Dongyang Wang

List of Publications by Year
in descending order

54	3,023	218381	161609
papers	citations	26 h-index	54 g-index

54	54	54	1615
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	High thermoelectric performance in low-cost SnS _{0.91} Se _{0.09} crystals. Science, 2019, 365, 1418-1424.	6.0	395
2	Power generation and thermoelectric cooling enabled by momentum and energy multiband alignments. Science, 2021, 373, 556-561.	6.0	270
3	Realizing high performance n-type PbTe by synergistically optimizing effective mass and carrier mobility and suppressing bipolar thermal conductivity. Energy and Environmental Science, 2018, 11, 2486-2495.	15.6	200
4	High thermoelectric performance realized through manipulating layered phonon-electron decoupling. Science, 2022, 375, 1385-1389.	6.0	194
5	Realizing High Thermoelectric Performance in p-Type SnSe through Crystal Structure Modification. Journal of the American Chemical Society, 2019, 141, 1141-1149.	6.6	137
6	Band Sharpening and Band Alignment Enable High Quality Factor to Enhance Thermoelectric Performance in n-Type PbS. Journal of the American Chemical Society, 2020, 142, 4051-4060.	6.6	130
7	Simultaneously enhancing the power factor and reducing the thermal conductivity of SnTe via introducing its analogues. Energy and Environmental Science, 2017, 10, 2420-2431.	15.6	116
8	Realizing high thermoelectric performance in GeTe through decreasing the phase transition temperature via entropy engineering. Journal of Materials Chemistry A, 2019, 7, 26393-26401.	5.2	103
9	Synergistically optimizing interdependent thermoelectric parameters of n-type PbSe through alloying CdSe. Energy and Environmental Science, 2019, 12, 1969-1978.	15.6	99
10	Ultrahigh Average ZT Realized in p-Type SnSe Crystalline Thermoelectrics through Producing Extrinsic Vacancies. Journal of the American Chemical Society, 2020, 142, 5901-5909.	6.6	94
11	Remarkable electron and phonon band structures lead to a high thermoelectric performance ZT > 1 in earth-abundant and eco-friendly SnS crystals. Journal of Materials Chemistry A, 2018, 6, 10048-10056.	5.2	90
12	Intrinsically Low Thermal Conductivity in BiSbSe₃: A Promising Thermoelectric Material with Multiple Conduction Bands. Advanced Functional Materials, 2019, 29, 1806558.	7.8	86
13	Realizing Highâ€Ranged Outâ€ofâ€Plane ZTs in Nâ€Type SnSe Crystals through Promoting Continuous Phase Transition. Advanced Energy Materials, 2019, 9, 1901334.	10.2	83
14	Approaching Topological Insulating States Leads to High Thermoelectric Performance in n-Type PbTe. Journal of the American Chemical Society, 2018, 140, 13097-13102.	6.6	77
15	Realizing High Thermoelectric Performance in GeTe through Optimizing Ge Vacancies and Manipulating Ge Precipitates. ACS Applied Energy Materials, 2019, 2, 7594-7601.	2.5	61
16	Amphoteric Indium Enables Carrier Engineering to Enhance the Power Factor and Thermoelectric Performance in nâ€Type Ag_nPb₁₀₀In_nTe₁₀₀₊₂_n (LIST). Advanced Energy Materials, 2019, 9, 1900414.	10.2	60
17	Slowing down the heat in thermoelectrics. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 755-789.	8.5	57
18	Realizing High Thermoelectric Performance in Polycrystalline SnSe via Silver Doping and Germanium Alloying. ACS Applied Energy Materials, 2020, 3, 2049-2054.	2.5	52

