

# Li-Dong Zhao

## List of Publications by Year in Descending Order

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

267  
papers

24,463  
citations

75  
h-index

153  
g-index

289  
ext. papers

28,990  
ext. citations

11.6  
avg, IF

7.47  
L-index

| #   | Paper   | IF   | Citations |
|-----|---|------|-----------|
| 267 | Realizing synergistic optimization of thermoelectric properties in n-type BiSbSe <sub>3</sub> polycrystals via co-doping zirconium and halogen. <i>Materials Today Physics</i> , <b>2022</b> , 22, 100608   | 8    | 1         |
| 266 | Ultrahigh carrier mobility contributes to remarkably enhanced thermoelectric performance in n-type PbSe. <i>Energy and Environmental Science</i> , <b>2022</b> , 15, 346-355                                | 35.4 | 8         |
| 265 | Enhanced thermoelectric performance in cubic form of SnSe stabilized through enformingly alloying AgSbTe <sub>2</sub> . <i>Acta Materialia</i> , <b>2022</b> , 227, 117681                                  | 8.4  | 1         |
| 264 | Remarkable electron and phonon transports in low-cost SnS: A new promising thermoelectric material. <i>Science China Materials</i> , <b>2022</b> , 65, 1143-1155  | 7.1  | 2         |
| 263 | Synergistically optimizing carrier and phonon transport properties in n-type PbTe through I doping and SnSe alloying. <i>Materials Today Energy</i> , <b>2022</b> , 100983                                  | 7    | 0         |
| 262 | High thermoelectric performance realized through manipulating layered phonon-electron decoupling.. <i>Science</i> , <b>2022</b> , 375, 1385-1389  | 33.3 | 24        |
| 261 | Distinct electron and hole transports in SnSe crystals. <i>Science Bulletin</i> , <b>2022</b> , 67, 1105-1105   | 10.6 | 1         |
| 260 | Synergistically Enhanced Thermoelectric Properties in n-Type Bi <sub>6</sub> Cu <sub>2</sub> Se <sub>4</sub> O <sub>6</sub> through Inducing Resonant Levels. <i>Acta Materialia</i> , <b>2022</b> , 117930 | 8.4  | 1         |
| 259 | Enhanced thermoelectric performance in SnTe due to the energy filtering effect introduced by Bi <sub>2</sub> O <sub>3</sub> . <i>Materials Today Energy</i> , <b>2022</b> , 25, 100985                      | 7    | 5         |
| 258 | Honeycomb-like puckered PbSe with wide bandgap as promising thermoelectric material: a first-principles prediction. <i>Materials Today Energy</i> , <b>2021</b> , 23, 100914                                | 7    | 4         |
| 257 | Evaluation on the Thermoelectric Cooling Ability of PbTe. <i>ACS Applied Energy Materials</i> , <b>2021</b> , 4, 11813-11818  | 11.8 | 0         |
| 256 | Realizing ranged performance in SnTe through integrating bands convergence and DOS distortion. <i>Journal of Materiomics</i> , <b>2021</b> , 8, 184-184   | 6.7  | 1         |
| 255 | Realizing high thermoelectric properties in p-type polycrystalline SnSe by inducing DOS distortion. <i>Rare Metals</i> , <b>2021</b> , 40, 2819-2828  | 5.5  | 5         |
| 254 | Contrasting Thermoelectric Transport Properties of n-Type PbS Induced by Adding Ni and Zn. <i>ACS Applied Energy Materials</i> , <b>2021</b> , 4, 6284-6289   | 6.1  | 0         |
| 253 | Nanoscale bubble domains with polar topologies in bulk ferroelectrics. <i>Nature Communications</i> , <b>2021</b> , 12, 3632  | 17.4 | 10        |
| 252 | Contrasting Cu Roles Lead to High Ranged Thermoelectric Performance of PbS. <i>Advanced Functional Materials</i> , <b>2021</b> , 31, 2102185  | 15.6 | 14        |
| 251 | Dynamic carrier transports and low thermal conductivity in n-type layered InSe thermoelectrics. <i>Aggregate</i> , <b>2021</b> , 2, e92   | 22.9 | 2         |

