Xiaoyu Chong

List of Publications by Year
in descending order

67 papers	2,027 citations	236612 25 h-index	253896 43 g-index
68 all docs	68 docs citations	68 times ranked	1589 citing authors

#	Article	IF	Citations
1	Enhanced thermoelectric performance in inorganic CsSnI3 perovskite by doping with PbI2. Materials Letters, 2022, 308, 131127.	1.3	8
2	Lattice stability, mechanical and thermal properties of a new class of multicomponent (Fe, Mo, W)6C Î· carbides with different atomic site configurations. Ceramics International, 2022, 48, 5107-5118.	2.3	8
3	Morphology, thermal stability, electronic structure and mechanical properties of Î±-AlFeMnSi phases with varying Mn/Fe atomic ratios: Experimental studies and DFT calculations. Journal of Alloys and Compounds, 2022, 901, 163523.	2.8	17
4	Exploring the solution strengthening effect of 33 alloying elements in Pt-based alloys by high-throughput first-principles calculations. Journal of Applied Physics, 2022, 131, .	1.1	4
5	Design of Fe2B-based ductile high temperature ceramics: First-principles calculations and experimental validation. Ceramics International, 2022, 48, 27163-27173.	2.3	11
6	Investigation on elastic properties and electronic structure of dilute Ir-based alloys by first-principles calculations. Journal of Alloys and Compounds, 2021, 850, 156548.	2.8	18
7	Balance between strength and ductility of dilute Fe2B by high-throughput first-principles calculations. Ceramics International, 2021, 47, 4758-4768.	2.3	16
8	Stability, electronic structure, mechanical properties and lattice thermal conductivity of FeS and FeS₂ polymorphs. Modern Physics Letters B, 2021, 35, 2150225.	1.0	1
9	Numerical Optimization for the Geometric Configuration of Ceramics Perform in HCCI/ZTAP Wear-Resistant Composites Based on Actual Particle Model. Nanoscale Research Letters, 2021, 16, 71.	3.1	0
10	Correlation analysis of materials properties by machine learning: illustrated with stacking fault energy from first-principles calculations in dilute fcc-based alloys. Journal of Physics Condensed Matter, 2021, 33, 295702.	0.7	13
11	Highâ€entropy ferroelastic rareâ€earth tantalite ceramic: (Y_{0.2}Ce_{0.2}Sm_{0.2}Gd_{0.2}Dy_{0.2})TaO₄ Journal of the American Ceramic Society, 2021, 104, 5873-5882.	1.9	49
12	Probing the mechanical properties of ordered and disordered Pt-Ir alloys by first-principles calculations. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 405, 127424.	0.9	17
13	Firstâ€principles study of thermophysical properties of polymorphous YTaO₄ ceramics. Journal of the American Ceramic Society, 2021, 104, 6467-6480.	1.9	20
14	Exploring crystal structures, stability and mechanical properties of Fe, Mn-containing intermetallics in Al-Si Alloy by experiments and first-principles calculations. Journal of Alloys and Compounds, 2021, 876, 160022.	2.8	28
15	Thermodynamic properties of the Yb-Sb system predicted from first-principles calculations. Acta Materialia, 2021, 217, 117169.	3.8	34
16	First-Principles Calculations of Thermal and Electrical Transport Properties of bcc and fcc Dilute Feâ€“X (X = Al, Co, Cr, Mn, Mo, Nb, Ni, Ti, V, and W) Binary Alloys. Metals, 2021, 11, 1988.	1.0	6
17	Sub-1.4eV bandgap inorganic perovskite solar cells with long-term stability. Nature Communications, 2020, 11, 151.	5.8	92
18	The thermoâ€mechanical properties and ferroelastic phase transition of RENbO₄ (REÂ=ÂY, La,) Tj ETQq0 0 0 rgBT /Overlock	1.9	36

