

Gangjian Tan

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.

94
papers

10,865
citations

39
h-index

100
g-index

100
ext. papers

12,918
ext. citations

12.4
avg, IF

6.49
L-index

| # | Paper | IF | Citations |
|----|--|------|-----------|
| 94 | CrTe as a versatile thermoelectromagnetic multi-functional material. <i>Applied Physics Letters</i> , 2022 , 120, 023905 | 3.4 | 0 |
| 93 | Boosting Thermoelectric Performance of SnTe by Selective Alloying and Band Tuning. <i>Materials Today Energy</i> , 2022 , 25, 100958 | 7 | 3 |
| 92 | Rapid synthesis of garnet-type Li ₇ La ₃ Zr ₂ O ₁₂ solid electrolyte with superior electrochemical performance. <i>Journal of the European Ceramic Society</i> , 2021 , 42, 1568-1568 | 6 | 1 |
| 91 | Strategies for boosting thermoelectric performance of PbSe: A review. <i>Chemical Engineering Journal</i> , 2021 , 133699 | 14.7 | 4 |
| 90 | An Instant Change of Elastic Lattice Strain during Cu ₂ Se Phase Transition: Origin of Abnormal Thermoelectric Properties. <i>Advanced Functional Materials</i> , 2021 , 31, 2100431 | 15.6 | 9 |
| 89 | Strong Anisotropy and Bipolar Conduction-Dominated Thermoelectric Transport Properties in the Polycrystalline Topological Phase of ZrTe. <i>Inorganic Chemistry</i> , 2021 , 60, 8890-8897 | 5.1 | 3 |
| 88 | Copper ion chemistry in a new rechargeable all-solid-state copper-ion battery. <i>Journal of Solid State Chemistry</i> , 2021 , 298, 122112 | 3.3 | 0 |
| 87 | Quasi-isostructural Alloying of Cu ₂ SnSe ₃ /Cu ₃ SbSe ₄ toward Higher Thermoelectric Performance. <i>ACS Applied Energy Materials</i> , 2021 , 4, 6333-6339 | 6.1 | 5 |
| 86 | Lead-free SnTe-based compounds as advanced thermoelectrics. <i>Materials Today Physics</i> , 2021 , 19, 100405 | 5 | 17 |
| 85 | Power generation and thermoelectric cooling enabled by momentum and energy multiband alignments. <i>Science</i> , 2021 , 373, 556-561 | 33.3 | 79 |
| 84 | Achieving superior performance in thermoelectric Bi _{0.4} Sb _{1.6} Te _{3.72} by enhancing texture and inducing high-density line defects. <i>Science China Materials</i> , 2021 , 64, 1507-1520 | 7.1 | 3 |
| 83 | Dissociation of GaSb in n-Type PbTe: off-Centered Gallium Atom and Weak Electron-Phonon Coupling Provide High Thermoelectric Performance. <i>Chemistry of Materials</i> , 2021 , 33, 1842-1851 | 9.6 | 11 |
| 82 | In-situ formed nano-pore induced by Ultrasonication boosts the thermoelectric performance of Cu ₂ Se compounds. <i>Journal of Alloys and Compounds</i> , 2021 , 881, 160639 | 5.7 | 4 |
| 81 | Bridging the miscibility gap towards higher thermoelectric performance of PbS. <i>Acta Materialia</i> , 2021 , 220, 117337 | 8.4 | 4 |
| 80 | Identifying the Origins of High Thermoelectric Performance in Group IIIA Element Doped PbS. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 14203-14212 | 9.5 | 8 |
| 79 | One-Step Processing of Soft Electrolyte/Metallic Lithium Interface for High-Performance Solid-State Lithium Batteries. <i>ACS Applied Energy Materials</i> , 2020 , 3, 6139-6145 | 6.1 | 6 |
| 78 | Large effective mass and low lattice thermal conductivity contributing to high thermoelectric performance of Zn-doped Cu ₅ Sn ₂ Se ₇ . <i>Journal of Alloys and Compounds</i> , 2020 , 826, 154154 | 5.7 | 7 |