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| 250 | Realizing N-type SnTe Thermoelectrics with Competitive Performance through Suppressing Sn Vacancies. <i>Journal of the American Chemical Society</i> , <b>2021</b> , 143, 8538-8542  | 16.4 | 12 |
| 249 | Slowing down the heat in thermoelectrics. <i>Informa Mater</i> , <b>2021</b> , 3, 755-789  | 23.1 | 20 |
| 248 | An Update Review on -Type Layered Oxyselenide Thermoelectric Materials. <i>Materials</i> , <b>2021</b> , 14,   | 3.5  | 4  |
| 247 | Physical insights on the low lattice thermal conductivity of AgInSe <sub>2</sub> . <i>Materials Today Physics</i> , <b>2021</b> , 19, 100428   | 8    | 9  |
| 246 | Power generation and thermoelectric cooling enabled by momentum and energy multiband alignments. <i>Science</i> , <b>2021</b> , 373, 556-561   | 33.3 | 79 |
| 245 | Understanding the electrical transports of p-type polycrystalline SnSe with effective medium theory. <i>Applied Physics Letters</i> , <b>2021</b> , 119, 044103  | 3.4  | 2  |
| 244 | Boosting thermoelectric performance of n-type PbS through synergistically integrating In resonant level and Cu dynamic doping. <i>Journal of Physics and Chemistry of Solids</i> , <b>2021</b> , 148, 109640                             | 3.9  | 10 |
| 243 | Enhanced thermoelectric performance in Cl-doped BiSbSe <sub>3</sub> with optimal carrier concentration and effective mass. <i>Journal of Materials Science and Technology</i> , <b>2021</b> , 70, 67-72                                  | 9.1  | 5  |
| 242 | Preparing bulk Cu-Ni-Mn based thermoelectric alloys and synergistically improving their thermoelectric and mechanical properties using nanotwins and nanoprecipitates. <i>Materials Today Physics</i> , <b>2021</b> , 17, 100332         | 8    | 8  |
| 241 | Boosting the thermoelectric performance of GeTe by manipulating the phase transition temperature via Sb doping. <i>Journal of Materials Chemistry C</i> , <b>2021</b> , 9, 6484-6490   | 7.1  | 6  |
| 240 | Hierarchical structures lead to high thermoelectric performance in Cu <sub>m</sub> +nPb <sub>100</sub> Sb <sub>m</sub> Te <sub>100</sub> Se <sub>2m</sub> (CLAST). <i>Energy and Environmental Science</i> , <b>2021</b> , 14, 451-461   | 35.4 | 22 |
| 239 | Realizing high doping efficiency and thermoelectric performance in n-type SnSe polycrystals via bandgap engineering and vacancy compensation. <i>Materials Today Physics</i> , <b>2021</b> , 20, 100452                                  | 8    | 3  |
| 238 | Band structure and microstructure modulations enable high quality factor to elevate thermoelectric performance in Ge <sub>0.9</sub> Sb <sub>0.1</sub> Te-x%FeTe <sub>2</sub> . <i>Materials Today Physics</i> , <b>2021</b> , 20, 100444 | 8    | 6  |
| 237 | Anisotropic thermoelectric transport properties in polycrystalline SnSe <sub>2</sub> *. <i>Chinese Physics B</i> , <b>2021</b> , 30, 067101  | 1.2  | 1  |
| 236 | Enhancing thermoelectric performance of n-type Bi <sub>6</sub> Cu <sub>2</sub> Se <sub>4</sub> O <sub>6</sub> through introducing transition metal elements. <i>Scripta Materialia</i> , <b>2021</b> , 202, 114010                       | 5.6  | 4  |
| 235 | Thermo-phototronic effect in p-type Na-doped SnS single crystals for enhanced self-powered photodetectors. <i>Nano Energy</i> , <b>2021</b> , 88, 106268   | 17.1 | 1  |
| 234 | Band convergence and nanostructure modulations lead to high thermoelectric performance in SnPb <sub>0.04</sub> Te-y% AgSbTe <sub>2</sub> . <i>Materials Today Physics</i> , <b>2021</b> , 21, 100505                                     | 8    | 7  |
| 233 | Bridging the miscibility gap towards higher thermoelectric performance of PbS. <i>Acta Materialia</i> , <b>2021</b> , 220, 117337  | 8.4  | 4  |

