Tian-Ran Wei

List of Publications by Year
in descending order

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57 papers	3,233 citations	136950 32 h-index	149698 56 g-index
60 all docs	60 docs citations	60 times ranked	2657 citing authors

#	Article	IF	Citations
1	Distinct Impact of Alkali-Ion Doping on Electrical Transport Properties of Thermoelectric p-Type Polycrystalline SnSe. Journal of the American Chemical Society, 2016, 138, 8875-8882.	13.7	298
2	Thermoelectrics with earth abundant elements: low thermal conductivity and high thermopower in doped SnS. Journal of Materials Chemistry A, 2014, 2, 17302-17306.	10.3	246
3	Flexible thermoelectrics: from silver chalcogenides to full-inorganic devices. Energy and Environmental Science, 2019, 12, 2983-2990.	30.8	188
4	Exceptional plasticity in the bulk single-crystalline van der Waals semiconductor InSe. Science, 2020, 369, 542-545.	12.6	163
5	Thermoelectric transport properties of pristine and Na-doped SnSe_{1â^'x}Te_x polycrystals. Physical Chemistry Chemical Physics, 2015, 17, 30102-30109.	2.8	154
6	Enhanced thermoelectric performance of Ca-doped BiCuSeO in a wide temperature range. Journal of Materials Chemistry A, 2013, 1, 11942.	10.3	128
7	Electrical and thermal transport properties of spark plasma sintered n-type Bi₂Te_{3â^'x}Se_x alloys: the combined effect of point defect and Se content. Journal of Materials Chemistry C, 2015, 3, 10583-10589.	5.5	122
8	Thermoelectric properties of Sn-doped p-type Cu₃SbSe₄: a compound with large effective mass and small band gap. Journal of Materials Chemistry A, 2014, 2, 13527-13533.	10.3	112
9	Copper chalcogenide thermoelectric materials. Science China Materials, 2019, 62, 8-24.	6.3	111
10	Cu₂Se-Based liquid-like thermoelectric materials: looking back and stepping forward. Energy and Environmental Science, 2020, 13, 3307-3329.	30.8	106
11	Processing of advanced thermoelectric materials. Science China Technological Sciences, 2017, 60, 1347-1364.	4.0	79
12	Enhanced Thermoelectric Performance in n-Type Bi₂Te₃-Based Alloys via Suppressing Intrinsic Excitation. ACS Applied Materials & Interfaces, 2018, 10, 21372-21380.	8.0	76
13	Low-cost and environmentally benign selenides as promising thermoelectric materials. Journal of Materiomics, 2018, 4, 304-320.	5.7	73
14	Thermoelectric SnS and SnS-SnSe solid solutions prepared by mechanical alloying and spark plasma sintering: Anisotropic thermoelectric properties. Scientific Reports, 2017, 7, 43262.	3.3	71
15	Mechanically enhanced p- and n-type Bi2Te3-based thermoelectric materials reprocessed from commercial ingots by ball milling and spark plasma sintering. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2015, 197, 75-81.	3.5	69
16	Conformal organicâ€“inorganic semiconductor composites for flexible thermoelectrics. Energy and Environmental Science, 2020, 13, 511-518.	30.8	67
17	How to Measure Thermoelectric Properties Reliably. Joule, 2018, 2, 2183-2188.	24.0	65
18	Ductile Ag₂₀S₇Te₃ with Excellent Shapeâ€Conformability and High Thermoelectric Performance. Advanced Materials, 2021, 33, e2007681.	21.0	65

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19	Roomâ€temperature plastic inorganic semiconductors for flexible and deformable electronics. InformaÄnÃ-MateriÃ¡ly, 2021, 3, 22-35.	17.3	55
20	Thermoelectric transport properties of polycrystalline SnSe alloyed with PbSe. Applied Physics Letters, 2017, 110, .	3.3	52
21	Thermal stability and oxidation resistance of BiCuSeO based thermoelectric ceramics. Journal of Alloys and Compounds, 2014, 614, 394-400.	5.5	44
22	Discovery of high-performance thermoelectric copper chalcogenide using modified diffusion-couple high-throughput synthesis and automated histogram analysis technique. Energy and Environmental Science, 2020, 13, 3041-3053.	30.8	43
23	PbTe-based thermoelectric nanocomposites with reduced thermal conductivity by SiC nanodispersion. Applied Physics Letters, 2014, 104, .	3.3	42
24	Enhanced Thermoelectric Performance of Nonstoichiometric Compounds Cu3â^'x SbSe4 by Cu Deficiencies. Journal of Electronic Materials, 2014, 43, 2229-2238.	2.2	41
25	Electrical and thermal transport properties of Pb_{1â^'x}Sn_xSe solid solution thermoelectric materials. Physical Chemistry Chemical Physics, 2015, 17, 13006-13012.	2.8	40
26	pâ€Type Plastic Inorganic Thermoelectric Materials. Advanced Energy Materials, 2021, 11, 2100883.	19.5	40
27	Nanoporous PbSeâ€“SiO₂ Thermoelectric Composites. Advanced Science, 2017, 4, 1700199.	11.2	39
28	Largely Enhanced Seebeck Coefficient and Thermoelectric Performance by the Distortion of Electronic Density of States in Ge₂Sb₂Te₅. ACS Applied Materials & Interfaces, 2019, 11, 34046-34052.	8.0	38
29	Decoupling Thermoelectric Performance and Stability in Liquidâ€Like Thermoelectric Materials. Advanced Science, 2020, 7, 1901598.	11.2	36
30	Entropy engineering induced exceptional thermoelectric and mechanical performances in Cu2-Ag Te1-2S Se. Acta Materialia, 2022, 224, 117512.	7.9	36
31	Thermoelectric properties of non-stoichiometric Cu2+xSn1â^'xS3 compounds. Journal of Applied Physics, 2019, 126, .	2.5	35
32	Dopantâ€Dependent Increase in Seebeck Coefficient and Electrical Conductivity in Blended Polymers with Offset Carrier Energies. Advanced Electronic Materials, 2019, 5, 1800618.	5.1	34
33	High thermoelectric performance of all-oxide heterostructures with carrier double-barrier filtering effect. NPG Asia Materials, 2015, 7, e182-e182.	7.9	32
34	Enhancing average ZT in pristine PbSe by over-stoichiometric Pb addition. APL Materials, 2016, 4, 104801.	5.1	32
35	Phase-modulated mechanical and thermoelectric properties of Ag2S1-xTex ductile semiconductors. Journal of Materiomics, 2022, 8, 656-661.	5.7	31
36	Thermoelectric Ag₂Se: Imperfection, Homogeneity, and Reproducibility. ACS Applied Materials & Interfaces, 2021, 13, 60192-60199.	8.0	28

