

G. Jeffrey Snyder

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.

577
papers

57,032
citations

109
h-index

226
g-index

639
ext. papers

65,606
ext. citations

11.3
avg, IF

8.22
L-index

#	Paper	IF	Citations
577	Thermoelectric transport effects beyond single parabolic band and acoustic phonon scattering. <i>Materials Advances</i> , 2022 , 3, 734-755	3.3	4
576	Tuning valley degeneracy with band inversion. <i>Journal of Materials Chemistry A</i> , 2022 , 10, 1588-1595	13	0
575	Conduction band engineering of half-Heusler thermoelectrics using orbital chemistry. <i>Journal of Materials Chemistry A</i> , 2022 , 10, 3051-3057	13	1
574	Effect of Texturing on Thermal, Electric and Elastic Properties of MoAlB, Fe ₂ AlB ₂ , and Mn ₂ AlB ₂ . <i>Journal of the European Ceramic Society</i> , 2022 , 42, 3183-3183	6	0
573	When power factor supersedes zT to determine power in a thermocouple. <i>Journal of Applied Physics</i> , 2022 , 131, 115101	2.5	0
572	Hidden Local Symmetry Breaking in Silver Diamondoid Compounds is Root Cause of Ultralow Thermal Conductivity.. <i>Advanced Materials</i> , 2022 , e2202255	24	2
571	Inherent Anharmonicity of Harmonic Solids. <i>Research</i> , 2022 , 2022, 1-11	7.8	1
570	Ag rearrangement induced metal-insulator phase transition in thermoelectric MgAgSb. <i>Materials Today Physics</i> , 2022 , 25, 100702	8	
569	Estimating the lower-limit of fracture toughness from ideal-strength calculations.. <i>Materials Horizons</i> , 2021 ,	14.4	1
568	Printing thermoelectric inks toward next-generation energy and thermal devices. <i>Chemical Society Reviews</i> , 2021 ,	58.5	6
567	Finding the order in complexity: The electronic structure of 14-1-11 zintl compounds. <i>Applied Physics Letters</i> , 2021 , 119, 213902	3.4	1
566	Iterative design of a high zT thermoelectric material. <i>Applied Physics Letters</i> , 2021 , 119, 202101	3.4	1
565	Stress/pressure-stabilized cubic polymorph of Li ₃ Sb with improved thermoelectric performance. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 25024-25031	13	0
564	Parallel Dislocation Networks and Cottrell Atmospheres Reduce Thermal Conductivity of PbTe Thermoelectrics. <i>Advanced Functional Materials</i> , 2021 , 31, 2101214	15.6	15
563	Phase Boundary Mapping of Tin-Doped ZnSb Reveals Thermodynamic Route to High Thermoelectric Efficiency. <i>Advanced Energy Materials</i> , 2021 , 11, 2100181	21.8	4
562	Fracture toughness of thermoelectric materials. <i>Materials Science and Engineering Reports</i> , 2021 , 144, 100607	30.9	7
561	Distributed and localized cooling with thermoelectrics. <i>Joule</i> , 2021 , 5, 748-751	27.8	9