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| 77 | The electronic-thermal transport properties and the exploration of magneto-thermoelectric properties and the Nernst thermopower of Ag ₂ (1+)Se. <i>Journal of Solid State Chemistry</i> , 2020 , 288, 121453 ³³ | | 5 |
| 76 | Impurity states in Mo _{1-x} M _x Se ₂ compounds doped with group VB elements and their electronic and thermal transport properties. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 619-629 | 7.1 | 7 |
| 75 | Band inversion induced multiple electronic valleys for high thermoelectric performance of SnTe with strong lattice softening. <i>Nano Energy</i> , 2020 , 69, 104395 | 17.1 | 55 |
| 74 | Realizing High Thermoelectric Performance in Sb-Doped AgTe Compounds with a Low-Temperature Monoclinic Structure. <i>ACS Applied Materials & Interfaces</i> , 2020 , 12, 39425-39433 | 9.5 | 16 |
| 73 | Enhancing Thermoelectric Performance of n-Type PbSe through Forming Solid Solution with PbTe and PbS. <i>ACS Applied Energy Materials</i> , 2020 , 3, 2-8 | 6.1 | 21 |
| 72 | High Figure of Merit in Gallium-Doped Nanostructured n-Type PbTe-GeTe with Midgap States. <i>Journal of the American Chemical Society</i> , 2019 , 141, 16169-16177 | 16.4 | 44 |
| 71 | Ultralow thermal conductivity of BaAg ₂ SnSe ₄ and the effect of doping by Ga and In. <i>Materials Today Physics</i> , 2019 , 9, 100098 | 8 | 14 |
| 70 | One-step ultra-rapid fabrication and thermoelectric properties of CuSe bulk thermoelectric material.. <i>RSC Advances</i> , 2019 , 9, 10508-10519 | 3.7 | 6 |
| 69 | Ion Beam Induced Artifacts in Lead-Based Chalcogenides. <i>Microscopy and Microanalysis</i> , 2019 , 25, 831-839.5 | | 6 |
| 68 | Optimizing the average power factor of p-type (Na, Ag) co-doped polycrystalline SnSe.. <i>RSC Advances</i> , 2019 , 9, 7115-7122 | 3.7 | 12 |
| 67 | Enhancement of Thermoelectric Performance for n-Type PbS through Synergy of Gap State and Fermi Level Pinning. <i>Journal of the American Chemical Society</i> , 2019 , 141, 6403-6412 | 16.4 | 48 |
| 66 | Lattice Softening Significantly Reduces Thermal Conductivity and Leads to High Thermoelectric Efficiency. <i>Advanced Materials</i> , 2019 , 31, e1900108 | 24 | 91 |
| 65 | Six Quaternary Chalcogenides of the Pavonite Homologous Series with Ultralow Lattice Thermal Conductivity. <i>Chemistry of Materials</i> , 2019 , 31, 3430-3439 | 9.6 | 12 |
| 64 | Enhanced Density-of-States Effective Mass and Strained Endotaxial Nanostructures in Sb-Doped PbCdTe Thermoelectric Alloys. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 9197-9204 | 9.5 | 46 |
| 63 | Ion Beam Induced Artifacts in Lead Based Chalcogenides. <i>Microscopy and Microanalysis</i> , 2019 , 25, 2262-2263 | | 1 |
| 62 | 3D Printing of highly textured bulk thermoelectric materials: mechanically robust BiSbTe alloys with superior performance. <i>Energy and Environmental Science</i> , 2019 , 12, 3106-3117 | 35.4 | 64 |
| 61 | Ultralow Thermal Conductivity and High-Temperature Thermoelectric Performance in n-Type K ₂ Sb ₈ Se ₁₄ . <i>Chemistry of Materials</i> , 2019 , 31, 5943-5952 | 9.6 | 15 |
| 60 | Thermoelectric power generation: from new materials to devices. <i>Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences</i> , 2019 , 377, 20180450 | 3 | 70 |

