Yuan Yu

List of Publications by Year
in descending order

50	2,460	218592	206029
papers	citations	26 h-index	48 g-index

50	50	50	1918
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Polycrystalline SnSe with a thermoelectric figure of merit greater than the single crystal. Nature Materials, 2021, 20, 1378-1384.	13.3	340
2	Unique Bond Breaking in Crystalline Phase Change Materials and the Quest for Metavalent Bonding. Advanced Materials, 2018, 30, e1706735.	11.1	175
3	Simultaneous optimization of electrical and thermal transport properties of Bi0.5Sb1.5Te3 thermoelectric alloy by twin boundary engineering. Nano Energy, 2017, 37, 203-213.	8.2	164
4	Chalcogenide Thermoelectrics Empowered by an Unconventional Bonding Mechanism. Advanced Functional Materials, 2020, 30, 1904862.	7.8	148
5	Texture-dependent thermoelectric properties of nano-structured Bi2Te3. Chemical Engineering Journal, 2020, 388, 124295.	6.6	142
6	High-Performance n-Type PbSeâ€“Cu₂Se Thermoelectrics through Conduction Band Engineering and Phonon Softening. Journal of the American Chemical Society, 2018, 140, 15535-15545.	6.6	103
7	Understanding the Structure and Properties of Sesquiâ€Chalcogenides (i.e.,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 507 Td (V	11.1	98
8	Ag-Segregation to Dislocations in PbTe-Based Thermoelectric Materials. ACS Applied Materials & Interfaces, 2018, 10, 3609-3615.	4.0	74
9	Revealing nano-chemistry at lattice defects in thermoelectric materials using atom probe tomography. Materials Today, 2020, 32, 260-274.	8.3	73
10	Exceptionally High Average Power Factor and Thermoelectric Figure of Merit in n-type PbSe by the Dual Incorporation of Cu and Te. Journal of the American Chemical Society, 2020, 142, 15172-15186.	6.6	72
11	Attaining ultrahigh thermoelectric performance of direction-solidified bulk n-type Bi2Te2.4Se0.6 via its liquid state treatment. Nano Energy, 2017, 42, 8-16.	8.2	71
12	Liquidâ€Phase Hot Deformation to Enhance Thermoelectric Performance of nâ€type Bismuthâ€Telluride‐Based Solid Solutions. Advanced Science, 2019, 6, 1901702.	5.6	71
13	Retarding Ostwald ripening through Gibbs adsorption and interfacial complexions leads to high-performance SnTe thermoelectrics. Energy and Environmental Science, 2021, 14, 5469-5479.	15.6	67
14	Cu Intercalation and Br Doping to Thermoelectric SnSe₂ Lead to Ultrahigh Electron Mobility and Temperatureâ€Independent Power Factor. Advanced Functional Materials, 2020, 30, 1908405.	7.8	53
15	Nbâ€Mediated Grain Growth and Grainâ€Boundary Engineering in Mg₃Sb₂â€Based Thermoelectric Materials. Advanced Functional Materials, 2021, 31, 2100258.	7.8	53
16	Defect Engineering in Solution-Processed Polycrystalline SnSe Leads to High Thermoelectric Performance. ACS Nano, 2022, 16, 78-88.	7.3	50
17	Advanced Optical Programming of Individual Metaâ€Atoms Beyond the Effective Medium Approach. Advanced Materials, 2019, 31, e1901033.	11.1	47
18	Mg Deficiency in Grain Boundaries of nâ€Type Mg₃Sb₂ Identified by Atom Probe Tomography. Advanced Materials Interfaces, 2019, 6, 1900429.	1.9	44

