Wei Liu

List of Publications by Year
in descending order

54 papers	3,919 citations	270111 25 h-index	190340 53 g-index
54 all docs	54 docs citations	54 times ranked	3198 citing authors

#	Article	IF	Citations
1	Enhanced Thermoelectric Properties of Cu₂SnSe₃-Based Materials with Ag₂Se Addition. ACS Applied Materials & Interfaces, 2022, 14, 5439-5446.	4.0	7
2	A comprehensive review on Bi₂Te₃â€based thin films: Thermoelectrics and beyond. , 2022, 1, 88-115.		119
3	Weyl Semimetal States Generated Extraordinary Quasiâ€Linear Magnetoresistance and Nernst Thermoelectric Power Factor in Polycrystalline NbP. Advanced Functional Materials, 2022, 32, .	7.8	13
4	Evolution of atomic structure and electronic transport properties in n-type Bi2Te3 films via Bi2 planar defects. Applied Physics Letters, 2021, 118, 103901.	1.5	4
5	Identifying the Manipulation of Individual Atomic-Scale Defects for Boosting Thermoelectric Performances in Artificially Controlled Bi₂Te₃ Films. ACS Nano, 2021, 15, 5706-5714.	7.3	38
6	Strong Anisotropy and Bipolar Conduction-Dominated Thermoelectric Transport Properties in the Polycrystalline Topological Phase of ZrTe₅. Inorganic Chemistry, 2021, 60, 8890-8897.	1.9	4
7	Tendency of Gap Opening in Semimetal 1Tâ€²â€MoTe₂ with Proximity to a 3D Topological Insulator. Advanced Functional Materials, 2021, 31, 2103384.	7.8	8
8	Power generation and thermoelectric cooling enabled by momentum and energy multiband alignments. Science, 2021, 373, 556-561.	6.0	270
9	High band degeneracy and weak chemical bonds leading to enhanced thermoelectric transport properties in 2Hâ€“MoTe2. Journal of Solid State Chemistry, 2021, 300, 122227.	1.4	2
10	Bridging the miscibility gap towards higher thermoelectric performance of PbS. Acta Materialia, 2021, 220, 117337.	3.8	17
11	Rationally optimized carrier effective mass and carrier density leads to high average <i>ZT</i> value in n-type PbSe. Journal of Materials Chemistry A, 2021, 9, 23011-23018.	5.2	15
12	Synergistically Enhanced Thermoelectric Performance of Cu₂SnSe₃-Based Composites <i>via</i> Ag Doping Balance. ACS Applied Materials & Interfaces, 2021, 13, 55178-55187.	4.0	9
13	Native Atomic Defects Manipulation for Enhancing the Electronic Transport Properties of Epitaxial SnTe Films. ACS Applied Materials & Interfaces, 2021, 13, 56446-56455.	4.0	2
14	Enhancing Thermoelectric Performance of n-Type PbSe through Forming Solid Solution with PbTe and PbS. ACS Applied Energy Materials, 2020, 3, 2-8.	2.5	27
15	Discordant nature of Cd in GeTe enhances phonon scattering and improves band convergence for high thermoelectric performance. Journal of Materials Chemistry A, 2020, 8, 1193-1204.	5.2	83
16	Impurity states in Mo_{1â^'x}M_xSe₂ compounds doped with group VB elements and their electronic and thermal transport properties. Journal of Materials Chemistry C, 2020, 8, 619-629.	2.7	11
17	Thickness-dependent electronic transport induced by <i>in situ</i> transformation of point defects in MBE-grown Bi2Te3 thin films. Applied Physics Letters, 2020, 117, .	1.5	19
18	Realizing High Thermoelectric Performance in Sb-Doped Ag₂Te Compounds with a Low-Temperature Monoclinic Structure. ACS Applied Materials & Interfaces, 2020, 12, 39425-39433.	4.0	35

