Wei Hua Wang

List of Publications by Year
in descending order

106 papers	6,274 citations	94269 37 h-index	66788 78 g-index
107 all docs	107 docs citations	107 times ranked	3412 citing authors

#	Article	IF	Citations
1	The elastic properties, elastic models and elastic perspectives of metallic glasses. Progress in Materials Science, 2012, 57, 487-656.	16.0	1,096
2	Rejuvenation of metallic glasses by non-affine thermal strain. Nature, 2015, 524, 200-203.	13.7	568
3	Fracture of Brittle Metallic Glasses: Brittleness or Plasticity. Physical Review Letters, 2005, 94, 125510.	2.9	492
4	Dynamic relaxations and relaxation-property relationships in metallic glasses. Progress in Materials Science, 2019, 106, 100561.	16.0	257
5	Five-fold symmetry as indicator of dynamic arrest in metallic glass-forming liquids. Nature Communications, 2015, 6, 8310.	5.8	206
6	The Î²-relaxation in metallic glasses. National Science Review, 2014, 1, 429-461.	4.6	199
7	A Highly Efficient and Selfâ€Stabilizing Metallicâ€Glass Catalyst for Electrochemical Hydrogen Generation. Advanced Materials, 2016, 28, 10293-10297.	11.1	195
8	High-temperature bulk metallic glasses developed by combinatorial methods. Nature, 2019, 569, 99-103.	13.7	185
9	Flow Unit Perspective on Room Temperature Homogeneous Plastic Deformation in Metallic Glasses. Physical Review Letters, 2014, 113, 045501.	2.9	165
10	Nanoscale Periodic Morphologies on the Fracture Surface of Brittle Metallic Glasses. Physical Review Letters, 2007, 98, 235501.	2.9	155
11	Machine Learning Approach for Prediction and Understanding of Glass-Forming Ability. Journal of Physical Chemistry Letters, 2017, 8, 3434-3439.	2.1	137
12	Evidence of liquidâ€"liquid transition in glass-forming La50Al35Ni15 melt above liquidus temperature. Nature Communications, 2015, 6, 7696.	5.8	111
13	Relaxation Decoupling in Metallic Glasses at Low Temperatures. Physical Review Letters, 2017, 118, 225901.	2.9	102
14	Formation of Zr-Based Bulk Metallic Glasses from Low Purity of Materials by Yttrium Addition. Materials Transactions, JIM, 2000, 41, 1410-1414.	0.9	97
15	Elastic constants and their pressure dependence of Zr41Ti14Cu12.5Ni9Be22.5C1 bulk metallic glass. Applied Physics Letters, 1999, 74, 1803-1805.	1.5	93
16	Flow units as dynamic defects in metallic glassy materials. National Science Review, 2019, 6, 304-323.	4.6	88
17	Fast surface dynamics enabled cold joining of metallic glasses. Science Advances, 2019, 5, eaax7256.	4.7	87
18	Carbon-nanotube-reinforced Zr52.5Cu17.9Ni14.6Al10Ti5 bulk metallic glass composites. Applied Physics Letters, 2002, 81, 4739-4741.	1.5	84