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|-----|---|------|----|
| 232 | Realizing high thermoelectric performance in SnSe <sub>2</sub> via intercalating Cu. <i>Wuli Xuebao/Acta Physica Sinica</i> , <b>2021</b> , 0-0   | 0.6  | 0  |
| 231 | Phonon and Carrier Transport Properties in Low-Cost and Environmentally Friendly SnS <sub>2</sub> : A Promising Thermoelectric Material. <i>Chemistry of Materials</i> , <b>2020</b> , 32, 10348-10356                                    | 9.6  | 7  |
| 230 | Investigation on carrier mobility when comparing nanostructures and bands manipulation. <i>Nanoscale</i> , <b>2020</b> , 12, 12741-12747  | 7.7  | 9  |
| 229 | Influence of direct electric current on wetting behavior during brazing. <i>Frontiers of Mechanical Engineering</i> , <b>2020</b> , 15, 496-503   | 3.3  |    |
| 228 | Thermoelectric transport properties of PbS and its contrasting electronic band structures. <i>Scripta Materialia</i> , <b>2020</b> , 185, 76-81   | 5.6  | 4  |
| 227 | Key influencing factors for the thermal shock resistance of La <sub>2</sub> Zr <sub>2</sub> O <sub>7</sub> -based multilayer TBCs. <i>Surface and Coatings Technology</i> , <b>2020</b> , 396, 125951                                     | 4.4  | 8  |
| 226 | Extremely low thermal conductivity from bismuth selenohalides with 1D soft crystal structure. <i>Science China Materials</i> , <b>2020</b> , 63, 1759-1768  | 7.1  | 22 |
| 225 | Estimation of the potential performance in p-type SnSe crystals through evaluating weighted mobility and effective mass. <i>Journal of Materiomics</i> , <b>2020</b> , 6, 671-676   | 6.7  | 23 |
| 224 | Sb <sub>2</sub> Si <sub>2</sub> Te <sub>6</sub> : A Robust New Thermoelectric Material. <i>Trends in Chemistry</i> , <b>2020</b> , 2, 89-91   | 14.8 | 12 |
| 223 | Synergistically improving thermoelectric and mechanical properties of Ge <sub>0.94</sub> Bi <sub>0.06</sub> Te through dispersing nano-SiC. <i>Scripta Materialia</i> , <b>2020</b> , 183, 22-27  | 5.6  | 17 |
| 222 | A telomerase-responsive nanoprobe with theranostic properties in tumor cells. <i>Talanta</i> , <b>2020</b> , 215, 120888  | 8.8  | 5  |
| 221 | Molecular Construction from AgGaS <sub>2</sub> to CuZnPS <sub>4</sub> : Defect-Induced Second Harmonic Generation Enhancement and Cosubstitution-Driven Band Gap Enlargement. <i>Chemistry of Materials</i> , <b>2020</b> , 32, 3288-3296 | 9.6  | 34 |
| 220 | Ultrahigh Average Realized in p-Type SnSe Crystalline Thermoelectrics through Producing Extrinsic Vacancies. <i>Journal of the American Chemical Society</i> , <b>2020</b> , 142, 5901-5909   | 16.4 | 51 |
| 219 | Contrasting roles of small metallic elements M (M = Cu, Zn, Ni) in enhancing the thermoelectric performance of n-type PbM <sub>0.01</sub> Se. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 5699-5708                        | 13   | 12 |
| 218 | Enhancing thermoelectric performance of BiSbSe <sub>3</sub> through improving carrier mobility via percolating carrier transports. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 836, 155473                                     | 5.7  | 6  |
| 217 | Improving the thermoelectric performance of p-type PbSe via synergistically enhancing the Seebeck coefficient and reducing electronic thermal conductivity. <i>Journal of Materials Chemistry A</i> , <b>2020</b> , 8, 4931-4937          | 13   | 18 |
| 216 | Enhancing thermoelectric performance of n-type PbTe through separately optimizing phonon and charge transport properties. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 828, 154377  | 5.7  | 7  |
| 215 | Carrier mobility does matter for enhancing thermoelectric performance. <i>APL Materials</i> , <b>2020</b> , 8, 010901   | 5.7  | 27 |

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| 214 | Band Sharpening and Band Alignment Enable High Quality Factor to Enhance Thermoelectric Performance in -Type PbS. <i>Journal of the American Chemical Society</i> , <b>2020</b> , 142, 4051-4060   | 16.4 | 71  |
| 213 | Large effective mass and low lattice thermal conductivity contributing to high thermoelectric performance of Zn-doped Cu <sub>5</sub> Sn <sub>2</sub> Se <sub>7</sub> . <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 826, 154154 | 5.7  | 7   |
| 212 | High-quality textured SnSe thin films for self-powered, rapid-response photothermoelectric application. <i>Nano Energy</i> , <b>2020</b> , 72, 104742  | 17.1 | 30  |
| 211 | Temperature-driven n-p conduction type switching without structural transition in a Cu-rich chalcogenide, NaCuS. <i>Chemical Communications</i> , <b>2020</b> , 56, 4882-4885  | 5.8  | 3   |
| 210 | Seeking new, highly effective thermoelectrics. <i>Science</i> , <b>2020</b> , 367, 1196-1197   | 33.3 | 161 |
| 209 | Contrasting Thermoelectric Transport Behaviors of -Type PbS Caused by Doping Alkali Metals (Li and Na). <i>Research</i> , <b>2020</b> , 2020, 4084532  | 7.8  | 0   |
| 208 | An approach of enhancing thermoelectric performance for p-type PbS: Decreasing electronic thermal conductivity. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 820, 153453   | 5.7  | 11  |
| 207 | High thermoelectric figure of merit ZT > 1 in SnS polycrystals. <i>Journal of Materiomics</i> , <b>2020</b> , 6, 77-85   | 6.7  | 26  |
| 206 | Band inversion induced multiple electronic valleys for high thermoelectric performance of SnTe with strong lattice softening. <i>Nano Energy</i> , <b>2020</b> , 69, 104395  | 17.1 | 55  |
| 205 | Synergistically Enhancing Thermoelectric Performance of n-Type PbTe with Indium Doping and Sulfur Alloying. <i>Annalen Der Physik</i> , <b>2020</b> , 532, 1900421   | 2.6  | 11  |
| 204 | High-Quality SnSe <sub>2</sub> Single Crystals: Electronic and Thermoelectric Properties. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 10787-10792   | 6.1  | 10  |
| 203 | Predicting the Potential Performance in P-Type SnS Crystals via Utilizing the Weighted Mobility and Quality Factor. <i>Chinese Physics Letters</i> , <b>2020</b> , 37, 087104  | 1.8  | 12  |
| 202 | Symmetry and asymmetry in thermoelectrics. <i>Journal of Materials Chemistry C</i> , <b>2020</b> , 8, 12054-12061  | 7.1  | 8   |
| 201 | Single-Crystal SnSe Thermoelectric Fibers via Laser-Induced Directional Crystallization: From 1D Fibers to Multidimensional Fabrics. <i>Advanced Materials</i> , <b>2020</b> , 32, e2002702  | 24   | 25  |
| 200 | Synergistically optimizing charge and phonon transport properties in n-type PbTe via introducing ternary compound AgSb(Se, Te) <sub>2</sub> . <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 815, 152463                           | 5.7  | 8   |
| 199 | Electrical and Thermal Transport Properties of n-type Bi <sub>6</sub> Cu <sub>2</sub> Se <sub>4</sub> O <sub>6</sub> (2BiCuSeO + 2Bi <sub>2</sub> O <sub>2</sub> Se). <i>Annalen Der Physik</i> , <b>2020</b> , 532, 1900340               | 2.6  | 5   |
| 198 | Realizing High Thermoelectric Performance in Polycrystalline SnSe via Silver Doping and Germanium Alloying. <i>ACS Applied Energy Materials</i> , <b>2020</b> , 3, 2049-2054   | 6.1  | 29  |
| 197 | Comprehensive Investigation on the Thermoelectric Properties of p-Type PbTe-PbSe-PbS Alloys. <i>Advanced Electronic Materials</i> , <b>2019</b> , 5, 1900609   | 6.4  | 20  |

