Wei Hua Wang

List of Publications by Year
in descending order

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

#	Article	IF	Citations
1	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
2	Data-driven discovery of a universal indicator for metallic glass forming ability. Nature Materials, 2022, 21, 165-172.	13.3	46
3	Cycle deformation enabled controllable mechanical polarity of bulk metallic glasses. Acta Materialia, 2022, 225, 117557.	3.8	4
4	Evident glass relaxation at room temperature induced by size effect. Physical Review B, 2022, 105, .	1.1	4
5	Strong adhesion induced by liquid-like surface of metallic glasses. Applied Physics Letters, 2022, 120, 051601.	1.5	0
6	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
7	Nanoscale-to-Mesoscale Heterogeneity and Percolating Favored Clusters Govern Ultrastability of Metallic Glasses. Nano Letters, 2022, , .	4.5	4
8	Softening in an ultrasonic-vibrated Pd-based metallic glass. Intermetallics, 2022, 144, 107527.	1.8	8
9	Short-to-medium range structure and glass-forming ability in metallic glasses. Physical Review Materials, 2022, 6, .	0.9	2
10	Crack tip cavitation in metallic glasses. Journal of Non-Crystalline Solids, 2022, 592, 121762.	1.5	6
11	High-temperature malleable Ta-Co metallic glass developed by combinatorial method. Scripta Materialia, 2022, 219, 114883.	2.6	4
12	Enhanced oxidation resistance of MoTaTiCrAl high entropy alloys by removal of Al. Science China Materials, 2021, 64, 223-231.	3.5	30
13	Ultrasonic-assisted plastic flow in a Zr-based metallic glass. Science China Materials, 2021, 64, 448-459.	3.5	14
14	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
15	Observation of cavitation governing fracture in glasses. Science Advances, 2021, 7, .	4.7	33
16	Unusually thick shear-softening surface of micrometer-size metallic glasses. Innovation(China), 2021, 2, 100106.	5.2	7
17	Atomistic modelling of thermal-cycling rejuvenation in metallic glasses. Acta Materialia, 2021, 213, 116952.	3.8	32
18	Microscopic Structural Evolution during Ultrastable Metallic Glass Formation. ACS Applied Materials & Interfaces, 2021, 13, 40098-40105.	4.0	10

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19	Boson-peak-like anomaly caused by transverse phonon softening in strain glass. Nature Communications, 2021, 12, 5755.	5.8	18
20	Interface design enabled manufacture of giant metallic glasses. Science China Materials, 2021, 64, 964-972.	3.5	25
21	Low-temperature thermoplastic welding of metallic glass ribbons for in-space manufacturing. Science China Materials, 2021, 64, 979-986.	3.5	8
22	Lowâ€Iridiumâ€Content IrNiTa Metallic Glass Films as Intrinsically Active Catalysts for Hydrogen Evolution Reaction. Advanced Materials, 2020, 32, e1906384.	11.1	79
23	Nonmonotonous atomic motions in metallic glasses. Physical Review B, 2020, 102, .	1.1	10
24	Two-way tuning of structural order in metallic glasses. Nature Communications, 2020, 11, 314.	5.8	29
25	Magnetic Properties in Finemet-Type Soft Magnetic Toroidal Cores Annealed under Radial Stresses. Metals, 2020, 10, 122.	1.0	9
26	Flow units as dynamic defects in metallic glassy materials. National Science Review, 2019, 6, 304-323.	4.6	88
27	Ultrafast extreme rejuvenation of metallic glasses by shock compression. Science Advances, 2019, 5, eaaw6249.	4.7	66
28	Direct observation of fast surface dynamics in sub-10-nm nanoglass particles. Applied Physics Letters, 2019, 114, 043103.	1.5	12
29	Dynamic relaxations and relaxation-property relationships in metallic glasses. Progress in Materials Science, 2019, 106, 100561.	16.0	257
30	Liquid-like behaviours of metallic glassy nanoparticles at room temperature. Nature Communications, 2019, 10, 1966.	5.8	48
31	High-temperature bulk metallic glasses developed by combinatorial methods. Nature, 2019, 569, 99-103.	13.7	185
32	Fast surface dynamics enabled cold joining of metallic glasses. Science Advances, 2019, 5, eaax7256.	4.7	87
33	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
34	Controlled growth of complex polar oxide films with atomically precise molecular beam epitaxy. Frontiers of Physics, 2018, 13, 1.	2.4	10
35	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
36	Stretched and compressed exponentials in the relaxation dynamics of a metallic glass-forming melt. Nature Communications, 2018, 9, 5334.	5.8	60