#	Article	IF	Citations
19	Realizing N-type SnTe Thermoelectrics with Competitive Performance through Suppressing Sn Vacancies. Journal of the American Chemical Society, 2021, 143, 8538-8542.	6.6	51
20	Hierarchical structures lead to high thermoelectric performance in Cu_{m+n}Pb₁₀₀Sb_mTe₁₀₀Se_{2m} (CLAST). Energy and Environmental Science, 2021, 14, 451-461.	15.6	47
21	Thermoelectric transport properties of rock-salt SnSe: first-principles investigation. Journal of Materials Chemistry C, 2018, 6, 12016-12022.	2.7	43
22	Extremely low thermal conductivity from bismuth selenohalides with 1D soft crystal structure. Science China Materials, 2020, 63, 1759-1768.	3.5	38
23	Enhancing thermoelectric performance of SnTe via stepwisely optimizing electrical and thermal transport properties. Journal of Alloys and Compounds, 2019, 773, 571-584.	2.8	37
24	Improving the thermoelectric performance of p-type PbSe via synergistically enhancing the Seebeck coefficient and reducing electronic thermal conductivity. Journal of Materials Chemistry A, 2020, 8, 4931-4937.	5.2	34
25	Contrasting Cu Roles Lead to High Ranged Thermoelectric Performance of PbS. Advanced Functional Materials, 2021, 31, 2102185.	7.8	33
26	Contrasting roles of small metallic elements M (M = Cu, Zn, Ni) in enhancing the thermoelectric performance of n-type PbM_{0.01}Se. Journal of Materials Chemistry A, 2020, 8, 5699-5708.	5.2	32
27	Synergistically improving thermoelectric and mechanical properties of Ge0.94Bi0.06Te through dispersing nano-SiC. Scripta Materialia, 2020, 183, 22-27.	2.6	29
28	Oxygen adsorption and its influence on the thermoelectric performance of polycrystalline SnSe. Journal of Materials Chemistry C, 2019, 7, 10507-10513.	2.7	28
29	Boosting thermoelectric performance of n-type PbS through synergistically integrating In resonant level and Cu dynamic doping. Journal of Physics and Chemistry of Solids, 2021, 148, 109640.	1.9	26
30	Enhancing the thermoelectric performance of Bi2S3: A promising earth-abundant thermoelectric material. Frontiers of Physics, 2019, 14, 1.	2.4	24
31	Synergistically optimized electrical and thermal transport properties of polycrystalline SnSe via alloying SnS. Journal of Solid State Chemistry, 2019, 273, 85-91.	1.4	23
32	An approach of enhancing thermoelectric performance for p-type PbS: Decreasing electronic thermal conductivity. Journal of Alloys and Compounds, 2020, 820, 153453.	2.8	22
33	Outstanding CdSe with Multiple Functions Leads to High Performance of GeTe Thermoelectrics. Advanced Energy Materials, 2022, 12, .	10.2	21
34	Synergistically Enhancing Thermoelectric Performance of nâ€Type PbTe with Indium Doping and Sulfur Alloying. Annalen Der Physik, 2020, 532, 1900421.	0.9	19
35	Boosting the thermoelectric performance of GeTe by manipulating the phase transition temperature via Sb doping. Journal of Materials Chemistry C, 2021, 9, 6484-6490.	2.7	19
36	Band convergence and nanostructure modulations lead to high thermoelectric performance in SnPb0.04Te-y% AgSbTe2. Materials Today Physics, 2021, 21, 100505.	2.9	17

#	Article	IF	Citations
37	Low carrier concentration leads to high in-plane thermoelectric performance in n-type SnS crystals. Science China Materials, 2021, 64, 3051-3058.	3.5	16
38	Realizing high doping efficiency and thermoelectric performance in n-type SnSe polycrystals via bandgap engineering and vacancy compensation. Materials Today Physics, 2021, 20, 100452.	2.9	16
39	Enhanced thermoelectric perfromance in cubic form of SnSe stabilized through enformatingly alloying AgSbTe2. Acta Materialia, 2022, 227, 117681.	3.8	16
40	Rationally optimized carrier effective mass and carrier density leads to high average ZT value in n-type PbSe. Journal of Materials Chemistry A, 2021, 9, 23011-23018.	5.2	15
41	Dynamic carrier transports and low thermal conductivity in nâ€type layered InSe thermoelectrics. Aggregate, 2021, 2, e92.	5.2	14
42	Synergistically enhanced thermoelectric properties in n-type Bi6Cu2Se4O6 through inducing resonant levels. Acta Materialia, 2022, 232, 117930.	3.8	13
43	Enhanced thermoelectric performance in SnTe due to the energy filtering effect introduced by Bi2O3. Materials Today Energy, 2022, 25, 100985.	2.5	13
44	An Update Review on N-Type Layered Oxyselenide Thermoelectric Materials. Materials, 2021, 14, 3905.	1.3	12
45	Honeycomb-like puckered PbSe with wide bandgap as promising thermoelectric material: a first-principles prediction. Materials Today Energy, 2022, 23, 100914.	2.5	11
46	Oneâ€“One Correspondence between n-Type SnTe Thermoelectric and Topological Phase Transition. Chemistry of Materials, 2022, 34, 3423-3429.	3.2	11
47	Enhancing thermoelectric performance of n-type Bi6Cu2Se4O6 through introducing transition metal elements. Scripta Materialia, 2021, 202, 114010.	2.6	10
48	Thermoelectric transport properties of PbS and its contrasting electronic band structures. Scripta Materialia, 2020, 185, 76-81.	2.6	7
49	Realizing synergistic optimization of thermoelectric properties in n-type BiSbSe3 polycrystals via co-doping zirconium and halogen. Materials Today Physics, 2022, 22, 100608.	2.9	7
50	Contrasting Thermoelectric Transport Properties of n-Type PbS Induced by Adding Ni and Zn. ACS Applied Energy Materials, 2021, 4, 6284-6289.	2.5	5
51	A promising thermoelectrics In4SnSe4 with a wide bandgap and cubic structure composited by layered SnSe and In4Se3. Journal of Materiomics, 2022, 8, 982-991.	2.8	5
52	Contrasting Thermoelectric Transport Behaviors of p -Type PbS Caused by Doping Alkali Metals (Li and Na). Research, 2020, 2020, 4084532.	2.8	2
53	Investigations on the Thermoelectric Transport Properties in the Holeâ€doped La₂CuO₄. Zeitschrift Fur Anorganische Und Allgemeine Chemie, 2022, 648, .	0.6	2
54	Synergistically enhanced electrical transport properties of SrTiO₃via Fermi level regulation and modulation doping. Journal of Materials Chemistry C, 2022, 10, 13851-13859.	2.7	1