Ze Liu

List of Publications by Year
in descending order

85 papers	2,838 citations	186265 28 h-index	182427 51 g-index
85 all docs	85 docs citations	85 times ranked	2928 citing authors

#	Article	IF	Citations
1	Observation of Microscale Superlubricity in Graphite. Physical Review Letters, 2012, 108, 205503.	7.8	431
2	Interlayer binding energy of graphite: A mesoscopic determination from deformation. Physical Review B, 2012, 85, .	3.2	203
3	Combinatorial development of bulk metallic glasses. Nature Materials, 2014, 13, 494-500.	27.5	196
4	Observation of High-Speed Microscale Superlubricity in Graphite. Physical Review Letters, 2013, 110, 255504.	7.8	131
5	Mechanical glass transition revealed by the fracture toughness of metallic glasses. Nature Communications, 2018, 9, 3271.	12.8	103
6	Eastward tectonic migration and transition of the Jurassic-Cretaceous Andean-type continental margin along Southeast China. Earth-Science Reviews, 2019, 196, 102884.	9.1	93
7	Interlayer shear strength of single crystalline graphite. Acta Mechanica Sinica/Lixue Xuebao, 2012, 28, 978-982.	3.4	86
8	Joining of bulk metallic glasses in air. Acta Materialia, 2014, 62, 49-57.	7.9	74
9	Spatially heterogeneous dynamics in a metallic glass forming liquid imaged by electron correlation microscopy. Nature Communications, 2018, 9, 1129.	12.8	73
10	3D metallic glass cellular structures. Acta Materialia, 2016, 105, 35-43.	7.9	69
11	Flaw tolerance of metallic glasses. Acta Materialia, 2016, 107, 220-228.	7.9	61
12	Experimental advances in superlubricity. Friction, 2014, 2, 182-192.	6.4	57
13	Flaw tolerance vs. performance: A tradeoff in metallic glass cellular structures. Acta Materialia, 2014, 73, 259-274.	7.9	55
14	One-step fabrication of crystalline metal nanostructures by direct nanoimprinting below melting temperatures. Nature Communications, 2017, 8, 14910.	12.8	55
15	Elastic anisotropy measure for two-dimensional crystals. Extreme Mechanics Letters, 2020, 34, 100615.	4.1	54
16	One-Dimensional Sb₂Se₃ Enabling a Highly Flexible Photodiode for Light-Source-Free Heart Rate Detection. ACS Photonics, 2020, 7, 352-360.	6.6	53
17	Critical Crystallization for Embrittlement in Metallic Glasses. Physical Review Letters, 2015, 115, 265502.	7.8	48
18	Does the fracture toughness of bulk metallic glasses scatter?. Scripta Materialia, 2015, 107, 1-4.	5.2	44

#	Article	IF	Citations
19	Test sample geometry for fracture toughness measurements of bulk metallic glasses. Acta Materialia, 2018, 145, 477-487.	7.9	43
20	Nanofabrication through molding. Progress in Materials Science, 2022, 125, 100891.	32.8	39
21	A graphite nanoeraser. Nanotechnology, 2011, 22, 265706.	2.6	38
22	Processing effects on fracture toughness of metallic glasses. Scripta Materialia, 2017, 130, 152-156.	5.2	38
23	Structural and kinematic analysis of Cenozoic rift basins in South China Sea: A synthesis. Earth-Science Reviews, 2021, 216, 103522.	9.1	38
24	General nanomoulding with bulk metallic glasses. Nanotechnology, 2015, 26, 145301.	2.6	37
25	Transition From Lowâ€K to Highâ€K Calcâ€Alkaline Magmatism at Approximately 84ÂMa in the Eastern Pontides (NE Turkey): Magmatic Response to Slab Rollback of the Black Sea. Journal of Geophysical Research: Solid Earth, 2018, 123, 7604-7628.	3.4	34
26	Tuning apparent friction coefficient by controlled patterning bulk metallic glasses surfaces. Scientific Reports, 2016, 6, 39388.	3.3	33
27	Nanomolding of Crystalline Metals: The Smaller the Easier. Physical Review Letters, 2019, 122, 036101.	7.8	30
28	Accretion of oceanic plateaus at continental margins: Numerical modeling. Gondwana Research, 2020, 81, 390-402.	6.0	30
29	One-dimensional Sb2Se3 enabling ultra-flexible solar cells and mini-modules for IoT applications. Nano Energy, 2021, 86, 106101.	16.0	30
30	Shear-accelerated crystallization in a supercooled atomic liquid. Physical Review E, 2015, 91, 020301.	2.1	28
31	Atomic imprinting into metallic glasses. Communications Physics, 2018, 1, .	5.3	28
32	When plateau meets subduction zone: A review of numerical models. Earth-Science Reviews, 2021, 215, 103556.	9.1	25
33	The diversity of friction behavior between bi-layer graphenes. Nanotechnology, 2014, 25, 075703.	2.6	24
34	Lightweight Ti-based bulk metallic glasses with superior thermoplastic formability. Intermetallics, 2018, 98, 54-59.	3.9	23
35	Rapid and continuous regulating adhesion strength by mechanical micro-vibration. Nature Communications, 2020, 11, 1583.	12.8	23
36	Binding and interlayer force in the near-contact region of two graphite slabs: Experiment and theory. Journal of Chemical Physics, 2013, 139, 224704.	3.0	21

