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	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
2	â€œSelf-sharpeningâ€•tungsten high-entropy alloy. Acta Materialia, 2020, 186, 257-266.	3.8	91
3	Characteristics of stress relaxation kinetics of La 60 Ni 15 Al 25 bulk metallic glass. Acta Materialia, 2015, 98, 43-50.	3.8	89
4	Fast surface dynamics enabled cold joining of metallic glasses. Science Advances, 2019, 5, eaax7256.	4.7	87
5	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
6	Prediction of pressure-promoted thermal rejuvenation in metallic glasses. Npj Computational Materials, 2016, 2, .	3.5	67
7	Time, stress, and temperature-dependent deformation in nanostructured copper: Stress relaxation tests and simulations. Acta Materialia, 2016, 108, 252-263.	3.8	66
8	Transition from stress-driven to thermally activated stress relaxation in metallic glasses. Physical Review B, 2016, 94, .	1.1	65
9	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
10	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
11	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
12	Transition of creep mechanism in nanocrystalline metals. Physical Review B, 2011, 84, .	1.1	51
13	Revisiting the structureâ€"property relationship of metallic glasses: Common spatial correlation revealed as a hidden rule. Physical Review B, 2019, 99, .	1.1	50
14	Structural Parameter of Orientational Order to Predict the Boson Vibrational Anomaly in Glasses. Physical Review Letters, 2019, 122, 015501.	2.9	45
15	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
16	Dynamic mechanical relaxation and thermal creep of high-entropy La30Ce30Ni10Al20Co10 bulk metallic glass. Science China: Physics, Mechanics and Astronomy, 2021, 64, 1.	2.0	37
17	Grain Size Dependence of Creep in Nanocrystalline Copper by Molecular Dynamics. Materials Transactions, 2012, 53, 156-160.	0.4	35
18	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

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19	Strain gradient drives shear banding in metallic glasses. Physical Review B, 2017, 96, .	1.1	34
20	Assessing the utility of structure in amorphous materials. Journal of Chemical Physics, 2019, 150, 114502.	1.2	34
21	A free energy landscape perspective on the nature of collective diffusion in amorphous solids. Acta Materialia, 2018, 157, 165-173.	3.8	33
22	Mechanical and electronic properties of 5d transition metal diborides MB2 (M=Re, W, Os, Ru). Journal of Applied Physics, 2009, 105, .	1.1	32
23	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
24	Dislocation nucleation and evolution at the ferrite-cementite interface under cyclic loadings. Acta Materialia, 2020, 186, 267-277.	3.8	30
25	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
26	Entropic effect on creep in nanocrystalline metals. Acta Materialia, 2013, 61, 3866-3871.	3.8	28
27	Direct atomic-scale evidence for shearâ€“dilatation correlation in metallic glasses. Scripta Materialia, 2016, 112, 37-41.	2.6	28
28	Atomistic structural mechanism for the glass transition: Entropic contribution. Physical Review B, 2020, 101, .	1.1	28
29	Effects of oxidation on tensile deformation of iron nanowires: Insights from reactive molecular dynamics simulations. Journal of Applied Physics, 2016, 120, .	1.1	27
30	Atomic theory of viscoelastic response and memory effects in metallic glasses. Physical Review B, 2017, 96, .	1.1	27
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	Disentangling diffusion heterogeneity in high-entropy alloys. Acta Materialia, 2022, 224, 117527.	3.8	25
33	Influence of alloying elements on the elastic properties of ternary and quaternary nickel-base superalloys. Philosophical Magazine, 2009, 89, 2935-2947.	0.7	22
34	Atomic structure of the Fe/Fe₃C interface with the Isaichev orientation in pearlite. Philosophical Magazine, 2017, 97, 2375-2386.	0.7	22
35	Susceptibility of shear banding to chemical short-range order in metallic glasses. Scripta Materialia, 2019, 162, 141-145.	2.6	22
36	Size-dependent transition of deformation mechanism, and nonlinear elasticity in Ni3Al nanowires. Applied Physics Letters, 2013, 102, .	1.5	19