#	Article	IF	Citations
19	Parallel Dislocation Networks and Cottrell Atmospheres Reduce Thermal Conductivity of PbTe Thermoelectrics. Advanced Functional Materials, 2021, 31, 2101214.	7.8	41
20	Thermoelectric Performance of Sb₂Te₃-Based Alloys is Improved by Introducing PN Junctions. ACS Applied Materials & Interfaces, 2018, 10, 23277-23284.	4.0	39
21	Boron Strengthened GeTeâ€Based Alloys for Robust Thermoelectric Devices with High Output Power Density. Advanced Energy Materials, 2021, 11, 2102012.	10.2	39
22	Employing Interfaces with Metavalently Bonded Materials for Phonon Scattering and Control of the Thermal Conductivity in TAGSâ€x Thermoelectric Materials. Advanced Functional Materials, 2020, 30, 1910039.	7.8	35
23	Enhancing thermoelectric performance of Sb2Te3 through swapped bilayer defects. Nano Energy, 2021, 79, 105484.	8.2	32
24	Boronâ€Mediated Grain Boundary Engineering Enables Simultaneous Improvement of Thermoelectric and Mechanical Properties in Nâ€Type Bi₂Te₃. Small, 2021, 17, e2104067.	5.2	30
25	Role of Nanostructuring and Microstructuring in Silver Antimony Telluride Compounds for Thermoelectric Applications. ACS Applied Materials & Interfaces, 2017, 9, 14779-14790.	4.0	28
26	Enhanced thermoelectric properties of p-type Bi 0.5 Sb 1.5 Te 3 bulk alloys by electroless plating with Cu and annealing. Scripta Materialia, 2016, 118, 19-23.	2.6	26
27	Dislocations Stabilized by Point Defects Increase Brittleness in PbTe. Advanced Functional Materials, 2021, 31, 2108006.	7.8	25
28	Dopant-segregation to grain boundaries controls electrical conductivity of n-type NbCo(Pt)Sn half-Heusler alloy mediating thermoelectric performance. Acta Materialia, 2021, 217, 117147.	3.8	24
29	Achieving high thermoelectric performance of Ni/Cu modified Bi0.5Sb1.5Te3 composites by a facile electroless plating. Materials Today Energy, 2018, 9, 383-390.	2.5	22
30	Enhancing the thermoelectric performance of free solidified p-type Bi0.5Sb1.5Te3 alloy by manipulating its parent liquid state. Intermetallics, 2015, 66, 40-47.	1.8	21
31	Influence of melt overheating treatment on solidification behavior of BiTe-based alloys at different cooling rates. Materials and Design, 2015, 88, 743-750.	3.3	19
32	Enhanced thermoelectric properties of n-type Bi2Te2.7Se0.3 semiconductor by manipulating its parent liquid state. Journal of Materials Science, 2017, 52, 8526-8537.	1.7	19
33	The Importance of Surface Adsorbates in Solutionâ€Processed Thermoelectric Materials: The Case of SnSe. Advanced Materials, 2021, 33, e2106858.	11.1	19
34	Enhancing the room temperature thermoelectric performance of n-type Bismuth-telluride-based polycrystalline materials by low-angle grain boundaries. Materials Today Physics, 2022, 22, 100573.	2.9	19
35	Tailoring Thermoelectric Transport Properties of Ag-Alloyed PbTe: Effects of Microstructure Evolution. ACS Applied Materials & Interfaces, 2018, 10, 38994-39001.	4.0	17
36	Dynamic doping and Cottrell atmosphere optimize the thermoelectric performance of n-type PbTe over a broad temperature interval. Nano Energy, 2022, 101, 107576.	8.2	16

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37	Attaining reduced lattice thermal conductivity and enhanced electrical conductivity in as-sintered pure n-type Bi2Te3 alloy. Journal of Materials Science, 2019, 54, 4788-4797.	1.7	15
38	Synergistically Optimized Electron and Phonon Transport of Polycrystalline BiCuSeO via Pb and Yb Co-Doping. ACS Applied Materials & Interfaces, 2021, 13, 57638-57645.	4.0	15
39	Enhanced thermoelectric properties of n-type direction solidified Bi2Te2.7Se0.3 alloys by manipulating its liquid state. Scripta Materialia, 2018, 146, 192-195.	2.6	14
40	Density, distribution and nature of planar faults in silver antimony telluride for thermoelectric applications. Acta Materialia, 2019, 178, 135-145.	3.8	13
41	Dependence of Solidification for Bi2Te3â^'xSex Alloys on Their Liquid States. Scientific Reports, 2017, 7, 2463.	1.6	12
42	High-performance p-type elemental Te thermoelectric materials enabled by the synergy of carrier tuning and phonon engineering. Journal of Materials Chemistry A, 2020, 8, 12156-12168.	5.2	12
43	Approaching the Glass Transition Temperature of GeTe by Crystallizing Ge₁₅Te₈₅. Physica Status Solidi - Rapid Research Letters, 2021, 15, 2000478.	1.2	12
44	Solidâ€State Janus Nanoprecipitation Enables Amorphousâ€Like Heat Conduction in Crystalline Mg₃Sb₂â€Based Thermoelectric Materials. Advanced Science, 2022, 9, .	5.6	12
45	Simultaneous optimization of Seebeck, electrical and thermal conductivity in free-solidified Bi0.4Sb1.6Te3 alloy via liquid-state manipulation. Journal of Materials Science, 2018, 53, 9107-9116.	1.7	10
46	Effects of melting time and temperature on the microstructure and thermoelectric properties of p-type Bi0.3Sb1.7Te3 alloy. Journal of Physics and Chemistry of Solids, 2019, 124, 281-288.	1.9	8
47	Enhancing thermoelectric performance of Cu-modified Bi0.5Sb1.5Te3 by electroless plating and annealing. Progress in Natural Science: Materials International, 2018, 28, 218-224.	1.8	6
48	The Effect of SbI3 Doping on the Structure and Electrical Properties of n-Type Bi1.8Sb0.2Te2.85Se0.15 Alloy Prepared by the Free Growth Method. Journal of Electronic Materials, 2018, 47, 998-1002.	1.0	6
49	Effect of Chemical Plating with Ni Content on Thermoelectric and Mechanical Properties of P-Type Bi_{0.5}Sb_{0.15}Te₃ Bulk Alloys. Materials Science Forum, 2016, 847, 177-183.	0.3	5
50	Effects of Electroless Plating with Cu Content on Thermoelectric and Mechanical Properties of p-type Bi0.5Sb1.5Te3 Bulk Alloys. Journal Wuhan University of Technology, Materials Science Edition, 2018, 33, 797-801.	0.4	4