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19	High surface mobility and fast surface enhanced crystallization of metallic glass. Applied Physics Letters, 2015, 107, .	1.5	83
20	Lowâ€Iridiumâ€Content IrNiTa Metallic Glass Films as Intrinsically Active Catalysts for Hydrogen Evolution Reaction. Advanced Materials, 2020, 32, e1906384.	11.1	79
21	Crystallization kinetics and glass transition of Zr41Ti14Cu12.5Ni10â^'xFexBe22.5 bulk metallic glasses. Applied Physics Letters, 1999, 75, 2392-2394.	1.5	76
22	Microâ€and Nanoscale Metallic Glassy Fibers. Advanced Engineering Materials, 2010, 12, 1117-1122.	1.6	72
23	Ultrafast extreme rejuvenation of metallic glasses by shock compression. Science Advances, 2019, 5, eaaw6249.	4.7	66
24	Relationship between glass transition temperature and Debye temperature in bulk metallic glasses. Journal of Materials Research, 2003, 18, 2747-2751.	1.2	60
25	Stretched and compressed exponentials in the relaxation dynamics of a metallic glass-forming melt. Nature Communications, 2018, 9, 5334.	5.8	60
26	Stability of ZrTiCuNiBe Bulk Metallic Glass upon Isothermal Annealing Near the Glass Transition Temperature. Journal of Materials Research, 2002, 17, 1385-1389.	1.2	57
27	Structures of Local Rearrangements in Soft Colloidal Glasses. Physical Review Letters, 2016, 116, 238003.	2.9	54
28	Structural perspectives on the elastic and mechanical properties of metallic glasses. Journal of Applied Physics, 2013, 114, 173505.	1.1	52
29	Effects of relaxation on glass transition and crystallization of ZrTiCuNiBe bulk metallic glass. Journal of Applied Physics, 2000, 87, 8209-8211.	1.1	51
30	Pressure effects on structure and dynamics of metallic glass-forming liquid. Journal of Chemical Physics, 2017, 146, 024507.	1.2	49
31	Liquid-like behaviours of metallic glassy nanoparticles at room temperature. Nature Communications, 2019, 10, 1966.	5.8	48
32	Equation of state of bulk metallic glasses studied by an ultrasonic method. Applied Physics Letters, 2001, 79, 3947-3949.	1.5	46
33	Data-driven discovery of a universal indicator for metallic glass forming ability. Nature Materials, 2022, 21, 165-172.	13.3	46
34	Structural evolution and property changes in Nd60Al10Fe20Co10 bulk metallic glass during crystallization. Applied Physics Letters, 2002, 81, 4371-4373.	1.5	43
35	Configuration correlation governs slow dynamics of supercooled metallic liquids. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 6375-6380.	3.3	43
36	High stored energy of metallic glasses induced by high pressure. Applied Physics Letters, 2017, 110, .	1.5	40

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37	Characteristics of the glass transition and supercooled liquid state of theZr41Ti14Cu12.5Ni10Be22.5bulk metallic glass. Physical Review B, 2001, 63, .	1.1	37
38	The failure stress of bulk metallic glasses under very high strain rate. Journal of Materials Research, 2010, 25, 1230-1234.	1.2	34
39	Observation of cavitation governing fracture in glasses. Science Advances, 2021, 7, .	4.7	33
40	Atomistic modelling of thermal-cycling rejuvenation in metallic glasses. Acta Materialia, 2021, 213, 116952.	3.8	32
41	Structural origin of magnetic softening in a Fe-based amorphous alloy upon annealing. Journal of Materials Science and Technology, 2022, 96, 233-240.	5.6	32
42	Microstructural transformation in aZr41Ti14Cu12.5Ni10Be22.5bulk metallic glass under high pressure. Physical Review B, 2000, 62, 11292-11295.	1.1	30
43	Pressure-induced amorphization of ZrTiCuNiBe bulk glass-forming alloy. Applied Physics Letters, 2001, 79, 1106-1108.	1.5	30
44	Enhanced oxidation resistance of MoTaTiCrAl high entropy alloys by removal of Al. Science China Materials, 2021, 64, 223-231.	3.5	30
45	Two-way tuning of structural order in metallic glasses. Nature Communications, 2020, 11, 314.	5.8	29
46	The inquiry of liquids and glass transition by heat capacity. AIP Advances, 2012, 2, .	0.6	28
47	Macroscopic tensile plasticity by scalarizating stress distribution in bulk metallic glass. Scientific Reports, 2016, 6, 21929.	1.6	28
48	Interface design enabled manufacture of giant metallic glasses. Science China Materials, 2021, 64, 964-972.	3.5	25
49	Classification of metallic glasses based on structural and dynamical heterogeneities by stress relaxation. Science China Materials, 2015, 58, 98-105.	3.5	24
50	Phase transformation in aZr41Ti14Cu12.5Ni10Be22.5bulk amorphous alloy upon crystallization. Physical Review B, 2002, 66, .	1.1	23
51	Plastic zone at crack tip: A nanolab for formation and study of metallic glassy nanostructures. Journal of Materials Research, 2009, 24, 2986-2992.	1.2	23
52	Mechanical relaxation in supercooled liquids of bulk metallic glasses. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 2693-2703.	0.8	23
53	Excellent ultrasonic absorption ability of carbon-nanotube-reinforced bulk metallic glass composites. Applied Physics Letters, 2003, 82, 2790-2792.	1.5	22
54	Statistic Analysis of the Mechanical Behavior of Bulk Metallic Glasses. Advanced Engineering Materials, 2009, 11, 370-373.	1.6	22