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19	Identifying the Origins of High Thermoelectric Performance in Group IIIA Element Doped PbS. ACS Applied Materials & Interfaces, 2020, 12, 14203-14212.	4.0	12
20	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.	3.2	26
21	Enhanced Mechanical Properties of Na_{0.02}Pb_{0.98}Te/MoTe₂ Thermoelectric Composites Through in-Situ-Formed MoTe₂. ACS Applied Materials & Interfaces, 2019, 11, 41472-41481.	4.0	12
22	Large Thermal Conductivity Drops in the Diamondoid Lattice of CuFeS₂ by Discordant Atom Doping. Journal of the American Chemical Society, 2019, 141, 18900-18909.	6.6	66
23	Fine-tuning the solid-state ordering and thermoelectric performance of regioregular P3HT analogues by sequential oxygen-substitution of carbon atoms along the alkyl side chains. Journal of Materials Chemistry C, 2019, 7, 2333-2344.	2.7	13
24	Synergistically Improved Electronic and Thermal Transport Properties in Nb-Doped Nb_{<i>y</i>}Mo_{1â€“<i>y</i>}Se_{2â€“2<i>x</i>}Te_{2<i>x</i>} Solid Solutions Due to Alloy Phonon Scattering and Increased Valley Degeneracy. ACS Applied Materials & Interfaces, 2019, 11, 26069-26081.	4.0	9
25	One-step ultra-rapid fabrication and thermoelectric properties of Cu₂Se bulk thermoelectric material. RSC Advances, 2019, 9, 10508-10519.	1.7	9
26	Optimizing the average power factor of p-type (Na, Ag) co-doped polycrystalline SnSe. RSC Advances, 2019, 9, 7115-7122.	1.7	20
27	Modification of Bulk Heterojunction and Cl Doping for High-Performance Thermoelectric SnSe₂/SnSe Nanocomposites. ACS Applied Materials & Interfaces, 2018, 10, 15793-15802.	4.0	39
28	Realization of non-equilibrium process for high thermoelectric performance Sb-doped GeTe. Science Bulletin, 2018, 63, 717-725.	4.3	49
29	Self-propagating high-temperature synthesis and thermoelectric performances of Cu2SnSe3. Journal of Alloys and Compounds, 2018, 750, 965-971.	2.8	11
30	Low temperature thermoelectric properties of <i>p</i>-type doped single-crystalline SnSe. Applied Physics Letters, 2018, 112, .	1.5	24
31	Rhombohedral to Cubic Conversion of GeTe via MnTe Alloying Leads to Ultralow Thermal Conductivity, Electronic Band Convergence, and High Thermoelectric Performance. Journal of the American Chemical Society, 2018, 140, 2673-2686.	6.6	307
32	Structure and thermoelectric properties of 2D Cr₂Se_{3âˆ’3x}S_{3x} solid solutions. Journal of Materials Chemistry C, 2018, 6, 836-846.	2.7	13
33	High thermoelectric performance in Bi_{0.46}Sb_{1.54}Te₃ nanostructured with ZnTe. Energy and Environmental Science, 2018, 11, 1520-1535.	15.6	239
34	Interpreting the Combustion Process for High-Performance ZrNiSn Thermoelectric Materials. ACS Applied Materials & Interfaces, 2018, 10, 864-872.	4.0	26
35	Understanding the combustion process for the synthesis of mechanically robust SnSe thermoelectrics. Nano Energy, 2018, 44, 53-62.	8.2	51
36	Structure and Improved Thermoelectric Properties of Ag_{2<i>x</i>}Cr_{2â€“2<i>x</i>}Se₃ Compounds. Inorganic Chemistry, 2018, 57, 12125-12131.	1.9	5

