Yun-Jiang Wang

List of Publications by Year
in descending order

79 papers	2,051 citations	201385 27 h-index	288905 40 g-index
79 all docs	79 docs citations	79 times ranked	1477 citing authors

#	Article	IF	Citations
1	Atomistic interpretation of extra temperature and strain-rate sensitivity of heterogeneous dislocation nucleation in a multi-principal-element alloy. International Journal of Plasticity, 2022, 149, 103155.	4.1	18
2	Dynamic responses in shocked Cu-Zr nanoglasses with gradient microstructure. International Journal of Plasticity, 2022, 149, 103154.	4.1	15
3	Disentangling diffusion heterogeneity in high-entropy alloys. Acta Materialia, 2022, 224, 117527.	3.8	25
4	Correlation between vibrational anomalies and emergent anharmonicity of the local potential energy landscape in metallic glasses. Physical Review B, 2022, 105, .	1.1	12
5	Ergodic Structural Diversity Predicts Dynamics in Amorphous Materials. Frontiers in Materials, 2022, 9, .	1.2	0
6	Sluggish dynamics of homogeneous flow in high-entropy metallic glasses. Scripta Materialia, 2022, 214, 114673.	2.6	11
7	A hierarchically correlated flow defect model for metallic glass: Universal understanding of stress relaxation and creep. International Journal of Plasticity, 2022, 154, 103288.	4.1	29
8	Elastic criterion for shear-banding instability in amorphous solids. Physical Review E, 2022, 105, 045003.	0.8	8
9	Hidden spatiotemporal sequence in transition to shear band in amorphous solids. Physical Review Research, 2022, 4, .	1.3	10
10	Sluggish hydrogen diffusion and hydrogen decreasing stacking fault energy in a high-entropy alloy. Materials Today Communications, 2021, 26, 101902.	0.9	11
11	Inelastic deformation of metallic glasses under dynamic cyclic loading. Scripta Materialia, 2021, 194, 113675.	2.6	6
12	Grain boundary-mediated plasticity accommodating the cracking process in nanograined gold: In situ observations and simulations. Scripta Materialia, 2021, 194, 113693.	2.6	6
13	Synergistic strengthening mechanisms of rhenium in nickel-based single crystal superalloys. Intermetallics, 2021, 132, 107133.	1.8	15
14	Dynamic mechanical relaxation and thermal creep of high-entropy $La_{30}Ce_{30}Ni_{10}Al_{20}Co_{10}$ bulk metallic glass. Science China: Physics, Mechanics and Astronomy, 2021, 64, 1.	2.0	37
15	Machine-learning integrated glassy defect from an intricate configurational-thermodynamic-dynamic space. Physical Review B, 2021, 104, .	1.1	15
16	Stress relaxation in high-entropy $Pd_{20}Pt_{20}Cu_{20}Ni_{20}P_{20}$ metallic glass: Experiments, modeling and theory. Mechanics of Materials, 2021, 160, 103959.	1.7	5
17	Machine learning atomic-scale stiffness in metallic glass. Extreme Mechanics Letters, 2021, 48, 101446.	2.0	19
18	Microstructural effects on the dynamical relaxation of glasses and glass composites: A molecular dynamics study. Acta Materialia, 2021, 220, 117293.	3.8	9