560	Ultralow Thermal Conductivity in Diamondoid Structures and High Thermoelectric Performance in (CuAg)(InGa)Te. <i>Journal of the American Chemical Society</i> , 2021 , 143, 5978-5989	16.4	15
559	Thermal resistance at a twist boundary and a semicoherent heterointerface. <i>Physical Review B</i> , 2021 , 103,	3.3	2
558	Quantifying charge carrier localization in chemically doped semiconducting polymers. <i>Nature Materials</i> , 2021 , 20, 1414-1421	27	20
557	Nb-Mediated Grain Growth and Grain-Boundary Engineering in Mg ₃ Sb ₂ -Based Thermoelectric Materials. <i>Advanced Functional Materials</i> , 2021 , 31, 2100258	15.6	15
556	Uncovering design principles for amorphous-like heat conduction using two-channel lattice dynamics. <i>Materials Today Physics</i> , 2021 , 18, 100344	8	13
555	Charge-carrier-mediated lattice softening contributes to high zT in thermoelectric semiconductors. <i>Joule</i> , 2021 , 5, 1168-1182	27.8	11
554	Thermal Evolution of Internal Strain in Doped PbTe. <i>Chemistry of Materials</i> , 2021 , 33, 4765-4772	9.6	3
553	When band convergence is not beneficial for thermoelectrics. <i>Nature Communications</i> , 2021 , 12, 3425	17.4	13
552	Physical insights on the low lattice thermal conductivity of AgInSe ₂ . <i>Materials Today Physics</i> , 2021 , 19, 100428	8	9
551	First principles investigation of intrinsic and Na defects in XTe (X=Ca, Sr, Ba) nanostructured PbTe. <i>Materials Today Physics</i> , 2021 , 19, 100415	8	3
550	Creep behavior and post-creep thermoelectric performance of the n-type Skutterudite alloy Yb _{0.3} Co ₄ Sb ₁₂ . <i>Journal of Materiomics</i> , 2021 , 7, 89-97	6.7	2
549	Thermoelectric Properties of Novel Semimetals: A Case Study of YbMnSb. <i>Advanced Materials</i> , 2021 , 33, e2003168	24	15
548	Compositional Fluctuations Locked by Athermal Transformation Yielding High Thermoelectric Performance in GeTe. <i>Advanced Materials</i> , 2021 , 33, e2005612	24	22
547	Enhanced thermoelectric performance in Mg _{3+x} Sb _{1.5} Bi _{0.49} Te _{0.01} via engineering microstructure through melt-centrifugation. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 1733-1742	13	8
546	Intrinsic carrier multiplication in layered Bi ₂ O ₂ Se avalanche photodiodes with gain bandwidth product exceeding 1 GHz. <i>Nano Research</i> , 2021 , 14, 1961-1966	10	7
545	Synthesis and physical properties of single-crystalline InTe: towards high thermoelectric performance. <i>Journal of Materials Chemistry C</i> , 2021 , 9, 5250-5260	7.1	6
544	Temperature-Dependent Band Renormalization in CoSb ₃ Skutterudites Due to Sb-Ring-Related Vibrations. <i>Chemistry of Materials</i> , 2021 , 33, 1046-1052	9.6	7
543	Thermoelectric Materials: Compositional Fluctuations Locked by Athermal Transformation Yielding High Thermoelectric Performance in GeTe (Adv. Mater. 1/2021). <i>Advanced Materials</i> , 2021 , 33, 2170008	24	5

542	Using phase boundary mapping to resolve discrepancies in the Mg ₂ Si/Mg ₂ Sn miscibility gap. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 7208-7215	13	3
541	Orbital chemistry of high valence band convergence and low-dimensional topology in PbTe. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 12119-12139	13	7
540	Defect chemistry and doping of BiCuSeO. <i>Journal of Materials Chemistry A</i> , 2021 , 9, 20685-20694	13	5
539	Discovery of multivalley Fermi surface responsible for the high thermoelectric performance in YbMnSb and YbMgSb. <i>Science Advances</i> , 2021 , 7,	14.3	18
538	Thermoelectric Materials: Thermoelectric Properties of Novel Semimetals: A Case Study of YbMnSb ₂ (Adv. Mater. 7/2021). <i>Advanced Materials</i> , 2021 , 33, 2170051	24	0
537	Possibility of interstitial Na as electron donor in Yb ₁₄ MgSb ₁₁ . <i>MRS Communications</i> , 2021 , 11, 226-232	2.7	1
536	Significant Enhancement of Thermoelectric Figure of Merit in BiSbTe-Based Composites by Incorporating Carbon Microfiber. <i>Advanced Functional Materials</i> , 2021 , 31, 2008851	15.6	23
535	Probing the phonon mean free paths in dislocation core by molecular dynamics simulation. <i>Journal of Applied Physics</i> , 2021 , 129, 055103	2.5	5
534	Phase-Transition-Enhanced Thermoelectric Transport in Rickardite Mineral Cu ₃ Te ₂ . <i>Chemistry of Materials</i> , 2021 , 33, 1832-1841	9.6	3
533	Thermoelectric Performance Enhancement in BiSbTe Alloy by Microstructure Modulation via Cyclic Spark Plasma Sintering with Liquid Phase. <i>Advanced Functional Materials</i> , 2021 , 31, 2009681	15.6	28
532	High thermoelectric performance enabled by convergence of nested conduction bands in PbBiSe with low thermal conductivity. <i>Nature Communications</i> , 2021 , 12, 4793	17.4	15
531	Regulating Te Vacancies through Dopant Balancing via Excess Ag Enables Rebounding Power Factor and High Thermoelectric Performance in p-Type PbTe. <i>Advanced Science</i> , 2021 , 8, e2100895	13.6	9
530	Dopant-segregation to grain boundaries controls electrical conductivity of n-type NbCo(Pt)Sn half-Heusler alloy mediating thermoelectric performance. <i>Acta Materialia</i> , 2021 , 217, 117147	8.4	6
529	Disorder-induced Anderson-like localization for bidimensional thermoelectrics optimization. <i>Matter</i> , 2021 , 4, 2970-2984	12.7	3
528	Thermal transport in defective and disordered materials. <i>Applied Physics Reviews</i> , 2021 , 8, 031311	17.3	13
527	What makes a material bendable? A thickness-dependent metric for bendability, malleability, ductility. <i>Matter</i> , 2021 , 4, 2694-2696	12.7	0
526	Role of interfaces in organic/inorganic flexible thermoelectrics. <i>Nano Energy</i> , 2021 , 89, 106380	17.1	9
525	The effect of MgAs alloying on the thermoelectric properties of n-type Mg(Sb, Bi). <i>Dalton Transactions</i> , 2021 , 50, 9376-9382	4.3	2

