Lei Hu

List of Publications by Year
in descending order

49 papers	2,314 citations	257101 24 h-index	214527 47 g-index
52 all docs	52 docs citations	52 times ranked	1820 citing authors

#	Article	IF	Citations
1	Realization of Negative Thermal Expansion in Lead-Free Bi0.5K0.5VO3 by the Suppression of Tetragonality. Inorganic Chemistry, 2022, , .	1.9	3
2	Tolerance Factor Control of Tetragonality and Negative Thermal Expansion in PbTiO₃-Based Ferroelectrics. Chemistry of Materials, 2022, 34, 2798-2803.	3.2	6
3	Upcycling Silicon Photovoltaic Waste into Thermoelectrics. Advanced Materials, 2022, 34, e2110518.	11.1	25
4	Chemical Diversity for Tailoring Negative Thermal Expansion. Chemical Reviews, 2022, 122, 8438-8486.	23.0	51
5	Designing good compatibility factor in segmented Bi0.5Sb1.5Te3 â€“ GeTe thermoelectrics for high power conversion efficiency. Nano Energy, 2022, 96, 107147.	8.2	24
6	Polarization Rotation at Morphotropic Phase Boundary in New Lead-Free Na_{1/2}Bi_{1/2}V_{1â€“<i>x</i>}Ti<i>_{<i>x</i>}</i>O₃ Piezoceramics. ACS Applied Materials & Interfaces, 2021, 13, 5208-5215.	4.0	11
7	Polarization- and Strain-Mediated Control of Negative Thermal Expansion and Ferroelasticity in BiInO₃â€“BiZn_{1/2}Ti_{1/2}O₃. Chemistry of Materials, 2021, 33, 1498-1505.	3.2	4
8	Physical insights on the low lattice thermal conductivity of AgInSe2. Materials Today Physics, 2021, 19, 100428.	2.9	20
9	High thermoelectric performance enabled by convergence of nested conduction bands in Pb7Bi4Se13 with low thermal conductivity. Nature Communications, 2021, 12, 4793.	5.8	53
10	Defect engineering in thermoelectric materials: what have we learned?. Chemical Society Reviews, 2021, 50, 9022-9054.	18.7	201
11	High Thermoelectric Performance through Crystal Symmetry Enhancement in Triply Doped Diamondoid Compound Cu₂SnSe₃. Advanced Energy Materials, 2021, 11, 2100661.	10.2	39
12	Crystal Structure and Atomic Vacancy Optimized Thermoelectric Properties in Gadolinium Selenides. Chemistry of Materials, 2020, 32, 10130-10139.	3.2	36
13	Tailoring the phase transition temperature to achieve high-performance cubic GeTe-based thermoelectrics. Journal of Materials Chemistry A, 2020, 8, 18880-18890.	5.2	61
14	Achieving high thermoelectric quality factor toward high figure of merit in GeTe. Materials Today Physics, 2020, 14, 100239.	2.9	61
15	Origin of High Thermoelectric Performance in Earth-Abundant Phosphideâ€“Tetrahedrite. ACS Applied Materials & Interfaces, 2020, 12, 9150-9157.	4.0	35
16	Negative Thermal Expansion in Nanosolids. Accounts of Chemical Research, 2019, 52, 2694-2702.	7.6	14
17	Large Negative Thermal Expansion Induced by Synergistic Effects of Ferroelectrostriction and Spin Crossover in PbTiO₃-Based Perovskites. Chemistry of Materials, 2019, 31, 1296-1303.	3.2	29
18	Zero Thermal Expansion in Magnetic and Metallic Tb(Co,Fe)₂ Intermetallic Compounds. Journal of the American Chemical Society, 2018, 140, 602-605.	6.6	87

