Zhaoping Lu

List of Publications by Year
in descending order

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131	8,789	87723	43802
papers	citations	38	91
		h-index	g-index

134	134	134	4907
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	A precipitation-hardened high-entropy alloy with outstanding tensile properties. Acta Materialia, 2016, 102, 187-196.	3.8	1,665
2	Effects of Al addition on structural evolution and tensile properties of the FeCoNiCrMn high-entropy alloy system. Acta Materialia, 2014, 62, 105-113.	3.8	1,036
3	Enhanced strength and ductility in a high-entropy alloy via ordered oxygen complexes. Nature, 2018, 563, 546-550.	13.7	988
4	Bulk Metallic Glass Composites with Transformationâ€Mediated Workâ€Hardening and Ductility. Advanced Materials, 2010, 22, 2770-2773.	11.1	431
5	Phaseâ€Transformation Ductilization of Brittle Highâ€Entropy Alloys via Metastability Engineering. Advanced Materials, 2017, 29, 1701678.	11.1	421
6	Stacking fault energy of face-centered-cubic high entropy alloys. Intermetallics, 2018, 93, 269-273.	1.8	312
7	Precipitation behavior and its effects on tensile properties of FeCoNiCr high-entropy alloys. Intermetallics, 2016, 79, 41-52.	1.8	225
8	Short-range ordering and its effects on mechanical properties of high-entropy alloys. Journal of Materials Science and Technology, 2021, 62, 214-220.	5.6	201
9	Ultrahigh-strength and ductile superlattice alloys with nanoscale disordered interfaces. Science, 2020, 369, 427-432.	6.0	187
10	Metallic Liquids and Glasses: Atomic Order and Global Packing. Physical Review Letters, 2010, 105, 155501.	2.9	157
11	Formation, structure and properties of biocompatible TiZrHfNbTa high-entropy alloys. Materials Research Letters, 2019, 7, 225-231.	4.1	131
12	Development of a novel high-entropy alloy with eminent efficiency of degrading azo dye solutions. Scientific Reports, 2016, 6, 34213.	1.6	109
13	Facile route to bulk ultrafine-grain steels for high strength and ductility. Nature, 2021, 590, 262-267.	13.7	98
14	Local chemical fluctuation mediated ductility in body-centered-cubic high-entropy alloys. Materials Today, 2021, 46, 28-34.	8.3	98
15	Transformation-induced plasticity in bulk metallic glass composites evidenced by in-situ neutron diffraction. Acta Materialia, 2017, 124, 478-488.	3.8	93
16	Transformation-reinforced high-entropy alloys with superior mechanical properties via tailoring stacking fault energy. Journal of Alloys and Compounds, 2019, 792, 444-455.	2.8	90
17	IrW nanochannel support enabling ultrastable electrocatalytic oxygen evolution at 2â€‰Aâ€‰cmâ^'2 in acidic media. Nature Communications, 2021, 12, 3540.	5.8	89
18	High thermal stability and sluggish crystallization kinetics of high-entropy bulk metallic glasses. Journal of Applied Physics, 2016, 119, .	1.1	82

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19	Flexible Honeycombed Nanoporous/Glassy Hybrid for Efficient Electrocatalytic Hydrogen Generation. Advanced Materials, 2019, 31, e1904989.	11.1	80
20	Solving the strength-ductility tradeoff in the medium-entropy NiCoCr alloy via interstitial strengthening of carbon. Intermetallics, 2019, 106, 77-87.	1.8	77
21	Development of advanced materials via entropy engineering. Scripta Materialia, 2019, 165, 164-169.	2.6	74
22	Atomistic mechanism for nanocrystallization of metallic glasses. Acta Materialia, 2008, 56, 2760-2769.	3.8	73