524	Visualizing defect energetics. <i>Materials Horizons</i> , 2021 , 8, 1966-1975	14.4	1
523	Phonon scattering in the complex strain field of a dislocation in PbTe. <i>Journal of Materials Chemistry C</i> , 2021 , 9, 8506-8514	7.1	3
522	Band Engineering SnTe via Trivalent Substitutions for Enhanced Thermoelectric Performance. <i>Chemistry of Materials</i> , 2021 , 33, 9624-9637	9.6	3
521	Mg ₃ (Bi,Sb) ₂ single crystals towards high thermoelectric performance. <i>Energy and Environmental Science</i> , 2020 , 13, 1717-1724	35.4	41
520	On the Dopability of Semiconductors and Governing Material Properties. <i>Chemistry of Materials</i> , 2020 , 32, 4467-4480	9.6	16
519	Vibrational Entropy Stabilizes Distorted Half-Heusler Structures. <i>Chemistry of Materials</i> , 2020 , 32, 4767-4773	9.7	3
518	Weighted Mobility. <i>Advanced Materials</i> , 2020 , 32, e2001537	24	156
517	Hall-effect Measurements and Transport Properties of Heterostructures in the Model System NiTe ₂ -Sn ₁₂ Sb ₂ Te ₁₅ . <i>Zeitschrift Fur Anorganische Und Allgemeine Chemie</i> , 2020 , 646, 1345-1351	1.3	
516	High-performance p-type elemental Te thermoelectric materials enabled by the synergy of carrier tuning and phonon engineering. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 12156-12168	13	6
515	Analytical Models of Phonon Point-Defect Scattering. <i>Physical Review Applied</i> , 2020 , 13,	4.3	25
514	Contrasting SnTe-NaSbTe and SnTe-NaBiTe Thermoelectric Alloys: High Performance Facilitated by Increased Cation Vacancies and Lattice Softening. <i>Journal of the American Chemical Society</i> , 2020 , 142, 12524-12535	16.4	21
513	Systematic over-estimation of lattice thermal conductivity in materials with electrically-resistive grain boundaries. <i>Energy and Environmental Science</i> , 2020 , 13, 1250-1258	35.4	23
512	Metallic n-Type Mg Sb Single Crystals Demonstrate the Absence of Ionized Impurity Scattering and Enhanced Thermoelectric Performance. <i>Advanced Materials</i> , 2020 , 32, e1908218	24	62
511	Stretchable fabric generates electric power from woven thermoelectric fibers. <i>Nature Communications</i> , 2020 , 11, 572	17.4	94
510	Band Sharpening and Band Alignment Enable High Quality Factor to Enhance Thermoelectric Performance in -Type PbS. <i>Journal of the American Chemical Society</i> , 2020 , 142, 4051-4060	16.4	71
509	Thermoelectric transport enhancement of Te-rich bismuth antimony telluride (Bi _{0.5} Sb _{1.5} Te _{3+x}) through controlled porosity. <i>Journal of Materiomics</i> , 2020 , 6, 532-544	6.7	19
508	Understanding the thermally activated charge transport in NaPbmSbQm+2 (Q = S, Se, Te) thermoelectrics: weak dielectric screening leads to grain boundary dominated charge carrier scattering. <i>Energy and Environmental Science</i> , 2020 , 13, 1509-1518	35.4	40
507	Alloy scattering of phonons. <i>Materials Horizons</i> , 2020 , 7, 1452-1456	14.4	22