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19	Large spontaneous polarization in polar perovskites of PbTiO₃â€“Bi(Zn_{1/2}Ti_{1/2})O₃. Inorganic Chemistry Frontiers, 2018, 5, 1277-1281.	3.0	15
20	Localized Symmetry Breaking for Tuning Thermal Expansion in ScF₃ Nanoscale Frameworks. Journal of the American Chemical Society, 2018, 140, 4477-4480.	6.6	44
21	Construction of multi-shelled Bi2WO6 hollow microspheres with enhanced visible light photo-catalytic performance. Materials Research Bulletin, 2018, 99, 331-335.	2.7	29
22	Controllable Thermal Expansion and Crystal Structure of (Fe_{1-<i>x</i>}Ni<i>_x</i>)ZrF₆ Solid Solutions. Wuli Huaxue Xuebao/ Acta Physico - Chimica Sinica, 2018, 34, 339-343.	2.2	5
23	Zero Thermal Expansion and Semiconducting Properties in PbTiO₃â€“Bi(Co,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50	1.9	13
24	Tunable thermal expansion in framework materials through redox intercalation. Nature Communications, 2017, 8, 14441.	5.8	95
25	Structural Evidence for Strong Coupling between Polarization Rotation and Lattice Strain in Monoclinic Relaxor Ferroelectrics. Chemistry of Materials, 2017, 29, 5767-5771.	3.2	36
26	Local structure and controllable thermal expansion in the solid solution (Mn_{1â^’x}Ni_x)ZrF₆. Inorganic Chemistry Frontiers, 2017, 4, 343-347.	3.0	12
27	Colossal Volume Contraction in Strong Polar Perovskites of Pb(Ti,V)O₃. Journal of the American Chemical Society, 2017, 139, 14865-14868.	6.6	55
28	Isotropic Zero Thermal Expansion and Local Vibrational Dynamics in (Sc,Fe)F₃. Inorganic Chemistry, 2017, 56, 10840-10843.	1.9	16
29	Zero thermal expansion in cubic MgZrF₆. Journal of the American Ceramic Society, 2017, 100, 5385-5388.	1.9	17
30	Structure, Magnetism, and Tunable Negative Thermal Expansion in (Hf,Nb)Fe₂ Alloys. Chemistry of Materials, 2017, 29, 7078-7082.	3.2	27
31	Preparation and characterization of high Curie-temperature piezoelectric ceramics in a new Bi-based perovskite of (1 â^’ x)PbTiO3-xBi(Zn1/2Hf1/2)O3. Inorganic Chemistry Frontiers, 2017, 4, 1352-1355.	3.0	5
32	Tunable thermal expansion and magnetism in Zr-doped ScF3. Applied Physics Letters, 2016, 109, .	1.5	22
33	The Distortionâ€Adjusted Change of Thermal Expansion Behavior of Cubic Magnetic Semiconductor (Sc) Tj ETQq1 1 0.784314 rgBT /Ov	1.9	14
34	Giant Polarization and High Temperature Monoclinic Phase in a Lead-Free Perovskite of Bi(Zn_{0.5}Ti_{0.5})O₃-BiFeO₃. Inorganic Chemistry, 2016, 55, 9513-9516.	1.9	14
35	Atomic Linkage Flexibility Tuned Isotropic Negative, Zero, and Positive Thermal Expansion in MZrF₆ (M = Ca, Mn, Fe, Co, Ni, and Zn). Journal of the American Chemical Society, 2016, 138, 14530-14533.	6.6	89
36	Lattice dynamics and anharmonicity of CaZrF6 from Raman spectroscopy and ab initio calculations. Materials Chemistry and Physics, 2016, 180, 213-218.	2.0	28

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37	New Insights into the Negative Thermal Expansion: Direct Experimental Evidence for the â€œGuitar-Stringâ€• Effect in Cubic ScF₃. Journal of the American Chemical Society, 2016, 138, 8320-8323.	6.6	115
38	Large negative thermal expansion in non-perovskite lead-free ferroelectric Sn₂P₂S₆. Physical Chemistry Chemical Physics, 2016, 18, 6247-6251.	1.3	22
39	TiO₂/CdS porous hollow microspheres rapidly synthesized by salt-assistant aerosol decomposition method for excellent photocatalytic hydrogen evolution performance. Dalton Transactions, 2016, 45, 1160-1165.	1.6	26
40	Highâ€Curie<i>â€‹</i>Temperature Ferromagnetism in (Sc,Fe)F₃ Fluorides and its Dependence on Chemical Valence. Advanced Materials, 2015, 27, 4592-4596.	11.1	25
41	Enhanced photocatalytic hydrogen evolution efficiency using hollow microspheres of (CuIn)_xZn_{2(1â^'x)}S₂ solid solutions. Dalton Transactions, 2015, 44, 10991-10996.	1.6	9
42	Low temperature molten salt synthesis of perovskite-type ACeO3(A=Sr, Ba) in eutectic NaCl-KCl. Chemical Research in Chinese Universities, 2015, 31, 342-346.	1.3	7
43	Negative thermal expansion in functional materials: controllable thermal expansion by chemical modifications. Chemical Society Reviews, 2015, 44, 3522-3567.	18.7	527
44	Largeâ€Scale Synthesis of Isotropic Singleâ€Crystalline <scp><scp>ScF</scp></scp>₃ Cubes by Hydrothermal Method. Journal of the American Ceramic Society, 2014, 97, 1386-1388.	1.9	10
45	Rapid Molten Salt Synthesis of Isotropic Negative Thermal Expansion <scp><scp>ScF</scp></scp>₃. Journal of the American Ceramic Society, 2014, 97, 1009-1011.	1.9	19
46	A general and rapid synthesis of metal sulphides hollow spheres that have properties enhanced by salt-assisted aerosol decomposition: a case of ZnS and other multicomponent solid solutions. Journal of Materials Chemistry C, 2014, 2, 8564-8568.	2.7	8
47	Zero Thermal Expansion and Ferromagnetism in Cubic Sc_{1â€"<i>x</i>}M_{<i>x</i>}F₃ (M = Ga, Fe) over a Wide Temperature Range. Journal of the American Chemical Society, 2014, 136, 13566-13569.	6.6	144
48	Effectively control negative thermal expansion of single-phase ferroelectrics of PbTiO3-(Bi,La)FeO3 over a giant range. Scientific Reports, 2013, 3, 2458.	1.6	91
49	Origin and Absence of Giant Negative Thermal Expansion in Reduced and Oxidized Ca2RuO4. Chemistry of Materials, 0, , .	3.2	14