

# Ben Xu

## List of Publications by Year in descending order

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Version: 2024-02-01

47  
papers

2,196  
citations

706676

14  
h-index

263392

45  
g-index

49  
all docs

49  
docs citations

49  
times ranked

3767  
citing authors

| #  | ARTICLE   | IF   | CITATIONS |
|----|---|------|-----------|
| 1  | Selective tuning of order parameters of multiferroic BiFeO <sub>3</sub> in picoseconds using midinfrared terahertz laser pulses. <i>Physical Review B</i> , 2022, 105, .  | 1.1  | 6         |
| 2  | Distinctive Nb <sup>4d</sup> -O hybridization at domain walls in orthorhombic KNbO <sub>3</sub> ferroelectric perovskite. <i>Applied Physics Letters</i> , 2022, 120, 052902.   | 1.5  | 2         |
| 3  | Isolated <sup>2+</sup> Oxygen <sup>2-</sup> Vacancy Hardening in Lead <sup>2+</sup> -Free Piezoelectrics. <i>Advanced Materials</i> , 2022, 34, e2202558.   | 11.1 | 40        |
| 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.  | 5.2  | 126       |
| 5  | Improvement in irradiation resistance of FeCu alloy by pre-deformation through introduction of dense point defect sinks. <i>Rare Metals</i> , 2021, 40, 885-896.  | 3.6  | 1         |
| 6  | Probing the phonon mean free paths in dislocation core by molecular dynamics simulation. <i>Journal of Applied Physics</i> , 2021, 129, .   | 1.1  | 9         |
| 7  | Progress on material characterization methods under big data environment. <i>Advanced Composites and Hybrid Materials</i> , 2021, 4, 235-247.   | 9.9  | 16        |
| 8  | Toroidal polar topology in strained ferroelectric polymer. <i>Science</i> , 2021, 371, 1050-1056.   | 6.0  | 74        |
| 9  | Spontaneous symmetry breaking of dislocation core in SrTiO <sub>3</sub> . <i>Materials Today Physics</i> , 2021, 20, 100453.  | 2.9  | 1         |
| 10 | Improved physics-based structural descriptors of perovskite materials enable higher accuracy of machine learning. <i>Computational Materials Science</i> , 2021, 198, 110714.   | 1.4  | 11        |
| 11 | Phonon scattering in the complex strain field of a dislocation in PbTe. <i>Journal of Materials Chemistry C</i> , 2021, 9, 8506-8514.   | 2.7  | 7         |
| 12 | Phonon <sup>2+</sup> -phonon interaction assisted electron <sup>2+</sup> -hole recombination in WSe <sub>2</sub> /hBN van der Waals heterostructure. <i>Journal of Applied Physics</i> , 2021, 130, .   | 1.1  | 6         |
| 13 | 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.  | 2.7  | 9         |
| 14 | Mechanisms of Skyrmion and Skyrmion Crystal Formation from the Conical Phase. <i>Nano Letters</i> , 2020, 20, 4731-4738.  | 4.5  | 14        |
| 15 | Molecular dynamics simulations of the effect of dislocations on the thermal conductivity of iron. <i>Journal of Applied Physics</i> , 2020, 127, 045106.  | 1.1  | 11        |
| 16 | A progressive learning method for predicting the band gap of ABO <sub>3</sub> perovskites using an instrumental variable. <i>Journal of Materials Chemistry C</i> , 2020, 8, 3127-3136.   | 2.7  | 23        |
| 17 | The Microstructural Characterization of NiSi-Rich Sub-precipitates Within Cementite in Isothermally Aged Reactor Pressure Vessel Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2019, 50, 3992-3999. | 1.1  | 2         |
| 18 | Strong phonon localization in PbTe with dislocations and large deviation to Matthiessen <sup>2+</sup> 's rule. <i>Npj Computational Materials</i> , 2019, 5, .  | 3.5  | 29        |