506	All-Inorganic Halide Perovskites as Potential Thermoelectric Materials: Dynamic Cation off-Centering Induces Ultralow Thermal Conductivity. <i>Journal of the American Chemical Society</i> , 2020 , 142, 9553-9563	16.4	64
505	The Thermoelectric Properties of -Type Bismuth Telluride: Bismuth Selenide Alloys BiTe Se. <i>Research</i> , 2020 , 2020, 4361703	7.8	33
504	Violation of the Relationship in the Lattice Thermal Conductivity of MgSb with Locally Asymmetric Vibrations. <i>Research</i> , 2020 , 2020, 4589786	7.8	9
503	Machine Learning Chemical Guidelines for Engineering Electronic Structures in Half-Heusler Thermoelectric Materials. <i>Research</i> , 2020 , 2020, 6375171	7.8	17
502	Revealing the Intrinsic Electronic Structure of 3D Half-Heusler Thermoelectric Materials by Angle-Resolved Photoemission Spectroscopy. <i>Advanced Science</i> , 2020 , 7, 1902409	13.6	31
501	The importance of the MgMg interaction in Mg ₃ Sb ₂ Mg ₃ Bi ₂ shown through cation site alloying. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 2033-2038	13	18
500	Origin of inhomogeneity in spark plasma sintered bismuth antimony telluride thermoelectric nanocomposites. <i>Nano Research</i> , 2020 , 13, 1339-1346	10	2
499	Revealing nano-chemistry at lattice defects in thermoelectric materials using atom probe tomography. <i>Materials Today</i> , 2020 , 32, 260-274	21.8	31
498	Prediction of improved thermoelectric performance by ordering in double half-Heusler materials. <i>Journal of Materials Chemistry A</i> , 2020 , 8, 23590-23598	13	9
497	Expression of interfacial Seebeck coefficient through grain boundary engineering with multi-layer graphene nanoplatelets. <i>Energy and Environmental Science</i> , 2020 , 13, 4114-4121	35.4	30
496	Optimum load resistance for a thermoelectric generator system. <i>Energy Conversion and Management</i> , 2020 , 226, 113490	10.6	5
495	Thermoelectric transport of semiconductor full-Heusler VFe ₂ Al. <i>Journal of Materials Chemistry C</i> , 2020 , 8, 10174-10184	7.1	15
494	Unveiling the phonon scattering mechanisms in half-Heusler thermoelectric compounds. <i>Energy and Environmental Science</i> , 2020 , 13, 5165-5176	35.4	16
493	Crystal Structure and Atomic Vacancy Optimized Thermoelectric Properties in Gadolinium Selenides. <i>Chemistry of Materials</i> , 2020 , 32, 10130-10139	9.6	20
492	Electronic quality factor for thermoelectrics. <i>Science Advances</i> , 2020 , 6,	14.3	49
491	Orbital Chemistry That Leads to High Valley Degeneracy in PbTe. <i>Chemistry of Materials</i> , 2020 , 32, 9771-9779	9.7	12
490	Na Doping in PbTe: Solubility, Band Convergence, Phase Boundary Mapping, and Thermoelectric Properties. <i>Journal of the American Chemical Society</i> , 2020 , 142, 15464-15475	16.4	46
489	Discovery of high-performance thermoelectric copper chalcogenide using modified diffusion-couple high-throughput synthesis and automated histogram analysis technique. <i>Energy and Environmental Science</i> , 2020 , 13, 3041-3053	35.4	16

