

Ben Xu

List of Publications by Year in descending order

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47
papers

2,196
citations

623734

14
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233421

45
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all docs

49
docs citations

49
times ranked

3261
citing authors

#	ARTICLE	IF	CITATIONS
1	Synergistic Coupling between $\text{Li}_{6.75}\text{La}_3\text{Zr}_{1.75}\text{Ta}_{0.25}\text{O}_{12}$ and Poly(vinylidene fluoride) Induces High Ionic Conductivity, Mechanical Strength, and Thermal Stability of Solid Composite Electrolytes. <i>Journal of the American Chemical Society</i> , 2017, 139, 13779-13785.	13.7	698
2	Giant Energy Density and Improved Discharge Efficiency of Solution-Processed Polymer Nanocomposites for Dielectric Energy Storage. <i>Advanced Materials</i> , 2016, 28, 2055-2061.	21.0	534
3	Diffused Phase Transition Boosts Thermal Stability of High-Performance Lead-Free Piezoelectrics. <i>Advanced Functional Materials</i> , 2016, 26, 1217-1224.	14.9	272
4	Artemisinin-passivated mixed-cation perovskite films for durable flexible perovskite solar cells with over 21% efficiency. <i>Journal of Materials Chemistry A</i> , 2021, 9, 1574-1582.	10.3	126
5	Toroidal polar topology in strained ferroelectric polymer. <i>Science</i> , 2021, 371, 1050-1056.	12.6	74
6	Noble-Metal-Free Hybrid Membranes for Highly Efficient Hydrogen Evolution. <i>Advanced Materials</i> , 2017, 29, 1603617.	21.0	73
7	Isolated Oxygen Vacancy Hardening in Lead-Free Piezoelectrics. <i>Advanced Materials</i> , 2022, 34, e2202558.	21.0	40
8	Boosting the thermoelectric performance of $\text{Bi}_2\text{O}_2\text{Se}$ by isovalent doping. <i>Journal of the American Ceramic Society</i> , 2018, 101, 4634-4644.	3.8	39
9	Microstructure and Mechanical Properties of Al-SiC Nanocomposites Synthesized by Surface-Modified Aluminium Powder. <i>Metals</i> , 2018, 8, 253.	2.3	30
10	Strong phonon localization in PbTe with dislocations and large deviation to Matthiessen's rule. <i>Npj Computational Materials</i> , 2019, 5, .	8.7	29
11	A progressive learning method for predicting the band gap of ABO_3 perovskites using an instrumental variable. <i>Journal of Materials Chemistry C</i> , 2020, 8, 3127-3136.	5.5	23
12	Possible structural origin of superconductivity in Sr-doped $\text{B}_i\text{S}_2\text{S}_3\text{e}$. <i>Physi</i>	2.4	23
13	$\text{Bi}_{1-x}\text{La}_x\text{CuSeO}$ as New Tunable Full Solar Light Active Photocatalysts. <i>Scientific Reports</i> , 2016, 6, 24620.	3.3	17
14	Progress on material characterization methods under big data environment. <i>Advanced Composites and Hybrid Materials</i> , 2021, 4, 235-247.	21.1	16
15	Mechanisms of Skyrmion and Skyrmion Crystal Formation from the Conical Phase. <i>Nano Letters</i> , 2020, 20, 4731-4738.	9.1	14
16	Lattice and spin dynamics in multiferroic BiFeO_3 and MnO_3 . <i>National Science Review</i> , 2019, 6, 642-652.	9.5	13
17	Self-assembly growth of a multiferroic topological nanoisland array. <i>Nanoscale</i> , 2019, 11, 20514-20521.	5.6	13
18	Removal of Chlorpheniramine from Water by Birnessite. <i>Water, Air, and Soil Pollution</i> , 2014, 225, 1.	2.4	12

