Inhomogeneous flow and fracture of glassy materials

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Citation Report

#	Article	IF	CITATIONS
1	Metallic glasses: Gaining plasticity for microsystems. Jom, 2010, 62, 93-98.	1.9	25
2	Characteristic length scales governing plasticity/brittleness of bulk metallic glasses at ambient temperature. Applied Physics Letters, 2010, 96, 011905.	3.3	31
3	Experimental study of random-close-packed colloidal particles. Physical Review E, 2010, 82, 011403.	2.1	74
4	Shear Banding and Flow-Concentration Coupling in Colloidal Glasses. Physical Review Letters, 2010, 105, 268301.	7.8	170
5	Fractal in fracture of bulk metallic glass. Intermetallics, 2010, 18, 2468-2471.	3.9	29
6	Heterogeneous yielding dynamics in a colloidal gel. Soft Matter, 2010, 6, 3482.	2.7	118
7	Application of phase-field modeling to deformation of metallic glasses. Current Opinion in Solid State and Materials Science, 2011, 15, 116-124.	11.5	5
8	Effect of fragility on relaxation of density fluctuations in glass. Journal of Non-Crystalline Solids, 2011, 357, 3520-3523.	3.1	25
9	Towards Ultrastrong Glasses. Advanced Materials, 2011, 23, 4578-4586.	21.0	314
10	Shear-band toughness of bulk metallic glasses. Acta Materialia, 2011, 59, 4525-4537.	7.9	51
11	Incompressibility of polydisperse random-close-packed colloidal particles. Physical Review E, 2011, 84, 030401.	2.1	58
12	Failure criterion for metallic glasses. Philosophical Magazine, 2011, 91, 4536-4554.	1.6	43
13	Scaling Relation in Fracture of the Materials with Elastoplastic Response Inaccessible by Scaling Laws. Journal of the Physical Society of Japan, 2012, 81, 074604.	1.6	5
14	Contributions of atomic diffusion and plastic deformation to the plasma surface activation assisted diffusion bonding of zirconium-based bulk metallic glass. Applied Physics Letters, 2012, 100, .	3.3	15
15	Microscale Rheology of a Soft Glassy Material Close to Yielding. Physical Review Letters, 2012, 108, 148301.	7.8	67
16	Heterogeneous Shear in Hard Sphere Glasses. Physical Review Letters, 2012, 108, 098301.	7.8	21
18	Plastic heterogeneity in nanoscale metallic glass. Physica E: Low-Dimensional Systems and Nanostructures, 2012, 44, 1461-1466.	2.7	3
19	Viscoelastic phase separation in soft matter and foods. Faraday Discussions, 2012, 158, 371.	3.2	56

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		CITATION RE	PORT	
#	Article		IF	CITATIONS
20	Shear Banding in Bulk Metallic Glasses. , 2012, , 311-361.			6
21	The viscous-brittle transition of crystal-bearing silicic melt: Direct observation of magma healing. Geology, 2012, 40, 611-614.	rupture and	4.4	113
22	The influence of inertia and elastic retraction on flow-induced crystallization of isotactic polypropylene. Journal of Rheology, 2013, 57, 1281-1296.		2.6	4
23	Capillary flow of amorphous metal for high performance electrode. Scientific Reports, 20	013, 3, 2185.	3.3	20
24	Yielding and shear banding of metallic glasses. Acta Materialia, 2013, 61, 5928-5936.		7.9	62
25	Densification and Strain Hardening of a Metallic Glass under Tension at Room Temperat Review Letters, 2013, 111, 135504.	ure. Physical	7.8	131
26	Shear banding behavior and fracture mechanisms of Zr55Al10Ni5Cu30 bulk metallic gla compression analyzed using a digital image correlation method. Intermetallics, 2013, 32	ss in uniaxial 2, 21-29.	3.9	29
27	A thermoplastic forming map of a Zr-based bulk metallic glass. Acta Materialia, 2013, 61	, 1921-1931.	7.9	96
28	Apparent Fracture in Polymeric Fluids Under Step Shear. Physical Review Letters, 2013, 2	110, 204503.	7.8	25
29	A molecular dynamics study of non-local effects in the flow of soft jammed particles. So 2013, 9, 7489.	ft Matter,	2.7	43
31	Wavelike fracture pattern in a metallic glass: a Kelvin–Helmholtz flow instability. Philo Magazine Letters, 2014, 94, 669-677.	sophical	1.2	2
32	Multiferroics and Magnetoelectrics: A Comparison between Some Chromites and Cobalt Chemistry of Materials, 2014, 26, 830-836.	tites.	6.7	52
33	Boundary conditions for soft glassy flows: slippage and surface fluidization. Soft Matter, 6984-6989.	, 2014, 10,	2.7	38
34	Spatiotemporal correlations between plastic events in the shear flow of athermal amorp European Physical Journal E, 2014, 37, 9.	hous solids.	1.6	50
35	Elimination of strength degrading effects caused by surface microdefect: A prevention a silicon nanotexturing to avoid catastrophic brittle fracture. Scientific Reports, 2015, 5, 1	chieved by .0869.	3.3	13
36	Fracture of Jammed Colloidal Suspensions. Scientific Reports, 2015, 5, 14175.		3.3	12
37	Understanding ductile-to-brittle transition of metallic glasses from shear transformation dilatation. Theoretical and Applied Mechanics Letters, 2015, 5, 200-204.	zone	2.8	11
38	Mapping the intriguing transient morphologies and the demixing behavior in PS/PVME b presence of rod-like nanoparticles. Physical Chemistry Chemical Physics, 2015, 17, 1497	lends in the 2-14985.	2.8	15

