Jiehe Sui

List of Publications by Year in descending order

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108 papers	5,625 citations	94269 37 h-index	82410 72 g-index
108 all docs	108 docs citations	108 times ranked	3806 citing authors

#	Article	IF	Citations
1	MoSe2 nanosheets perpendicularly grown on graphene with Moâ€“C bonding for sodium-ion capacitors. Nano Energy, 2018, 47, 224-234.	8.2	358
2	A high thermoelectric figure of merit ZT > 1 in Ba heavily doped BiCuSeO oxyselenides. Energy and Environmental Science, 2012, 5, 8543.	15.6	333
3	Texturation boosts the thermoelectric performance of BiCuSeO oxyselenides. Energy and Environmental Science, 2013, 6, 2916.	15.6	326
4	High thermoelectric performance of MgAgSb-based materials. Nano Energy, 2014, 7, 97-103.	8.2	264
5	Grain Boundary Engineering for Achieving High Thermoelectric Performance in nâ€Type Skutterudites. Advanced Energy Materials, 2017, 7, 1602582.	10.2	194
6	Extraordinary thermoelectric performance in n-type manganese doped Mg3Sb2 Zintl: High band degeneracy, tuned carrier scattering mechanism and hierarchical microstructure. Nano Energy, 2018, 52, 246-255.	8.2	188
7	Phase-transition temperature suppression to achieve cubic GeTe and high thermoelectric performance by Bi and Mn codoping. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5332-5337.	3.3	183
8	Thermoelectric properties of Mg doped p-type BiCuSeO oxyselenides. Journal of Alloys and Compounds, 2013, 551, 649-653.	2.8	146
9	Higher thermoelectric performance of Zintl phases (Eu _{0.5} Yb _{0.5}) _{1â^'x} Ca _x Mg ₂ Bi ₂ by band engineering and strain fluctuation. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, E4125-32.	3.3	145
10	Lamellar MoSe₂nanosheets embedded with MoO₂nanoparticles: novel hybrid nanostructures promoted excellent performances for lithium ion batteries. Nanoscale, 2016, 8, 17902-17910.	2.8	143
11	The roles of Na doping in BiCuSeO oxyselenides as a thermoelectric material. Journal of Materials Chemistry A, 2014, 2, 4903.	5.2	135
12	Thermoelectric SnTe with Band Convergence, Dense Dislocations, and Interstitials through Sn Selfâ€Compensation and Mn Alloying. Small, 2018, 14, e1802615.	5.2	132
13	Thermoelectric properties of Na-doped Zintl compound: Mg3â^'Na Sb2. Acta Materialia, 2015, 93, 187-193.	3.8	131
14	High thermoelectric performance of Î±-MgAgSb for power generation. Energy and Environmental Science, 2018, 11, 23-44.	15.6	127
15	Design of coherent anode materials with 0D Ni₃S₂nanoparticles self-assembled on 3D interconnected carbon networks for fast and reversible sodium storage. Journal of Materials Chemistry A, 2017, 5, 7394-7402.	5.2	125
16	Lithium Doping to Enhance Thermoelectric Performance of MgAgSb with Weak Electronâ€“Phonon Coupling. Advanced Energy Materials, 2016, 6, 1502269.	10.2	122
17	Facile synthesis of MWCNTâ€“ZnFe2O4 nanocomposites as anode materials for lithium ion batteries. Journal of Materials Chemistry, 2012, 22, 13674.	6.7	121
18	Towards tellurium-free thermoelectric modules for power generation from low-grade heat. Nature Communications, 2021, 12, 1121.	5.8	118

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19	Zintl-phase Eu ₂ ZnSb ₂ : A promising thermoelectric material with ultralow thermal conductivity. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 2831-2836.	3.3	103
20	Thermoelectric properties of Bi-based Zintl compounds Ca_{1â^'x}Yb_xMg₂Bi₂. Journal of Materials Chemistry A, 2016, 4, 4312-4320.	5.2	92
21	Design of Highâ€Performance Disordered Halfâ€Heusler Thermoelectric Materials Using 18â€Electron Rule. Advanced Functional Materials, 2019, 29, 1905044.	7.8	81