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| 196 | Pressure-induced enhancement of thermoelectric power factor in pristine and hole-doped SnSe crystals.. <i>RSC Advances</i> , <b>2019</b> , 9, 26831-26837   | 3.7  | 4   |
| 195 | Layered oxygen-containing thermoelectric materials: Mechanisms, strategies, and beyond. <i>Materials Today</i> , <b>2019</b> , 29, 68-85  | 21.8 | 35  |
| 194 | Realizing High Thermoelectric Performance in GeTe through Optimizing Ge Vacancies and Manipulating Ge Precipitates. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 7594-7601  | 6.1  | 37  |
| 193 | Thermo-photoelectric coupled effect induced electricity in N-type SnSe:Br single crystals for enhanced self-powered photodetectors. <i>Nano Energy</i> , <b>2019</b> , 66, 104111   | 17.1 | 29  |
| 192 | High thermoelectric performance in low-cost SnSSe crystals. <i>Science</i> , <b>2019</b> , 365, 1418-1424   | 33.3 | 233 |
| 191 | Thermoelectric transport properties of n-type tin sulfide. <i>Scripta Materialia</i> , <b>2019</b> , 170, 99-105  | 5.6  | 17  |
| 190 | Realizing High-Ranged Out-of-Plane ZTs in N-Type SnSe Crystals through Promoting Continuous Phase Transition. <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1901334   | 21.8 | 51  |
| 189 | Significant Optimization of Electron-Phonon Transport of n-Type BiOSe by Mechanical Manipulation of Se Vacancies via Shear Exfoliation. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2019</b> , 11, 21603-21609   | 9.5  | 28  |
| 188 | Seeing atomic-scale structural origins and foreseeing new pathways to improved thermoelectric materials. <i>Materials Horizons</i> , <b>2019</b> , 6, 1548-1570   | 14.4 | 16  |
| 187 | Synergistically optimizing interdependent thermoelectric parameters of n-type PbSe through alloying CdSe. <i>Energy and Environmental Science</i> , <b>2019</b> , 12, 1969-1978   | 35.4 | 63  |
| 186 | Realizing n-type BiCuSeO through halogens doping. <i>Ceramics International</i> , <b>2019</b> , 45, 14953-14957   | 5.1  | 7   |
| 185 | Dynamic Ag <sup>+</sup> -intercalation with AgSnSe <sub>2</sub> nano-precipitates in Cl-doped polycrystalline SnSe <sub>2</sub> toward ultra-high thermoelectric performance. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 9761-9772            | 13   | 25  |
| 184 | Realizing high thermoelectric performance of polycrystalline SnS through optimizing carrier concentration and modifying band structure. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 789, 485-492   | 5.7  | 23  |
| 183 | Amphoteric Indium Enables Carrier Engineering to Enhance the Power Factor and Thermoelectric Performance in n-Type Ag <sub>n</sub> Pb <sub>100</sub> In <sub>n</sub> Te <sub>100+2n</sub> (LIST). <i>Advanced Energy Materials</i> , <b>2019</b> , 9, 1900414 | 21.8 | 34  |
| 182 | Effects of temperature and pressure on the optical and vibrational properties of thermoelectric SnSe. <i>Physical Chemistry Chemical Physics</i> , <b>2019</b> , 21, 8663-8678  | 3.6  | 16  |
| 181 | A highly porous thermal barrier coating based on Gd <sub>2</sub> O <sub>3</sub> /b <sub>2</sub> O <sub>3</sub> co-doped YSZ. <i>Surface and Coatings Technology</i> , <b>2019</b> , 366, 349-354  | 4.4  | 10  |
| 180 | Oxygen adsorption and its influence on the thermoelectric performance of polycrystalline SnSe. <i>Journal of Materials Chemistry C</i> , <b>2019</b> , 7, 10507-10513   | 7.1  | 16  |
| 179 | Synergistically optimizing interdependent thermoelectric parameters of n-type PbSe through introducing a small amount of Zn. <i>Materials Today Physics</i> , <b>2019</b> , 9, 100102   | 8    | 25  |

