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List of Publications by Year
in descending order

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116 papers	4,369 citations	126907 33 h-index	114465 63 g-index
119 all docs	119 docs citations	119 times ranked	3293 citing authors

#	Article	IF	Citations
1	Thermal behavior of newly developed Zr33Hf8Ti6Cu32Ni10Co5Al6 high-entropy bulk metallic glass. Journal of Alloys and Compounds, 2022, 892, 162220.	5.5	25
2	Synthesis of high-entropy alloy thin films via grain boundary diffusionâ€“assisted solid-state alloying. Scripta Materialia, 2022, 207, 114302.	5.2	3
3	A new class of light-weight metastable high entropy alloy with high strength and large ductility. Materialia, 2022, 21, 101284.	2.7	9
4	Alloy design strategy to improve fluidity of Zr-based bulk metallic glass for near-net-shape manufacturing. Journal of Alloys and Compounds, 2022, 896, 162680.	5.5	9
5	Strengthening by customizing microstructural complexity in nitrogen interstitial CoCrFeMnNi high-entropy alloys. Journal of Alloys and Compounds, 2022, 901, 163483.	5.5	8
6	Composition Design and Nanoindentation Studies on Mg-Ca-Zn Metallic Glass. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2022, 53, 1419-1429.	2.2	5
7	Pushing the Boundaries of Multicomponent Alloy Nanostructures: Hybrid Approach of Liquid Phase Separation and Selective Leaching Processes. Accounts of Chemical Research, 2022, 55, 1821-1831.	15.6	3
8	Grain Boundaries Boost Oxygen Evolution Reaction in NiFe Electrocatalysts. Small Methods, 2021, 5, 2000755.	8.6	22
9	Suppressed radiation-induced dynamic recrystallization in CrFeCoNiCu high-entropy alloy. Scripta Materialia, 2021, 190, 158-162.	5.2	5
10	Optimization of conflicting properties via engineering compositional complexity in refractory high entropy alloys. Scripta Materialia, 2021, 199, 113839.	5.2	17
11	Manipulation of Microstructure and Mechanical Properties in N-Doped CoCrFeMnNi High-Entropy Alloys. Metals, 2021, 11, 1487.	2.3	10
12	Element-resolved local lattice distortion in complex concentrated alloys: An observable signature of electronic effects. Acta Materialia, 2021, 216, 117135.	7.9	22
13	In-situ synthesis of Mg-based bulk metallic glass matrix composites with primary Î±-Mg phases. Journal of Alloys and Compounds, 2021, 879, 160417.	5.5	7
14	Rapid assessment of solid solution hardening via atomic size misfit parameter in refractory concentrated alloys. Journal of Alloys and Compounds, 2021, 886, 161320.	5.5	6
15	Electrochemically Activated NiFeO_xH_y for Enhanced Oxygen Evolution. ACS Applied Energy Materials, 2021, 4, 595-601.	5.1	10
16	Medium-range ordering, structural heterogeneity, and their influence on properties of Zr-Cu-Co-Al metallic glasses. Physical Review Materials, 2021, 5, .	2.4	8
17	An in situ ambient and cryogenic transmission electron microscopy study of the effects of temperature on dislocation behavior in CrCoNi-based high-entropy alloys with low stacking-fault energy. Applied Physics Letters, 2021, 119, .	3.3	8
18	Development of Light-Weight TRIP/TWIP FCC High Entropy Alloy with High Specific Strength and Large Ductility. Journal of Korean Institute of Metals and Materials, 2021, 59, 857-869.	1.0	1

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19	Improvement of Mechanical Properties of Zr-Based Bulk Amorphous Alloys by High Temperature Heat Treatment. Metals and Materials International, 2020, 26, 1144-1151.	3.4	5
20	Anomalous behavior of glass-forming ability and mechanical response in a series of equiatomic binary to denary metallic glasses. Materialia, 2020, 9, 100505.	2.7	6
21	Effects of transformation-induced plasticity on the small-scale deformation behavior of single crystalline complex concentrated alloys. Scripta Materialia, 2020, 176, 122-125.	5.2	5