22	Highâ€Performance Nâ€type Mg₃Sb₂ towards Thermoelectric Application near Room Temperature. Advanced Functional Materials, 2020, 30, 1906143.	7.8	78
23	Improved thermoelectric performance of p-type Bi0.5Sb1.5Te3 through Mn doping at elevated temperature. Materials Today Physics, 2018, 6, 31-37.	2.9	73
24	High thermoelectric performance in n-type BiAgSeS due to intrinsically low thermal conductivity. Energy and Environmental Science, 2013, 6, 1750.	15.6	68
25	Enhancement of thermoelectric performance of phase pure Zintl compounds Ca1â^'Yb Zn2Sb2, Ca1â^'Eu Zn2Sb2, and Eu1â^'Yb Zn2Sb2 by mechanical alloying and hot pressing. Nano Energy, 2016, 25, 136-144.	8.2	67
26	Tellurium doped n-type Zintl Zr3Ni3Sb4 thermoelectric materials: Balance between carrier-scattering mechanism and bipolar effect. Materials Today Physics, 2017, 2, 54-61.	2.9	64
27	Reliable N-type Mg3.2Sb1.5Bi0.49Te0.01/304 stainless steel junction for thermoelectric applications. Acta Materialia, 2020, 198, 25-34.	3.8	62
28	Enhanced Thermoelectric and Mechanical Properties in Yb_{0.3}Co₄Sb₁₂ with In Situ Formed CoSi Nanoprecipitates. Advanced Energy Materials, 2019, 9, 1902435.	10.2	53
29	Restructured single parabolic band model for quick analysis in thermoelectricity. Npj Computational Materials, 2021, 7, .	3.5	53
30	Mediating Point Defects Endows nâ€Type Bi₂Te₃ with High Thermoelectric Performance and Superior Mechanical Robustness for Power Generation Application. Small, 2022, 18, e2201352.	5.2	51
31	Understanding and manipulating the intrinsic point defect in Î±-MgAgSb for higher thermoelectric performance. Journal of Materials Chemistry A, 2016, 4, 16834-16840.	5.2	49
32	Effects of antimony content in MgAg0.97Sbx on output power and energy conversion efficiency. Acta Materialia, 2016, 102, 17-23.	3.8	45
33	A Dual Role by Incorporation of Magnesium in YbZn₂Sb₂ Zintl Phase for Enhanced Thermoelectric Performance. Advanced Energy Materials, 2020, 10, 2001229.	10.2	44
34	Simultaneous Boost of Power Factor and Figureâ€ofâ€Merit in Inâ€“Cu Codoped SnTe. Small, 2019, 15, e1902493.	5.2	43
35	Ultrahigh Thermoelectric Performance in Environmentally Friendly SnTe Achieved through Stressâ€Induced Lotusâ€Seedpodâ€Like Grain Boundaries. Advanced Functional Materials, 2021, 31, 2101554.	7.8	43
36	High thermoelectric performance from high carrier mobility and reduced lattice thermal conductivity in Ba, Yb double-filled Skutterudites. Materials Today Physics, 2019, 8, 128-137.	2.9	40

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37	Enhanced thermoelectric performance of p-type Mg3Sb2 by lithium doping and its tunability in an anionic framework. Journal of Materials Science, 2018, 53, 16001-16009.	1.7	37
38	Promising Zintl-Phase Thermoelectric Compound SrAgSb. Chemistry of Materials, 2020, 32, 6983-6989.	3.2	36
39	Structure and Transport Properties of the BiCuSeO-BiCuSO Solid Solution. Materials, 2015, 8, 1043-1058.	1.3	33
40	Passive Radiative Cooling Enables Improved Performance in Wearable Thermoelectric Generators. Small, 2022, 18, e2106875.	5.2	33
41	Thermoelectric properties of Zintl compound Ca1â^'xNaxMg2Bi1.98. Applied Physics Letters, 2016, 108, .	1.5	32
42	Enhanced shape memory effect of poly(L-lactide-co-Îµ-caprolactone) biodegradable copolymer reinforced with functionalized MWCNTs. Journal of Polymer Research, 2012, 19, 1.	1.2	31
43	Preparation of multi-walled carbon nanotube-reinforced TiNi matrix composites from elemental powders by spark plasma sintering. Rare Metals, 2012, 31, 48-50.	3.6	31