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19	Dislocation nucleation and evolution at the ferrite-cementite interface under cyclic loadings. Acta Materialia, 2020, 186, 267-277.	3.8	30
20	â€œSelf-sharpeningâ€•tungsten high-entropy alloy. Acta Materialia, 2020, 186, 257-266.	3.8	91
21	Ultrasonic plasticity of metallic glass near room temperature. Applied Materials Today, 2020, 21, 100866.	2.3	15
22	Complexity of plastic instability in amorphous solids: Insights from spatiotemporal evolution of vibrational modes. European Physical Journal E, 2020, 43, 56.	0.7	10
23	Unraveling strongly entropic effect on <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math> -relaxation in metallic glass: Insights from enhanced atomistic samplings over experimentally relevant timescales. Physical Review B, 2020, 102, .	1.1	5
24	Unified perspective on structural heterogeneity of a LaCe-based metallic glass from versatile dynamic stimuli. Intermetallics, 2020, 125, 106922.	1.8	8
25	Statistical complexity of potential energy landscape as a dynamic signature of the glass transition. Physical Review B, 2020, 101, .	1.1	12
26	Atomistic structural mechanism for the glass transition: Entropic contribution. Physical Review B, 2020, 101, .	1.1	28
27	Novel atomic-scale mechanism of incipient plasticity in a chemically complex CrCoNi medium-entropy alloy associated with inhomogeneity in local chemical environment. Acta Materialia, 2020, 194, 283-294.	3.8	101
28	Ratchetting in Cold-Drawn Pearlitic Steel Wires. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 4561-4568.	1.1	8
29	Hierarchical-microstructure based modeling for plastic deformation of partial recrystallized copper. Mechanics of Materials, 2019, 139, 103207.	1.7	3
30	Revisiting the structureâ€“property relationship of metallic glasses: Common spatial correlation revealed as a hidden rule. Physical Review B, 2019, 99, .	1.1	50
31	One-step annealing optimizes strength-ductility tradeoff in pearlitic steel wires. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 757, 1-13.	2.6	25
32	Atomistic insights on the influence of pre-oxide shell layer and size on the compressive mechanical properties of nickel nanowires. Journal of Applied Physics, 2019, 125, .	1.1	4
33	Assessing the utility of structure in amorphous materials. Journal of Chemical Physics, 2019, 150, 114502.	1.2	34
34	Incorporating a soft ordered phase into an amorphous configuration enhances its uniform plastic deformation under shear. AIP Advances, 2019, 9, 015329.	0.6	1
35	Fast surface dynamics enabled cold joining of metallic glasses. Science Advances, 2019, 5, eaax7256.	4.7	87
36	Susceptibility of shear banding to chemical short-range order in metallic glasses. Scripta Materialia, 2019, 162, 141-145.	2.6	22

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37	Structural Parameter of Orientational Order to Predict the Boson Vibrational Anomaly in Glasses. Physical Review Letters, 2019, 122, 015501.	2.9	45
38	Enhancing strength without compromising ductility in copper by combining extrusion machining and heat treatment. Journal of Materials Processing Technology, 2019, 267, 52-60.	3.1	19
39	Investigation of high spin states in 133Cs. European Physical Journal A, 2018, 54, 1.	1.0	1
40	A free energy landscape perspective on the nature of collective diffusion in amorphous solids. Acta Materialia, 2018, 157, 165-173.	3.8	33
41	Oxyhydroxide of metallic nanowires in a molecular H2O and H2O2 environment and their effects on mechanical properties. Physical Chemistry Chemical Physics, 2018, 20, 17289-17303.	1.3	17
42	Atomic structure of the Fe/Fe₃C interface with the Isaichev orientation in pearlite. Philosophical Magazine, 2017, 97, 2375-2386.	0.7	22
43	Atomic theory of viscoelastic response and memory effects in metallic glasses. Physical Review B, 2017, 96, .	1.1	27
44	Strain gradient drives shear banding in metallic glasses. Physical Review B, 2017, 96, .	1.1	34
45	Universal structural softening in metallic glasses indicated by boson heat capacity peak. Applied Physics Letters, 2017, 111, .	1.5	15
46	Correlation between strain rate sensitivity and Î± relaxation of metallic glasses. AIP Advances, 2016, 6, 075022.	0.6	1
47	Effects of oxidation on tensile deformation of iron nanowires: Insights from reactive molecular dynamics simulations. Journal of Applied Physics, 2016, 120, .	1.1	27
48	Prediction of pressure-promoted thermal rejuvenation in metallic glasses. Npj Computational Materials, 2016, 2, .	3.5	67
49	Time-, stress-, and temperature-dependent deformation in nanostructured copper: Creep tests and simulations. Journal of the Mechanics and Physics of Solids, 2016, 94, 191-206.	2.3	54
50	Time, stress, and temperature-dependent deformation in nanostructured copper: Stress relaxation tests and simulations. Acta Materialia, 2016, 108, 252-263.	3.8	66
51	Mechanism transition and strong temperature dependence of dislocation nucleation from grain boundaries: An accelerated molecular dynamics study. Physical Review B, 2016, 94, .	1.1	32
52	Transition from stress-driven to thermally activated stress relaxation in metallic glasses. Physical Review B, 2016, 94, .	1.1	65
53	Understanding the serrated flow and Johari-Goldstein relaxation of metallic glasses. Journal of Non-Crystalline Solids, 2016, 444, 23-30.	1.5	17
54	Intrinsic structural defects on medium range in metallic glasses. Intermetallics, 2016, 75, 36-41.	1.8	17