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19	First-principles and molecular dynamics study of thermoelectric transport properties of N-type silicon-based superlattice-nanocrystalline heterostructures. <i>Journal of Applied Physics</i> , 2017, 122, 085105.	2.5	12
20	Adsorption Mechanism of Ciprofloxacin from Water by Synthesized Birnessite. <i>Advances in Materials Science and Engineering</i> , 2015, 2015, 1-7.	1.8	11
21	Molecular dynamics simulations of the effect of dislocations on the thermal conductivity of iron. <i>Journal of Applied Physics</i> , 2020, 127, 045106.	2.5	11
22	Improved physics-based structural descriptors of perovskite materials enable higher accuracy of machine learning. <i>Computational Materials Science</i> , 2021, 198, 110714.	3.0	11
23	Morphological Development of Sub-Grain Cellular/Bands Microstructures in Selective Laser Melting. <i>Materials</i> , 2019, 12, 1204.	2.9	10
24	Vacancy-induced brittle to ductile transition of W-M co-doped Al3Ti (M=Si, Ge, Sn and Pb). <i>Scientific Reports</i> , 2017, 7, 13964.	3.3	9
25	Ensemble-machine-learning-based correlation analysis of internal and band characteristics of thermoelectric materials. <i>Journal of Materials Chemistry C</i> , 2020, 8, 13079-13089.	5.5	9
26	Probing the phonon mean free paths in dislocation core by molecular dynamics simulation. <i>Journal of Applied Physics</i> , 2021, 129, .	2.5	9
27	Calculation of solid-liquid interfacial free energy and its anisotropy in undercooled system. <i>Rare Metals</i> , 2018, 37, 543-553.	7.1	7
28	Phonon scattering in the complex strain field of a dislocation in PbTe. <i>Journal of Materials Chemistry C</i> , 2021, 9, 8506-8514.	5.5	7
29	Simulation of magnetic hysteresis loops and magnetic Barkhausen noise of $\hat{\Gamma}$ -iron containing nonmagnetic particles. <i>AIP Advances</i> , 2015, 5, .	1.3	6
30	Three-Dimensional Growth of Coherent Ferrite in Austenite: A Molecular Dynamics Study. <i>Acta Metallurgica Sinica (English Letters)</i> , 2019, 32, 669-676.	2.9	6
31	Phonon-phonon interaction assisted electron-hole recombination in WSe2/hBN van der Waals heterostructure. <i>Journal of Applied Physics</i> , 2021, 130, .	2.5	6
32	Selective tuning of order parameters of multiferroic BiFeO3 in picoseconds using midinfrared terahertz laser pulses. <i>Physical Review B</i> , 2022, 105, .	3.2	6
33	Effects of normal stress, surface roughness, and initial grain size on the microstructure of copper subjected to platen friction sliding deformation. <i>International Journal of Minerals, Metallurgy and Materials</i> , 2016, 23, 57-69.	4.9	5
34	Atomistic simulations of carbon effect on kink-pair energetics of bcc iron screw dislocations. <i>Journal of Materials Science</i> , 2019, 54, 10728-10736.	3.7	4
35	Magnetic Properties of Thermally Aged Fe-Cu Alloys with Pre-deformation. <i>Journal of Iron and Steel Research International</i> , 2016, 23, 981-987.	2.8	3
36	Softening effects due to reorientations of Cu precipitates in $\hat{\Gamma}$ -iron: Atomistic simulations of dislocations-obstacles interactions. <i>Journal of Applied Physics</i> , 2019, 125, .	2.5	3

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37	Solubility and Anisotropic Migration Behaviors of Helium in bcc Iron Under Strain. Acta Metallurgica Sinica (English Letters), 2018, 31, 199-207.	2.9	2
38	Modeling and predicting responses of magnetoelectric materials. MRS Bulletin, 2018, 43, 829-833.	3.5	2
39	The Microstructural Characterization of NiSi-Rich Sub-precipitates Within Cementite in Isothermally Aged Reactor Pressure Vessel Steel. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 3992-3999.	2.2	2
40	Reverse evolution in nanoscale Cu-rich precipitates of an aged Fe-Cu alloy under electropulsing. Philosophical Magazine Letters, 2019, 99, 39-47.	1.2	2
41	Stress field interaction during propagation of adjacent tensile twinning nuclei in magnesium. Rare Metals, 2019, 38, 721-732.	7.1	2
42	Distinctive Nb-O hybridization at domain walls in orthorhombic KNbO ₃ ferroelectric perovskite. Applied Physics Letters, 2022, 120, 052902.	3.3	2
43	Improvement in irradiation resistance of FeCu alloy by pre-deformation through introduction of dense point defect sinks. Rare Metals, 2021, 40, 885-896.	7.1	1
44	Spontaneous symmetry breaking of dislocation core in SrTiO ₃ . Materials Today Physics, 2021, 20, 100453.	6.0	1
45	Study of lattice vibration and thermal conductivity of BiCuSeO from first-principles calculations. Materials Research Society Symposia Proceedings, 2015, 1735, 110.	0.1	0
46	Oxide Semiconductors: Arc Melting to Narrow the Bandgap of Oxide Semiconductors (Adv. Mater.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf	2.0	0
47	Hydrogen-Induced Core Structures Change of Screw and Edge Dislocations in Tungsten. , 2016, , 253-259.		0