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| 59 | Enhanced Mechanical Properties of NaPbTe/MoTe Thermoelectric Composites Through in-Situ-Formed MoTe. <i>ACS Applied Materials & Interfaces</i> , 2019 , 11, 41472-41481 | 9.5 | 5 |
| 58 | All-Scale Hierarchically Structured p-Type PbSe Alloys with High Thermoelectric Performance Enabled by Improved Band Degeneracy. <i>Journal of the American Chemical Society</i> , 2019 , 141, 4480-4486 | 16.4 | 62 |
| 57 | High-Performance PbTe Thermoelectric Films by Scalable and Low-Cost Printing. <i>ACS Energy Letters</i> , 2018 , 3, 818-822 | 20.1 | 38 |
| 56 | High Thermoelectric Performance in SnTeAgSbTe ₂ Alloys from Lattice Softening, Giant Phonon Vacancy Scattering, and Valence Band Convergence. <i>ACS Energy Letters</i> , 2018 , 3, 705-712 | 20.1 | 90 |
| 55 | Soft phonon modes from off-center Ge atoms lead to ultralow thermal conductivity and superior thermoelectric performance in n-type PbSe _{1-x} Te _x . <i>Energy and Environmental Science</i> , 2018 , 11, 3220-3230 | 35.4 | 75 |
| 54 | High Thermoelectric Performance in Supersaturated Solid Solutions and Nanostructured n-Type PbTe _{1-x} Te _x . <i>Advanced Functional Materials</i> , 2018 , 28, 1801617 | 15.6 | 69 |
| 53 | The Thermoelectric Properties of SnSe Continue to Surprise: Extraordinary Electron and Phonon Transport. <i>Chemistry of Materials</i> , 2018 , 30, 7355-7367 | 9.6 | 52 |
| 52 | Weak Electron Phonon Coupling and Deep Level Impurity for High Thermoelectric Performance Pb _{1-x} GaxTe. <i>Advanced Energy Materials</i> , 2018 , 8, 1800659 | 21.8 | 75 |
| 51 | The New Semiconductor Cs ₄ Cu ₃ Bi ₉ S ₁₇ . <i>Chemistry of Materials</i> , 2017 , 29, 1744-1751 | 9.6 | 10 |
| 50 | Thermoelectric transport properties of polycrystalline SnSe alloyed with PbSe. <i>Applied Physics Letters</i> , 2017 , 110, 053901 | 3.4 | 44 |
| 49 | High Thermoelectric Performance in Electron-Doped AgBiS with Ultralow Thermal Conductivity. <i>Journal of the American Chemical Society</i> , 2017 , 139, 6467-6473 | 16.4 | 115 |
| 48 | The Two-Dimensional ACdBiQ (A = K, Rb, Cs; Q = S, Se): Direct Bandgap Semiconductors and Ion-Exchange Materials. <i>Journal of the American Chemical Society</i> , 2017 , 139, 6978-6987 | 16.4 | 14 |
| 47 | Subtle Roles of Sb and S in Regulating the Thermoelectric Properties of N-Type PbTe to High Performance. <i>Advanced Energy Materials</i> , 2017 , 7, 1700099 | 21.8 | 88 |
| 46 | Semiconducting Pavanites CdMBi ₄ Se ₈ (M = Sn and Pb) and Their Thermoelectric Properties. <i>Chemistry of Materials</i> , 2017 , 29, 8494-8503 | 9.6 | 11 |
| 45 | Homologous Series of 2D Chalcogenides Cs-Ag-Bi-Q (Q = S, Se) with Ion-Exchange Properties. <i>Journal of the American Chemical Society</i> , 2017 , 139, 12601-12609 | 16.4 | 16 |
| 44 | Integrating Band Structure Engineering with All-Scale Hierarchical Structuring for High Thermoelectric Performance in PbTe System. <i>Advanced Energy Materials</i> , 2017 , 7, 1601450 | 21.8 | 125 |
| 43 | Thermal Stability of P-Type BiSbTe Alloys Prepared by Melt Spinning and Rapid Sintering. <i>Materials</i> , 2017 , 10, | 3.5 | 18 |
| 42 | Rationally Designing High-Performance Bulk Thermoelectric Materials. <i>Chemical Reviews</i> , 2016 , 116, 12123-12149 | 68.1 | 1155 |

