Guang Han

List of Publications by Year in descending order

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86 papers	3,766 citations	159585 30 h-index	133252 59 g-index
86 all docs	86 docs citations	86 times ranked	3696 citing authors

#	Article	IF	Citations
1	Nanostructured thermoelectric materials: Current research and future challenge. Progress in Natural Science: Materials International, 2012, 22, 535-549.	4.4	630
2	Indium Selenides: Structural Characteristics, Synthesis and Their Thermoelectric Performances. Small, 2014, 10, 2747-2765.	10.0	278
3	High-performance thermoelectric Cu2Se nanoplates through nanostructure engineering. Nano Energy, 2015, 16, 367-374.	16.0	218
4	Enhanced Thermoelectric Performance of Nanostructured Bi₂Te₃ through Significant Phonon Scattering. ACS Applied Materials & Interfaces, 2015, 7, 23694-23699.	8.0	200
5	Texture-dependent thermoelectric properties of nano-structured Bi2Te3. Chemical Engineering Journal, 2020, 388, 124295.	12.7	142
6	Facile in situ solution synthesis of SnSe/rGO nanocomposites with enhanced thermoelectric performance. Journal of Materials Chemistry A, 2020, 8, 1394-1402.	10.3	117
7	n-type Bi-doped PbTe Nanocubes with Enhanced Thermoelectric Performance. Nano Energy, 2017, 31, 105-112.	16.0	113
8	Te-Doped Cu₂Se nanoplates with a high average thermoelectric figure of merit. Journal of Materials Chemistry A, 2016, 4, 9213-9219.	10.3	91
9	Impacts of Cu deficiency on the thermoelectric properties of Cu2â^'XSe nanoplates. Acta Materialia, 2016, 113, 140-146.	7.9	87
10	Facile Surfactantâ€Free Synthesis of pâ€Type SnSe Nanoplates with Exceptional Thermoelectric Power Factors. Angewandte Chemie - International Edition, 2016, 55, 6433-6437.	13.8	81
11	In-doped Bi2Se3 hierarchical nanostructures as anode materials for Li-ion batteries. Journal of Materials Chemistry A, 2014, 2, 7109.	10.3	80
12	Chlorineâ€Enabled Electron Doping in Solutionâ€Synthesized SnSe Thermoelectric Nanomaterials. Advanced Energy Materials, 2017, 7, 1602328.	19.5	64
13	T-Shaped Bi₂Te₃â€“Te Heteronanojunctions: Epitaxial Growth, Structural Modeling, and Thermoelectric Properties. Journal of Physical Chemistry C, 2013, 117, 12458-12464.	3.1	59
14	Enhanced Thermoelectric Performance of Ultrathin Bi₂Se₃ Nanosheets through Thickness Control. Advanced Electronic Materials, 2015, 1, 1500025.	5.1	57
15	Rational Design of Bi₂Te₃ Polycrystalline Whiskers for Thermoelectric Applications. ACS Applied Materials & Interfaces, 2015, 7, 989-995.	8.0	54
16	Enhancing the Thermoelectric Performance of p-Type Mg₃Sb₂ via Codoping of Li and Cd. ACS Applied Materials & Interfaces, 2020, 12, 8359-8365.	8.0	54
17	Twin Engineering in Solutionâ€Synthesized Nonstoichiometric Cu₅FeS₄ Icosahedral Nanoparticles for Enhanced Thermoelectric Performance. Advanced Functional Materials, 2018, 28, 1705117.	14.9	53
18	Understanding the stepwise capacity increase of high energy low-Co Li-rich cathode materials for lithium ion batteries. Journal of Materials Chemistry A, 2014, 2, 18767-18774.	10.3	52