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55	Fracture behaviors under pure shear loading in bulk metallic glasses. Scientific Reports, 2016, 6, 39522.	1.6	21
56	Glass Forming Ability and Properties of Zr/Nb-Based Bulk Metallic Glasses. Materials Transactions, JIM, 2000, 41, 1423-1426.	0.9	18
57	Phase transition of Zr41Ti14Cu12.5Ni10Be22.5 bulk amorphous below glass transition temperature under high pressure. Applied Physics Letters, 2001, 78, 601-603.	1.5	18
58	Thermodynamic scaling of glassy dynamics and dynamic heterogeneities in metallic glass-forming liquid. Journal of Chemical Physics, 2016, 145, 104503.	1.2	18
59	Boson-peak-like anomaly caused by transverse phonon softening in strain glass. Nature Communications, 2021, 12, 5755.	5.8	18
60	Mechanical response of metallic glasses: Insights from in-situ high energy X-ray diffraction. Jom, 2010, 62, 76-82.	0.9	17
61	Formation and properties of strontium-based bulk metallic glasses with ultralow glass transition temperature. Journal of Materials Research, 2012, 27, 2593-2600.	1.2	17
62	The Effects of Iron Addition on the Glass-Forming Ability and Properties of Zr–Ti–Cu–Ni–Be–Fe Bulk Metallic Glass. Materials Transactions, JIM, 2000, 41, 1427-1431.	0.9	16
63	Guiding and Deflecting Cracks in Bulk Metallic Glasses to Increase Damage Tolerance. Advanced Engineering Materials, 2015, 17, 620-625.	1.6	15
64	Universal structural softening in metallic glasses indicated by boson heat capacity peak. Applied Physics Letters, 2017, 111, .	1.5	15
65	Ultrasonic-assisted plastic flow in a Zr-based metallic glass. Science China Materials, 2021, 64, 448-459.	3.5	14
66	Temperature dependent evolution of dynamic heterogeneity in metallic glass. Journal of Applied Physics, 2017, 121, .	1.1	13
67	Possible origin of Î² -relaxation in amorphous metal alloys from atomic-mass differences of the constituents. Physical Review B, 2018, 98, .	1.1	13
68	Direct observation of fast surface dynamics in sub-10-nm nanoglass particles. Applied Physics Letters, 2019, 114, 043103.	1.5	12
69	Low temperature specific heat of bulk glassy and crystalline Zr41Ti14Cu12.5Ni10Be22.5 alloys. Applied Physics Letters, 2001, 78, 2697-2699.	1.5	11
70	Formation, properties, thermal characteristics, and crystallization of hard magnetic Prâ€"Alâ€"Feâ€"Cu bulk metallic glasses. Journal of Materials Research, 2003, 18, 2208-2213.	1.2	10
71	Controlled growth of complex polar oxide films with atomically precise molecular beam epitaxy. Frontiers of Physics, 2018, 13, 1.	2.4	10
72	Nonmonotonous atomic motions in metallic glasses. Physical Review B, 2020, 102, .	1.1	10

