Jian-Zhong Jiang

List of Publications by Year
in descending order

132 papers	3,868 citations	109321 35 h-index	144013 57 g-index
132 all docs	132 docs citations	132 times ranked	4708 citing authors

#	Article	IF	Citations
1	Correlation Between Viscosity and Local Atomic Structure in Liquid Zr56Co28Al16 Alloy. Microgravity Science and Technology, 2022, 34, 1.	1.4	2
2	Short-range order controlling atomic dynamics in Y-based metallic glasses. Physical Review B, 2022, 105, .	3.2	3
3	Ultrahigh specific hardness of Co-Ni-V-Al medium entropy alloy thin films. Materials Today Communications, 2022, 31, 103447.	1.9	0
4	Extra plasticity governed by shear band deflection in gradient metallic glasses. Nature Communications, 2022, 13, 2120.	12.8	27
5	Î²-Relaxation and Crystallization Behaviors in a Pulse-Current-Thermoplastic-Formed La-Based Bulk Metallic Glass. Journal of Physical Chemistry B, 2021, 125, 657-664.	2.6	5
6	Temperature-Induced Structural Changes in the Liquid GaInSn Eutectic Alloy. Journal of Physical Chemistry C, 2021, 125, 7413-7420.	3.1	8
7	Anomalous fast atomic dynamics in bulk metallic glasses. Materials Today Physics, 2021, 17, 100351.	6.0	4
8	Production of Uniformly Sized Gallium-Based Liquid Alloy Nanodroplets via Ultrasonic Method and Their Li-Ion Storage. Materials, 2021, 14, 1759.	2.9	9
9	Fabrication and optical behavior of AuCuSi amorphous alloy film. Nanotechnology, 2021, 32, 335702.	2.6	2
10	Structural rejuvenation in a Zr-based bulk metallic glass via electropulsing treatment. Applied Physics Letters, 2021, 119, .	3.3	5
11	A dual-phase alloy with ultrahigh strength-ductility synergy over a wide temperature range. Science Advances, 2021, 7, .	10.3	61
12	A Self-Healing Anode for Li-Ion Batteries by Rational Interface Modification of Room-Temperature Liquid Metal. ACS Applied Energy Materials, 2021, 4, 12224-12231.	5.1	18
13	Pressure-induced atomic packing change in Pd37Ni37S26 metallic glass. Acta Materialia, 2021, 216, 117116.	7.9	3
14	Different Thermal Responses of Local Structures in Pd43Cu27Ni10P20 Alloy from Glass to Liquid. Journal of Physical Chemistry C, 2020, 124, 19817-19828.	3.1	5
15	Contribution of cryogenic thermal cycling to the atomic dynamics in a La-based bulk metallic glass with different initial states. Journal of Applied Physics, 2020, 127, .	2.5	4
16	Novel Magnetic Field Modulation Concept Using Multiferroic Heterostructure for Magnetoresistive Sensors. Sensors, 2020, 20, 1440.	3.8	9
17	Phase Selection, Lattice Distortions, and Mechanical Properties in Highâ€Entropy Alloys. Advanced Engineering Materials, 2020, 22, 2000466.	3.5	59
18	Aging Behaviors in a La-Based Metallic Glass Revealed by Two-Time Correlation Functions. Journal of Physical Chemistry C, 2020, 124, 22753-22760.	3.1	2