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37	Preamble for the special issue of amorphous materials. Journal of Iron and Steel Research International, 2018, 25, 599-599.	1.4	1
38	Possible origin of Î² -relaxation in amorphous metal alloys from atomic-mass differences of the constituents. Physical Review B, 2018, 98, .	1.1	13
39	Design and Analysis of â€œFilling-Evacuatingâ€• High-Pressure Helium-Cooled Loop. IEEE Transactions on Plasma Science, 2018, 46, 2191-2197.	0.6	0
40	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
41	Pressure effects on structure and dynamics of metallic glass-forming liquid. Journal of Chemical Physics, 2017, 146, 024507.	1.2	49
42	Temperature dependent evolution of dynamic heterogeneity in metallic glass. Journal of Applied Physics, 2017, 121, .	1.1	13
43	Non-linear behavior in advanced materials. Journal of Iron and Steel Research International, 2017, 24, 357-357.	1.4	0
44	The relationship between dynamic strain aging and serrated flow behaviour in magnesium alloy. Philosophical Magazine Letters, 2017, 97, 235-240.	0.5	2
45	High stored energy of metallic glasses induced by high pressure. Applied Physics Letters, 2017, 110, .	1.5	40
46	Impact of spatial dimension on structural ordering in metallic glass. Physical Review E, 2017, 96, 022613.	0.8	9
47	Machine Learning Approach for Prediction and Understanding of Glass-Forming Ability. Journal of Physical Chemistry Letters, 2017, 8, 3434-3439.	2.1	137
48	Relaxation Decoupling in Metallic Glasses at Low Temperatures. Physical Review Letters, 2017, 118, 225901.	2.9	102
49	Universal structural softening in metallic glasses indicated by boson heat capacity peak. Applied Physics Letters, 2017, 111, .	1.5	15
50	Thermodynamic scaling of glassy dynamics and dynamic heterogeneities in metallic glass-forming liquid. Journal of Chemical Physics, 2016, 145, 104503.	1.2	18
51	Fracture behaviors under pure shear loading in bulk metallic glasses. Scientific Reports, 2016, 6, 39522.	1.6	21
52	Serration and Noise Behavior in Advanced Materials. Journal of Iron and Steel Research International, 2016, 23, 1-1.	1.4	8
53	A Highly Efficient and Selfâ€Stabilizing Metallicâ€Glass Catalyst for Electrochemical Hydrogen Generation. Advanced Materials, 2016, 28, 10293-10297.	11.1	195
54	Structures of Local Rearrangements in Soft Colloidal Glasses. Physical Review Letters, 2016, 116, 238003.	2.9	54

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55	Macroscopic tensile plasticity by scalarizating stress distribution in bulk metallic glass. Scientific Reports, 2016, 6, 21929.	1.6	28
56	Composition-dependent metallic glass alloys correlate atomic mobility with collective glass surface dynamics. Physical Chemistry Chemical Physics, 2016, 18, 16856-16861.	1.3	9
57	High surface mobility and fast surface enhanced crystallization of metallic glass. Applied Physics Letters, 2015, 107, .	1.5	83
58	Classification of metallic glasses based on structural and dynamical heterogeneities by stress relaxation. Science China Materials, 2015, 58, 98-105.	3.5	24
59	Evidence of liquidâ€"liquid transition in glass-forming La50Al35Ni15 melt above liquidus temperature. Nature Communications, 2015, 6, 7696.	5.8	111
60	Five-fold symmetry as indicator of dynamic arrest in metallic glass-forming liquids. Nature Communications, 2015, 6, 8310.	5.8	206
61	Rejuvenation of metallic glasses by non-affine thermal strain. Nature, 2015, 524, 200-203.	13.7	568
62	Guiding and Deflecting Cracks in Bulk Metallic Glasses to Increase Damage Tolerance. Advanced Engineering Materials, 2015, 17, 620-625.	1.6	15
63	The Î²-relaxation in metallic glasses. National Science Review, 2014, 1, 429-461.	4.6	199
64	Flow Unit Perspective on Room Temperature Homogeneous Plastic Deformation in Metallic Glasses. Physical Review Letters, 2014, 113, 045501.	2.9	165
65	Strength softening at shear bands in metallic glasses. Philosophical Magazine Letters, 2013, 93, 221-230.	0.5	7
66	Structural perspectives on the elastic and mechanical properties of metallic glasses. Journal of Applied Physics, 2013, 114, 173505.	1.1	52
67	The inquiry of liquids and glass transition by heat capacity. AIP Advances, 2012, 2, .	0.6	28
68	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
69	The elastic properties, elastic models and elastic perspectives of metallic glasses. Progress in Materials Science, 2012, 57, 487-656.	16.0	1,096
70	Mechanical response of metallic glasses: Insights from in-situ high energy X-ray diffraction. Jom, 2010, 62, 76-82.	0.9	17
71	Microâ€and Nanoscale Metallic Glassy Fibers. Advanced Engineering Materials, 2010, 12, 1117-1122.	1.6	72
72	Mechanical relaxation in supercooled liquids of bulk metallic glasses. Physica Status Solidi (A) Applications and Materials Science, 2010, 207, 2693-2703.	0.8	23

