Zhaoxuan Wu

List of Publications by Year in Descending Order

35 papers	2,131 citations	24 h-index	35 g-index
35 ext. papers	2,639 ext. citations	9.5 avg, IF	5.63 L-index

#	Paper	IF	Citations
35	Modified Embedded-Atom Method Potentials for the Plasticity and Fracture Behaviors of Unary HCP Metals. *Advanced Theory and Simulations*, **2022**, 5, 2100377	3.5	0
34	Chemical-Affinity Disparity and Exclusivity Drive Atomic Segregation, Short-Range Ordering, and Cluster Formation in High-Entropy Alloys. *Acta Materialia*, **2021**, 206, 116638	8.4	12
33	Modified embedded-atom method potentials for the plasticity and fracture behaviors of unary fcc metals. *Physical Review B*, **2021**, 103,	3.3	3
32	A systematic study of interatomic potentials for mechanical behaviours of Ti-Al alloys. *Computational Materials Science*, **2021**, 188, 110239	3.2	11
31	Simultaneously enhancing the ultimate strength and ductility of high-entropy alloys via short-range ordering. *Nature Communications*, **2021**, 12, 4953	17.4	13
30	Specialising neural network potentials for accurate properties and application to the mechanical response of titanium. *Npj Computational Materials*, **2021**, 7,	10.9	3
29	Design of Ductile Rare-Earth-Free Magnesium Alloys. *Minerals, Metals and Materials Series*, **2020**, 19-24	0.3	1
28	Analysis of double cross-slip of pyramidal I <c+a> screw dislocations and implications for ductility in Mg alloys. *Acta Materialia*, **2020**, 183, 228-241	8.4	34
27	Designing high ductility in magnesium alloys. *Acta Materialia*, **2019**, 172, 161-184	8.4	58
26	Mechanistic origin and prediction of enhanced ductility in magnesium alloys. *Science*, **2018**, 359, 447-452	33.3	265
25	Pyramidal II to basal transformation of <c + a> edge dislocations in Mg-Y alloys. *Scripta Materialia*, **2018**, 155, 114-118	5.6	20
24	Highly polarized single mode nanobelt laser. *Applied Physics Letters*, **2017**, 110, 201112	3.4	8
23	First-principles calculations of stacking fault energies in Mg-Y, Mg-Al and Mg-Zn alloys and implications for <c+a> activity. *Acta Materialia*, **2017**, 136, 249-261	8.4	55
22	Comprehensive first-principles study of stable stacking faults in hcp metals. *Acta Materialia*, **2017**, 123, 223-234	8.4	96
21	Energetics of dislocation transformations in hcp metals. *Acta Materialia*, **2016**, 119, 203-217	8.4	36
20	Intrinsic structural transitions of the pyramidal I < + > dislocation in magnesium. *Scripta Materialia*, **2016**, 116, 104-107	5.6	43
19	The inverse hallPetch relation in nanocrystalline metals: A discrete dislocation dynamics analysis. *Journal of the Mechanics and Physics of Solids*, **2016**, 88, 252-266	5	58

18	Mechanism and energetics of <c + a> dislocation cross-slip in hcp metals. *Proceedings of the National Academy of Sciences of the United States of America*, **2016**, 113, 11137-11142	11.5	62
17	The origins of high hardening and low ductility in magnesium. *Nature*, **2015**, 526, 62-7	50.4	323
16	Magnesium interatomic potential for simulating plasticity and fracture phenomena. *Modelling and Simulation in Materials Science and Engineering*, **2015**, 23, 015004	2	89
15	Effects of Alloying Elements on Microstructure and Properties of Magnesium Alloys for Tripling Ball. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2015**, 46, 4793-4803	2.3	28
14	Effects of copper on the microstructure and properties of Mg-17Al-3Zn alloys. *Materials and Corrosion - Werkstoffe Und Korrosion*, **2015**, 66, 1159-1168	1.6	27
13	Brittle and ductile crack-tip behavior in magnesium. *Acta Materialia*, **2015**, 88, 1-12	8.4	61
12	Mechanisms of failure in nanoscale metallic glass. *Nano Letters*, **2014**, 14, 5858-64	11.5	68
11	Polycrystal deformation in a discrete dislocation dynamics framework. *Acta Materialia*, **2014**, 75, 92-105	8.4	46
10	Anatomy of nanomaterial deformation: Grain boundary sliding, plasticity and cavitation in nanocrystalline Ni. *Acta Materialia*, **2013**, 61, 5807-5820	8.4	33
9	Microstructure versus flaw: mechanisms of failure and strength in nanostructures. *Nano Letters*, **2013**, 13, 5703-9	11.5	48
8	Nanostructure and surface effects on yield in Cu nanowires. *Acta Materialia*, **2013**, 61, 1831-1842	8.4	60
7	Size-dependent deformation of nanocrystalline Pt nanopillars. *Nano Letters*, **2012**, 12, 6385-92	11.5	137
6	Nanowire failure: long = brittle and short = ductile. *Nano Letters*, **2012**, 12, 910-4	11.5	91
5	Deformation mechanisms, length scales and optimizing the mechanical properties of nanotwinned metals. *Acta Materialia*, **2011**, 59, 6890-6900	8.4	70
4	Grain boundary finite length faceting. *Acta Materialia*, **2009**, 57, 4278-4287	8.4	19
3	Dislocation–twin interaction mechanisms for ultrahigh strength and ductility in nanotwinned metals. *Acta Materialia*, **2009**, 57, 4508-4518	8.4	160
2	Dislocation junctions as barriers to threading dislocation migration. *Applied Physics Letters*, **2007**, 90, 011905	3.4	5
1	Deformable Antireflection Coatings from Polymer and Nanoparticle Multilayers. *Advanced Materials*, **2006**, 18, 2699-2702	24	88