Trevor Bailey

List of Publications by Year
in descending order

55	2,928	186265 28	168389 53
papers	citations	h-index	g-index

56	56	56	2189
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Valence Band Modification and High Thermoelectric Performance in SnTe Heavily Alloyed with MnTe. Journal of the American Chemical Society, 2015, 137, 11507-11516.	13.7	371
2	Partial indium solubility induces chemical stability and colossal thermoelectric figure of merit in Cu₂Se. Energy and Environmental Science, 2017, 10, 1668-1676.	30.8	272
3	High Thermoelectric Performance in SnTeâ€“AgSbTe₂ Alloys from Lattice Softening, Giant Phononâ€“Vacancy Scattering, and Valence Band Convergence. ACS Energy Letters, 2018, 3, 705-712.	17.4	151
4	Subtle Roles of Sb and S in Regulating the Thermoelectric Properties of Nâ€Type PbTe to High Performance. Advanced Energy Materials, 2017, 7, 1700099.	19.5	118
5	Soft phonon modes from off-center Ge atoms lead to ultralow thermal conductivity and superior thermoelectric performance in n-type PbSeâ€“GeSe. Energy and Environmental Science, 2018, 11, 3220-3230.	30.8	115
6	Weak Electron Phonon Coupling and Deep Level Impurity for High Thermoelectric Performance Pb_{1â^'}_xGa_xTe. Advanced Energy Materials, 2018, 8, 1800659.	19.5	111
7	Extraordinary role of Zn in enhancing thermoelectric performance of Ga-doped n-type PbTe. Energy and Environmental Science, 2022, 15, 368-375.	30.8	107
8	High Thermoelectric Performance in Supersaturated Solid Solutions and Nanostructured nâ€Type PbTeâ€“GeTe. Advanced Functional Materials, 2018, 28, 1801617.	14.9	92
9	All-Scale Hierarchically Structured p-Type PbSe Alloys with High Thermoelectric Performance Enabled by Improved Band Degeneracy. Journal of the American Chemical Society, 2019, 141, 4480-4486.	13.7	87
10	Enhanced ZT and attempts to chemically stabilize Cu₂Se via Sn doping. Journal of Materials Chemistry A, 2016, 4, 17225-17235.	10.3	84
11	Chemical Insights into PbSeâ€“x%HgSe: High Power Factor and Improved Thermoelectric Performance by Alloying with Discordant Atoms. Journal of the American Chemical Society, 2018, 140, 18115-18123.	13.7	80
12	High Figure of Merit in Gallium-Doped Nanostructured n-Type PbTe-xGeTe with Midgap States. Journal of the American Chemical Society, 2019, 141, 16169-16177.	13.7	76
13	Enhancement of Thermoelectric Performance for n-Type PbS through Synergy of Gap State and Fermi Level Pinning. Journal of the American Chemical Society, 2019, 141, 6403-6412.	13.7	67
14	Enhanced Density-of-States Effective Mass and Strained Endotaxial Nanostructures in Sb-Doped Pb_{0.97}Cd_{0.03}Te Thermoelectric Alloys. ACS Applied Materials & Interfaces, 2019, 11, 9197-9204.	8.0	66
15	Understanding the thermally activated charge transport in NaPb_mSbQ_{m+2} (Q) Tj ETQq1 1 0.784314 rgBT /O carrier scattering. Energy and Environmental Science, 2020, 13, 1509-1518.	30.8	63
16	All-Optical Probe of Three-Dimensional Topological Insulators Based on High-Harmonic Generation by Circularly Polarized Laser Fields. Nano Letters, 2021, 21, 8970-8978.	9.1	59
17	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.	30.8	57
18	High Thermoelectric Performance in PbSeâ€“NaSbSe₂ Alloys from Valence Band Convergence and Low Thermal Conductivity. Advanced Energy Materials, 2019, 9, 1901377.	19.5	54

#	Article	IF	Citations
19	Ultralow thermal conductivity in diamondoid lattices: high thermoelectric performance in chalcopyrite Cu_{0.8+y}Ag_{0.2}In_{1â^'y}Te₂. Energy and Environmental Science, 2020, 13, 3693-3705.	30.8	52
20	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.	13.7	51
21	Grain boundary scattering effects on mobilities in p-type polycrystalline SnSe. Journal of Materials Chemistry C, 2017, 5, 10191-10200.	5.5	50
22	Origin of Intrinsically Low Thermal Conductivity in Talnakhite Cu_{17.6}Fe_{17.6}S₃₂ Thermoelectric Material: Correlations between Lattice Dynamics and Thermal Transport. Journal of the American Chemical Society, 2019, 141, 10905-10914.	13.7	50
23	Origin of the Distinct Thermoelectric Transport Properties of Chalcopyrite ABTe₂ (A) Tj ETQq1 1 0.784314 rgBT /Overloc	14.9	50
24	Ultralow Thermal Conductivity in Diamondoid Structures and High Thermoelectric Performance in (Cu_{1â€“x}Ag_x)(In_{1â€“y}Ga_y)Te₂. Journal of the American Chemical Society, 2021, 143, 5978-5989.	15.7	49
25	Promising bulk nanostructured Cu₂Se thermoelectrics via high throughput and rapid chemical synthesis. RSC Advances, 2016, 6, 111457-111464.	3.6	38
26	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.	17.4	37
27	Potential for superionic conductors in thermoelectric applications. Current Opinion in Green and Sustainable Chemistry, 2017, 4, 58-63.	5.9	33
28	Ultralow Thermal Conductivity, Multiband Electronic Structure and High Thermoelectric Figure of Merit in TlCuSe. Advanced Materials, 2021, 33, e2104908.	21.0	29
29	Thermoelectric and thermal stability improvements in Nano-Cu2Se included Ag2Se. Journal of Solid State Chemistry, 2019, 273, 122-127.	2.9	28
30	Strong Valence Band Convergence to Enhance Thermoelectric Performance in PbSe with Two Chemically Independent Controls. Angewandte Chemie - International Edition, 2021, 60, 268-273.	13.8	28
31	Absence of Nanostructuring in NaPb_mSbTe_{m+2}: Solid Solutions with High Thermoelectric Performance in the Intermediate Temperature Regime. Journal of the American Chemical Society, 2018, 140, 7021-7031.	13.7	27
32	Coherent magnetic nanoinclusions induce charge localization in half-Heusler alloys leading to high-Tc ferromagnetism and enhanced thermoelectric performance. Journal of Materials Chemistry A, 2019, 7, 11095-11103.	10.3	27
33	Anomalously Large Seebeck Coefficient of CuFeS₂ Derives from Large Asymmetry in the Energy Dependence of Carrier Relaxation Time. Chemistry of Materials, 2020, 32, 2639-2646.	6.7	26
34	Direct Measurement of Anharmonic Decay Channels of a Coherent Phonon. Physical Review Letters, 2018, 121, 125901.	7.8	25
35	Ultralow Thermal Conductivity and High-Temperature Thermoelectric Performance in n-Type K_{2.5}Bi_{8.5}Se₁₄. Chemistry of Materials, 2019, 31, 5943-5952.	6.7	25
36	Low temperature thermoelectric properties of p-type doped single-crystalline SnSe. Applied Physics Letters, 2018, 112, .	3.3	24