23	Microstructural Control via Copious Nucleation Manipulated by In Situ Formed Nucleants: Largeâ€Sized and Ductile Metallic Glass Composites. Advanced Materials, 2016, 28, 8156-8161.	11.1	63
24	Experimental determination and thermodynamic calculation of phase equilibria in the Feâ^'Mnâ^'Al system. Journal of Phase Equilibria and Diffusion, 2006, 27, 54-62.	0.5	58
25	Nanoporous silver with tunable pore characteristics and superior surface enhanced Raman scattering. Corrosion Science, 2014, 84, 159-164.	3.0	58
26	Ordered clusters and free volume in a Zrâ€“Ni metallic glass. Applied Physics Letters, 2008, 93, .	1.5	56
27	Snoek-type damping performance in strong and ductile high-entropy alloys. Science Advances, 2020, 6, eaba7802.	4.7	56
28	Formation mechanism and characterization of nanoporous silver with tunable porosity and promising capacitive performance by chemical dealloying of glassy precursor. Acta Materialia, 2016, 105, 367-377.	3.8	52
29	Microstructural Evolution of Alloy Powder for Electronic Materials with Liquid Miscibility Gap. Journal of Electronic Materials, 2009, 38, 2-9.	1.0	51
30	Substantially enhanced plasticity of bulk metallic glasses by densifying local atomic packing. Nature Communications, 2021, 12, 6582.	5.8	51
31	Designing Bulk Metallic Glass Composites with Enhanced Formability and Plasticity. Journal of Materials Science and Technology, 2014, 30, 566-575.	5.6	49
32	Self-organization of core-shell and core-shell-corona structures in small liquid droplets. Applied Physics Letters, 2011, 98, .	1.5	47
33	Reentrant glass transition leading to ultrastable metallic glass. Materials Today, 2020, 34, 66-77.	8.3	45
34	Microstructure and mechanical properties of FeCoNiCr high-entropy alloy strengthened by nano-Y2O3 dispersion. Science China Technological Sciences, 2018, 61, 179-183.	2.0	44
35	Strain-induced ferromagnetism enhancement in Co:ZnO films. Journal of Applied Physics, 2008, 103, .	1.1	43
36	Unusual relation between glass-forming ability and thermal stability of high-entropy bulk metallic glasses. Materials Research Letters, 2018, 6, 495-500.	4.1	42

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37	Interpretable machine-learning strategy for soft-magnetic property and thermal stability in Fe-based metallic glasses. Npj Computational Materials, 2020, 6, .	3.5	42
38	Effects of Sn addition on phase formation and mechanical properties of TiCu-based bulk metallic glass composites. Intermetallics, 2013, 42, 68-76.	1.8	40
39	A general and transferable deep learning framework for predicting phase formation in materials. Npj Computational Materials, 2021, 7, .	3.5	40
40	Enhancement of electrical and ferromagnetic properties by additional Al doping in Co:ZnO thin films. Journal of Physics Condensed Matter, 2007, 19, 296208.	0.7	36
41	Cooling rate effect on Young's modulus and hardness of a Zr-based metallic glass. Journal of Alloys and Compounds, 2011, 509, 3269-3273.	2.8	36
42	Compositional gradient films constructed by sputtering in a multicomponent Tiâ€“Alâ€“(Cr, Fe, Ni) system. Journal of Materials Research, 2018, 33, 3330-3338.	1.2	36
43	Effects of cooling rates on the mechanical properties of a Ti-based bulk metallic glass. Science China: Physics, Mechanics and Astronomy, 2010, 53, 394-398.	2.0	35
44	Effects of Mo additions on the glass-forming ability and magnetic properties of bulk amorphous Fe-C-Si-B-P-Mo alloys. Science China: Physics, Mechanics and Astronomy, 2010, 53, 430-434.	2.0	34