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| 41 | Non-equilibrium processing leads to record high thermoelectric figure of merit in PbTe-SrTe. <i>Nature Communications</i> , 2016 , 7, 12167 | 17.4 | 377 |
| 40 | Zhao et al. reply. <i>Nature</i> , 2016 , 539, E2-E3 | 50.4 | 10 |
| 39 | Enhanced Thermoelectric Properties in the Counter-Doped SnTe System with Strained Endotaxial SrTe. <i>Journal of the American Chemical Society</i> , 2016 , 138, 2366-73 | 16.4 | 213 |
| 38 | Ultrahigh power factor and thermoelectric performance in hole-doped single-crystal SnSe. <i>Science</i> , 2016 , 351, 141-4 | 33.3 | 1237 |
| 37 | Distinct Impact of Alkali-Ion Doping on Electrical Transport Properties of Thermoelectric p-Type Polycrystalline SnSe. <i>Journal of the American Chemical Society</i> , 2016 , 138, 8875-82 | 16.4 | 243 |
| 36 | Multiple Converged Conduction Bands in KBiSe: A Promising Thermoelectric Material with Extremely Low Thermal Conductivity. <i>Journal of the American Chemical Society</i> , 2016 , 138, 16364-16371 | 16.4 | 95 |
| 35 | Chapter 4 All-Scale Hierarchical PbTe 2016 , 125-158 | | 4 |
| 34 | A low-temperature study of manganese-induced ferromagnetism and valence band convergence in tin telluride. <i>Applied Physics Letters</i> , 2016 , 108, 182101 | 3.4 | 11 |
| 33 | Microstructure Evolution in Nanostructured High-Performance Thermoelectrics: The case of p-type Pb _{1-x} Na _x Te-SrTe. <i>Microscopy and Microanalysis</i> , 2016 , 22, 1268-1269 | 0.5 | |
| 32 | SnSe: a remarkable new thermoelectric material. <i>Energy and Environmental Science</i> , 2016 , 9, 3044-3060 | 35.4 | 297 |
| 31 | Concerted Rattling in CsAg ₅ Te ₃ Leading to Ultralow Thermal Conductivity and High Thermoelectric Performance. <i>Angewandte Chemie - International Edition</i> , 2016 , 55, 11431-6 | 16.4 | 105 |
| 30 | Concerted Rattling in CsAg ₅ Te ₃ Leading to Ultralow Thermal Conductivity and High Thermoelectric Performance. <i>Angewandte Chemie</i> , 2016 , 128, 11603-11608 | 3.6 | 15 |
| 29 | Toward high thermoelectric performance p-type FeSb _{2.2} Te _{0.8} via in situ formation of InSb nano-inclusions. <i>Journal of Materials Chemistry C</i> , 2015 , 3, 8372-8380 | 7.1 | 26 |
| 28 | Codoping in SnTe: Enhancement of Thermoelectric Performance through Synergy of Resonance Levels and Band Convergence. <i>Journal of the American Chemical Society</i> , 2015 , 137, 5100-12 | 16.4 | 310 |
| 27 | Valence Band Modification and High Thermoelectric Performance in SnTe Heavily Alloyed with MnTe. <i>Journal of the American Chemical Society</i> , 2015 , 137, 11507-16 | 16.4 | 289 |
| 26 | High Thermoelectric Performance SnTe _{1-x} Te ₂ Solid Solutions Enabled by Resonant Levels and Strong Vacancy Phonon Scattering. <i>Chemistry of Materials</i> , 2015 , 27, 7801-7811 | 9.6 | 155 |
| 25 | Extraordinary role of Hg in enhancing the thermoelectric performance of p-type SnTe. <i>Energy and Environmental Science</i> , 2015 , 8, 267-277 | 35.4 | 279 |
| 24 | Mechanically Robust BiSbTe Alloys with Superior Thermoelectric Performance: A Case Study of Stable Hierarchical Nanostructured Thermoelectric Materials. <i>Advanced Energy Materials</i> , 2015 , 5, 1401391 | 21.8 | 232 |