22	Determining Medium Range Atomic Ordering in Metallic Glasses Using 4D-STEM. Microscopy and Microanalysis, 2020, 26, 230-232.	0.4	0
23	Natural-mixing guided design of refractory high-entropy alloys with as-cast tensile ductility. Nature Materials, 2020, 19, 1175-1181.	27.5	209
24	A scalable Alâ€“Ni alloy powder catalyst prepared by metallurgical microstructure control. Journal of Materials Chemistry A, 2020, 8, 11133-11140.	10.3	6
25	A criterion of ideal thermoplastic forming ability for metallic glasses. Scripta Materialia, 2020, 187, 221-226.	5.2	7
26	High Pressure Quenched Glasses: unique structures and properties. Scientific Reports, 2020, 10, 9497.	3.3	6
27	Real-time observations of TRIP-induced ultrahigh strain hardening in a dual-phase CrMnFeCoNi high-entropy alloy. Nature Communications, 2020, 11, 826.	12.8	165
28	Development of Al-Based Metallic Glass Composites Containing Pb-Rich Crystalline 2nd Phase. Journal of Korean Institute of Metals and Materials, 2020, 58, 77-86.	1.0	2
29	Synthesis of bioinspired ice-templated bulk metallic glass-alumina composites with intertwined dendritic structure. Scripta Materialia, 2019, 172, 159-164.	5.2	13
30	An experimental case study on corrosion characterization of Cu46Zr40Ti8.5Al5.5 metallic glass. Journal of Non-Crystalline Solids, 2019, 524, 119654.	3.1	7
31	A strategy of designing high-entropy alloys with high-temperature shape memory effect. Scientific Reports, 2019, 9, 13140.	3.3	38
32	Engineering atomic-level complexity in high-entropy and complex concentrated alloys. Nature Communications, 2019, 10, 2090.	12.8	182
33	Tuning correlative atomic scale fluctuation and related properties in Niâ€“Nbâ€“Zr metallic glasses. Acta Materialia, 2019, 173, 52-60.	7.9	9
34	Bioinspired nacre-like alumina with a bulk-metallic glass-forming alloy as a compliant phase. Nature Communications, 2019, 10, 961.	12.8	106
35	Curie-Weiss behavior of liquid structure and ideal glass state. Scientific Reports, 2019, 9, 18579.	3.3	26
36	A large reversible room temperature magneto-caloric effect in Ni-TM-Co-Mn-Sn (TM = Ti, V, Cr) meta-magnetic Heusler alloys. Journal of Applied Physics, 2018, 123, 033903.	2.5	18

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37	Microstructure and mechanical properties of friction stir welded and laser welded high entropy alloy CrMnFeCoNi. Metals and Materials International, 2018, 24, 73-83.	3.4	84
38	Structural signature and size-dependent mechanical response of frozen-in icosahedral phase in bulk metallic glasses. Materials and Design, 2018, 138, 129-139.	7.0	3
39	Probing Nanoscale Structural Heterogeneity in Metallic Glasses Using 4-D STEM. Microscopy and Microanalysis, 2018, 24, 202-203.	0.4	1
40	The Achilles' heel of iron-based catalysts during oxygen reduction in an acidic medium. Energy and Environmental Science, 2018, 11, 3176-3182.	30.8	332
41	Direct determination of structural heterogeneity in metallic glasses using four-dimensional scanning transmission electron microscopy. Ultramicroscopy, 2018, 195, 189-193.	1.9	44
42	Probing structural changes during ductile fracture in metallic glasses via in situ straining inside a MeV transmission electron microscope. Intermetallics, 2018, 102, 94-100.	3.9	2
43	Biocorrosion Evaluation on a Zr-Cu-Ag-Ti Metallic Glass. IOP Conference Series: Materials Science and Engineering, 2018, 346, 012009.	0.6	1
44	Microstructure Evolution and Related Magnetic Properties of Cu-Zr-Al-Gd Phase-Separating Metallic Glasses. Jom, 2018, 70, 988-992.	1.9	3
45	Utilization of high entropy alloy characteristics in Er-Gd-Y-Al-Co high entropy bulk metallic glass. Acta Materialia, 2018, 155, 350-361.	7.9	79