488	Thermal studies of individual Si/Ge heterojunctions ¶The influence of the alloy layer on the heterojunction. <i>Journal of Materiomics</i> , 2020 , 6, 248-255	6.7	7
487	Graphene/Strontium Titanate: Approaching Single Crystal¶ike Charge Transport in Polycrystalline Oxide Perovskite Nanocomposites through Grain Boundary Engineering. <i>Advanced Functional Materials</i> , 2020 , 30, 1910079	15.6	12
486	Cobalt germanide precipitates indirectly improve the properties of thermoelectric germanium antimony tellurides. <i>Journal of Materials Chemistry C</i> , 2019 , 7, 11419-11430	7.1	3
485	Synergistically Optimizing Carrier Concentration and Decreasing Sound Velocity in n-type AgInSe2 Thermoelectrics. <i>Chemistry of Materials</i> , 2019 , 31, 8182-8190	9.6	13
484	Creep behavior and postcreep thermoelectric performance of the n-type half-Heusler alloy Hf0.3Zr0.7NiSn0.98Sb0.02. <i>Materials Today Physics</i> , 2019 , 9, 100134	8	16
483	Synergistic modulation of mobility and thermal conductivity in (Bi,Sb)2Te3 towards high thermoelectric performance. <i>Energy and Environmental Science</i> , 2019 , 12, 624-630	35.4	82
482	Origins of ultralow thermal conductivity in 1-2-1-4 quaternary selenides. <i>Journal of Materials Chemistry A</i> , 2019 , 7, 2589-2596	13	20
481	Titanium-based thin film metallic glass as diffusion barrier layer for PbTe-based thermoelectric modules. <i>APL Materials</i> , 2019 , 7, 013001	5.7	10
480	Interfaces in energy materials. <i>APL Materials</i> , 2019 , 7, 012901	5.7	1
479	Grain Boundary Engineering Nanostructured SrTiO3 for Thermoelectric Applications. <i>Advanced Materials Interfaces</i> , 2019 , 6, 1900222	4.6	31
478	Double Half-Heuslers. <i>Joule</i> , 2019 , 3, 1226-1238	27.8	46
477	Mg Deficiency in Grain Boundaries of n-Type Mg3Sb2 Identified by Atom Probe Tomography. <i>Advanced Materials Interfaces</i> , 2019 , 6, 1900429	4.6	23
476	Microstructure and composition engineering Yb single-filled CoSb3 for high thermoelectric and mechanical performances. <i>Journal of Materiomics</i> , 2019 , 5, 702-710	6.7	17
475	Short-range order in defective half-Heusler thermoelectric crystals. <i>Energy and Environmental Science</i> , 2019 , 12, 1568-1574	35.4	51
474	Achieving band convergence by tuning the bonding ionicity in n-type Mg Sb. <i>Journal of Computational Chemistry</i> , 2019 , 40, 1693-1700	3.5	41
473	Amphoteric Indium Enables Carrier Engineering to Enhance the Power Factor and Thermoelectric Performance in n-Type AgnPb100InnTe100+2n (LIST). <i>Advanced Energy Materials</i> , 2019 , 9, 1900414	21.8	34
472	Dramatically reduced lattice thermal conductivity of Mg2Si thermoelectric material from nanotwinning. <i>Acta Materialia</i> , 2019 , 169, 9-14	8.4	17
471	Thermal conductivity of complex materials. <i>National Science Review</i> , 2019 , 6, 380-381	10.8	26