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19	Constructing n-type Ag2Se/CNTs composites toward synergistically enhanced thermoelectric and mechanical performance. Acta Materialia, 2022, 223, 117502.	7.9	48
20	Realizing Bi-doped Î±-Cu2Se as a promising near-room-temperature thermoelectric material. Chemical Engineering Journal, 2019, 371, 593-599.	12.7	46
21	Melt-spun Sn1â^'â^'Sb Mn Te with unique multiscale microstructures approaching exceptional average thermoelectric zT. Nano Energy, 2021, 84, 105879.	16.0	46
22	Phase control and formation mechanism of Alâ€“Mn(â€“Fe) intermetallic particles in Mgâ€“Al-based alloys with FeCl3 addition or melt superheating. Acta Materialia, 2016, 114, 54-66.	7.9	42
23	Strong lattice anharmonicity securing intrinsically low lattice thermal conductivity and high performance thermoelectric SnSb2Te4 via Se alloying. Nano Energy, 2020, 76, 105084.	16.0	39
24	Realizing enhanced thermoelectric properties in Cu2S-alloyed SnSe based composites produced via solution synthesis and sintering. Journal of Materials Science and Technology, 2021, 78, 121-130.	10.7	38
25	Multiphysics simulations of thermoelectric generator modules with cold and hot blocks and effects of some factors. Case Studies in Thermal Engineering, 2017, 10, 63-72.	5.7	35
26	Thermal performance of two heat exchangers for thermoelectric generators. Case Studies in Thermal Engineering, 2016, 8, 164-175.	5.7	34
27	High thermoelectric performance of Cu₃SbSe₄ nanocrystals with Cu_{2â^'x}Se in situ inclusions synthesized by a microwave-assisted solvothermal method. Nanoscale, 2018, 10, 14546-14553.	5.6	33
28	General surfactant-free synthesis of binary silver chalcogenides with tuneable thermoelectric properties. Chemical Engineering Journal, 2020, 393, 124763.	12.7	33
29	A new crystal: layer-structured rhombohedral In3Se4. CrystEngComm, 2014, 16, 393-398.	2.6	31
30	High Curie Temperature Bi_{1.85}Mn_{0.15}Te₃ Nanoplates. Journal of the American Chemical Society, 2012, 134, 18920-18923.	13.7	30
31	High-performance magnesium-based thermoelectric materials: Progress and challenges. Journal of Magnesium and Alloys, 2022, 10, 1719-1736.	11.9	29
32	Grain refinement of Mgâ€“Al based alloys by a new Alâ€“C master alloy. Journal of Alloys and Compounds, 2009, 467, 202-207.	5.5	28
33	Topotactic anion-exchange in thermoelectric nanostructured layered tin chalcogenides with reduced selenium content. Chemical Science, 2018, 9, 3828-3836.	7.4	28
34	Unconventional Doping Effect Leads to Ultrahigh Average Thermoelectric Power Factor in Cu₃SbSe₄â€Based Composites. Advanced Materials, 2022, 34, e2109952.	21.0	28
35	Large-Scale Surfactant-Free Synthesis of p-Type SnTe Nanoparticles for Thermoelectric Applications. Materials, 2017, 10, 233.	2.9	27
36	Grain refinement of AZ31 magnesium alloy by new Al-Ti-C master alloys. Transactions of Nonferrous Metals Society of China, 2009, 19, 1057-1064.	4.2	26

