Hong-Xiang Zong

List of Publications by Year
in descending order

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42 papers	965 citations	471509 17 h-index	454955 30 g-index
44 all docs	44 docs citations	44 times ranked	940 citing authors

#	Article	IF	Citations
1	Uniting tensile ductility with ultrahigh strength via composition undulation. Nature, 2022, 604, 273-279.	27.8	80
2	Unveiling the grain boundary-related effects on the incipient plasticity and dislocation behavior in nanocrystalline CrCoNi medium-entropy alloy. Journal of Materials Science and Technology, 2022, 127, 98-107.	10.7	9
3	Molecular dynamics simulations of ultralow hysteretic behavior in super-elastic shape memory alloys. Acta Materialia, 2022, 232, 117973.	7.9	4
4	Enhancement of strength-ductility balance of heavy Ti and Al alloyed FeCoNiCr high-entropy alloys via boron doping. Journal of Materials Science and Technology, 2021, 75, 154-163.	10.7	42
5	Observation of Fundamental Mechanisms in Compression-Induced Phase Transformations Using Ultrafast X-ray Diffraction. Jom, 2021, 73, 2185-2193.	1.9	2
6	Identifying the Activity Origin of a Cobalt Singleâ€Atom Catalyst for Hydrogen Evolution Using Supervised Learning. Advanced Functional Materials, 2021, 31, 2100547.	14.9	93
7	Free electron to electride transition in dense liquid potassium. Nature Physics, 2021, 17, 955-960.	16.7	15
8	Anomalous dislocation core structure in shock compressed bcc high-entropy alloys. Acta Materialia, 2021, 209, 116801.	7.9	42
9	Nanoscale bubble domains with polar topologies in bulk ferroelectrics. Nature Communications, 2021, 12, 3632.	12.8	57
10	Two-state model for critical points and the negative slope of the melting curve. Physical Review B, 2021, 104, .	3.2	2
11	Anomalous thermophysical properties and electride transition in fcc potassium. Physical Review B, 2021, 104, .	3.2	0
12	Boson-peak-like anomaly caused by transverse phonon softening in strain glass. Nature Communications, 2021, 12, 5755.	12.8	18
13	Improving radiation-tolerance of bcc multi-principal element alloys by tailoring compositional heterogeneities. Journal of Nuclear Materials, 2021, 555, 153140.	2.7	10
14	Rippling Ferroic Phase Transition and Domain Switching In 2D Materials. Advanced Materials, 2021, 33, e2103469.	21.0	14
15	Understanding high pressure molecular hydrogen with a hierarchical machine-learned potential. Nature Communications, 2020, 11, 5014.	12.8	5
16	Dynamics Studies of Nitrogen Interstitial in GaN from Ab Initio Calculations. Materials, 2020, 13, 3627.	2.9	6
17	Unusual activated processes controlling dislocation motion in body-centered-cubic high-entropy alloys. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 16199-16206.	7.1	117
18	Nucleation mechanism for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mi>hcp</mml:mi><mml:mo>â†’</mml:mo><mml:mi>bcc</m phase transformation in shock-compressed Zr. Physical Review B, 2020, 101, .	3.2	20

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19	Percolated Strain Networks and Universal Scaling Properties of Strain Glasses. Physical Review Letters, 2019, 123, 015701.	7.8	18
20	Seamless joining of silicon carbide ceramics through an sacrificial interlayer of Dy3Si2C2. Journal of the European Ceramic Society, 2019, 39, 5457-5462.	5.7	17
21	On the chain-melted phase of matter. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 10297-10302.	7.1	19
22	Commensurate-incommensurate phase transition of dense potassium simulated by machine-learned interatomic potential. Physical Review B, 2019, 100, .	3.2	8
23	hcp â†’ Ï‰ phase transition mechanisms in shocked zirconium: A machine learning based atomic simulation study. Acta Materialia, 2019, 162, 126-135.	7.9	17
24	Insight into the Effects of Reinforcement Shape on Achieving Continuous Martensite Transformation in Phase Transforming Matrix Composites. Applied Composite Materials, 2018, 25, 1369-1384.	2.5	2
25	Developing an interatomic potential for martensitic phase transformations in zirconium by machine learning. Npj Computational Materials, 2018, 4, .	8.7	79
26	Origin of high strength, low modulus superelasticity in nanowire-shape memory alloy composites. Scientific Reports, 2017, 7, 46360.	3.3	12
27	Hydrogenation Induced Carrier Mobility Polarity Reversal in Monolayer AlN. Physica Status Solidi - Rapid Research Letters, 2017, 11, 1700260.	2.4	6
28	Adjustable localized states in perfect and single C-chain doped zigzag AlN nanoribbons. Physica Status Solidi (B): Basic Research, 2017, 254, 1600489.	1.5	1
29	C-chain-doping induced band-state transition in armchair AlN nanoribbons. Physica Status Solidi (B): Basic Research, 2016, 253, 1643-1648.	1.5	2
30	C-chain-doping induced band-state transition in armchair AlN nanoribbons (Phys. Status Solidi B) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 3	1.5	0
31	Twin boundary activated Î±Â†’Ï‰ phase transformation in titanium under shock compression. Acta Materialia, 2016, 115, 1-9.	7.9	28
32	Long-time behavior of the Ï‰â†’Î± transition in shocked zirconium: Interplay of nucleation and plastic deformation. Acta Materialia, 2016, 108, 138-142.	7.9	5
33	Origin of low thermal hysteresis in shape memory alloy ultrathin films. Acta Materialia, 2016, 103, 407-415.	7.9	13
34	Alpha â€“ omega and omega â€“ alpha phase transformations in zirconium under hydrostatic pressure: A 3D mesoscale study. Acta Materialia, 2016, 102, 97-107.	7.9	19
35	Uniaxial stress-driven coupled grain boundary motion in hexagonal close-packed metals: A molecular dynamics study. Acta Materialia, 2015, 82, 295-303.	7.9	28
36	Phase transformations in Titanium: Anisotropic deformation of Ï‰ phase. Journal of Physics: Conference Series, 2014, 500, 112042.	0.4	4

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37	Anisotropic shock response of titanium: Reorientation and transformation mechanisms. Acta Materialia, 2014, 65, 10-18.	7.9	57
38	The kinetics of the Ï‰ to Î± phase transformation in Zr, Ti: Analysis of data from shock-recovered samples and atomistic simulations. Acta Materialia, 2014, 77, 191-199.	7.9	40
39	Publisher's Note: Collective nature of plasticity in mediating phase transformation under shock compression [Phys. Rev. B89, 220101(R) (2014)]. Physical Review B, 2014, 90, .	3.2	0
40	Collective nature of plasticity in mediating phase transformation under shock compression. Physical Review B, 2014, 89, .	3.2	40
41	On glassy behavior in ferroics. Physica Status Solidi (B): Basic Research, 2014, 251, 2003-2009.	1.5	4
42	Diffuse scattering as an indicator for martensitic variant selection. Acta Materialia, 2014, 66, 69-78.	7.9	9