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37	Is Cu₃SbSe₃ a promising thermoelectric material?. RSC Advances, 2015, 5, 42848-42854.	3.6	27
38	Thermoelectric materials with crystal-amorphicity duality induced by large atomic size mismatch. Joule, 2021, 5, 1183-1195.	24.0	27
39	Thermoelectric properties of n-type Cu₄Sn₇S₁₆-based compounds. RSC Advances, 2019, 9, 7826-7832.	3.6	26
40	Doping of thermoelectric PbSe with chemically inert secondary phase nanoparticles. Journal of Materials Chemistry C, 2017, 5, 10881-10887.	5.5	23
41	Quasi-two-dimensional GeSbTe compounds as promising thermoelectric materials with anisotropic transport properties. Applied Physics Letters, 2019, 114, .	3.3	23
42	A low-cost and eco-friendly Br-doped Cu₇Sn₃S₁₀ thermoelectric compound with zT around unity. Journal of Materials Chemistry A, 2021, 9, 7946-7954.	10.3	23
43	A Fully Flexible Intelligent Thermal Touch Panel Based on Intrinsically Plastic Ag₂S Semiconductor. Advanced Materials, 2022, 34, e2107479.	21.0	23
44	Enhanced thermoelectric performance of two dimensional MS2 (MÂ=ÂMo, W) through phase engineering. Journal of Materiomics, 2018, 4, 329-337.	5.7	21
45	Novel meta-phase arising from large atomic size mismatch. Matter, 2022, 5, 605-615.	10.0	20
46	Structural Modularization of Cu₂Te Leading to High Thermoelectric Performance near the Mottâ€“Ioffeâ€“Regel Limit. Advanced Materials, 2022, 34, e2108573.	21.0	20
47	Efficient lanthanide Gd doping promoting the thermoelectric performance of Mg₃Sb₂-based materials. Journal of Materials Chemistry A, 2021, 9, 25944-25953.	10.3	19
48	Mechanical Alloying and Spark Plasma Sintering of BiCuSeO Oxyselenide: Synthesis Process and Thermoelectric Properties. Journal of the American Ceramic Society, 2016, 99, 507-514.	3.8	18
49	Comparing the role of annealing on the transport properties of polymorphous AgBiSe₂ and monophase AgSbSe₂. RSC Advances, 2018, 8, 7055-7061.	3.6	16
50	Composition optimization of p-type AgSn m SbTe m +2 thermoelectric materials synthesized by mechanical alloying and spark plasma sintering. Journal of Alloys and Compounds, 2014, 615, 451-455.	5.5	15
51	Number mismatch between cations and anions as an indicator for low lattice thermal conductivity in chalcogenides. Npj Computational Materials, 2020, 6, .	8.7	13
52	Anion-site-modulated thermoelectric properties in Ge2Sb2Te5-based compounds. Rare Metals, 2020, 39, 1127-1133.	7.1	12
53	Memory of pressure-induced superconductivity in a phase-change alloy. Physical Review B, 2021, 103, .	3.2	7
54	Thermoelectrics: pâ€Type Plastic Inorganic Thermoelectric Materials (Adv. Energy Mater. 23/2021). Advanced Energy Materials, 2021, 11, 2170086.	19.5	4

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55	Low thermal conductivity of Bi2Mo2O9 ceramics. Journal of Alloys and Compounds, 2015, 646, 298-302.	5.5	3
56	Data-driven discovery of high-performance multicomponent solid solution thermoelectric materials. Materials Today Energy, 2022, 28, 101070.	4.7	1
57	Plastic Inorganic Semiconductors for Flexible Electronics. , 0, , .		0