44	Enhanced thermoelectric performance of p-type filled skutterudites via the coherency strain fields from spinodal decomposition. Acta Materialia, 2015, 98, 405-415.	3.8	31
45	Contrasting the Role of Mg and Ba Doping on the Microstructure and Thermoelectric Properties of p-Type AgSbSe₂. ACS Applied Materials & Interfaces, 2015, 7, 23047-23055.	4.0	29
46	Synergistic boost of output power density and efficiency in In-Liâ€“codoped SnTe. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 21998-22003.	3.3	29
47	Enhanced thermoelectric performance in Ti(Fe, Co, Ni)Sb pseudo-ternary Half-Heusler alloys. Journal of Materiomics, 2021, 7, 756-765.	2.8	29
48	N-type Bi-doped SnSe Thermoelectric Nanomaterials Synthesized by a Facile Solution Method. Inorganic Chemistry, 2018, 57, 13800-13808.	1.9	28
49	Manipulating the intrinsic vacancies for enhanced thermoelectric performance in Eu2ZnSb2 Zintl phase. Nano Energy, 2020, 73, 104771.	8.2	28
50	Achieving High Thermoelectric Performance by NaSbTe₂ Alloying in GeTe for Simultaneous Suppression of Ge Vacancies and Band Tailoring. Advanced Energy Materials, 2022, 12, .	10.2	28
51	Achieving a High Average zT Value in Sb₂Te₃-Based Segmented Thermoelectric Materials. ACS Applied Materials & Interfaces, 2020, 12, 945-952.	4.0	26
52	Enhanced mechanical and thermoelectric properties enabled by hierarchical structure in medium-temperature Sb2Te3 based alloys. Nano Energy, 2020, 78, 105228.	8.2	26
53	Excellent thermoelectric performance of boron-doped n-type Mg3Sb2-based materials via the manipulation of grain boundary scattering and control of Mg content. Science China Materials, 2021, 64, 1761-1769.	3.5	26
54	Balancing the anionic framework polarity for enhanced thermoelectric performance in YbMg2Sb2 Zintl compounds. Journal of Materiomics, 2019, 5, 583-589.	2.8	25

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55	New insights into the role of dislocation engineering in N-type filled skutterudite CoSb₃. Journal of Materials Chemistry C, 2019, 7, 13622-13631.	2.7	25
56	Unsupervised machine learning for discovery of promising half-Heusler thermoelectric materials. Npj Computational Materials, 2022, 8, .	3.5	24
57	Thermoelectric properties of n-type transition metal-doped PbSe. Materials Today Physics, 2018, 6, 45-52.	2.9	23
58	Enhanced Thermoelectric and Mechanical Performance in n-Type Yb-Filled Skutterudites through Aluminum Alloying. ACS Applied Materials & Interfaces, 2020, 12, 12930-12937.	4.0	23
59	Nanotwins Strengthening High Thermoelectric Performance Bismuth Antimony Telluride Alloys. Advanced Science, 2022, 9, e2200432.	5.6	23
60	High thermoelectric performance of single phase p-type cerium-filled skutterudites by dislocation engineering. Journal of Materials Chemistry A, 2018, 6, 20128-20137.	5.2	22
61	Enhanced Thermoelectric Properties in pâ€Type Double Halfâ€Heusler Ti_{2â^'y}Hf_yFeNiSb_{2â^'x}Sn_x Compounds. Physica Status Solidi (A) Applications and Materials Science, 2020, 217, 2000096.	0.8	22
62	Phase Boundary Mapping in ZrNiSn Half-Heusler for Enhanced Thermoelectric Performance. Research, 2020, 2020, 4630948.	2.8	22
63	Compromise of thermoelectric and mechanical properties in LiSbTe2 and LiBiTe2 alloyed SnTe. Acta Materialia, 2022, 231, 117922.	3.8	22
64	Enhanced Thermoelectric Properties of p-Type CaMg₂Bi₂ via a Synergistic Effect Originated from Zn and Alkali-Metal Co-doping. ACS Applied Materials & Interfaces, 2020, 12, 6015-6021.	4.0	20
65	Tin Acceptor Doping Enhanced Thermoelectric Performance of n-Type Yb Single-Filled Skutterudites via Reduced Electronic Thermal Conductivity. ACS Applied Materials & Interfaces, 2019, 11, 25133-25139.	4.0	19