#	Article	IF	CITATIONS
39	Microyielding of Core-Shell Crystal Dendrites in a Bulk-metallic-glass Matrix Composite. Scientific Reports, 2015, 4, 4394.	3.3	16
40	Tensile fracture of metallic glasses via shear band cavitation. Acta Materialia, 2015, 82, 483-490.	7.9	39
41	The fracture of bulk metallic glasses. Progress in Materials Science, 2015, 74, 211-307.	32.8	421
42	Effect of Metallic Class Particle Size on the Contact Resistance of Ag/Metallic Class Electrode. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2015, 46, 2443-2448.	2.2	5
43	On the source of plastic flow in metallic glasses: Concepts and models. Intermetallics, 2015, 67, 81-86.	3.9	99
44	Origin of Shear Stability and Compressive Ductility Enhancement of Metallic Glasses by Metal Coating. Scientific Reports, 2016, 6, 27852.	3.3	11
45	The Critical Criterion on Runaway Shear Banding in Metallic Glasses. Scientific Reports, 2016, 6, 21388.	3.3	18
46	Rheological evaluation of colloidal dispersions using the smoothed profile method: formulation and applications. Journal of Fluid Mechanics, 2016, 792, 590-619.	3.4	20
47	Insight on Viscoelasticiy of Ti16.7 Zr16.7 Hf16.7 Cu16.7 Ni16.7 Be16.7 High Entropy Bulk Metallic Glass. Journal of Iron and Steel Research International, 2016, 23, 19-23.	2.8	12
48	Localized plastic deformation in a model metallic glass: a survey of free volume and local force distributions. Journal of Statistical Mechanics: Theory and Experiment, 2016, 2016, 084006.	2.3	14
49	Onset of shear thinning in glassy liquids: Shear-induced small reduction of effective density. Physical Review E, 2017, 95, 012613.	2.1	9
50	Photopolymerized Triazoleâ€Based Glassy Polymer Networks with Superior Tensile Toughness. Advanced Functional Materials, 2018, 28, 1801095.	14.9	23
51	Shear bands and the evolving microstructure in a drying colloidal film studied with scanning µ-SAXS. Scientific Reports, 2018, 8, 12979.	3.3	9
52	Volume-shrinking kinetics of transient gels as a consequence of dynamic interplay between phase separation and mechanical relaxation. Physical Review E, 2018, 98, .	2.1	7
53	Nanometer-scale gradient atomic packing structure surrounding soft spots in metallic glasses. Npj Computational Materials, 2018, 4, .	8.7	37
54	Structural heterogeneities and mechanical behavior of amorphous alloys. Progress in Materials Science, 2019, 104, 250-329.	32.8	428
55	Voronoi volume recovery during plastic deformation in deep-notched metallic glasses. Journal of Alloys and Compounds, 2019, 776, 460-468.	5.5	11
56	Tailoring strength and plasticity of Ag/Nb nanolaminates via intrinsic microstructure and extrinsic dimension. International Journal of Plasticity, 2019, 113, 145-157.	8.8	32