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73	The failure stress of bulk metallic glasses under very high strain rate. Journal of Materials Research, 2010, 25, 1230-1234.	1.2	34
74	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
75	Statistic Analysis of the Mechanical Behavior of Bulk Metallic Glasses. Advanced Engineering Materials, 2009, 11, 370-373.	1.6	22
76	Nanoscale Periodic Morphologies on the Fracture Surface of Brittle Metallic Glasses. Physical Review Letters, 2007, 98, 235501.	2.9	155
77	Fracture of Brittle Metallic Glasses: Brittleness or Plasticity. Physical Review Letters, 2005, 94, 125510.	2.9	492
78	Effect of Al on Bulk Amorphization and Magnetic Properties of FeSnPSiB Alloys. Materials Transactions, 2004, 45, 888-892.	0.4	4
79	Excellent ultrasonic absorption ability of carbon-nanotube-reinforced bulk metallic glass composites. Applied Physics Letters, 2003, 82, 2790-2792.	1.5	22
80	Relationship between glass transition temperature and Debye temperature in bulk metallic glasses. Journal of Materials Research, 2003, 18, 2747-2751.	1.2	60
81	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
82	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
83	Phase transformation in aZr41Ti14Cu12.5Ni10Be22.5bulk amorphous alloy upon crystallization. Physical Review B, 2002, 66, .	1.1	23
84	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
85	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
86	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
87	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
88	Carbon-nanotube-reinforced Zr52.5Cu17.9Ni14.6Al10Ti5 bulk metallic glass composites. Applied Physics Letters, 2002, 81, 4739-4741.	1.5	84
89	Structural evolution and property changes in Nd60Al10Fe20Co10 bulk metallic glass during crystallization. Applied Physics Letters, 2002, 81, 4371-4373.	1.5	43
90	Equation of state of bulk metallic glasses studied by an ultrasonic method. Applied Physics Letters, 2001, 79, 3947-3949.	1.5	46

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91	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
92	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
93	Characteristics of the glass transition and supercooled liquid state of theZr41Ti14Cu12.5Ni10Be22.5bulk metallic glass. Physical Review B, 2001, 63, .	1.1	37
94	Pressure-induced amorphization of ZrTiCuNiBe bulk glass-forming alloy. Applied Physics Letters, 2001, 79, 1106-1108.	1.5	30
95	Low temperature specific heat of bulk glassy and crystalline Zr41Ti14Cu12.5Ni10Be22.5 alloys. Applied Physics Letters, 2001, 78, 2697-2699.	1.5	11
96	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
97	Glass Forming Ability and Properties of Zr/Nb-Based Bulk Metallic Glasses. Materials Transactions, JIM, 2000, 41, 1423-1426.	0.9	18
98	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
99	The effect of decomposition on crystallization in Zr41Ti14Cu12.5Ni10Be22.5 bulk metallic glass. Journal of Materials Science, 2000, 35, 2291-2295.	1.7	5
100	Microstructural transformation in aZr41Ti14Cu12.5Ni10Be22.5bulk metallic glass under high pressure. Physical Review B, 2000, 62, 11292-11295.	1.1	30
101	Effects of relaxation on glass transition and crystallization of ZrTiCuNiBe bulk metallic glass. Journal of Applied Physics, 2000, 87, 8209-8211.	1.1	51
102	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
103	Elastic constants and their pressure dependence of Zr41Ti14Cu12.5Ni9Be22.5C1 bulk metallic glass. Applied Physics Letters, 1999, 74, 1803-1805.	1.5	93
104	Crystallization kinetics and glass transition of Zr41Ti14Cu12.5Ni10â^'xFexBe22.5 bulk metallic glasses. Applied Physics Letters, 1999, 75, 2392-2394.	1.5	76
105	Collective interdiffusion in compositionally modulated multilayers. Journal of Applied Physics, 1999, 86, 4262-4266.	1.1	8
106	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