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37	Universal enthalpy-entropy compensation rule for the deformation of metallic glasses. Physical Review B, 2015, 92, .	1.1	19
38	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
39	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
40	Machine learning atomic-scale stiffness in metallic glass. Extreme Mechanics Letters, 2021, 48, 101446.	2.0	19
41	First Report of Lily Blight and Wilt Caused by <i>Fusarium tricinctum</i> in China. Plant Disease, 2013, 97, 993-993.	0.7	19
42	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
43	Atomistic understanding of diffusion kinetics in nanocrystals from molecular dynamics simulations. Physical Review B, 2013, 88, .	1.1	17
44	Understanding the serrated flow and Johari-Goldstein relaxation of metallic glasses. Journal of Non-Crystalline Solids, 2016, 444, 23-30.	1.5	17
45	Intrinsic structural defects on medium range in metallic glasses. Intermetallics, 2016, 75, 36-41.	1.8	17
46	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
47	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
48	Universal structural softening in metallic glasses indicated by boson heat capacity peak. Applied Physics Letters, 2017, 111, .	1.5	15
49	Ultrasonic plasticity of metallic glass near room temperature. Applied Materials Today, 2020, 21, 100866.	2.3	15
50	Synergistic strengthening mechanisms of rhenium in nickel-based single crystal superalloys. Intermetallics, 2021, 132, 107133.	1.8	15
51	Machine-learning integrated glassy defect from an intricate configurational-thermodynamic-dynamic space. Physical Review B, 2021, 104, .	1.1	15
52	Dynamic responses in shocked Cu-Zr nanoglasses with gradient microstructure. International Journal of Plasticity, 2022, 149, 103154.	4.1	15
53	Mechanical properties and electronic structure of superhard diamondlike BC5: A first-principles study. Journal of Applied Physics, 2009, 106, .	1.1	14
54	Thermal expansion accompanying the glass-liquid transition and crystallization. AIP Advances, 2015, 5, .	0.6	13

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55	Statistical complexity of potential energy landscape as a dynamic signature of the glass transition. Physical Review B, 2020, 101, .	1.1	12
56	Correlation between vibrational anomalies and emergent anharmonicity of the local potential energy landscape in metallic glasses. Physical Review B, 2022, 105, .	1.1	12
57	Sluggish hydrogen diffusion and hydrogen decreasing stacking fault energy in a high-entropy alloy. Materials Today Communications, 2021, 26, 101902.	0.9	11
58	Sluggish dynamics of homogeneous flow in high-entropy metallic glasses. Scripta Materialia, 2022, 214, 114673.	2.6	11
59	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
60	Complexity of plastic instability in amorphous solids: Insights from spatiotemporal evolution of vibrational modes. European Physical Journal E, 2020, 43, 56.	0.7	10
61	Hidden spatiotemporal sequence in transition to shear band in amorphous solids. Physical Review Research, 2022, 4, .	1.3	10
62	Atomistic Design of High Strength Crystalline-Amorphous Nanocomposites. Materials Transactions, 2013, 54, 1592-1596.	0.4	9
63	Microstructural effects on the dynamical relaxation of glasses and glass composites: A molecular dynamics study. Acta Materialia, 2021, 220, 117293.	3.8	9
64	Ratchetting in Cold-Drawn Pearlitic Steel Wires. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 4561-4568.	1.1	8
65	Unified perspective on structural heterogeneity of a LaCe-based metallic glass from versatile dynamic stimuli. Intermetallics, 2020, 125, 106922.	1.8	8
66	Elastic criterion for shear-banding instability in amorphous solids. Physical Review E, 2022, 105, 045003.	0.8	8
67	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
68	Inelastic deformation of metallic glasses under dynamic cyclic loading. Scripta Materialia, 2021, 194, 113675.	2.6	6
69	Grain boundary-mediated plasticity accommodating the cracking process in nanograined gold: In situ observations and simulations. Scripta Materialia, 2021, 194, 113693.	2.6	6
70	Bridging shear transformation zone to the atomic structure of amorphous solids. Journal of Non-Crystalline Solids, 2015, 410, 100-105.	1.5	5
71	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
72	Stress relaxation in high-entropy Pd20Pt20Cu20Ni20P20 metallic glass: Experiments, modeling and theory. Mechanics of Materials, 2021, 160, 103959.	1.7	5

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73	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
74	Hierarchical-microstructure based modeling for plastic deformation of partial recrystallized copper. Mechanics of Materials, 2019, 139, 103207.	1.7	3
75	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
76	Correlation between strain rate sensitivity and Î± relaxation of metallic glasses. AIP Advances, 2016, 6, 075022.	0.6	1
77	Investigation of high spin states in 133Cs. European Physical Journal A, 2018, 54, 1.	1.0	1
78	Incorporating a soft ordered phase into an amorphous configuration enhances its uniform plastic deformation under shear. AIP Advances, 2019, 9, 015329.	0.6	1
79	Ergodic Structural Diversity Predicts Dynamics in Amorphous Materials. Frontiers in Materials, 2022, 9, .	1.2	0