CITATION REPORT

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#	Article	IF	CITATIONS
57	Density-Based Measurement and Manipulation via Magnetic Levitation Enhanced by the Dual-Halbach Array. IEEE Sensors Journal, 2020, 20, 1730-1737.	4.7	9
58	Effect of Submicron Structures on the Mechanical Behavior of Polyethylene. Macromolecules, 2020, 53, 9097-9107.	4.8	11
59	A novel physical mechanism of liquid flow slippage on a solid surface. Science Advances, 2020, 6, eaaz0504.	10.3	23
60	A new continuum model for viscoplasticity in metallic glasses based on thermodynamics and its application to creep tests. Journal of the Mechanics and Physics of Solids, 2021, 146, 104216.	4.8	15
61	Effect of High-Temperature Deformation in the Supercooled Liquid Region on the Service Performance of a Zr-Based Bulk Metallic Glass. Journal of Materials Engineering and Performance, 2021, 30, 2940-2945.	2.5	4
62	Observation of cavitation governing fracture in glasses. Science Advances, 2021, 7, .	10.3	33
63	Effect of Cold Rolling on the Evolution of Shear Bands and Nanoindentation Hardness in Zr41.2Ti13.8Cu12.5Ni10Be22.5 Bulk Metallic Glass. Nanomaterials, 2021, 11, 1670.	4.1	9
64	Revealing the structural heterogeneity of metallic glass: Mechanical spectroscopy and nanoindentation experiments. International Journal of Mechanical Sciences, 2021, 201, 106469.	6.7	89
65	Machine-learning integrated glassy defect from an intricate configurational-thermodynamic-dynamic space. Physical Review B, 2021, 104, .	3.2	15
66	Dynamic mechanical response of ZrCu-based bulk metallic glasses. International Journal of Mechanical Sciences, 2021, 211, 106770.	6.7	11
67	Characteristic of dynamic mechanical relaxation processes in Cu46Zr46Al8 and La43.4Ce18.6Ni24Al14 metallic glasses. Journal of Alloys and Compounds, 2021, 887, 161392.	5.5	2
68	Manipulating internal flow units toward favorable plasticity in Zr-based bulk-metallic glasses by hydrogenation. Journal of Materials Science and Technology, 2022, 102, 36-45.	10.7	16
69	Self-organized critical behavior in plastic flow of amorphous solids. Wuli Xuebao/Acta Physica Sinica, 2017, 66, 178103.	0.5	5
70	Stress hyperuniformity and transient oscillatory-exponential correlation decay as signatures of strength vs fragility in glasses. Journal of Chemical Physics, 2021, 155, 194501.	3.0	2
71	Spatial inhomogeneity of chain orientation associated with strain-induced density fluctuations in polyethylene. Polymer Journal, 2022, 54, 243-248.	2.7	5
72	Mechanics of amorphous solids. Chinese Science Bulletin, 2022, 67, 2578-2593.	0.7	2
73	Compression Induced Deformation Twinning Evolution in Liquid-Like Cu ₂ Se. ACS Applied Materials & Interfaces, 2022, 14, 18671-18681.	8.0	4
74	Elastic criterion for shear-banding instability in amorphous solids. Physical Review E, 2022, 105, 045003.	2.1	8

CITATION REPORT

#	Article	IF	CITATIONS
75	Hidden spatiotemporal sequence in transition to shear band in amorphous solids. Physical Review Research, 2022, 4, .	3.6	10
76	Towards commonality between shear banding and glass-liquid transition in metallic glasses. Physical Review Materials, 2022, 6, .	2.4	1
77	Fatigue fracture mechanism of amorphous materials from a density-based coarse-grained model. Communications Materials, 2022, 3, .	6.9	2
78	Identification of medium range order defects and their critical effect on spallation of Cu64Zr36 metallic glass. Journal of Alloys and Compounds, 2023, 932, 167591.	5.5	5
79	Elastic interactions of plastic events in strained amorphous solids before yield. Physical Review Materials, 2023, 7, .	2.4	3
80	The Qualitative Difference in Flow Responses between Network-Forming Strong and Fragile Liquids. Journal of the Physical Society of Japan, 2023, 92, .	1.6	1
81	Molecular-scale structural changes of silicate melts under tension revealed by time-resolved X-ray diffraction. Chemical Geology, 2023, 621, 121372.	3.3	3
82	Real-Time Early Detection of Crack Propagation Precursors in Delayed Fracture of Soft Elastomers. Physical Review X, 2023, 13, .	8.9	2
83	Quantification of the volume-fraction reduction of sheared fragile glass-forming liquids and its impact on rheology. Physical Review Research, 2023, 5, .	3.6	0
84	Mechanical Slowing Down of Network-Forming Phase Separation of Polymer Solutions. ACS Nano, 2023, 17, 18025-18036.	14.6	2
85	Structural origin of deformation and dynamical heterogeneity in metallic glasses. Physical Review Materials, 2023, 7, .	2.4	0
86	Strain-hardening and failure mechanisms of metallic glasses under triaxial stress. Intermetallics, 2024, 167, 108210.	3.9	0