

Trevor Bailey

List of Publications by Year in descending order

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55
papers

2,928
citations

186265

28
h-index

168389

53
g-index

56
all docs

56
docs citations

56
times ranked

2189
citing authors

#	ARTICLE	IF	CITATIONS
1	Extraordinary role of Zn in enhancing thermoelectric performance of Ga-doped n-type PbTe. <i>Energy and Environmental Science</i> , 2022, 15, 368-375.	30.8	107
2	Valence Disproportionation of GeS in the PbS Matrix Forms Pb ₅ Ge ₅ S ₁₂ Inclusions with Conduction Band Alignment Leading to High n-Type Thermoelectric Performance. <i>Journal of the American Chemical Society</i> , 2022, 144, 7402-7413.	13.7	24
3	Strong Valence Band Convergence to Enhance Thermoelectric Performance in PbSe with Two Chemically Independent Controls. <i>Angewandte Chemie</i> , 2021, 133, 272-277.	2.0	7
4	Strong Valence Band Convergence to Enhance Thermoelectric Performance in PbSe with Two Chemically Independent Controls. <i>Angewandte Chemie - International Edition</i> , 2021, 60, 268-273.	13.8	28
5	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.	6.7	23
6	Ultralow Thermal Conductivity in Diamondoid Structures and High Thermoelectric Performance in (Cu _{1-x} Ag _x)(In _{1-y} Ga _y)Te ₂ . <i>Journal of the American Chemical Society</i> , 2021, 143, 5978-5989.	13.7	49
7	Measurements of nonequilibrium interatomic forces using time-domain x-ray scattering. <i>Physical Review B</i> , 2021, 103, .	3.2	12
8	Fine-grained polycrystalline MoTe ₂ with enhanced thermoelectric properties through iodine doping. <i>Journal of Materials Science: Materials in Electronics</i> , 2021, 32, 20093-20103.	2.2	2
9	Ultralow Thermal Conductivity, Multiband Electronic Structure and High Thermoelectric Figure of Merit in TiCuSe. <i>Advanced Materials</i> , 2021, 33, e2104908.	21.0	29
10	High carrier mobility and ultralow thermal conductivity in the synthetic layered superlattice Sn ₄ Bi ₁₀ Se ₁₉ . <i>Materials Advances</i> , 2021, 2, 2382-2390.	5.4	8
11	All-Optical Probe of Three-Dimensional Topological Insulators Based on High-Harmonic Generation by Circularly Polarized Laser Fields. <i>Nano Letters</i> , 2021, 21, 8970-8978.	9.1	59
12	Discordant nature of Cd in PbSe: off-centering and core-shell nanoscale CdSe precipitates lead to high thermoelectric performance. <i>Energy and Environmental Science</i> , 2020, 13, 200-211.	30.8	57
13	Ultrafine Interwoven Dendritic Cu ₂ Se/CuFeSe ₂ Composites with Enhanced Thermoelectric Performance. <i>ACS Applied Energy Materials</i> , 2020, 3, 9133-9142.	5.1	10
14	Origin of the Distinct Thermoelectric Transport Properties of Chalcopyrite ABTe ₂ (A) Tj ETQq 0 0 rgBT /Qverlock 10 Tf 50 .	14.9	50
15	Lone-Electron-Pair Micelles Strengthen Bond Anharmonicity in MnPb ₁₆ Sb ₁₄ S ₃₈ Complex Sulfosalt Leading to Ultralow Thermal Conductivity. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 44991-44997.	8.0	10
16	Ultralow thermal conductivity in diamondoid lattices: high thermoelectric performance in chalcopyrite Cu _{0.8+y} Ag _{0.2} In _{1-y} Te ₂ . <i>Energy and Environmental Science</i> , 2020, 13, 3693-3705.	30.8	52
17	CuAlSe ₂ Inclusions Trigger Dynamic Cu ⁺ Ion Depletion from the Cu ₂ Se Matrix Enabling High Thermoelectric Performance. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 58018-58027.	8.0	6
18	Nanoscale Engineering of Polymorphism in Cu ₂ Se-Based Composites. <i>ACS Applied Materials & Interfaces</i> , 2020, 12, 31601-31611.	8.0	8