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| 178 | Enhancing Thermoelectric Performance of p-Type PbSe through Suppressing Electronic Thermal Transports. <i>ACS Applied Energy Materials</i> , <b>2019</b> , 2, 8236-8243   | 6.1  | 18  |
| 177 | Enhancing thermoelectric transport properties of n-type PbS through introducing CaS/SrS. <i>Journal of Solid State Chemistry</i> , <b>2019</b> , 280, 120995  | 3.3  | 11  |
| 176 | Highly Textured N-Type SnSe Polycrystals with Enhanced Thermoelectric Performance. <i>Research</i> , <b>2019</b> , 2019, 9253132  | 7.8  | 21  |
| 175 | Synergistically optimized electrical and thermal transport properties of polycrystalline SnSe via alloying SnS. <i>Journal of Solid State Chemistry</i> , <b>2019</b> , 273, 85-91                                      | 3.3  | 15  |
| 174 | Realizing high thermoelectric performance in GeTe through decreasing the phase transition temperature via entropy engineering. <i>Journal of Materials Chemistry A</i> , <b>2019</b> , 7, 26393-26401                   | 13   | 58  |
| 173 | Probing exosome internalization pathways through confocal microscopy imaging. <i>Chemical Communications</i> , <b>2019</b> , 55, 14015-14018  | 5.8  | 11  |
| 172 | Enhancing the thermoelectric performance of Bi <sub>2</sub> S <sub>3</sub> : A promising earth-abundant thermoelectric material. <i>Frontiers of Physics</i> , <b>2019</b> , 14, 1                                      | 3.7  | 13  |
| 171 | Enhancing thermoelectric performance of SnTe via stepwisely optimizing electrical and thermal transport properties. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 773, 571-584                                 | 5.7  | 22  |
| 170 | Thermoelectric Material SnPbBiS: The L Member of Lillianite Homologous Series with Low Lattice Thermal Conductivity. <i>Inorganic Chemistry</i> , <b>2019</b> , 58, 1339-1348   | 5.1  | 4   |
| 169 | Intrinsically Low Thermal Conductivity in BiSbSe <sub>3</sub> : A Promising Thermoelectric Material with Multiple Conduction Bands. <i>Advanced Functional Materials</i> , <b>2019</b> , 29, 1806558                    | 15.6 | 53  |
| 168 | Wear behavior of HVOF-sprayed Al <sub>0.6</sub> TiCrFeCoNi high entropy alloy coatings at different temperatures. <i>Surface and Coatings Technology</i> , <b>2019</b> , 358, 215-222                                   | 4.4  | 56  |
| 167 | Realizing High Thermoelectric Performance in p-Type SnSe through Crystal Structure Modification. <i>Journal of the American Chemical Society</i> , <b>2019</b> , 141, 1141-1149   | 16.4 | 91  |
| 166 | Investigations on distinct thermoelectric transport behaviors of Cu in n-type PbS. <i>Journal of Alloys and Compounds</i> , <b>2019</b> , 781, 820-830  | 5.7  | 23  |
| 165 | High performance of n-type (PbS) <sub>1-x-y</sub> (PbSe) <sub>x</sub> (PbTe) <sub>y</sub> thermoelectric materials. <i>Journal of Alloys and Compounds</i> , <b>2018</b> , 744, 769-777                                 | 5.7  | 18  |
| 164 | Thermoelectric transport properties of Pb <sub>1-x</sub> Sn <sub>x</sub> Te system. <i>Rare Metals</i> , <b>2018</b> , 37, 343-350  | 5.5  | 40  |
| 163 | Remarkable electron and phonon band structures lead to a high thermoelectric performance ZT > 1 in earth-abundant and eco-friendly SnS crystals. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 10048-10056 | 13   | 59  |
| 162 | Thermoelectric transport properties of rock-salt SnSe: first-principles investigation. <i>Journal of Materials Chemistry C</i> , <b>2018</b> , 6, 12016-12022   | 7.1  | 22  |
| 161 | High-performance SnSe thermoelectric materials: Progress and future challenge. <i>Progress in Materials Science</i> , <b>2018</b> , 97, 283-346   | 42.2 | 273 |