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19	Effects of the alloying element on the stacking fault energies of dilute Ir-based superalloys: A comprehensive first-principles study. Journal of Materials Research, 2020, 35, 2718-2725.	1.2	7
20	Anisotropic mechanical properties and electronic structures of transition metal carbonitrides M2CN (Mâ€‰=â€‰V, Ti, Ta, Nb, Hf and Zr) by first-principles calculations. Applied Physics A: Materials Science and Processing, 2020, 126, 1.	1.1	4
21	The investigation on structural, electronic, elastic, adsorptive, catalytic and magnetic properties of precious metal materials via first-principles calculations based on density functional theory â€" a review. Journal of Micromechanics and Molecular Physics, 2020, 05, 2030001.	0.7	9
22	Effect of solution treatment on mechanical properties and microstructure of welded joints of Fe-29Mn-9Al-0.9C low-density steel. Journal of Micromechanics and Molecular Physics, 2020, 05, 2050006.	0.7	6
23	Investigation of the thermophysical properties of (Y1-xYbx)TaO4 ceramics. Journal of the European Ceramic Society, 2020, 40, 3111-3121.	2.8	18
24	Mechanical and thermal properties of RETaO4 (RE = Yb, Lu, Sc) ceramics with monoclinic-prime phase. Journal of Materials Science and Technology, 2020, 52, 20-28.	5.6	40
25	Investigation on the stability, electronic, optical, and mechanical properties of novel calcium carbonate hydrates via firstâ€principles calculations. International Journal of Quantum Chemistry, 2020, 120, e26219.	1.0	8
26	Achieving a fine balance in mechanical properties and thermoelectric performance in commercial Bi2Te3 materials. Ceramics International, 2020, 46, 14994-15002.	2.3	34
27	Thermodynamic analysis of the interface reaction and thermal stress of WCp/Fe composites. Ceramics International, 2020, 46, 26210-26215.	2.3	11
28	Rapid screening of alloy elements to improve the elastic properties of dilute Pt-based alloys: High-throughput first-principles calculations and modeling. Journal of Applied Physics, 2020, 128, .	1.1	16
29	The effect of ZrO₂ alloying on the microstructures and thermal properties of DyTaO₄ for highâ€temperature application. Journal of the American Ceramic Society, 2019, 102, 889-895.	1.9	16
30	Temperature and stress field analysis of solidification process in high chromium cast iron matrix composite reinforced by ZTA ceramic particles. Materials Research Express, 2019, 6, 106551.	0.8	5
31	The Effects of Laser Remelting on the Microstructure and Performance of Bainitic Steel. Metals, 2019, 9, 912.	1.0	10
32	An alternative approach to predict Seebeck coefficients: Application to La3â^'xTe4. Scripta Materialia, 2019, 169, 87-91.	2.6	9
33	Theoretical and experimental investigations of mechanical properties for polymorphous YTaO₄ceramics. Journal of the American Ceramic Society, 2019, 102, 7656-7664.	1.9	30
34	Multipoint Defect Synergy Realizing the Excellent Thermoelectric Performance of nâ€Type Polycrystalline SnSe via Re Doping. Advanced Functional Materials, 2019, 29, 1902893.	7.8	73
35	Tailoring the anisotropic mechanical properties of hexagonal M7X3 (M=Fe, Cr, W, Mo; X=C, B) by multialloying. Acta Materialia, 2019, 169, 193-208.	3.8	74
36	Stability, mechanical and electronic properties of ceramic interphases in biomedical composites via first-principles calculations. Ceramics International, 2018, 44, 9656-9663.	2.3	8