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| 23 | Hard Radiation Detection from the Selenophosphate Pb ₂ P ₂ Se ₆ . <i>Advanced Functional Materials</i> , 2015 , 25, 4874-4881 | 15.6 | 25 |
| 22 | Ultralow thermal conductivity and high thermoelectric figure of merit in SnSe crystals. <i>Nature</i> , 2014 , 508, 373-7 | 50.4 | 3074 |
| 21 | Structures and thermoelectric properties of double-filled (Ca _x Ce _{1-x})Fe ₄ Sb ₁₂ skutterudites. <i>Journal of Solid State Chemistry</i> , 2014 , 218, 221-229 | 3.3 | 15 |
| 20 | The new phase [Tl _{1/2} Bi _{1/2} Se][Sn _{1/2} Sb _{1/2} Se] a naturally formed semiconducting heterostructure with two-dimensional conductance. <i>Journal of the American Chemical Society</i> , 2014 , 136, 11079-84 | 16.4 | 10 |
| 19 | Thermoelectric Performance Optimization in p-Type Ce _y Fe ₃ CoSb ₁₂ Skutterudites. <i>Journal of Electronic Materials</i> , 2014 , 43, 1712-1717 | 1.9 | 18 |
| 18 | Preparation and thermoelectric properties of p-type filled skutterudites Ce _y Fe _{4-x} Ni _x Sb ₁₂ . <i>Journal of Alloys and Compounds</i> , 2014 , 584, 216-221 | 5.7 | 22 |
| 17 | High thermoelectric performance of p-type SnTe via a synergistic band engineering and nanostructuring approach. <i>Journal of the American Chemical Society</i> , 2014 , 136, 7006-17 | 16.4 | 425 |
| 16 | X-ray powder reference patterns of the Fe(Sb _{2+x} Te _{1-x}) skutterudites for thermoelectric applications. <i>Powder Diffraction</i> , 2014 , 29, 260-264 | 1.8 | 3 |
| 15 | Nanostructure-Assisted Phonon Scattering in Lead-Free Thermoelectric Materials: A TEM Investigation of the SnTe System. <i>Microscopy and Microanalysis</i> , 2014 , 20, 438-439 | 0.5 | 4 |
| 14 | SnTe _{1-x} Ag _x BiTe ₂ as an efficient thermoelectric material with low thermal conductivity. <i>Journal of Materials Chemistry A</i> , 2014 , 2, 20849-20854 | 13 | 117 |
| 13 | Rapid preparation of CeFe ₄ Sb ₁₂ skutterudite by melt spinning: rich nanostructures and high thermoelectric performance. <i>Journal of Materials Chemistry A</i> , 2013 , 1, 12657 | 13 | 85 |
| 12 | High thermoelectric performance of nonequilibrium synthesized CeFe ₄ Sb ₁₂ composite with multi-scaled nanostructures. <i>Applied Physics Letters</i> , 2013 , 103, 183904 | 3.4 | 57 |
| 11 | Realization of high thermoelectric performance in p-type unfilled ternary skutterudites FeSb _{2+x} Te _{1-x} via band structure modification and significant point defect scattering. <i>Acta Materialia</i> , 2013 , 61, 7693-7704 | 8.4 | 39 |
| 10 | Lower Thermal Conductivity and Higher Thermoelectric Performance of Fe-Substituted and Ce, Yb Double-Filled p-Type Skutterudites. <i>Journal of Electronic Materials</i> , 2013 , 42, 1622-1627 | 1.9 | 19 |
| 9 | High Thermoelectric Figure of Merit of p-Type Ternary Unfilled Skutterudite FeSb ₂ Te via Ge Doping. <i>Science of Advanced Materials</i> , 2013 , 5, 1974-1982 | 2.3 | 9 |
| 8 | Enhanced thermoelectric performance in zinc substituted p-type filled skutterudites CeFe _{4-x} Zn _x Sb ₁₂ . <i>Journal of Solid State Chemistry</i> , 2012 , 187, 316-322 | 3.3 | 28 |
| 7 | Preparation and thermoelectric properties of Ga-substituted p-type fully filled skutterudites CeFe _{4-x} Ga _x Sb ₁₂ . <i>Journal of Solid State Chemistry</i> , 2012 , 196, 203-208 | 3.3 | 22 |
| 6 | The realization of a high thermoelectric figure of merit in Ge-substituted BiZn ₄ Sb ₃ through band structure modification. <i>Journal of Materials Chemistry</i> , 2012 , 22, 13977 | | 49 |

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| 5 | Enhanced thermoelectric properties of Bi ₂ (Te _{1-x} Sex) ₃ -based compounds as n-type legs for low-temperature power generation. <i>Journal of Materials Chemistry</i> , 2012 , 22, 20943 | | 122 |
| 4 | Enhanced thermoelectric performance in p-type Ca _{0.5} Ce _{0.5} Fe _{4-x} NixSb ₁₂ skutterudites by adjusting the carrier concentration. <i>Journal of Alloys and Compounds</i> , 2012 , 513, 328-333 | 5-7 | 22 |
| 3 | Effects of Cobalt Substitution for Fe on the Thermoelectric Properties of p-Type CeFe _{4-x} Co _x Sb ₁₂ Skutterudites. <i>Journal of Electronic Materials</i> , 2012 , 41, 1147-1152 | 1-9 | 23 |
| 2 | Correlation of thermoelectric and microstructural properties of p-type CeFe ₄ Sb ₁₂ melt-spun ribbons using a rapid screening method. <i>Applied Physics Letters</i> , 2011 , 98, 142106 | 3-4 | 14 |
| 1 | Transformation of Undesired Li ₂ CO ₃ into Lithiophilic Layer Via Double Replacement Reaction for Garnet Electrolyte Engineering. <i>Energy and Environmental Materials</i> , | 13 | 5 |