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37	General Nanomolding of Ordered Phases. Physical Review Letters, 2020, 124, 036102.	7.8	21
38	Ultrawide bandwidth and sensitive electro-optic modulator based on a graphene nanoelectromechanical system with superlubricity. Carbon, 2021, 176, 228-234.	10.3	21
39	Stripe/kink microstructures formed in mechanical peeling of highly orientated pyrolytic graphite. Applied Physics Letters, 2010, 96, .	3.3	19
40	Superflexible C₆₈-graphyne as a promising anode material for lithium-ion batteries. Journal of Materials Chemistry A, 2019, 7, 17357-17365.	10.3	19
41	m7GPredictor: An improved machine learning-based model for predicting internal m7G modifications using sequence properties. Analytical Biochemistry, 2020, 609, 113905.	2.4	18
42	Electrochemical Growth of High-Strength Carbon Nanocoils in Molten Carbonates. Nano Letters, 2022, 22, 97-104.	9.1	17
43	Quantitative characterization of surface wettability by friction force. Applied Surface Science, 2021, 536, 147788.	6.1	16
44	Deep-shallow coupling response of the Cenozoic Bohai Bay Basin to plate interactions around the Eurasian Plate. Gondwana Research, 2022, 102, 180-199.	6.0	14
45	Bio-inspired self-folding strategy to break the trade-off between strength and ductility in carbon-nanoarchitected materials. Npj Computational Materials, 2020, 6, .	8.7	14
46	Vibration-accelerated activation of flow units in a Pd-based bulk metallic glass. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 692, 62-66.	5.6	13
47	Investigation of Temperature and Feature Size Effects on Deformation of Metals by Superplastic Nanomolding. Physical Review Letters, 2019, 122, 016101.	7.8	13
48	High-performance phosphorene electromechanical actuators. Npj Computational Materials, 2020, 6, .	8.7	13
49	Extraordinary Electromechanical Actuation of Ti2C MXene. Journal of Physical Chemistry C, 2021, 125, 1060-1068.	3.1	13
50	Protocols for multi-step thermoplastic processing of metallic glasses. Scripta Materialia, 2015, 104, 56-59.	5.2	12
51	Applications and limitations of electron correlation microscopy to study relaxation dynamics in supercooled liquids. Ultramicroscopy, 2017, 178, 125-130.	1.9	11
52	Computational Prediction of Superlubric Layered Heterojunctions. ACS Applied Materials & Interfaces, 2021, 13, 33600-33608.	8.0	11
53	Ordered Hierarchical Ag Nanostructures as Surface-Enhanced Raman Scattering Platforms for (Bio)chemical Sensing and Pollutant Monitoring. ACS Applied Nano Materials, 2021, 4, 11644-11650.	5.0	11
54	Mesozoic magmatic activity and tectonic evolution in the southern East China Sea Continental Shelf Basin: Thermoâ€mechanical modelling. Geological Journal, 2018, 53, 240-251.	1.3	10