45	Fully epitaxial (Zn,Co)Oâˆ•ZnOâˆ•(Zn,Co)O junction and its tunnel magnetoresistance. Applied Physics Letters, 2007, 91, .	1.5	33
46	High-performance hybrid electrode decorated by well-aligned nanograss arrays for glucose sensing. Biosensors and Bioelectronics, 2018, 102, 288-295.	5.3	31
47	Superior radiation tolerance via reversible disorderingâ€“ordering transition of coherent superlattices. Nature Materials, 2023, 22, 442-449.	13.3	31
48	Effects of cooling rate on the atomic structure of Cu64Zr36 binary metallic glass. Computational Materials Science, 2018, 141, 59-67.	1.4	30
49	Bendable nanoporous copper thin films with tunable thickness and pore features. Corrosion Science, 2016, 104, 227-235.	3.0	29
50	Experimental Investigation and Thermodynamic Calculation of the Phase Equilibria in the Al-Bi-Sn Ternary System. Journal of Phase Equilibria and Diffusion, 2012, 33, 9-19.	0.5	28
51	Flexible glassy grid structure for rapid degradation of azo dye. Materials and Design, 2018, 155, 346-351.	3.3	27
52	High-entropy carbide-nitrides with enhanced toughness and sinterability. Science China Materials, 2021, 64, 2037-2044.	3.5	27
53	Chemical short-range ordering and its strengthening effect in refractory high-entropy alloys. Physical Review B, 2021, 103, .	1.1	27
54	Enhancement of glass-forming ability and plasticity via alloying the elements having positive heat of mixing with Cu in Cu48Zr48Al4 bulk metallic glass. Journal of Alloys and Compounds, 2019, 777, 382-391.	2.8	26

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55	Room temperature ferromagnetism and ferroelectricity in cobalt-doped LiNbO3 film. Applied Physics Letters, 2008, 92, .	1.5	25
56	Beneficial effects of oxygen addition on glass formation in a high-entropy bulk metallic glass. Intermetallics, 2018, 99, 44-50.	1.8	25
57	Ordered nitrogen complexes overcoming strengthâ€“ductility trade-off in an additively manufactured high-entropy alloy. Virtual and Physical Prototyping, 2020, 15, 532-542.	5.3	25
58	Inherent structure length in metallic glasses: simplicity behind complexity. Scientific Reports, 2015, 5, 12137.	1.6	23
59	A general and scalable approach to produce nanoporous alloy nanowires with rugged ligaments for enhanced electrocatalysis. Journal of Materials Chemistry A, 2018, 6, 12541-12550.	5.2	23
60	Self-supported NiCoP/nanoporous copper as highly active electrodes for hydrogen evolution reaction. Scripta Materialia, 2019, 173, 51-55.	2.6	22
61	Design of Hierarchical Porosity Via Manipulating Chemical and Microstructural Complexities in Highâ€Entropy Alloys for Efficient Water Electrolysis. Advanced Science, 2022, 9, e2105808.	5.6	22
62	Synthesis of well-aligned CuO nanowire array integrated with nanoporous CuO network for oxidative degradation of methylene blue. Corrosion Science, 2017, 126, 37-43.	3.0	21
63	Molecular dynamic simulations and atomic structures of amorphous materials. Applied Physics Letters, 2006, 88, 203115.	1.5	20
64	In situ synchrotron SAXS study of nanocrystallization in Zr65Ni25Ti10 metallic glass. Intermetallics, 2008, 16, 10-15.	1.8	20
65	Formation mechanism and characterization of immiscible nanoporous binary Cuâ€“Ag alloys with excellent surface-enhanced Raman scattering performance by chemical dealloying of glassy precursors. Inorganic Chemistry Frontiers, 2020, 7, 1127-1139.	3.0	20