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37	Valence Disproportionation of GeS in the PbS Matrix Forms Pb₅Ge₅S₁₂ Inclusions with Conduction Band Alignment Leading to High n-Type Thermoelectric Performance. Journal of the American Chemical Society, 2022, 144, 7402-7413.	13.7	24
38	Dissociation of GaSb in n-Type PbTe: off-Centered Gallium Atom and Weak Electronâ€“Phonon Coupling Provide High Thermoelectric Performance. Chemistry of Materials, 2021, 33, 1842-1851.	6.7	23
39	Engineering Temperatureâ€Đependent Carrier Concentration in Bulk Composite Materials via Temperatureâ€Đependent Fermi Level Offset. Advanced Energy Materials, 2018, 8, 1701623.	19.5	21
40	Insights on the Synthesis, Crystal and Electronic Structures, and Optical and Thermoelectric Properties of Sr_{1â€“x}Sb_xHfSe₃ Orthorhombic Perovskite. Inorganic Chemistry, 2018, 57, 7402-7411.	4.0	20
41	Optimizing the average power factor of p-type (Na, Ag) co-doped polycrystalline SnSe. RSC Advances, 2019, 9, 7115-7122.	3.6	20
42	Preparation and properties of ultra-low density proppants for use in hydraulic fracturing. Journal of Petroleum Science and Engineering, 2018, 163, 100-109.	4.2	18
43	Fracture structure and thermoelectric enhancement of Cu2Se with substitution of nanostructured Ag2Se. Physical Chemistry Chemical Physics, 2019, 21, 13569-13577.	2.8	18
44	Ultralow thermal conductivity in grapheneâ€“silica porous ceramics with a special saucer structure of graphene aerogels. Journal of Materials Chemistry A, 2019, 7, 1574-1584.	10.3	16
45	Mechanism and application method to analyze the carrier scattering factor by electrical conductivity ratio based on thermoelectric property measurement. Journal of Applied Physics, 2018, 123, .	2.5	13
46	Chemical manipulation of phase stability and electronic behavior in Cu_{4â^'x}Ag_xSe₂. Journal of Materials Chemistry A, 2018, 6, 6997-7004.	10.3	13
47	Measurements of nonequilibrium interatomic forces using time-domain x-ray scattering. Physical Review B, 2021, 103, .	3.2	12
48	Ultrafine Interwoven Dendritic Cu2Se/CuFeSe2 Composites with Enhanced Thermoelectric Performance. ACS Applied Energy Materials, 2020, 3, 9133-9142.	5.1	10
49	Lone-Electron-Pair Micelles Strengthen Bond Anharmonicity in MnPb16Sb14S38 Complex Sulfosalt Leading to Ultralow Thermal Conductivity. ACS Applied Materials & Interfaces, 2020, 12, 44991-44997.	8.0	10
50	Nanoscale Engineering of Polymorphism in Cu₂Se-Based Composites. ACS Applied Materials & Interfaces, 2020, 12, 31601-31611.	8.0	8
51	High carrier mobility and ultralow thermal conductivity in the synthetic layered superlattice Sn₄Bi₁₀Se₁₉. Materials Advances, 2021, 2, 2382-2390.	5.4	8
52	Strong Valence Band Convergence to Enhance Thermoelectric Performance in PbSe with Two Chemically Independent Controls. Angewandte Chemie, 2021, 133, 272-277.	2.0	7
53	CuAlSe2 Inclusions Trigger Dynamic Cu+ Ion Depletion from the Cu2Se Matrix Enabling High Thermoelectric Performance. ACS Applied Materials & Interfaces, 2020, 12, 58018-58027.	8.0	6
54	Fine-grained polycrystalline MoTe2 with enhanced thermoelectric properties through iodine doping. Journal of Materials Science: Materials in Electronics, 2021, 32, 20093-20103.	2.2	2

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55	Paramagnon heat capacity in (Ti,Zr,Hf) NiFexNiSn half-Heusler composites. Physical Review B, 2020, 102, .	3.2	0