46	In situ synthesis of cold-rollable aluminumâ€“aluminum nitride composites via arc plasma-induced accelerated volume nitridation. Journal of Materials Research, 2017, 32, 217-226.	2.6	5
47	Accurate quantification of glass-forming ability by measuring effective volume relaxation of supercooled melt. APL Materials, 2017, 5, .	5.1	6
48	In-situ synthesis of co-continuous aluminum-aluminum nitride composites by arc plasma induced accelerated displacement reaction. Journal of Alloys and Compounds, 2017, 729, 171-179.	5.5	5
49	In-situ synthesis and mechanical properties of Zr-based bulk metallic glass matrix composites manipulated by nitrogen additions. Intermetallics, 2017, 91, 70-77.	3.9	9
50	Modulation of plastic flow in metallic glasses via nanoscale networks of chemical heterogeneities. Acta Materialia, 2017, 140, 116-129.	7.9	21
51	Manipulation of thermal and mechanical stability by addition of multiple equiatomic rare-earth elements in Al-TM-RE metallic glasses. Intermetallics, 2017, 91, 8-15.	3.9	17
52	A hidden variable in shear transformation zone volume versus Poissonâ€™s ratio relation in metallic glasses. APL Materials, 2017, 5, 106105.	5.1	7
53	Lattice Distortions in the FeCoNiCrMn High Entropy Alloy Studied by Theory and Experiment. Entropy, 2016, 18, 321.	2.2	151
54	Abnormal devitrification behavior and mechanical response of cold-rolled Mg-rich Mg-Cu-Gd metallic glasses. Acta Materialia, 2016, 116, 238-249.	7.9	22

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55	Manipulation of Ïƒy/Îº ratio in single phase FCC solid-solutions. Applied Physics Letters, 2016, 109, .	3.3	20
56	Development of Moâ€Niâ€Siâ€B metallic glass with high thermal stability and H versus E ratios. Materials and Design, 2016, 98, 31-40.	7.0	11
57	A novel parameter to describe the glass-forming ability of alloys. Journal of Applied Physics, 2015, 118, 064902.	2.5	22
58	Atomic structure and growth mechanism of T1 precipitate in Alâ€“Cuâ€“Liâ€“Mgâ€“Ag alloy. Scripta Materialia, 2015, 109, 68-71.	5.2	68
59	Enhancement of interface anchoring and densification of Y2O3 coating by metal substrate manipulation in aerosol deposition process. Journal of Applied Physics, 2015, 117, .	2.5	14
60	Understanding of the Shear Bands in Amorphous Metals. Applied Microscopy, 2015, 45, 63-73.	1.4	20
61	Development of fcc-Al nanoparticles during crystallization of amorphous Alâ€“Ni alloys containing mischmetal: Microstructure and hardness evaluation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 604, 92-97.	5.6	20
62	Non-isothermal kinetic studies of crystallization in amorphous Al86Ni10MM4 alloy. Journal of Non-Crystalline Solids, 2014, 387, 36-40.	3.1	7
63	Nano-crystal formation of Mg-Cu-Gd amorphous ribbon deformed by forced cold rolling. IOP Conference Series: Materials Science and Engineering, 2014, 63, 012165.	0.6	0
64	Phase separation in metallic glasses. Progress in Materials Science, 2013, 58, 1103-1172.	32.8	209
65	Nano-scale Shell in Phase Separating Gd-Ti-Al-Co Metallic Glass. Applied Microscopy, 2013, 43, 98-101.	1.4	2
66	Effects of alloying elements with positive enthalpy of mixing in Mg65Cu25Gd10 bulk-forming metallic glasses. Intermetallics, 2012, 31, 9-15.	3.9	13
67	Anomalous glass transition behavior in Cuâ€“Zrâ€“Sn alloy system. Journal of Alloys and Compounds, 2011, 509, S52-S55.	5.5	7
68	Thermomechanical Analysis on the Phase Stability of Nitrogen-Doped Amorphous Ge2Sb2Te5Films. Japanese Journal of Applied Physics, 2011, 50, 061201.	1.5	5
69	Synthesis of metallic glass composites using phase separation phenomena. Acta Materialia, 2010, 58, 2483-2491.	7.9	72
70	Abnormal behavior of supercooled liquid region in bulk-forming metallic glasses. Journal of Applied Physics, 2010, 108, 053515.	2.5	25