470	Lattice Softening Significantly Reduces Thermal Conductivity and Leads to High Thermoelectric Efficiency. <i>Advanced Materials</i> , 2019 , 31, e1900108	24	91
469	The importance of phase equilibrium for doping efficiency: iodine doped PbTe.. <i>Materials Horizons</i> , 2019 , 6, 1444-1453	14.4	26
468	The Thermoelectric Properties of Bismuth Telluride. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800904	6.4	219
467	Realization of higher thermoelectric performance by dynamic doping of copper in n-type PbTe. <i>Energy and Environmental Science</i> , 2019 , 12, 3089-3098	35.4	73
466	Ultralow Thermal Conductivity and High-Temperature Thermoelectric Performance in n-Type K ₂ Sb ₈ Bi ₈ Se ₁₄ . <i>Chemistry of Materials</i> , 2019 , 31, 5943-5952	9.6	15
465	High-Efficiency and Stable Thermoelectric Module Based on Liquid-Like Materials. <i>Joule</i> , 2019 , 3, 1538-1548	14.8	75
464	Density, distribution and nature of planar faults in silver antimony telluride for thermoelectric applications. <i>Acta Materialia</i> , 2019 , 178, 135-145	8.4	4
463	High Thermoelectric Performance in PbSe _{1-x} Sb _x Se ₂ Alloys from Valence Band Convergence and Low Thermal Conductivity. <i>Advanced Energy Materials</i> , 2019 , 9, 1901377	21.8	42
462	Phase Transformation Contributions to Heat Capacity and Impact on Thermal Diffusivity, Thermal Conductivity, and Thermoelectric Performance. <i>Advanced Materials</i> , 2019 , 31, e1902980	24	26
461	Conventional sintered Cu ₂ -Se thermoelectric material. <i>Journal of Materiomics</i> , 2019 , 5, 626-633	6.7	8
460	Improvement of Low-Temperature zT in a Mg Sb -Mg Bi Solid Solution via Mg-Vapor Annealing. <i>Advanced Materials</i> , 2019 , 31, e1902337	24	64
459	A figure of merit for flexibility. <i>Science</i> , 2019 , 366, 690-691	33.3	37
458	Exceptional thermoelectric performance in Mg ₃ Sb _{0.6} Bi _{1.4} for low-grade waste heat recovery. <i>Energy and Environmental Science</i> , 2019 , 12, 965-971	35.4	97
457	Effect of anion substitution on the structural and transport properties of argyrodites CuPSeS. <i>Dalton Transactions</i> , 2019 , 48, 15822-15829	4.3	15
456	3D extruded composite thermoelectric threads for flexible energy harvesting. <i>Nature Communications</i> , 2019 , 10, 5590	17.4	36
455	Effect of Two-Dimensional Crystal Orbitals on Fermi Surfaces and Electron Transport in Three-Dimensional Perovskite Oxides. <i>Angewandte Chemie</i> , 2019 , 131, 5557-5566	3.6	5
454	Effect of Two-Dimensional Crystal Orbitals on Fermi Surfaces and Electron Transport in Three-Dimensional Perovskite Oxides. <i>Angewandte Chemie - International Edition</i> , 2019 , 58, 5503-5512	16.4	9
453	The Vacancy-Induced Electronic Structure of the SrTiO ₃ Surface. <i>Advanced Electronic Materials</i> , 2019 , 5, 1800460	6.4	11

452	A Percolation Model for Piezoresistivity in Conductor/Polymer Composites. <i>Advanced Theory and Simulations</i> , 2019 , 2, 1800125	3.5	12
451	Mechanical properties in thermoelectric oxides: Ideal strength, deformation mechanism, and fracture toughness. <i>Acta Materialia</i> , 2018 , 149, 341-349	8.4	16
450	Resonant Bonding, Multiband Thermoelectric Transport, and Native Defects in n-Type BaBiTe ₃ Se _x (x = 0, 0.05, and 0.1). <i>Chemistry of Materials</i> , 2018 , 30, 174-184	9.6	10
449	Observation of valence band crossing: the thermoelectric properties of CaZn ₂ Sb ₂ TeMg ₂ Sb ₂ solid solution. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 9437-9444	13	44
448	High Thermoelectric Performance in SnTe/AgSbTe 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
447	Polycrystalline ZrTe ₅ Parametrized as a Narrow-Band-Gap Semiconductor for Thermoelectric Performance. <i>Physical Review Applied</i> , 2018 , 9,	4.3	19
446	Minimum thermal conductivity in the context of diffuson-mediated thermal transport. <i>Energy and Environmental Science</i> , 2018 , 11, 609-616	35.4	129
445	Quaternary Pavanites A ₂ SnBiS (A = Li, Na): Site Occupancy Disorder Defines Electronic Structure. <i>Inorganic Chemistry</i> , 2018 , 57, 2260-2268	5.1	7
444	Grain Boundaries Softening Thermoelectric Oxide BiCuSeO. <i>ACS Applied Materials & Interfaces</i> , 2018 , 10, 6772-6777	9.5	9
443	Grain boundary dominated charge transport in Mg ₃ Sb ₂ -based compounds. <i>Energy and Environmental Science</i> , 2018 , 11, 429-434	35.4	157
442	Improving the thermoelectric performance in Mg _{3+x} Sb _{1.5} Bi _{0.49} Te _{0.01} by reducing excess Mg. <i>APL Materials</i> , 2018 , 6, 016106	5.7	32
441	Manipulating Band Structure through Reconstruction of Binary Metal Sulfide for High-Performance Thermoelectrics in Solution-Synthesized Nanostructured Bi ₂ S ₃ . <i>Angewandte Chemie - International Edition</i> , 2018 , 57, 2413-2418	16.4	10
440	Enhancement of average thermoelectric figure of merit by increasing the grain-size of Mg _{3.2} Sb _{1.5} Bi _{0.49} Te _{0.01} . <i>Applied Physics Letters</i> , 2018 , 112, 033903	3.4	85
439	Impact of Ni content on the thermoelectric properties of half-Heusler TiNiSn. <i>Energy and Environmental Science</i> , 2018 , 11, 311-320	35.4	73
438	Assessing the Thermal Conductivity of Cu ₂ Se Alloys Undergoing a Phase Transition via the Simultaneous Measurement of Thermoelectric Parameters by a Harman-Based Setup. <i>Journal of Electronic Materials</i> , 2018 , 47, 3314-3319	1.9	14
437	Enhanced Thermoelectric Performance in 18-Electron Nb _{0.8} CoSb Half-Heusler Compound with Intrinsic Nb Vacancies. <i>Advanced Functional Materials</i> , 2018 , 28, 1705845	15.6	79
436	Ultralow Thermal Conductivity in Diamond-Like Semiconductors: Selective Scattering of Phonons from Antisite Defects. <i>Chemistry of Materials</i> , 2018 , 30, 3395-3409	9.6	16
435	Boosting the thermoelectric performance of PbSe through dynamic doping and hierarchical phonon scattering. <i>Energy and Environmental Science</i> , 2018 , 11, 1848-1858	35.4	112