66	Enhanced thermoelectric performance of P-type CaMg2Bi1.98 and optimized CaAl2Si2-type Zintl phase module with equal cross-section area. Materials Today Physics, 2020, 15, 100270.	2.9	19
67	Critical role of tellurium self-compensation in enhancing the thermoelectric performance of p-Type Bi0.4Sb1.6Te3 alloy. Chemical Engineering Journal, 2021, 425, 130670.	6.6	19
68	Realizing Excellent Thermoelectric Performance of Sb₂Te₃ Based Segmented Leg with a Wide Temperature Range Using Oneâ€Step Sintering. Advanced Electronic Materials, 2020, 6, 1901178.	2.6	18
69	Lattice Mismatch in Ni₃Se₄â€“MoSe₂ Nanoheterostructures with an Abundant Interface for Catalytic Hydrogen Evolution. ACS Applied Nano Materials, 2021, 4, 3493-3499.	2.4	18
70	Enhanced Thermoelectric Performance of Zintl Phase Ca₉Zn_{4+x}Sb₉ by Beneficial Disorder on the Selective Cationic Site. ACS Applied Materials & Interfaces, 2019, 11, 37741-37747.	4.0	17
71	Simultaneous Regulation of Electrical and Thermal Transport Properties of N-Type Bi₂Te₃ via Adding Excessive Te Followed by Se Doping. ACS Applied Energy Materials, 2021, 4, 4986-4992.	2.5	17
72	Enhanced thermoelectric properties of Zintl phase YbMg2Bi1.98 through Bi site substitution with Sb. Journal of Materials Science and Technology, 2020, 59, 189-194.	5.6	16

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73	Stabilizing the Optimal Carrier Concentration in Al/Sb-Codoped GeTe for High Thermoelectric Performance. ACS Applied Materials & Interfaces, 2021, 13, 45717-45725.	4.0	16
74	Tuning the Carrier Scattering Mechanism by Rare-Earth Element Doping for High Average zT in Mg₃Sb₂-Based Compounds. ACS Applied Materials & Interfaces, 2022, 14, 7022-7029.	4.0	16
75	Enhanced thermoelectric performance of SnTe alloy with Ce and Li co-doping. Materials Today Physics, 2019, 11, 100156.	2.9	15
76	Rare earth ytterbium enhanced thermoelectric properties of p-type Bi0.5Sb1.5Te3. Applied Physics Letters, 2019, 114, .	1.5	15
77	Titanium Doping to Enhance Thermoelectric Performance of 19â€Electron VCoSb Halfâ€Heusler Compounds with Vanadium Vacancies. Annalen Der Physik, 2020, 532, 1900440.	0.9	15
78	Enhanced Thermoelectric Performance in Nâ€Type Mg_{3.2}Sb_{1.5}Bi_{0.5} by La or Ce Doping into Mg. Advanced Electronic Materials, 2020, 6, 1901391.	2.6	15
79	Effects of Cerium Addition on Martensitic Transformation and Microstructure of Ti_{49.3}Ni_{50.7} Alloy. Materials Transactions, 2006, 47, 716-719.	0.4	14
80	Graphene-enhanced thermoelectric properties of p-type skutterudites. Chinese Physics B, 2018, 27, 048402.	0.7	13
81	The critical role of boron doping in the thermoelectric and mechanical properties of nanostructured Î±-MgAgSb. Journal of Materials Chemistry C, 2018, 6, 9821-9827.	2.7	13
82	Promoted application potential of p-type Mg3Sb1.5Bi0.5 for the matched thermal expansion with its n-type counterpart. Journal of Materiomics, 2020, 6, 729-735.	2.8	13
83	Solubility study of Y in n-type YxCe0.15Co4Sb12 skutterudites and its effect on thermoelectric properties. Materials Today Physics, 2020, 13, 100206.	2.9	13
84	Organic/Inorganic Hybrid Design as a Route for Promoting the Bi_{0.5}Sb_{1.5}Te₃ for Highâ€Performance Thermoelectric Power Generation. Advanced Functional Materials, 2022, 32, .	7.8	13
85	Band Modulation and Strain Fluctuation for Realizing High Average zT in GeTe. Advanced Energy Materials, 2022, 12, .	10.2	13
86	Simultaneously Improved Thermoelectric and Mechanical Properties Driven by MgB₂ Doping in Bi_{0.4}Sb_{1.6}Te₃ Based Alloys. Advanced Electronic Materials, 2021, 7, 2100173.	2.6	11
87	High-performance lead-free cubic GeTe-based thermoelectric alloy. Cell Reports Physical Science, 2022, 3, 100902.	2.8	11
