\text{Ba}_{0.25}\text{La}_{0.25})\text{TiO}_3/\text{Pb@Bi}$ composite oxide ceramics. <i>Journal of Materiomics</i> , 2023, , . | 2.8 | 3 |
| 172 | Lead Vacancy Promotes Sodium Solubility to Achieve Ultra-High zT in Only Ternary $\text{Pb}_{1-x}\text{Na}_x\text{Te}$. <i>Small</i> , 2023, 19, . | 5.2 | 5 |
| 173 | Room-Temperature Thermoelectric Performance of n-Type Multiphase Pseudobinary $\text{Bi}_2\text{Te}_3\text{-Bi}_2\text{S}_3$ Compounds: Synergic Effects of Phonon Scattering and Energy Filtering. <i>ACS Applied Materials & Interfaces</i> , 2023, 15, 19220-19229. | 4.0 | 9 |