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37	Achieving Enhanced Thermoelectric Performance in (SnTe)_{1-x}(Sb₂Te₃)_x and (SnTe)_{1-y}(Sb₂Se₃)_y Synthesized via Solvothermal Reaction and Sintering. ACS Applied Materials & Interfaces, 2020, 12, 44805-44814.	8.0	26
38	Nanostructured monoclinic Cu₂Se as a near-room-temperature thermoelectric material. Nanoscale, 2020, 12, 20536-20542.	5.6	26
39	A coupled optical-thermal-electrical model to predict the performance of hybrid PV/T-CCPC roof-top systems. Renewable Energy, 2017, 112, 166-186.	8.9	25
40	Exceptional Performance Driven by Planar Honeycomb Structure in a New High Temperature Thermoelectric Material BaAgAs. Advanced Functional Materials, 2021, 31, 2100583.	14.9	25
41	Conceptual design and performance evaluation of a hybrid concentrating photovoltaic system in preparation for energy. Energy, 2018, 147, 547-560.	8.8	24
42	A novel absorptive/reflective solar concentrator for heat and electricity generation: An optical and thermal analysis. Energy Conversion and Management, 2016, 114, 142-153.	9.2	23
43	Morphology and Texture Engineering Enhancing Thermoelectric Performance of Solvothermal Synthesized Ultralarge SnS Microcrystal. ACS Applied Energy Materials, 2020, 3, 2192-2199.	5.1	23
44	Achieving enhanced thermoelectric performance of Ca1â^'xâ^'yLaxSryMnO3 via synergistic carrier concentration optimization and chemical bond engineering. Chemical Engineering Journal, 2021, 408, 127364.	12.7	23
45	A new insight into heterogeneous nucleation mechanism of Al by non-stoichiometric TiCx. Acta Materialia, 2022, 233, 117977.	7.9	23
46	Duplex nucleation in Mgâ€“Alâ€“Znâ€“Mn alloys with carbon inoculation. Journal of Alloys and Compounds, 2009, 487, 194-197.	5.5	22
47	Grain refining efficiency of a new Alâ€“1Bâ€“0.6C master alloy on AZ63 magnesium alloy. Journal of Alloys and Compounds, 2010, 491, 165-169.	5.5	21
48	Thermal stability and oxidation of layer-structured rhombohedral In3Se4 nanostructures. Applied Physics Letters, 2013, 103, .	3.3	21
49	Regulating the electronic structure of ReS2 by Mo doping for electrocatalysis and lithium storage. Chemical Engineering Journal, 2021, 414, 128811.	12.7	21
50	Paramagnetic Cu-doped Bi2Te3 nanoplates. Applied Physics Letters, 2014, 104, 053105.	3.3	20
51	Effect of manganese on the microstructure of Mgâ€“3Al alloy. Journal of Alloys and Compounds, 2009, 486, 136-141.	5.5	19
52	Realizing Cd and Ag codoping in p-type Mg3Sb2 toward high thermoelectric performance. Journal of Magnesium and Alloys, 2023, 11, 2486-2494.	11.9	19
53	Structure-Dependent Thermoelectric Properties of GeSe_{1â€“x}Te_x (0 â‰¤ x â‰¤ 0.5). ACS Applied Materials & Interfaces, 2020, 12, 41381-41389.	8.0	18
54	Facile microwave-assisted hydrothermal synthesis of SnSe: impurity removal and enhanced thermoelectric properties. Journal of Materials Chemistry C, 2020, 8, 10333-10341.	5.5	18

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55	Nitrogen-doped activated porous carbon for 4.5ÂV lithium-ion capacitor with high energy and power density. Journal of Energy Storage, 2022, 47, 103675.	8.1	18
56	Trifold Tellurium One-Dimensional Nanostructures and Their Formation Mechanism. Crystal Growth and Design, 2013, 13, 4796-4802.	3.0	17
57	Ba6â^'3x Nd8+2x Ti18O54 Tungsten Bronze: A New High-Temperature n-Type Oxide Thermoelectric. Journal of Electronic Materials, 2016, 45, 1894-1899.	2.2	17
58	Phase Composition Manipulation and Twin Boundary Engineering Lead to Enhanced Thermoelectric Performance of Cu₂SnS₃. ACS Applied Energy Materials, 2021, 4, 9240-9247.	5.1	17
59	Phase Control and Formation Mechanism of New-Phase Layer-Structured Rhombohedral In₃Se₄ Hierarchical Nanostructures. Crystal Growth and Design, 2013, 13, 5092-5099.	3.0	16
60	In₃Se₄ and S-doped In₃Se₄ nano/micro-structures as new anode materials for Li-ion batteries. Journal of Materials Chemistry A, 2015, 3, 7560-7567.	10.3	15
61	Realizing Enhanced Thermoelectric Performance and Hardness in Icosahedral Cu₅FeS_{4â^'}_xSe_x with Highâ€Density Twin Boundaries. Small, 2022, 18, e2104592.	10.0	15
62	Ultralow Lattice Thermal Conductivity of Cubic CuFeS₂ Induced by Atomic Disorder. Chemistry of Materials, 2021, 33, 9795-9802.	6.7	15
63	Anion-exchange synthesis of thermoelectric layered SnS_{0.1}Se_{0.9â^'x}Te_x nano/microstructures in aqueous solution: complexity and carrier concentration. Journal of Materials Chemistry C, 2019, 7, 7572-7579.	5.5	14
64	Co-doped Sb₂Te₃paramagnetic nanoplates. Journal of Materials Chemistry C, 2016, 4, 521-525.	5.5	13
65	A scaling law for monocrystalline PV/T modules with CCPC and comparison with triple junction PV cells. Applied Energy, 2017, 202, 755-771.	10.1	11
66	Simultaneously optimized thermoelectric and mechanical performance of p-type polycrystalline SnSe enabled by CNTs addition. Scripta Materialia, 2022, 218, 114846.	5.2	11
67	Long wavelength emissions of Se4+-doped In2O3hierarchical nanostructures. Journal of Materials Chemistry C, 2014, 2, 6529.	5.5	10
68	Exploring thermoelectric performance of Ca3Co4O9+Î´ ceramics via chemical electroless plating with Cu. Journal of Alloys and Compounds, 2020, 821, 153522.	5.5	10
69	Solution-Synthesized SnSe_{1â€“x}S_x: Dual-Functional Materials with Enhanced Electrochemical Storage and Thermoelectric Performance. ACS Applied Materials & Interfaces, 2021, 13, 37201-37211.	8.0	10
70	Facile Surfactantâ€Free Synthesis of pâ€Type SnSe Nanoplates with Exceptional Thermoelectric Power Factors. Angewandte Chemie, 2016, 128, 6543-6547.	2.0	9
71	Dynamic Epitaxial Crystallization of SnSe₂ on the Oxidized SnSe Surface and Its Atomistic Mechanisms. ACS Applied Materials & Interfaces, 2020, 12, .	8.0	9
72	Exceptional Thermoelectric Performance Enabled by High Carrier Mobility and Intrinsically Low Lattice Thermal Conductivity in Phosphide Cd₃P₂. Chemistry of Materials, 2022, 34, 1620-1626.	6.7	9