66	Enhancing dynamic mechanical properties of bulk metallic glass composites via deformation-induced martensitic transformation. Scripta Materialia, 2020, 186, 346-351.	2.6	20
67	Self-supporting nanoporous Ni/metallic glass composites with hierarchically porous structure for efficient hydrogen evolution reaction. Journal of Materials Science and Technology, 2021, 73, 145-150.	5.6	19
68	Experimental Investigation of Phase Equilibria in the Cu-Fe-Zr Ternary System. Journal of Phase Equilibria and Diffusion, 2013, 34, 438-446.	0.5	17
69	Atomic vibration as an indicator of the propensity for configurational rearrangements in metallic glasses. Materials Horizons, 2021, 8, 2359-2372.	6.4	17
70	The unification of filament and interfacial resistive switching mechanisms for titanium dioxide based memory devices. Journal of Applied Physics, 2011, 109, 104504.	1.1	16
71	Comparison of the interfacial and electrical properties of HfAlO films on Ge with S and GeO2 passivation. Applied Physics Letters, 2011, 98, 162903.	1.5	16
72	Thermodynamic Database and the Phase Diagrams of the (U, Th, Pu)-X Binary Systems. Journal of Phase Equilibria and Diffusion, 2009, 30, 535.	0.5	15

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73	Polyamorphic transition in a transition metal based metallic glass under high pressure. Physical Review B, 2019, 99, .	1.1	15
74	Local chemical fluctuation mediated ultra-sluggish martensitic transformation in high-entropy intermetallics. Materials Horizons, 2022, 9, 804-814.	6.4	15
75	A Modified Model to Predict Self-Diffusion Coefficients in Metastable fcc, bcc and hcp Structures. Journal of Phase Equilibria and Diffusion, 2013, 34, 17-24.	0.5	14
76	Effects of Nitrogen on the Glass Formation and Mechanical Properties of a Ti-Based Metallic Glass. Acta Metallurgica Sinica (English Letters), 2016, 29, 173-180.	1.5	14
77	Simultaneously enhancing the strength and plasticity of Ti-based bulk metallic glass composites via microalloying with Ta. Materials Research Letters, 2020, 8, 23-30.	4.1	14
78	Growth mechanism from nano-ordered clusters to nanocrystals in a deeply undercooled melt of Zr-Ni-Ti metallic glass. Journal of Applied Physics, 2007, 102, 063515.	1.1	13
79	Thermodynamic Assessments of the Bi-Tb and Bi-Y Systems. Journal of Phase Equilibria and Diffusion, 2011, 32, 441-446.	0.5	13
80	Experimental Investigation of Phase Equilibria in the Fe-Si-Zr Ternary System. Journal of Phase Equilibria and Diffusion, 2013, 34, 277-288.	0.5	13
81	Thermodynamic Calculation of Phase Equilibria in the Sn-Ag-Cu-Ni-Au System. Journal of Electronic Materials, 2007, 36, 1429-1441.	1.0	12
82	Atomistic structural evolution with cooling rates during the solidification of liquid nickel. Intermetallics, 2011, 19, 630-635.	1.8	12
83	Static atomic-scale structural heterogeneity and its effects on glass formation and dynamics of metallic glasses. Intermetallics, 2018, 101, 133-143.	1.8	12
84	Phase equilibria and phase transformation of the body-centered cubic phase in the Cu-rich portion of the Cuâ€“Tiâ€“Al system. Journal of Materials Research, 2008, 23, 2674-2684.	1.2	11
85	The Effects of Metalloid Elements on the Nanocrystallization Behavior and Soft Magnetic Properties of FeCBSiPCu Amorphous Alloys. Metals, 2018, 8, 283.	1.0	11
86	Anomalous voltage dependence of tunnel magnetoresistance in (Zn, Co)O-based junction with double barrier. Applied Physics Letters, 2007, 91, 172109.	1.5	10
