

Zhaoxuan Wu

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/4664429/publications.pdf>

Version: 2024-02-01

34
papers

3,103
citations

201385

27
h-index

360668

35
g-index

35
all docs

35
docs citations

35
times ranked

2480
citing authors

#	ARTICLE	IF	CITATIONS
1	The origins of high hardening and low ductility in magnesium. <i>Nature</i> , 2015, 526, 62-67.	13.7	488
2	Mechanistic origin and prediction of enhanced ductility in magnesium alloys. <i>Science</i> , 2018, 359, 447-452.	6.0	432
3	Dislocation-twin interaction mechanisms for ultrahigh strength and ductility in nanotwinned metals. <i>Acta Materialia</i> , 2009, 57, 4508-4518.	3.8	192
4	Size-Dependent Deformation of Nanocrystalline Pt Nanopillars. <i>Nano Letters</i> , 2012, 12, 6385-6392.	4.5	162
5	Comprehensive first-principles study of stable stacking faults in hcp metals. <i>Acta Materialia</i> , 2017, 123, 223-234.	3.8	139
6	Magnesium interatomic potential for simulating plasticity and fracture phenomena. <i>Modelling and Simulation in Materials Science and Engineering</i> , 2015, 23, 015004.	0.8	117
7	Simultaneously enhancing the ultimate strength and ductility of high-entropy alloys via short-range ordering. <i>Nature Communications</i> , 2021, 12, 4953.	5.8	116
8	Nanowire Failure: Long = Brittle and Short = Ductile. <i>Nano Letters</i> , 2012, 12, 910-914.	4.5	104
9	Designing high ductility in magnesium alloys. <i>Acta Materialia</i> , 2019, 172, 161-184.	3.8	96
10	Deformable Antireflection Coatings from Polymer and Nanoparticle Multilayers. <i>Advanced Materials</i> , 2006, 18, 2699-2702.	11.1	94
11	Mechanism and energetics of $\frac{1}{2}c + a^2$ dislocation cross-slip in hcp metals. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 11137-11142.	3.3	93
12	Deformation mechanisms, length scales and optimizing the mechanical properties of nanotwinned metals. <i>Acta Materialia</i> , 2011, 59, 6890-6900.	3.8	87
13	First-principles calculations of stacking fault energies in Mg-Y, Mg-Al and Mg-Zn alloys and implications for $\frac{1}{2}c + a^2$ dislocation cross-slip in hcp metals. <i>Acta Materialia</i> , 2017, 136, 249-261.	3.8	84
14	Brittle and ductile crack-tip behavior in magnesium. <i>Acta Materialia</i> , 2015, 88, 1-12.	3.8	79
15	Mechanisms of Failure in Nanoscale Metallic Glass. <i>Nano Letters</i> , 2014, 14, 5858-5864.	4.5	78
16	The inverse Hall-Petch relation in nanocrystalline metals: A discrete dislocation dynamics analysis. <i>Journal of the Mechanics and Physics of Solids</i> , 2016, 88, 252-266.	2.3	76
17	Nanostructure and surface effects on yield in Cu nanowires. <i>Acta Materialia</i> , 2013, 61, 1831-1842.	3.8	68
18	Analysis of double cross-slip of pyramidal I screw dislocations and implications for ductility in Mg alloys. <i>Acta Materialia</i> , 2020, 183, 228-241.	3.8	68

#	ARTICLE	IF	CITATIONS
19	Intrinsic structural transitions of the pyramidal I $\frac{1}{2}\langle 111 \rangle$ dislocation in magnesium. Scripta Materialia, 2016, 116, 104-107.	2.6	60
20	Microstructure versus Flaw: Mechanisms of Failure and Strength in Nanostructures. Nano Letters, 2013, 13, 5703-5709.	4.5	58
21	Polycrystal deformation in a discrete dislocation dynamics framework. Acta Materialia, 2014, 75, 92-105.	3.8	56
22	Energetics of dislocation transformations in hcp metals. Acta Materialia, 2016, 119, 203-217.	3.8	52
23	Effects of copper on the microstructure and properties of Mg _{1.7} Al _{1.3} Zn alloys. Materials and Corrosion - Werkstoffe Und Korrosion, 2015, 66, 1159-1168.	0.8	51
24	Chemical-Affinity Disparity and Exclusivity Drive Atomic Segregation, Short-Range Ordering, and Cluster Formation in High-Entropy Alloys. Acta Materialia, 2021, 206, 116638.	3.8	45
25	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.	1.1	44
26	Anatomy of nanomaterial deformation: Grain boundary sliding, plasticity and cavitation in nanocrystalline Ni. Acta Materialia, 2013, 61, 5807-5820.	3.8	39
27	Grain boundary finite length faceting. Acta Materialia, 2009, 57, 4278-4287.	3.8	29
28	Pyramidal II to basal transformation of $\frac{1}{2}\langle 111 \rangle$ edge dislocations in Mg-Y alloys. Scripta Materialia, 2018, 155, 114-118.	2.6	27
29	Specialising neural network potentials for accurate properties and application to the mechanical response of titanium. Npj Computational Materials, 2021, 7, .	3.5	26
30	A systematic study of interatomic potentials for mechanical behaviours of Ti-Al alloys. Computational Materials Science, 2021, 188, 110239.	1.4	20
31	Highly polarized single mode nanobelt laser. Applied Physics Letters, 2017, 110, .	1.5	9
32	Dislocation junctions as barriers to threading dislocation migration. Applied Physics Letters, 2007, 90, 011905.	1.5	6
33	Modified embedded-atom method potentials for the plasticity and fracture behaviors of unary fcc metals. Physical Review B, 2021, 103, .	1.1	5
34	Modified Embedded-Atom Method Potentials for the Plasticity and Fracture Behaviors of Unary HCP Metals. Advanced Theory and Simulations, 2022, 5, 2100377.	1.3	2