88	Facile Synthesis of Multifunctional ZnFe₂O₄ Nanoparticles in Liquid Polyols. Journal of Nanoscience and Nanotechnology, 2012, 12, 3867-3872.	0.9	10
89	Constructing multi-type defects in In0.1Sb1.9Te3-(MgB2) composites: Simultaneously enhancing the thermoelectric and mechanical properties. Nano Energy, 2021, 90, 106530.	8.2	10
90	Enhancing Thermoelectric Performance of Yb_{0.3}Co₄Sb₁₂ by Synergistically Optimized Carrier Concentration and Ionized Impurity Scattering. ACS Applied Materials & Interfaces, 2021, 13, 39533-39540.	4.0	8

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91	Achieving High Thermoelectric Performance in Rare-Earth Element-Free CaMg ₂ Bi ₂ with High Carrier Mobility and Ultralow Lattice Thermal Conductivity. Research, 2020, 2020, 5016564.	2.8	8
92	High Thermoelectric Performance of CaMg₂Bi₂ Enabled by Dynamic Doping and Orbital Alignment. Advanced Functional Materials, 2022, 32, .	7.8	8
93	Periodic Corrosion Turns Bulk Ni into Zr-Incorporated Polycrystalline Ni(OH)₂ Nanoarrays for Overall Water Decomposition. ACS Applied Energy Materials, 2022, 5, 5711-5718.	2.5	7
94	BiSbTe alloy with high thermoelectric and mechanical performance for power generation. Scripta Materialia, 2022, 218, 114801.	2.6	7
95	Efficient Si Doping Promoting Thermoelectric Performance of Yb-Filled CoSb₃-Based Skutterudites. ACS Applied Materials & Interfaces, 2022, 14, 30901-30906.	4.0	7
96	High thermoelectric performance bismuth telluride prepared by cold pressing and annealing facilitating large scale application. Materials Today Physics, 2021, 21, 100522.	2.9	6
97	Improved thermoelectric and mechanical performance of Sb2Te3-based materials towardÂthe segmented operation. Materials Today Energy, 2022, 27, 101045.	2.5	6
98	Zintl Phase Yb_{1â€“x}Ba_xMg₂Bi_{1.98} Compounds with Enhanced Thermoelectric Performance Caused by Cation Substitution. ACS Applied Energy Materials, 2020, 3, 11036-11041.	2.5	5
99	Electronic Orbital Alignment and Hierarchical Phonon Scattering Enabling High Thermoelectric Performance p-Type Mg ₃ Sb ₂ Zintl Compounds. Research, 2022, 2022, 9842949.	2.8	5
100	Suppressing lone-pair expression endows room-temperature cubic structure and high thermoelectric performance in GeTe-based materials. Materials Today Physics, 2022, 27, 100780.	2.9	5
101	One-step deposition of antibacterial Ag@Pdop hybrid films on an NiTi alloy. RSC Advances, 2019, 9, 29263-29272.	1.7	4
102	Facile Synthesis of FeOOHâ^Ni₃S₂ Nanosheet Arrays on Nickel Foam via Chemical Immersion toward Electrocatalytic Water Splitting. ChemistrySelect, 2022, 7, .	0.7	4
103	Cooperative regulation of electrical and thermal transport behavior enhancing the thermoelectric performance of SnTe. Materials Today Physics, 2021, 21, 100556.	2.9	3
104	Enhanced Absorption in the Wide Wavelength Range: Black Silicon Decorated with Few-Layer PtS₂. Journal of Physical Chemistry C, 2021, 125, 27335-27343.	1.5	3
105	FIRST PRINCIPLE STUDY ON THE EFFECT OF Fe CONTENT ON THE PHASE STABILITY OF THE Ni-Mn-Ga ALLOY. International Journal of Modern Physics B, 2010, 24, 2369-2373.	1.0	2
106	Unusual thermoelectric properties mediated by solute segregation in tellurium alloyed CoSbS. Journal of Materials Chemistry A, 2022, 10, 19829-19838.	5.2	2
107	MICROSTRUCTURE AND OPTICAL PROPERTIES OF ERBIUM DOPED SILICA-BASED FILMS VIA FLAME HYDROLYSIS DEPOSITION AND AEROSOL DOPING. International Journal of Modern Physics B, 2009, 23, 1873-1878.	1.0	1
108	Damping Capacity of Niâ€“Mnâ€“Gaâ€“Gd High-Temperature Shape Memory Thin Film. Shape Memory and Superelasticity, 2018, 4, 369-376.	1.1	1