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|----|---|------|-----------|
| 19 | Softening effects due to reorientations of Cu precipitates in $\alpha$ -iron: Atomistic simulations of dislocations-obstacles interactions. Journal of Applied Physics, 2019, 125, .  | 1.1  | 3         |
| 20 | Atomistic simulations of carbon effect on kink-pair energetics of bcc iron screw dislocations. Journal of Materials Science, 2019, 54, 10728-10736.   | 1.7  | 4         |
| 21 | Reverse evolution in nanoscale Cu-rich precipitates of an aged Fe-Cu alloy under electropulsing. Philosophical Magazine Letters, 2019, 99, 39-47.   | 0.5  | 2         |
| 22 | Lattice and spin dynamics in multiferroic BiFeO <sub>3</sub> and R-MnO <sub>3</sub> . National Science Review, 2019, 6, 642-652.  | 4.6  | 13        |
| 23 | Morphological Development of Sub-Grain Cellular/Bands Microstructures in Selective Laser Melting. Materials, 2019, 12, 1204.  | 1.3  | 10        |
| 24 | Three-Dimensional Growth of Coherent Ferrite in Austenite: A Molecular Dynamics Study. Acta Metallurgica Sinica (English Letters), 2019, 32, 669-676.   | 1.5  | 6         |
| 25 | Self-assembly growth of a multiferroic topological nanoisland array. Nanoscale, 2019, 11, 20514-20521.  | 2.8  | 13        |
| 26 | Stress field interaction during propagation of adjacent tensile twinning nuclei in magnesium. Rare Metals, 2019, 38, 721-732.   | 3.6  | 2         |
| 27 | Boosting the thermoelectric performance of Bi <sub>2</sub> O <sub>2</sub> Se by isovalent doping. Journal of the American Ceramic Society, 2018, 101, 4634-4644.  | 1.9  | 39        |
| 28 | Solubility and Anisotropic Migration Behaviors of Helium in bcc Iron Under Strain. Acta Metallurgica Sinica (English Letters), 2018, 31, 199-207.   | 1.5  | 2         |
| 29 | Calculation of solid-liquid interfacial free energy and its anisotropy in undercooled system. Rare Metals, 2018, 37, 543-553.   | 3.6  | 7         |
| 30 | Modeling and predicting responses of magnetoelectric materials. MRS Bulletin, 2018, 43, 829-833.  | 1.7  | 2         |
| 31 | Microstructure and Mechanical Properties of Al-SiC Nanocomposites Synthesized by Surface-Modified Aluminium Powder. Metals, 2018, 8, 253.   | 1.0  | 30        |
| 32 | Possible structural origin of superconductivity in Sr-doped $B_{1-x}S_{2x}Fe_2As_2$ . Scientific Reports, 2018, 8, 13964.   | 0.9  | 23        |
| 33 | Vacancy-induced brittle to ductile transition of W-M co-doped Al <sub>3</sub> Ti (M=Si, Ge, Sn and Pb). Scientific Reports, 2017, 7, 13964.   | 1.6  | 9         |
| 34 | First-principles and molecular dynamics study of thermoelectric transport properties of N-type silicon-based superlattice-nanocrystalline heterostructures. Journal of Applied Physics, 2017, 122, 085105.  | 1.1  | 12        |
| 35 | Synergistic Coupling between Li <sub>0.75</sub> La <sub>0.3</sub> Zr <sub>0.175</sub> Ta <sub>0.25</sub> O <sub>12</sub> and Poly(vinylidene fluoride) Induces High Ionic Conductivity, Mechanical Strength, and Thermal Stability of Solid Composite Electrolytes. Journal of the American Chemical Society, 2017, 139, 13779-13785. | 6.6  | 698       |
| 36 | Noble-Metal-Free Hybrid Membranes for Highly Efficient Hydrogen Evolution. Advanced Materials, 2017, 29, 1603617.   | 11.1 | 73        |

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|----|---|------|-----------|
| 37 | Diffused Phase Transition Boosts Thermal Stability of High-Performance Lead-Free Piezoelectrics. <i>Advanced Functional Materials</i> , 2016, 26, 1217-1224.  | 7.8  | 272       |
| 38 | Hydrogen-Induced Core Structures Change of Screw and Edge Dislocations in Tungsten. , 2016, , 253-259.  |      | 0         |
| 39 | Magnetic Properties of Thermally Aged Fe-Cu Alloys with Pre-deformation. <i>Journal of Iron and Steel Research International</i> , 2016, 23, 981-987.   | 1.4  | 3         |
| 40 | $\text{Bi}_{1-x}\text{La}_x\text{CuSeO}$ as New Tunable Full Solar Light Active Photocatalysts. <i>Scientific Reports</i> , 2016, 6, 24620.   | 1.6  | 17        |
| 41 | Giant Energy Density and Improved Discharge Efficiency of Solution-Processed Polymer Nanocomposites for Dielectric Energy Storage. <i>Advanced Materials</i> , 2016, 28, 2055-2061.   | 11.1 | 534       |
| 42 | 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. | 2.4  | 5         |
| 43 | Study of lattice vibration and thermal conductivity of $\text{BiCuSeO}$ from first-principles calculations. <i>Materials Research Society Symposia Proceedings</i> , 2015, 1735, 110.   | 0.1  | 0         |
| 44 | Simulation of magnetic hysteresis loops and magnetic Barkhausen noise of $\delta$ -iron containing nonmagnetic particles. <i>AIP Advances</i> , 2015, 5, .  | 0.6  | 6         |
| 45 | Adsorption Mechanism of Ciprofloxacin from Water by Synthesized Birnessite. <i>Advances in Materials Science and Engineering</i> , 2015, 2015, 1-7.   | 1.0  | 11        |
| 46 | Oxide Semiconductors: Arc-Melting to Narrow the Bandgap of Oxide Semiconductors ( <i>Adv. Mater.</i> ) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 19.1   |      | 0         |
| 47 | Removal of Chlorpheniramine from Water by Birnessite. <i>Water, Air, and Soil Pollution</i> , 2014, 225, 1.   | 1.1  | 12        |