87	Self-formed pencil-like bulk composite materials consisting of copper alloy and stainless steel. Journal of Materials Research, 2008, 23, 933-940.	1.2	10
88	Experimental Determination of Phase Equilibria in the Co-Cr-V Ternary System. Journal of Phase Equilibria and Diffusion, 2012, 33, 189-194.	0.5	10
89	Interdiffusion and Atomic Mobility Studies in Ni-Rich fcc Ni-Co-Al Alloys. Journal of Phase Equilibria and Diffusion, 2016, 37, 269-276.	0.5	10
90	Effects of stacking fault energy on the deformation behavior of CoNiCrFeMn high-entropy alloys: A molecular dynamics study. Applied Physics Letters, 2021, 119, .	1.5	10

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91	Prediction of Ti-Zr-Nb-Ta high-entropy alloys with desirable hardness by combining machine learning and experimental data. Applied Physics Letters, 2021, 119, .	1.5	10
92	Evolution of atomic ordering in metallic glasses. Intermetallics, 2010, 18, 2333-2337.	1.8	9
93	Mechanical heterogeneity and its relation with glass-forming ability in Zr-Cu and Zr-Cu-Al metallic glasses. Intermetallics, 2017, 90, 159-163.	1.8	9
94	Work-hardenable Zr-based bulk metallic glass composites reinforced with ex-situ TiNi fibers. Journal of Alloys and Compounds, 2019, 806, 1497-1508.	2.8	9
95	Ion Irradiation-Enhanced Raman Scattering on Nanoporous Copper. Langmuir, 2018, 34, 13041-13046.	1.6	8
96	Experimental Investigation and Thermodynamic Assessment of Phase Equilibria in the Ag-Au-Sn System. Journal of Electronic Materials, 2009, 38, 2096-2105.	1.0	7
97	Experimental Investigation of the Phase Equilibria in the Co-Nb-V Ternary System. Journal of Phase Equilibria and Diffusion, 2015, 36, 592-598.	0.5	7
98	Enhanced Corrosion Resistance of an Alumina-forming Austenitic Steel Against Molten Al. Oxidation of Metals, 2020, 94, 465-475.	1.0	7
99	Self-supported efficient hydrogen evolution catalysts with a coreâ€“shell structure designed via phase separation. Nanoscale, 2022, 14, 325-332.	2.8	7
100	Thermodynamic Assessment of Phase Equilibria in the Sn-Ag-Ni System with Key Experimental Verification. Journal of Electronic Materials, 2008, 37, 279-287.	1.0	6
101	Experimental Investigation and Thermodynamic Calculation of the Phase Equilibria in the Cu-Nb-Zr Ternary System. Journal of Phase Equilibria and Diffusion, 2016, 37, 513-523.	0.5	6
102	Influences of Au ion radiation on microstructure and surface-enhanced Raman scattering of nanoporous copper. Nanotechnology, 2018, 29, 184001.	1.3	6
103	Local structural mechanism for frozen-in dynamics in metallic glasses. Physical Review B, 2018, 97, .	1.1	6
104	Effects of Al addition on atomic structure of Cu-Zr metallic glass. Journal of Applied Physics, 2018, 123, .	1.1	6
105	Atomic-scale structural evolution from disorder to order in an amorphous metal. Journal of Applied Physics, 2011, 110, 123508.	1.1	5
106	Thermodynamic Assessments of the Au-Nd and Au-Dy Systems. Journal of Phase Equilibria and Diffusion, 2015, 36, 241-247.	0.5	5
107	Corrosion and irradiation behavior of Fe-based amorphous coating in lead-bismuth eutectic liquids. Science China Technological Sciences, 2022, 65, 440-449.	2.0	5
108	Experimental Investigation and Thermodynamic Calculation of the Phase Equilibria in the Cu-Ni-Sb Ternary System. Journal of Electronic Materials, 2013, 42, 2961-2974.	1.0	4

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109	Thermodynamic Database for Phase Diagrams of Mn-RE Binary Alloy Systems. Journal of Phase Equilibria and Diffusion, 2014, 35, 612-621.	0.5	4