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37	Electron Density Optimization and the Anisotropic Thermoelectric Properties of Ti Self-Intercalated Ti_{1+<i>x</i>}S₂ Compounds. ACS Applied Materials & Interfaces, 2018, 10, 32344-32354.	4.0	23
38	Thermal conductivity in Bi _{0.5} Sb _{1.5} Te _{3+ <i>x</i>} and the role of dense dislocation arrays at grain boundaries. Science Advances, 2018, 4, eaar5606.	4.7	143
39	Ultrafast Synthesis and Thermoelectric Properties of Mn_{1+<i>x</i>}Te Compounds. ACS Applied Materials & Interfaces, 2018, 10, 25519-25528.	4.0	22
40	Enhanced Thermoelectric Properties of Codoped Cr2Se3: The Distinct Roles of Transition Metals and S. ACS Applied Materials & Interfaces, 2018, 10, 22389-22400.	4.0	18
41	Multiâ€Scale Microstructural Thermoelectric Materials: Transport Behavior, Nonâ€Equilibrium Preparation, and Applications. Advanced Materials, 2017, 29, 1602013.	11.1	234
42	Eco-friendly high-performance silicide thermoelectric materials. National Science Review, 2017, 4, 611-626.	4.6	71
43	High thermoelectric performance of p-BiSbTe compounds prepared by ultra-fast thermally induced reaction. Energy and Environmental Science, 2017, 10, 2638-2652.	15.6	138
44	Thermoelectric performance of CuFeS2+2x composites prepared by rapid thermal explosion. NPG Asia Materials, 2017, 9, e390-e390.	3.8	38
45	Origins of enhanced thermoelectric power factor in topologically insulating Bi0.64Sb1.36Te3 thin films. Applied Physics Letters, 2016, 108, .	1.5	8
46	Nonmagnetic In Substituted CuFe_{1â€“<i>x</i>}In_{<i>x</i>}S₂ Solid Solution Thermoelectric. Journal of Physical Chemistry C, 2016, 120, 27895-27902.	1.5	42
47	Epitaxial growth and improved electronic properties of (Bi1â^'Sb)2Te3 thin films grown on sapphire (0001) substrates: The influence of Sb content and the annealing. Journal of Alloys and Compounds, 2015, 647, 50-56.	2.8	10
48	Advanced thermoelectrics governed by a single parabolic band: Mg₂Si_{0.3}Sn_{0.7}, a canonical example. Physical Chemistry Chemical Physics, 2014, 16, 6893-6897.	1.3	114
49	Low effective mass and carrier concentration optimization for high performance p-type Mg_{2(1â^'x)}Li_{2x}Si_{0.3}Sn_{0.7}solid solutions. Physical Chemistry Chemical Physics, 2014, 16, 23576-23583.	1.3	77
50	Thermoelectric transport properties of p-type silver-doped PbS with<i>in situ</i>Ag₂S nanoprecipitates. Journal Physics D: Applied Physics, 2014, 47, 115303.	1.3	26
51	Rapid preparation of CeFe4Sb12 skutterudite by melt spinning: rich nanostructures and high thermoelectric performance. Journal of Materials Chemistry A, 2013, 1, 12657.	5.2	101
52	Realization of high thermoelectric performance in p-type unfilled ternary skutterudites FeSb2+xTe1â^'x via band structure modification and significant point defect scattering. Acta Materialia, 2013, 61, 7693-7704.	3.8	44
53	Convergence of Conduction Bands as a Means of Enhancing Thermoelectric Performance of<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>n</mml:mi></mml:math>-Type<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:msub><mml:mi>Mg</mml:mi><mml:mn>2</mml:mn></mml:msub><mml:msub><mml:mi>Si</mml:mi><mml:m Physical Review Letters, 2012, 108, 166601.	2.9	1,048
54	Optimized Thermoelectric Properties of Sb-Doped Mg_{2(1+<i>z</i>)}Si_{0.5â€“<i>y</i>}Sn_{0.5}Sb_{<i>y</i>} through Adjustment of the Mg Content. Chemistry of Materials, 2011, 23, 5256-5263.	3.2	148