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|-----|--|------|-----|
| 160 | Anharmonicity and low thermal conductivity in thermoelectrics. <i>Materials Today Physics</i> , <b>2018</b> , 4, 50-57   | 8    | 141 |
| 159 | Unusually large chemical potential shift in a degenerate semiconductor: Angle-resolved photoemission study of SnSe and Na-doped SnSe. <i>Physical Review B</i> , <b>2018</b> , 97,   | 3.3  | 9   |
| 158 | Measuring nano-scale thermal conductivity. <i>National Science Review</i> , <b>2018</b> , 5, 2-2   | 10.8 | 2   |
| 157 | Extraordinary thermoelectric performance in n-type manganese doped Mg <sub>3</sub> Sb <sub>2</sub> Zintl: High band degeneracy, tuned carrier scattering mechanism and hierarchical microstructure. <i>Nano Energy</i> , <b>2018</b> , 52, 246-255 | 17.1 | 117 |
| 156 | A mimetic transpiration system for record high conversion efficiency in solar steam generator under one-sun. <i>Materials Today Energy</i> , <b>2018</b> , 8, 166-173  | 7    | 106 |
| 155 | Investigations into the Surface Strain/Stress State in a Single-Crystal Superalloy via XRD Characterization. <i>Metals</i> , <b>2018</b> , 8, 376  | 2.3  | 1   |
| 154 | High temperature oxidation behavior of Al <sub>0.6</sub> CrFeCoNi and Al <sub>0.6</sub> CrFeCoNiSi <sub>0.3</sub> high entropy alloys. <i>Journal of Alloys and Compounds</i> , <b>2018</b> , 764, 845-852   | 5.7  | 44  |
| 153 | Realization of n-type and enhanced thermoelectric performance of p-type BiCuSeO by controlled iron incorporation. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 13340-13349   | 13   | 29  |
| 152 | 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> , <b>2018</b> , 11, 2486-2495                       | 35.4 | 129 |
| 151 | Influence of defects on the thermoelectricity in SnSe: A comprehensive theoretical study. <i>Physical Review B</i> , <b>2018</b> , 97,   | 3.3  | 33  |
| 150 | Homologous layered InFeO <sub>3</sub> (ZnO) m : new promising abradable seal coating materials. <i>Rare Metals</i> , <b>2018</b> , 37, 79-94   | 5.5  | 20  |
| 149 | Attempting to realize n-type BiCuSeO. <i>Journal of Solid State Chemistry</i> , <b>2018</b> , 258, 510-516   | 3.3  | 22  |
| 148 | Highly-anisotropic optical and electrical properties in layered SnSe. <i>Nano Research</i> , <b>2018</b> , 11, 554-564   | 10   | 77  |
| 147 | Large enhancement of electrical transport properties of SnS in the out-of-plane direction by n-type doping: a combined ARPES and DFT study. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 24588-24594                                 | 13   | 12  |
| 146 | Effect of Heat Treatment on the Phase Composition, Microstructure and Mechanical Properties of Al <sub>0.6</sub> CrFeCoNi and Al <sub>0.6</sub> CrFeCoNiSi <sub>0.3</sub> High-Entropy Alloys. <i>Metals</i> , <b>2018</b> , 8, 974                | 2.3  | 5   |
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| 144 | The Atomic Circus: Small Electron Beams Spotlight Advanced Materials Down to the Atomic Scale. <i>Advanced Materials</i> , <b>2018</b> , 30, e1802402  | 24   | 26  |
| 143 | The Thermoelectric Properties of SnSe Continue to Surprise: Extraordinary Electron and Phonon Transport. <i>Chemistry of Materials</i> , <b>2018</b> , 30, 7355-7367   | 9.6  | 52  |