110	Alloying effects of the elements with a positive heat of mixing on the glass forming ability of Al-La-Ni amorphous alloys. Science China: Physics, Mechanics and Astronomy, 2014, 57, 122-127.	2.0	4
111	Experimental Investigation of Isothermal Sections (1000, 1200ÂÂ°C) in the Ni-Ti-Zr System. Journal of Phase Equilibria and Diffusion, 2015, 36, 414-421.	0.5	4
112	Interdiffusion and Atomic Mobilities in bcc Ti-Ga and Ti-Cu Alloys. Journal of Phase Equilibria and Diffusion, 2017, 38, 84-93.	0.5	4
113	Eight in one: high-entropy-alloy nanoparticles synthesized by carbothermal shock. Science Bulletin, 2018, 63, 737-738.	4.3	4
114	Unravel unusual hardening behavior of a Pdâ€“Niâ€“P metallic glass in its supercooled liquid region. Applied Physics Letters, 2021, 118, .	1.5	4
115	Thermal Stability of Copper-Aluminum Alloy Thin Films for Barrierless Copper Metallization on Silicon Substrate. Journal of Electronic Materials, 2017, 46, 4891-4897.	1.0	3
116	Enhanced crystallization resistance and thermal stability via suppressing the metastable superlattice phase in Ni-(Pd)-P metallic glasses. Journal of Materials Science and Technology, 2020, 42, 203-211.	5.6	3
117	Metastable high entropy alloys. Applied Physics Letters, 2022, 120, .	1.5	3
118	Experimental Investigation and Thermodynamic Calculation of the Phase Equilibria in the Cr-Hf-Ti Ternary System. Journal of Phase Equilibria and Diffusion, 2013, 34, 375-384.	0.5	2
119	High speed characterization of the magnetoelectric hysteresis loop. IEEE Transactions on Magnetics, 2013, 49, 5671-5674.	1.2	2
120	Experimental Investigation and Thermodynamic Calculation of the Phase Equilibria in the Cu-Cr-W and Cu-Cr-Mo Systems. Journal of Phase Equilibria and Diffusion, 2014, 35, 314-325.	0.5	2
121	Thermodynamic Assessments of the Sc-M (M: Cr, Gd, Mo, W and Zr) Systems. Journal of Phase Equilibria and Diffusion, 2015, 36, 3-9.	0.5	2
122	Experimental Determination of Phase Equilibria in the Ag-Cu-Sb Ternary System. Journal of Phase Equilibria and Diffusion, 2015, 36, 503-509.	0.5	2
123	Thermodynamic Assessments of the Au-Tb and Au-Lu Systems. Journal of Phase Equilibria and Diffusion, 2016, 37, 319-326.	0.5	2
124	Title is missing!. International Journal of Thermophysics, 1999, 20, 755-770.	1.0	1
125	Calculation of Thermodynamic Properties in Pure Organic Compounds. Journal of Phase Equilibria and Diffusion, 2009, 30, 46-58.	0.5	1
126	Experimental Investigation of Phase Equilibria in the Nb-Si-V Ternary System. Journal of Phase Equilibria and Diffusion, 2017, 38, 110-120.	0.5	1

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127	Phase Equilibria of the Ti-Ta-Si Ternary System at 1100 and 1300 Â°C. Journal of Phase Equilibria and Diffusion, 2022, 43, 58-67.	0.5	1
128	Revealing the role of local shear strain partition of transformable particles in a TRIP-reinforced bulk metallic glass composite via digital image correlation. International Journal of Minerals, Metallurgy and Materials, 2022, 29, 807-813.	2.4	1
129	Thermodynamic Calculation of Phase Equilibria and Its Applications in the Sn-Ag-Cu-Ni-Au System. , 2007, , .		0
130	Characteristics of atomic layer deposition-derived all-high-k-based structures for flash memory application. , 2011, , .		0
131	Experimental Investigation of the Phase Equilibria in the Coâ€“Vâ€“Sn Ternary System. Journal of Phase Equilibria and Diffusion, 2017, 38, 723-732.	0.5	0