

Riley Hanus

List of Publications by Year in descending order

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Version: 2024-02-01

26
papers

2,823
citations

279798

23
h-index

552781

26
g-index

29
all docs

29
docs citations

29
times ranked

2456
citing authors

#	ARTICLE	IF	CITATIONS
1	Lattice Dislocations Enhancing Thermoelectric PbTe in Addition to Band Convergence. <i>Advanced Materials</i> , 2017, 29, 1606768.	21.0	365
2	Vacancy-induced dislocations within grains for high-performance PbSe thermoelectrics. <i>Nature Communications</i> , 2017, 8, 13828.	12.8	360
3	Ultrahigh thermoelectric performance in Cu ₂ Se-based hybrid materials with highly dispersed molecular CNTs. <i>Energy and Environmental Science</i> , 2017, 10, 1928-1935.	30.8	298
4	Skutterudite with graphene-modified grain-boundary complexation enhances zT enabling high-efficiency thermoelectric device. <i>Energy and Environmental Science</i> , 2017, 10, 183-191.	30.8	252
5	Minimum thermal conductivity in the context of <i>diffuson</i> -mediated thermal transport. <i>Energy and Environmental Science</i> , 2018, 11, 609-616.	30.8	221
6	Enhanced Thermoelectric Performance through Tuning Bonding Energy in Cu ₂ Se _{1-x} S _x Liquid-like Materials. <i>Chemistry of Materials</i> , 2017, 29, 6367-6377.	6.7	179
7	Lattice Softening Significantly Reduces Thermal Conductivity and Leads to High Thermoelectric Efficiency. <i>Advanced Materials</i> , 2019, 31, e1900108.	21.0	171
8	Solubility design leading to high figure of merit in low-cost Ce-CoSb ₃ skutterudites. <i>Nature Communications</i> , 2015, 6, 7584.	12.8	142
9	Melt-Centrifuged (Bi,Sb) ₂ Te ₃ : Engineering Microstructure toward High Thermoelectric Efficiency. <i>Advanced Materials</i> , 2018, 30, e1802016.	21.0	133
10	Dislocation strain as the mechanism of phonon scattering at grain boundaries. <i>Materials Horizons</i> , 2016, 3, 234-240.	12.2	108
11	Enhanced stability and thermoelectric figure-of-merit in copper selenide by lithium doping. <i>Materials Today Physics</i> , 2017, 1, 7-13.	6.0	93
12	Quantifying charge carrier localization in chemically doped semiconducting polymers. <i>Nature Materials</i> , 2021, 20, 1414-1421.	27.5	61
13	Analytical Models of Phonon-Point-Defect Scattering. <i>Physical Review Applied</i> , 2020, 13, .	3.8	55
14	A Chemical Understanding of the Band Convergence in Thermoelectric CoSb ₃ Skutterudites: Influence of Electron Population, Local Thermal Expansion, and Bonding Interactions. <i>Chemistry of Materials</i> , 2017, 29, 1156-1164.	6.7	50
15	Thermal transport in defective and disordered materials. <i>Applied Physics Reviews</i> , 2021, 8, .	11.3	45
16	Uncovering design principles for amorphous-like heat conduction using two-channel lattice dynamics. <i>Materials Today Physics</i> , 2021, 18, 100344.	6.0	42
17	Parallel Dislocation Networks and Cottrell Atmospheres Reduce Thermal Conductivity of PbTe Thermoelectrics. <i>Advanced Functional Materials</i> , 2021, 31, 2101214.	14.9	41
18	Alloy scattering of phonons. <i>Materials Horizons</i> , 2020, 7, 1452-1456.	12.2	39

#	ARTICLE	IF	CITATIONS
19	Atomistic explanation of brittle failure of thermoelectric skutterudite CoSb ₃ . Acta Materialia, 2016, 103, 775-780.	7.9	28
20	Phonon diffraction and dimensionality crossover in phonon-interface scattering. Communications Physics, 2018, 1, .	5.3	28
21	Thermal boundary resistance correlated with strain energy in individual Si film-wafer twist boundaries. Materials Today Physics, 2018, 6, 53-59.	6.0	27
22	Considering the Role of Ion Transport in Diffusion-Dominated Thermal Conductivity. Advanced Energy Materials, 2022, 12, .	19.5	27
23	GaN thermal transport limited by the interplay of dislocations and size effects. Physical Review B, 2020, 102, .	3.2	26
24	Thermal Evolution of Internal Strain in Doped PbTe. Chemistry of Materials, 2021, 33, 4765-4772.	6.7	11
25	Thermoreflectance Imaging of (Ultra)wide Band-Gap Devices with MoS ₂ Enhancement Coatings. ACS Applied Materials & Interfaces, 2021, 13, 42195-42204.	8.0	7
26	Dislocation-Limited Thermal Conductivity in LiF: Revisiting Perturbative Models. Jom, 0, , 1.	1.9	1