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19	Contrasting SnTe ϵ NaSbTe ₂ and SnTe ϵ NaBiTe ₂ 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
20	Anomalously Large Seebeck Coefficient of CuFeS ₂ Derives from Large Asymmetry in the Energy Dependence of Carrier Relaxation Time. Chemistry of Materials, 2020, 32, 2639-2646.	6.7	26
21	Understanding the thermally activated charge transport in NaPb _m SbQ _{m+2} (Q) Tj ETQq1 1 0.784314 rgBT carrier scattering. Energy and Environmental Science, 2020, 13, 1509-1518.	30.8	63
22	Paramagnon heat capacity in (Ti,Zr,Hf) NiFexNiSn half-Heusler composites. Physical Review B, 2020, 102, .	3.2	0
23	Ultralow Thermal Conductivity and High-Temperature Thermoelectric Performance in n-Type K _{2.5} Bi _{8.5} Se ₁₄ . Chemistry of Materials, 2019, 31, 5943-5952.	6.7	25
24	High Thermoelectric Performance in PbSe ϵ NaSbSe ₂ Alloys from Valence Band Convergence and Low Thermal Conductivity. Advanced Energy Materials, 2019, 9, 1901377.	19.5	54
25	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
26	Ultralow thermal conductivity in graphene ϵ silica porous ceramics with a special saucer structure of graphene aerogels. Journal of Materials Chemistry A, 2019, 7, 1574-1584.	10.3	16
27	Origin of Intrinsically Low Thermal Conductivity in Talnakhite Cu _{17.6} Fe _{17.6} S ₃₂ Thermoelectric Material: Correlations between Lattice Dynamics and Thermal Transport. Journal of the American Chemical Society, 2019, 141, 10905-10914.	13.7	50
28	Fracture structure and thermoelectric enhancement of Cu ₂ Se with substitution of nanostructured Ag ₂ Se. Physical Chemistry Chemical Physics, 2019, 21, 13569-13577.	2.8	18
29	Thermoelectric and thermal stability improvements in Nano-Cu ₂ Se included Ag ₂ Se. Journal of Solid State Chemistry, 2019, 273, 122-127.	2.9	28
30	Optimizing the average power factor of p-type (Na, Ag) co-doped polycrystalline SnSe. RSC Advances, 2019, 9, 7115-7122.	3.6	20
31	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
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	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
34	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
35	Low temperature thermoelectric properties of p-type doped single-crystalline SnSe. Applied Physics Letters, 2018, 112, .	3.3	24
36	High Thermoelectric Performance in SnTe ϵ AgSbTe ₂ Alloys from Lattice Softening, Giant Phonon ϵ Vacancy Scattering, and Valence Band Convergence. ACS Energy Letters, 2018, 3, 705-712.	17.4	151

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37	Preparation and properties of ultra-low density proppants for use in hydraulic fracturing. <i>Journal of Petroleum Science and Engineering</i> , 2018, 163, 100-109.	4.2	18
38	Mechanism and application method to analyze the carrier scattering factor by electrical conductivity ratio based on thermoelectric property measurement. <i>Journal of Applied Physics</i> , 2018, 123, .	2.5	13
39	Chemical manipulation of phase stability and electronic behavior in $\text{Cu}_{4-x}\text{Ag}_x\text{Se}_2$. <i>Journal of Materials Chemistry A</i> , 2018, 6, 6997-7004.	10.3	13
40	Engineering Temperature-Dependent Carrier Concentration in Bulk Composite Materials via Temperature-Dependent Fermi Level Offset. <i>Advanced Energy Materials</i> , 2018, 8, 1701623.	19.5	21
41	Chemical Insights into $\text{PbSe}_{1-x}\text{HgSe}_x$: High Power Factor and Improved Thermoelectric Performance by Alloying with Discordant Atoms. <i>Journal of the American Chemical Society</i> , 2018, 140, 18115-18123.	13.7	80
42	Dual Alloying Strategy to Achieve a High Thermoelectric Figure of Merit and Lattice Hardening in p-Type Nanostructured PbTe. <i>ACS Energy Letters</i> , 2018, 3, 2593-2601.	17.4	37
43	Direct Measurement of Anharmonic Decay Channels of a Coherent Phonon. <i>Physical Review Letters</i> , 2018, 121, 125901.	7.8	25
44	Weak Electron Phonon Coupling and Deep Level Impurity for High Thermoelectric Performance $\text{Pb}_{1-x}\text{Ga}_x\text{Te}$. <i>Advanced Energy Materials</i> , 2018, 8, 1800659.	19.5	111
45	Absence of Nanostructuring in $\text{NaPb}_m\text{SbTe}_{m+2}$: Solid Solutions with High Thermoelectric Performance in the Intermediate Temperature Regime. <i>Journal of the American Chemical Society</i> , 2018, 140, 7021-7031.	13.7	27
46	Soft phonon modes from off-center Ge atoms lead to ultralow thermal conductivity and superior thermoelectric performance in n-type $\text{PbSe}_{1-x}\text{Ge}_x$. <i>Energy and Environmental Science</i> , 2018, 11, 3220-3230.	30.8	115
47	Insights on the Synthesis, Crystal and Electronic Structures, and Optical and Thermoelectric Properties of $\text{Sr}_{1-x}\text{Sb}_x\text{HfSe}_3$ Orthorhombic Perovskite. <i>Inorganic Chemistry</i> , 2018, 57, 7402-7411.	4.0	20
48	High Thermoelectric Performance in Supersaturated Solid Solutions and Nanostructured n-Type $\text{PbTe}_{1-x}\text{Ge}_x$. <i>Advanced Functional Materials</i> , 2018, 28, 1801617.	14.9	92
49	Potential for superionic conductors in thermoelectric applications. <i>Current Opinion in Green and Sustainable Chemistry</i> , 2017, 4, 58-63.	5.9	33
50	Partial indium solubility induces chemical stability and colossal thermoelectric figure of merit in Cu_2Se . <i>Energy and Environmental Science</i> , 2017, 10, 1668-1676.	30.8	272
51	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.	19.5	118
52	Grain boundary scattering effects on mobilities in p-type polycrystalline SnSe. <i>Journal of Materials Chemistry C</i> , 2017, 5, 10191-10200.	5.5	50
53	Promising bulk nanostructured Cu_2Se thermoelectrics via high throughput and rapid chemical synthesis. <i>RSC Advances</i> , 2016, 6, 111457-111464.	3.6	38
54	Enhanced ZT and attempts to chemically stabilize Cu_2Se via Sn doping. <i>Journal of Materials Chemistry A</i> , 2016, 4, 17225-17235.	10.3	84

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55	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