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55	Joining mechanism of bulk metallic glasses in their supercooled liquid region. Journal of Materials Processing Technology, 2020, 279, 116583.	6.3	10
56	NE-trending transtensional faulting in the Pearl River Mouth basin of the Northern South China Sea margin. Gondwana Research, 2023, 120, 4-19.	6.0	10
57	Earth's surface responses during geodynamic evolution: Numerical insight from the southern East China Sea Continental Shelf Basin, West Pacific. Gondwana Research, 2022, 102, 167-179.	6.0	8
58	Robust and reproducible fabrication of large area aluminum (Al) micro/nanorods arrays by superplastic nanomolding at room temperature. Applied Physics Express, 2020, 13, 036503.	2.4	8
59	Nanomolding of Gold and Goldâ€“Silicon Heterostructures at Room Temperature. ACS Nano, 2021, 15, 14275-14284.	14.6	8
60	Superplastic Nanomolding of Highly Ordered Metallic Subâ€Micrometer Pillars Arrays for Surface Enhanced Raman Scattering. Advanced Materials Technologies, 2022, 7, 2100891.	5.8	8
61	Experimental decoding of grain boundary-based plastic deformation. Acta Materialia, 2022, 225, 117534.	7.9	8
62	Three-stage extension in the Cenozoic Pearl River Mouth Basin triggering onset of the South China Sea spreading. Gondwana Research, 2023, 120, 31-46.	6.0	8
63	Thermodynamic model of twisted bilayer graphene: Entropy matters. Journal of the Mechanics and Physics of Solids, 2022, 167, 104972.	4.8	7
64	Dynamic and reversible tuning of pixelated plasmonic cluster arrays. Journal of Materials Chemistry C, 2021, 9, 15927-15931.	5.5	6
65	Dynamic and Reversible Tuning of Particleâ€inâ€Bowl Shaped Plasmonic Resonators for Switchable Surface Enhanced Raman Scattering. Advanced Materials Interfaces, 2022, 9, .	3.7	5
66	Mechanical buckling induced periodic kinking/stripe microstructures in mechanically peeled graphite flakes from HOPG. Acta Mechanica Sinica/Lixue Xuebao, 2015, 31, 494-499.	3.4	4
67	Flexural subsidence modelling of post-rift paleobathymetry and sedimentary infill in the northern South China Sea margin. Journal of Asian Earth Sciences, 2022, 226, 105076.	2.3	4
68	Fabrication of 3D metallic glass architectures by a mold-strain-set method. Materials and Design, 2022, 218, 110668.	7.0	4
69	Deep and surface driving forces to shape the Earth: Insights from the evolution of the northern South China Sea margin. Gondwana Research, 2022, , .	6.0	4
70	Dynamic mechanism of tectonic inversion and implications for oilâ€“gas accumulation in the Xihu Sag, East China Sea Shelf Basin: Insights from numerical modelling. Geological Journal, 2018, 53, 225-239.	1.3	3
71	Controlled fabrication of hierarchical metal nanostructures. Materials Letters, 2019, 241, 160-163.	2.6	3
72	Observation of speeding growth of metal nanowires by ultra-low frequency micro-vibration assisted superplastic nanomolding. Materials Letters, 2021, 283, 128890.	2.6	3

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73	Novel single-host Al1â^'xSixCxN1â^'x: Mn2+ white phosphors for field emission displays. Journal of Materials Science: Materials in Electronics, 2017, 28, 8405-8413.	2.2	2
74	ANOX: A robust computational model for predicting the antioxidant proteins based on multiple features. Analytical Biochemistry, 2021, 631, 114257.	2.4	2
75	A new method for fabrication and electrical characterization of nanosized molten metals. Nanotechnology, 2020, 31, 445705.	2.6	2
76	Arbitrarily Patterned Active Wrinkles in Highly Stretched Substrate-Free Dielectric Elastic Membrane. Journal of Applied Mechanics, Transactions ASME, 2021, 88, .	2.2	2
77	Controlled fabrication of gold nanotip arrays by nanomolding-necking technology. Nanotechnology, 2020, 31, 144001.	2.6	1
78	Electromechanically Actuated MXene Nanotubes for Tunable Mass Transport. Journal of Physical Chemistry C, 2021, 125, 25275-25283.	3.1	1
79	Tuning the Nonlinear Mechanical Anisotropy of Layered Crystals via Interlayer Twist. Journal of Applied Mechanics, Transactions ASME, 2021, 88, .	2.2	1
80	Generation of buckling and wrinkling in elastic films: The effect of initial imperfection. Physical Review E, 2021, 104, 055002.	2.1	1
81	Peeling mechanics of film-substrate system with mutually embedded nanostructures in the interface. International Journal of Solids and Structures, 2022, 251, 111737.	2.7	1
82	Mechanics and Multidisciplinary Study for Creating Graphene-Based van der Waals Nano/Microscale Devices. , 2013, , 87-104.		0
83	Computational Nanocharacterization for Combinatorially Developed Bulk Metallic Glass. International Journal of High Speed Electronics and Systems, 2015, 24, 1520012.	0.7	0
84	Spatio-temporally modulated composite metamaterials by using switchable mesostructural topology. Composite Structures, 2020, 251, 112601.	5.8	0
85	Mechanical design of an asymmetric-deformation-driven rotating machinery. Mechanics Research Communications, 2021, 117, 103772.	1.8	0