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| 142 | Charge and phonon transport in PbTe-based thermoelectric materials. <i>Npj Quantum Materials</i> , <b>2018</b> , 3, 1-10   | 5    | 131 |
| 141 | Approaching Topological Insulating States Leads to High Thermoelectric Performance in n-Type PbTe. <i>Journal of the American Chemical Society</i> , <b>2018</b> , 140, 13097-13102  | 16.4 | 49  |
| 140 | 3D charge and 2D phonon transports leading to high out-of-plane in n-type SnSe crystals. <i>Science</i> , <b>2018</b> , 360, 778-783   | 33.3 | 569 |
| 139 | Synergistically optimizing electrical and thermal transport properties of n-type PbSe. <i>Progress in Natural Science: Materials International</i> , <b>2018</b> , 28, 275-280   | 3.6  | 5   |
| 138 | Excellent ZT achieved in Cu <sub>1.8</sub> S thermoelectric alloys through introducing rare-earth trichlorides. <i>Journal of Materials Chemistry A</i> , <b>2018</b> , 6, 14440-14448   | 13   | 23  |
| 137 | Effect of long-term heat-treatment at 1150 °C on the microstructure and properties of thermal barrier coatings based on ZrO <sub>2</sub> 4 mol.% Y <sub>2</sub> O <sub>3</sub> 1 mol.% Gd <sub>2</sub> O <sub>3</sub> 1 mol.% Yb <sub>2</sub> O <sub>3</sub> . <i>Surface and Coatings Technology</i> , <b>2017</b> , 318, 142-146 | 4.4  | 9   |
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| 135 | Thermoelectric transport properties of polycrystalline SnSe alloyed with PbSe. <i>Applied Physics Letters</i> , <b>2017</b> , 110, 053901  | 3.4  | 44  |
| 134 | Enhancing thermoelectric performance of n-type PbSe via additional meso-scale phonon scattering. <i>Inorganic Chemistry Frontiers</i> , <b>2017</b> , 4, 719-726   | 6.8  | 26  |
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| 132 | Improvements of thermoelectric properties for p-type Cu <sub>1.8</sub> S bulk materials via optimizing the mechanical alloying process. <i>Inorganic Chemistry Frontiers</i> , <b>2017</b> , 4, 1192-1199  | 6.8  | 18  |
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| 130 | Boosting the Thermoelectric Performance of (Na,K)-Codoped Polycrystalline SnSe by Synergistic Tailoring of the Band Structure and Atomic-Scale Defect Phonon Scattering. <i>Journal of the American Chemical Society</i> , <b>2017</b> , 139, 9714-9720  | 16.4 | 135 |
| 129 | Analysis of Nanoprecipitates in a Na-Doped PbTe-SrTe Thermoelectric Material with a High Figure of Merit. <i>ACS Applied Materials &amp; Interfaces</i> , <b>2017</b> , 9, 21791-21797   | 9.5  | 41  |
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| 125 | Enhancing thermoelectric performance of SnTe via nanostructuring particle size. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 709, 575-580  | 5.7  | 31  |

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| 121 | Promising Thermoelectric Bulk Materials with 2D Structures. <i>Advanced Materials</i> , <b>2017</b> , 29, 1702676   | 24   | 165  |
| 120 | Investigation on thermal transport and structural properties of InFeO <sub>3</sub> (ZnO) <sub>m</sub> with modulated layer structures. <i>Acta Materialia</i> , <b>2017</b> , 136, 235-241  | 8.4  | 9    |
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| 117 | Synergistically optimizing thermoelectric transport properties of n-type PbTe via Se and Sn co-alloying. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 724, 208-221  | 5.7  | 41   |
| 116 | Mercouri G. Kanatzidis: Excellence and Innovations in Inorganic and Solid-State Chemistry. <i>Inorganic Chemistry</i> , <b>2017</b> , 56, 7582-7597   | 5.1  | 3    |
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| 114 | Influence of long time post annealing on thermal stability and thermophysical properties of plasma sprayed La <sub>2</sub> Zr <sub>2</sub> O <sub>7</sub> coatings. <i>Journal of Alloys and Compounds</i> , <b>2017</b> , 695, 2549-2555 | 5.7  | 15   |
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| 112 | BiCuSeO Thermoelectrics: An Update on Recent Progress and Perspective. <i>Materials</i> , <b>2017</b> , 10,   | 3.5  | 59   |
| 111 | Rationally Designing High-Performance Bulk Thermoelectric Materials. <i>Chemical Reviews</i> , <b>2016</b> , 116, 12123-12149   | 68.1 | 1155 |
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| 109 | Non-equilibrium processing leads to record high thermoelectric figure of merit in PbTe-SrTe. <i>Nature Communications</i> , <b>2016</b> , 7, 12167  | 17.4 | 377  |
| 108 | Zhao et al. reply. <i>Nature</i> , <b>2016</b> , 539, E2-E3   | 50.4 | 10   |
| 107 | Understanding Nanostructuring Processes in Thermoelectrics and Their Effects on Lattice Thermal Conductivity. <i>Advanced Materials</i> , <b>2016</b> , 28, 2737-43   | 24   | 43   |