434	Low-Symmetry Rhombohedral GeTe Thermoelectrics. <i>Joule</i> , 2018 , 2, 976-987	27.8	275
433	A valence balanced rule for discovery of 18-electron half-Heuslers with defects. <i>Energy and Environmental Science</i> , 2018 , 11, 1480-1488	35.4	68
432	Simple and efficient synthesis of nanograin structured single phase filled skutterudite for high thermoelectric performance. <i>Acta Materialia</i> , 2018 , 142, 8-17	8.4	34
431	Unique Role of Refractory Ta Alloying in Enhancing the Figure of Merit of NbFeSb Thermoelectric Materials. <i>Advanced Energy Materials</i> , 2018 , 8, 1701313	21.8	128
430	Discovery of High-Performance Thermoelectric Chalcogenides through Reliable High-Throughput Material Screening. <i>Journal of the American Chemical Society</i> , 2018 , 140, 10785-10793	16.4	86
429	Compressive creep behavior of hot-pressed GeTe based TAGS-85 and effect of creep on thermoelectric properties. <i>Acta Materialia</i> , 2018 , 158, 239-246	8.4	13
428	Suppression of atom motion and metal deposition in mixed ionic electronic conductors. <i>Nature Communications</i> , 2018 , 9, 2910	17.4	97
427	Melt-Centrifuged (Bi,Sb) Te : Engineering Microstructure toward High Thermoelectric Efficiency. <i>Advanced Materials</i> , 2018 , 30, e1802016	24	95
426	Ductile deformation mechanism in semiconductor PbAg_2S . <i>Npj Computational Materials</i> , 2018 , 4,	10.9	28
425	Highly fluidic liquid at homointerface generates grain-boundary dislocation arrays for high-performance bulk thermoelectrics. <i>Acta Materialia</i> , 2018 , 159, 266-275	8.4	13
424	Mechanical softening of thermoelectric semiconductor Mg_2Si from nanotwinning. <i>Scripta Materialia</i> , 2018 , 157, 90-94	5.6	10
423	Giant enhancement of the figure-of-merit over a broad temperature range in nano-boron incorporated Cu_2Se . <i>Journal of Materials Chemistry A</i> , 2018 , 6, 18409-18416	13	37
422	Thermopower-conductivity relation for distinguishing transport mechanisms: Polaron hopping in CeO_2 and band conduction in SrTiO_3 . <i>Physical Review B</i> , 2018 , 97,	3.3	20
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