71	Effect of manipulating atomic scale heterogeneity on plasticity in Mg-based bulk metallic glasses. Intermetallics, 2010, 18, 1867-1871.	3.9	8
72	Structural behaviors of single and multiple amorphous alloys deformed by forced cold rolling. Intermetallics, 2010, 18, 1920-1924.	3.9	9

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73	Network structure composite in phase separating Gd30Zr25Al25(Co/Cu)20 metallic glassy alloys. Intermetallics, 2010, 18, 1846-1850.	3.9	7
74	Improvement of glass-forming ability and phase separation in Cuâ€“Ti-rich Cuâ€“Tiâ€“Zrâ€“Niâ€“Si bulk metallic glasses. Journal of Alloys and Compounds, 2010, 504, S27-S30.	5.5	14
75	Effect of addition of Be on glass-forming ability, plasticity and structural change in Cuâ€“Zr bulk metallic glasses. Acta Materialia, 2008, 56, 3120-3131.	7.9	67
76	Anelastic strain and structural anisotropy in homogeneously deformed Cu64.5Zr35.5 metallic glass. Acta Materialia, 2008, 56, 5575-5583.	7.9	18
77	Corrosion behaviour of Mg65Cu7.5Ni7.5Ag5Zn5Gd5Y5 bulk metallic glass in aqueous environments. Electrochimica Acta, 2008, 53, 3403-3411.	5.2	43
78	Poissonâ€™s ratio and fragility of bulk metallic glasses. Journal of Materials Research, 2008, 23, 523-528.	2.6	23
79	Role of minor addition of metallic alloying elements in formation and properties of Cuâ€“Ti-rich bulk metallic glasses. Journal of Materials Research, 2008, 23, 1995-2002.	2.6	22
80	Correlation between plasticity and fragility in Mg-based bulk metallic glasses with modulated heterogeneity. Journal of Applied Physics, 2008, 104, 023520.	2.5	37
81	Correlation between volumetric change and glass-forming ability of metallic glass-forming alloys. Applied Physics Letters, 2008, 92, .	3.3	22
82	Improvement of plasticity by tailoring combination of constituent elements in Ti-rich Tiâ€“Zrâ€“Beâ€“Cuâ€“Ni bulk metallic glasses. Journal of Materials Research, 2007, 22, 3440-3447.	2.6	18
83	Mg-rich Mgâ€“Niâ€“Gd ternary bulk metallic glasses with high compressive specific strength and ductility. Journal of Materials Research, 2007, 22, 334-338.	2.6	35
84	The effect of Zr addition in glass forming ability of Niâ€“Nb alloy system. Journal of Alloys and Compounds, 2007, 434-435, 156-159.	5.5	36
85	Correlation between fragility and glass-forming ability/plasticity in metallic glass-forming alloys. Applied Physics Letters, 2007, 91, .	3.3	94
86	Enhanced glass forming ability and plasticity in Mg-based bulk metallic glasses. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 449-451, 225-229.	5.6	47
87	Mechanical behavior of Cu54Ni6Zr22Ti18 bulk amorphous alloy during multi-pass warm rolling. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 449-451, 929-933.	5.6	12
88	Deformation behavior of amorphous composites containing crystalline nickel in the supercooled liquid region. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 449-451, 916-919.	5.6	10
89	Finite element method analysis on the stress and strain states in amorphous composites containing crystalline copper during compression. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 449-451, 704-708.	5.6	6
90	In situ formation of two glassy phases in the Ndâ€“Zrâ€“Alâ€“Co alloy system. Scripta Materialia, 2007, 56, 197-200.	5.2	80

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91	Phase separation and improved plasticity by modulated heterogeneity in Cuâ€“(Zr,Hf)â€“(Gd,Y)â€“Al metallic glasses. Scripta Materialia, 2007, 57, 49-52.	5.2	100
92	Phase separation and enhancement of plasticity in Cuâ€“Zrâ€“Alâ€“Y bulk metallic glasses. Acta Materialia, 2006, 54, 2597-2604.	7.9	234
93	Fracture behavior of bulk metallic glass/metal laminate composites. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 417, 239-242.	5.6	18