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73	Microscopic Structural Evolution during Ultrastable Metallic Glass Formation. ACS Applied Materials & Interfaces, 2021, 13, 40098-40105.	4.0	10
74	Composition-dependent metallic glass alloys correlate atomic mobility with collective glass surface dynamics. Physical Chemistry Chemical Physics, 2016, 18, 16856-16861.	1.3	9
75	Impact of spatial dimension on structural ordering in metallic glass. Physical Review E, 2017, 96, 022613.	0.8	9
76	Magnetic Properties in Finemet-Type Soft Magnetic Toroidal Cores Annealed under Radial Stresses. Metals, 2020, 10, 122.	1.0	9
77	Collective interdiffusion in compositionally modulated multilayers. Journal of Applied Physics, 1999, 86, 4262-4266.	1.1	8
78	Electric-Field-Enhanced Crystallization of Zr_{<B>41</B>}Ti_{<B>14</B>}Cu_{<B>12.5</B>}Ni_{<B>10</B>}Be<SUB><B>22.5</B Bulk Metallic Glass. Materials Transactions, 2001, 42, 583-586.	0.4	8
79	Serration and Noise Behavior in Advanced Materials. Journal of Iron and Steel Research International, 2016, 23, 1-1.	1.4	8
80	Identifying packing features of atoms with distinct dynamic behaviors in metallic glass by machine-learning method. Science China Materials, 2021, 64, 1820-1826.	3.5	8
81	Low-temperature thermoplastic welding of metallic glass ribbons for in-space manufacturing. Science China Materials, 2021, 64, 979-986.	3.5	8
82	Softening in an ultrasonic-vibrated Pd-based metallic glass. Intermetallics, 2022, 144, 107527.	1.8	8
83	Strength softening at shear bands in metallic glasses. Philosophical Magazine Letters, 2013, 93, 221-230.	0.5	7
84	Unusually thick shear-softening surface of micrometer-size metallic glasses. Innovation(China), 2021, 2, 100106.	5.2	7
85	Crack tip cavitation in metallic glasses. Journal of Non-Crystalline Solids, 2022, 592, 121762.	1.5	6
86	The effect of decomposition on crystallization in Zr41Ti14Cu12.5Ni10Be22.5 bulk metallic glass. Journal of Materials Science, 2000, 35, 2291-2295.	1.7	5
87	Pressure Dependence of Elastic Constants and Debye Temperature for Zr50.5Ti4.8Cu19.0Ni11.4Al14.3 Bulk Metallic Glass. Journal of Materials Research, 2002, 17, 1785-1788.	1.2	5
88	Characteristics of microstructure and glass transition of (Zr0.59Ti0.06Cu0.22Ni0.13)100â^’xAlx bulk metallic glasses. Journal of Applied Physics, 2003, 93, 759-761.	1.1	5
89	Correlation between boson peak and thermal expansion manifested by physical aging and high pressure. Science China: Physics, Mechanics and Astronomy, 2022, 65, 1.	2.0	5
90	Ultrasonic attenuation in Zr41Ti14Cu12.5Ni10â^’xBe22.5Cx (x=0,1) bulk metallic glasses under high pressure. Journal of Applied Physics, 2000, 88, 3266-3268.	1.1	4

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91	Effect of Al on Bulk Amorphization and Magnetic Properties of FeSnPSiB Alloys. Materials Transactions, 2004, 45, 888-892.	0.4	4
92	Anomalous low-temperature transport property of oxygen containing high-entropy Ti-Zr-Hf-Cu-Ni metallic glass thin films. Science China Materials, 2019, 62, 907-912.	3.5	4
93	Cycle deformation enabled controllable mechanical polarity of bulk metallic glasses. Acta Materialia, 2022, 225, 117557.	3.8	4
94	Evident glass relaxation at room temperature induced by size effect. Physical Review B, 2022, 105, .	1.1	4
95	Nanoscale-to-Mesoscale Heterogeneity and Percolating Favored Clusters Govern Ultrastability of Metallic Glasses. Nano Letters, 2022, , .	4.5	4
96	High-temperature malleable Ta-Co metallic glass developed by combinatorial method. Scripta Materialia, 2022, 219, 114883.	2.6	4
97	The relationship between dynamic strain aging and serrated flow behaviour in magnesium alloy. Philosophical Magazine Letters, 2017, 97, 235-240.	0.5	2
98	Short-to-medium range structure and glass-forming ability in metallic glasses. Physical Review Materials, 2022, 6, .	0.9	2
99	Response to â€œComment on â€˜Pressure-induced amorphization of ZrTiCuNiBe bulk glass-forming alloyâ€™â€Šâ€• [Appl. Phys. Lett. 80, 700 (2002)]. Applied Physics Letters, 2002, 80, 701-701.	1.5	1
100	Effect of high pressure on glass transition in Zr-Ti-Cu-Ni-Be bulk metallic glass. Materials Research Society Symposia Proceedings, 2002, 754, 1.	0.1	1
101	Study of Temperature and Heat Flux on the EAST Divertor Target Plate in LHW+ NBI/ICRH H-Mode. IEEE Transactions on Plasma Science, 2018, 46, 2672-2676.	0.6	1
102	Preamble for the special issue of amorphous materials. Journal of Iron and Steel Research International, 2018, 25, 599-599.	1.4	1
103	Non-linear behavior in advanced materials. Journal of Iron and Steel Research International, 2017, 24, 357-357.	1.4	0
104	Design and Analysis of â€œFilling-Evacuatingâ€•High-Pressure Helium-Cooled Loop. IEEE Transactions on Plasma Science, 2018, 46, 2191-2197.	0.6	0
105	Exceptionally shear-stable and ultra-strong Ir-Ni-Ta high-temperature metallic glasses at micro/nano scales. Science China Materials, 0, , 1.	3.5	0
106	Strong adhesion induced by liquid-like surface of metallic glasses. Applied Physics Letters, 2022, 120, 051601.	1.5	0