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55	Direct atomic-scale evidence for shearâ€“dilatation correlation in metallic glasses. Scripta Materialia, 2016, 112, 37-41.	2.6	28
56	Size-dependent plastic deformation and failure mechanisms of nanotwinned Ni3Al: Insights from an atomistic cracking model. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2016, 649, 449-460.	2.6	19
57	Universal enthalpy-entropy compensation rule for the deformation of metallic glasses. Physical Review B, 2015, 92, .	1.1	19
58	Publisher's Note: Universal enthalpy-entropy compensation rule for the deformation of metallic glasses [Phys. Rev. B92, 174118 (2015)]. Physical Review B, 2015, 92, .	1.1	2
59	Thermal expansion accompanying the glass-liquid transition and crystallization. AIP Advances, 2015, 5, .	0.6	13
60	Characteristics of stress relaxation kinetics of La 60 Ni 15 Al 25 bulk metallic glass. Acta Materialia, 2015, 98, 43-50.	3.8	89
61	Bridging shear transformation zone to the atomic structure of amorphous solids. Journal of Non-Crystalline Solids, 2015, 410, 100-105.	1.5	5
62	Studying the elastic properties of nanocrystalline copper using a model of randomly packed uniform grains. Computational Materials Science, 2013, 79, 56-62.	1.4	34
63	Atomistic understanding of diffusion kinetics in nanocrystals from molecular dynamics simulations. Physical Review B, 2013, 88, .	1.1	17
64	Entropic effect on creep in nanocrystalline metals. Acta Materialia, 2013, 61, 3866-3871.	3.8	28
65	Size-dependent transition of deformation mechanism, and nonlinear elasticity in Ni3Al nanowires. Applied Physics Letters, 2013, 102, .	1.5	19
66	Atomistic Design of High Strength Crystalline-Amorphous Nanocomposites. Materials Transactions, 2013, 54, 1592-1596.	0.4	9
67	First Report of Lily Blight and Wilt Caused by <i>Fusarium tricinctum</i> in China. Plant Disease, 2013, 97, 993-993.	0.7	19
68	Grain Size Dependence of Creep in Nanocrystalline Copper by Molecular Dynamics. Materials Transactions, 2012, 53, 156-160.	0.4	35
69	Effect of water stress on leaf photosynthesis, chlorophyll content, and growth of oriental lily. Russian Journal of Plant Physiology, 2011, 58, 844-850.	0.5	56
70	Transition of creep mechanism in nanocrystalline metals. Physical Review B, 2011, 84, .	1.1	51
71	CO adsorption on small Au _{<i>n</i>} (<i>n</i> = 1 â€” 7) clusters supported on a reduced rutile TiO ₂ (110) surface: a first-principles study. Chinese Physics B, 2011, 20, 036801.	0.7	6
72	A comparison of the ideal strength between L12Co3(Al,W) and Ni3Al under tension and shear from first-principles calculations. Applied Physics Letters, 2009, 94, .	1.5	72

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73	Mechanical properties and electronic structure of superhard diamondlike BC5: A first-principles study. Journal of Applied Physics, 2009, 106, .	1.1	14
74	Influence of alloying elements on the elastic properties of ternary and quaternary nickel-base superalloys. Philosophical Magazine, 2009, 89, 2935-2947.	0.7	22
75	Influence of the alloying element Re on the ideal tensile and shear strength of Î³â€²-Ni3Al. Scripta Materialia, 2009, 61, 197-200.	2.6	51
76	Mechanical and electronic properties of 5d transition metal diborides MB2 (M=Re, W, Os, Ru). Journal of Applied Physics, 2009, 105, .	1.1	32
77	Effect of Alloying Elements on the Elastic Properties of Î³-Ni and Î³'-Ni3Al from First-principles Calculations. Materials Research Society Symposia Proceedings, 2009, 1224, 1.	0.1	10
78	The alloying mechanisms of Re, Ru in the quaternary Ni-based superalloys interface: A first principles calculation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 490, 242-249.	2.6	42
79	A first-principles survey of the partitioning behaviors of alloying elements on Î³/Î³â€² interface. Journal of Applied Physics, 2008, 104, 013109.	1.1	15