94	Effect of the substitution of Ag and Ni for Cu on the glass forming ability and plasticity of Cu60Zr30Ti10 alloy. Scripta Materialia, 2006, 54, 1569-1573.	5.2	52
95	Observation of artifact-free amorphous structure in Cuâ€“Zr-based alloy using transmission electron microscopy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 406, 119-124.	5.6	25
96	Estimation of critical cooling rates for glass formation in bulk metallic glasses through non-isothermal thermal analysis. Metals and Materials International, 2005, 11, 1-9.	3.4	20
97	Design of Bulk metallic glasses with high glass forming ability and enhancement of plasticity in metallic glass matrix composites: A review. Metals and Materials International, 2005, 11, 19-27.	3.4	127
98	Fabrication and mechanical properties of WC particulate reinforced Cu47Ti33Zr11Ni6Sn2Si1 bulk metallic glass matrix composites. Journal of Materials Science, 2005, 40, 6127-6130.	3.7	17
99	Ca-Mg-Zn Bulk Metallic Glasses with Strong Glass-Forming Ability Synthesized under Air Atmosphere. Journal of Metastable and Nanocrystalline Materials, 2005, 24-25, 687-690.	0.1	0
100	Parameter for glass forming ability of ternary alloy systems. Applied Physics Letters, 2005, 86, 061907.	3.3	52
101	Effect of Ag Addition on the Improvement of Glass-forming Ability and Plasticity of Mgâ€“Cuâ€“Gd Bulk Metallic Glass. Journal of Materials Research, 2005, 20, 2379-2385.	2.6	77
102	Formation of Mgâ€“Cuâ€“Niâ€“Agâ€“Znâ€“Yâ€“Gd Bulk Glassy Alloy by Casting into Cone-shaped Copper Mold in Air Atmosphere. Journal of Materials Research, 2005, 20, 1465-1469.	2.6	48
103	Effect of atomic configuration and liquid stability on the glass-forming ability of Ca-based metallic glasses. Applied Physics Letters, 2005, 86, 201912.	3.3	32
104	Effect of Alloy Composition on the Glass Forming Ability in Ca-Mg-Zn Alloy System. Materials Science Forum, 2005, 475-479, 3415-3418.	0.3	22
105	Enhancement of glass forming ability and plasticity by addition of Nb in Cuâ€“Tiâ€“Zrâ€“Niâ€“Si bulk metallic glasses. Journal of Non-Crystalline Solids, 2005, 351, 1232-1238.	3.1	101
106	Formation of Caâ€“Mgâ€“Zn bulk glassy alloy by casting into cone-shaped copper mold. Journal of Materials Research, 2004, 19, 685-688.	2.6	109
107	Formation of amorphous phase in melt-spun and injection-cast Cu60Zr30Ti10 alloys. Scripta Materialia, 2004, 51, 221-224.	5.2	17
108	Bulk Glass Formation in Mg-Cu-Ag-Y-Gd Alloy. Materials Transactions, 2004, 45, 2474-2477.	1.2	37

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109	The Effect of In Addition on the Glass-Forming Ability in Cu-Ti-Zr-Ni-Si Metallic Glasses. Materials Transactions, 2004, 45, 2693-2696.	1.2	11
110	The effect of Sn addition on the glass-forming ability of Cuâ€“Tiâ€“Zrâ€“Niâ€“Si metallic glass alloys. Journal of Non-Crystalline Solids, 2002, 298, 15-22.	3.1	111
111	Quasicrystals and related approximant phases in Mgâ€“Znâ€“Y. Micron, 2002, 33, 565-570.	2.2	16
112	The effect of Ag addition on the glass-forming ability of Mgâ€“Cuâ€“Y metallic glass alloys. Journal of Non-Crystalline Solids, 2001, 279, 154-160.	3.1	94
113	A simple model for determining alloy composition with large glass forming ability in ternary alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2001, 32, 200-202.	2.2	11
114	(Icosahedral phase+Î±-Mg) two phase microstructures in the Mgâ€“Znâ€“Y ternary system. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2001, 300, 312-315.	5.6	59
115	The Effect of Ag on the Glass Forming Ability and Crystallization in Mg-Cu-Ag-Y Alloys. Materials Science Forum, 2001, 360-362, 95-100.	0.3	2
116	Fabrication of Bulk Mg–Cu–Ag–Y Glassy Alloy by Squeeze Casting. Materials Transactions, JIM, 2000, 41, 846-849.	0.9	72