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37	Exploring the intrinsic ductile metastable Fe-C compounds: Complex chemical bonds, anisotropic elasticity and variable thermal expansion. Journal of Alloys and Compounds, 2018, 745, 196-211.	2.8	32
38	Effect of Al³⁺ doping on mechanical and thermal properties of DyTaO₄ as promising thermal barrier coating application. Journal of the American Ceramic Society, 2018, 101, 1818-1823.	1.9	32
39	Synthesis and thermophysical properties of RETa₃O₉ (REÂ=ÂCe, Nd, Sm, Eu, Gd,) Tj ETQq1 1 0.784314 rgB 1266-1278.	1.9	93
40	Enhanced thermoelectric properties of bismuth telluride bulk achieved by telluride-spilling during the spark plasma sintering process. Scripta Materialia, 2018, 143, 90-93.	2.6	77
41	Quasiharmonic calculations of thermodynamic properties for La3â^'xTe4 system. Computational Materials Science, 2018, 142, 417-426.	1.4	6
42	A first-principles calculation of structural, mechanical, thermodynamic and electronic properties of binary Niâ€“Y compounds. RSC Advances, 2018, 8, 41575-41586.	1.7	17
43	Investigation on microstructures and thermo-physical properties of ferroelastic (Y1-xDyx)TaO4 ceramics. Materialia, 2018, 4, 478-486.	1.3	25
44	Revealing the stability, elastic properties and electronic structures of Pd-V intermetallics via first principle calculations. AIP Advances, 2018, 8, .	0.6	6
45	Understanding the Intrinsic P-Type Behavior and Phase Stability of Thermoelectric Î±-Mg₃Sb₂. ACS Applied Energy Materials, 2018, 1, 6600-6608.	2.5	28
46	Wear Resistance Mechanism of ZTAP/HCCI Composites with a Honeycomb Structure. Metals, 2018, 8, 588.	1.0	19
47	The rattler effect of phonon propagation in defect-fluorite Dy3(Nb1-xTix)O7-x/2. Ceramics International, 2018, 44, 21998-22002.	2.3	9
48	Achieving high thermoelectric performance of Cu_{1.8}S composites with WSe₂ nanoparticles. Nanotechnology, 2018, 29, 345402.	1.3	19
49	Exploring accurate structure, composition and thermophysical properties of Î· carbides in 17.90â€¯wt% W-4.15â€¯wt% Cr-1.10â€¯wt% V-0.69â€¯wt% C steel. Scripta Materialia, 2018, 154, 149-153.	2.6	18
50	Multialloying effect on thermophysical properties of Cr₇C₃â€type carbides. Journal of the American Ceramic Society, 2017, 100, 1588-1597.	1.9	26
51	Boosting the Thermoelectric Performance of (Na,K)-Codoped Polycrystalline SnSe by Synergistic Tailoring of the Band Structure and Atomic-Scale Defect Phonon Scattering. Journal of the American Chemical Society, 2017, 139, 9714-9720.	6.6	168
52	Effects of alloying elements such as Ti, Zr and Hf on the mechanical and thermodynamic properties of Pd-Base superalloy. Journal of Alloys and Compounds, 2017, 710, 589-599.	2.8	16
53	Mechanical properties and electronic structures of Fe-Al intermetallic. Physica B: Condensed Matter, 2017, 506, 1-11.	1.3	82
54	Microstructure and thermal properties of RETaO4 (RE = Nd, Eu, Gd, Dy, Er, Yb, Lu) as promising thermal barrier coating materials. Scripta Materialia, 2017, 126, 24-28.	2.6	144

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55	Stability, electronic structure, mechanical and thermodynamic properties of Fe-Si binary compounds. Journal of Alloys and Compounds, 2017, 693, 859-870.	2.8	41
56	Elaborating the phases and mechanical properties of multiphase alloy: Experimental two-dimensional mapping combined with theoretical calculations. Materials Characterization, 2017, 134, 347-353.	1.9	24
57	Pressure dependence of electronic structure and superconductivity of the MnX (Xâ€‰=â€‰N, P, As, Sb). Scientific Reports, 2016, 6, 21821.	1.6	21
58	The effects of ordered carbon vacancies on stability and thermo-mechanical properties of V8C7 compared with VC. Scientific Reports, 2016, 6, 34007.	1.6	14
59	Microstructure and thermal properties of a promising thermal barrier coating: YTaO4. Ceramics International, 2016, 42, 13876-13881.	2.3	64
60	Stability, chemical bonding behavior, elastic properties and lattice thermal conductivity of molybdenum and tungsten borides under hydrostatic pressure. Ceramics International, 2016, 42, 2117-2132.	2.3	43
61	Numerical simulation of mold filling process for high chromium cast iron matrix composite reinforced by ZTA ceramic particles. International Journal of Heat and Mass Transfer, 2015, 89, 872-883.	2.5	27
62	Electronic structure, anisotropic elastic and thermal properties of the Î· phase Fe 6 W 6 C. Computational Materials Science, 2015, 108, 205-211.	1.4	29
63	Structure, stability, mechanical and electronic properties of Feâ€“P binary compounds by first-principles calculations. RSC Advances, 2015, 5, 81943-81956.	1.7	24
64	Elastic properties and electronic structures of CrxBy as superhard compounds. Journal of Alloys and Compounds, 2014, 610, 684-694.	2.8	49
65	First principles study the stability, mechanical and electronic properties of manganese carbides. Computational Materials Science, 2014, 87, 19-25.	1.4	53
66	Electronic structures mechanical and thermal properties of Vâ€“C binary compounds. RSC Advances, 2014, 4, 44959-44971.	1.7	62
67	Optimization of the thermophysical properties of the thermal barrier coating materials based on GA-SVR machine learning method: illustrated with ZrO2 doped DyTaO4 system. Materials Research Express, 0, , .	0.8	1