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| 25 | Effects of Co doping on the transport properties and superconductivity in CeFe(1-x)Co(x)AsO. <i>Journal of Physics Condensed Matter</i> , <b>2010</b> , 22, 115701  | 1.8  | 15  |
| 24 | Electrical transport properties of F-doped LaFeAsO oxypnictide. <i>Journal of Alloys and Compounds</i> , <b>2010</b> , 508, 606-609   | 5.7  | 9   |
| 23 | High-performance nanostructured thermoelectric materials. <i>NPG Asia Materials</i> , <b>2010</b> , 2, 152-158  | 10.3 | 679 |
| 22 | Development of new transient liquid phase system Au-Sn-Au for microsystem technology. <i>Frontiers of Mechanical Engineering in China</i> , <b>2010</b> , 5, 370-375  |      | 9   |
| 21 | Influence of the filler materials on flux-free brazing of pure aluminium (1050). <i>Frontiers of Mechanical Engineering in China</i> , <b>2010</b> , 5, 47-51   |      | 2   |
| 20 | Brazing of ceramic-to-ceramic and ceramic-to-metal joints in air. <i>Frontiers of Mechanical Engineering in China</i> , <b>2010</b> , 5, 125-129  |      | 13  |
| 19 | Application of cold spraying for flux-free brazing of aluminium alloy 6060. <i>Frontiers of Mechanical Engineering in China</i> , <b>2010</b> , 5, 256-260  |      | 3   |
| 18 | Superconductivity at 15 K in NdFe <sub>0.9</sub> Rh <sub>0.1</sub> AsO without F-doping. <i>Physica C: Superconductivity and Its Applications</i> , <b>2010</b> , 470, 165-167  | 1.3  | 6   |
| 17 | Development of a new wear resistant coating by arc spraying of a steel-based cored wire. <i>Frontiers of Mechanical Engineering in China</i> , <b>2009</b> , 4, 1-4   |      | 4   |



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|----|--|------|-----|
| 16 | Effects of annealing on electrical properties of n-type Bi <sub>2</sub> Te <sub>3</sub> fabricated by mechanical alloying and spark plasma sintering. <i>Journal of Alloys and Compounds</i> , <b>2009</b> , 467, 91-97          | 5.7  | 104 |
| 15 | Effect of mixed grain sizes on thermoelectric performance of Bi <sub>2</sub> Te <sub>3</sub> compound. <i>Journal of Applied Physics</i> , <b>2009</b> , 105, 023704   | 2.5  | 112 |
| 14 | Improvement of Thermoelectric Performance of CoSb <sub>3</sub> -xTex Skutterudite Compounds by Additional Substitution of IVB-Group Elements for Sb. <i>Chemistry of Materials</i> , <b>2008</b> , 20, 7526-7531                 | 9.6  | 137 |
| 13 | Thermoelectric and mechanical properties of nano-SiC-dispersed Bi <sub>2</sub> Te <sub>3</sub> fabricated by mechanical alloying and spark plasma sintering. <i>Journal of Alloys and Compounds</i> , <b>2008</b> , 455, 259-264 | 5.7  | 312 |
| 12 | Enhanced thermoelectric property originating from additional carrier pocket in skutterudite compounds. <i>Applied Physics Letters</i> , <b>2008</b> , 93, 042109   | 3.4  | 25  |
| 11 | Flux-free brazing of Mg-containing aluminium alloys by means of cold spraying. <i>Frontiers of Mechanical Engineering in China</i> , <b>2008</b> , 3, 355-359  |      | 3   |
| 10 | Enhanced thermoelectric properties of bismuth sulfide polycrystals prepared by mechanical alloying and spark plasma sintering. <i>Journal of Solid State Chemistry</i> , <b>2008</b> , 181, 3278-3282                            | 3.3  | 84  |
| 9  | Thermoelectric property of fine-grained CoSb <sub>3</sub> skutterudite compound fabricated by mechanical alloying and spark plasma sintering. <i>Journal Physics D: Applied Physics</i> , <b>2007</b> , 40, 566-572              | 3    | 69  |
| 8  | Effects of process parameters on electrical properties of n-type Bi <sub>2</sub> Te <sub>3</sub> prepared by mechanical alloying and spark plasma sintering. <i>Physica B: Condensed Matter</i> , <b>2007</b> , 400, 11-15       | 2.8  | 36  |
| 7  | Effects of Sb compensation on microstructure, thermoelectric properties and point defect of CoSb <sub>3</sub> compound. <i>Journal Physics D: Applied Physics</i> , <b>2007</b> , 40, 6784-6790                                  | 3    | 85  |
| 6  | Enhanced thermoelectric properties in CoSb <sub>3</sub> -xTex alloys prepared by mechanical alloying and spark plasma sintering. <i>Journal of Applied Physics</i> , <b>2007</b> , 102, 103717                                   | 2.5  | 187 |
| 5  | Outstanding CdSe with Multiple Functions Leads to High Performance of GeTe Thermoelectrics. <i>Advanced Energy Materials</i> , 2103779   | 21.8 | 3   |
| 4  | Low carrier concentration leads to high in-plane thermoelectric performance in n-type SnS crystals. <i>Science China Materials</i> , 1   | 7.1  | 3   |
| 3  | Rationally optimized carrier effective mass and carrier density leads to high average ZT value in n-type PbSe. <i>Journal of Materials Chemistry A</i> ,   | 13   | 5   |
| 2  | Carriers: the Less, the Faster <sup>1</sup> , 1-3  |      | 4   |
| 1  | High-Ranged ZT Value Promotes Thermoelectric Cooling and Power Generation in n-Type PbTe. <i>Advanced Energy Materials</i> , 2200204   | 21.8 | 5   |