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73	Manipulating the phase transformation temperature to achieve cubic Cu₅FeS_{4âˆ'x}Se_x and enhanced thermoelectric performance. Journal of Materials Chemistry C, 2020, 8, 17222-17228.	5.5	8
74	Phase Tuning for Enhancing the Thermoelectric Performance of Solution-Synthesized Cu2â€“xS. ACS Applied Materials & Interfaces, 2021, 13, 39541-39549.	8.0	8
75	Band convergence and thermoelectric performance enhancement of InSb via Bi doping. Intermetallics, 2021, 139, 107347.	3.9	8
76	A new indium selenide phase: controllable synthesis, phase transformation and photoluminescence properties. Journal of Materials Chemistry C, 2019, 7, 13573-13584.	5.5	7
77	Structural Core-Shell beyond Chemical Homogeneity in Non-Stoichiometric Cu5FeS4 Nano-Icosahedrons: An in Situ Heating TEM Study. Nanomaterials, 2020, 10, 4.	4.1	7
78	Thermoelectric performance of binary lithium-based compounds: Li3Sb and Li3Bi. Applied Physics Letters, 2021, 119, .	3.3	7
79	Phase Modulation Enabled High Thermoelectric Performance in Polycrystalline GeSe_{0.75}Te_{0.25}. Advanced Functional Materials, 2022, 32, .	14.9	7
80	Synergistic modulation of the thermoelectric performance of melt-spun p-type Mg₂Sn via Na₂S and Si alloying. Journal of Materials Chemistry A, 2022, 10, 5452-5459.	10.3	6
81	Enhanced Thermoelectric Performance in SmMg₂Bi₂ via Ca-Alloying and Ge-Doping. ACS Applied Energy Materials, 2022, 5, 5182-5190.	5.1	5
82	Attaining enhanced thermoelectric performance in p-type (SnSe)1â€“(SnS2) produced via sintering their solution-synthesized micro/nanostructures. Journal of Materials Science and Technology, 2022, 120, 205-213.	10.7	5
83	Identification of vibrational mode symmetry and phonon anharmonicity in SbCrSe3 single crystal using Raman spectroscopy. Science China Materials, 2021, 64, 2824-2834.	6.3	4
84	Self-assembled epitaxy of Ga2Se3 on the oxidized GaSe surface and atomic imaging of the Ga2Se3/GaSe heterostructure. Applied Surface Science, 2022, 586, 152774.	6.1	4
85	Revealing the intrinsic p-to-n transition mechanism on Mg₃Sb₂ through extra Mg. Applied Physics Letters, 2022, 120, 173902.	3.3	4
86	Decreased order-disorder transition temperature and enhanced phonon scattering in Ag-alloyed Cu3SbSe3. Journal of Alloys and Compounds, 2022, 919, 165829.	5.5	2