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19	Temperature-induced structural evolution in liquid Ag-Ga alloys. Physical Review B, 2020, 102, .	3.2	1
20	Structural evolution in liquid GaIn eutectic alloy under high temperature and pressure. Journal of Applied Physics, 2019, 126, .	2.5	6
21	Temperature Dependences of Peak Positions in Pair Distribution Function of Metallic Liquids. Journal of Physical Chemistry B, 2019, 123, 7055-7060.	2.6	7
22	Powerâ€“Law Feature of Structure in Metallic Glasses. Journal of Physical Chemistry C, 2019, 123, 27868-27874.	3.1	4
23	Temperature- and Pressure-Induced Polyamorphic Transitions in AuCuSi Alloy. Journal of Physical Chemistry C, 2019, 123, 20342-20350.	3.1	8
24	Broadband Optical Absorber Based on Nanopatterned Metallic Glass Thin Films. Journal of Physical Chemistry Letters, 2019, 10, 6055-6060.	4.6	3
25	Temperature-Dependent Structural Evolution in Au₄₄Ga₅₆ Liquid Eutectic Alloy. Journal of Physical Chemistry C, 2019, 123, 25209-25219.	3.1	10
26	Surface Tension and Viscosity of Cu50Zr50 Measured by the Oscillating Drop Technique on Board the International Space Station. Microgravity Science and Technology, 2019, 31, 177-184.	1.4	35
27	Identifying surface structural changes in a newly-developed Ga-based alloy with melting temperature below 10â€Â°C. Applied Surface Science, 2019, 492, 143-149.	6.1	21
28	Improved Tensile Ductility by Severe Plastic Deformation for Nano-Structured Metallic Glass. Materials, 2019, 12, 1611.	2.9	6
29	Synthesis and characterization of macroporous europium-doped Ca₁₂Al₁₄O₃₃ (C12A7:Eu³⁺) and its application in metal ion detection. New Journal of Chemistry, 2019, 43, 8315-8324.	2.8	5
30	Metallic Glassy Thin Films: Perspective on Mechanical, Magnetic, Biomedical, and Optical Properties. Advanced Engineering Materials, 2019, 21, 1900046.	3.5	1
31	Two-dimensional ferroelectricity and switchable spin-textures in ultra-thin elemental Te multilayers. Materials Horizons, 2018, 5, 521-528.	12.2	96
32	Pressure-induced structural change and nucleation in liquid aluminum. Journal of Applied Physics, 2018, 124, 225903.	2.5	2
33	Surface compressive and softening effect on deformation mode transition in Ni-Nb metallic glassy thin films: A molecular dynamics study. Journal of Applied Physics, 2018, 124, 205304.	2.5	1
34	Structural Signature of Î²-Relaxation in La-Based Metallic Glasses. Journal of Physical Chemistry Letters, 2018, 9, 4308-4313.	4.6	20
35	Intermediate Temperature Brittleness in Metallic Glasses. Advanced Materials, 2017, 29, 1605537.	21.0	34
36	Broad band optical band-reject filters in near-infrared regime utilizing bilayer Ag metasurface. Journal of Applied Physics, 2017, 121, .	2.5	13

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37	Pressure-induced structural change in liquid GaIn eutectic alloy. Scientific Reports, 2017, 7, 1139.	3.3	17
38	Structural evolution and atomic dynamics in Niâ€“Nb metallic glasses: A molecular dynamics study. Journal of Chemical Physics, 2017, 147, 144503.	3.0	18
39	Perspective on Structural Evolution and Relations with Thermophysical Properties of Metallic Liquids. Advanced Materials, 2017, 29, 1703136.	21.0	11
40	Elastic Anomaly and Polyamorphic Transition in (La, Ce)-based Bulk Metallic Glass under Pressure. Scientific Reports, 2017, 7, 724.	3.3	6
41	Liquid-to-liquid crossover in the GaIn eutectic alloy. Physical Review B, 2017, 95, .	3.2	21
42	Size effect on atomic structure in low-dimensional Cu-Zr amorphous systems. Scientific Reports, 2017, 7, 7291.	3.3	11
43	Structural stability of high entropy alloys under pressure and temperature. Journal of Applied Physics, 2017, 121, .	2.5	44
44	Layer-dependent semiconductor-metal transition of SnO/Si(001) heterostructure and device application. Scientific Reports, 2017, 7, 2570.	3.3	5
45	Correlation Between Local Structure and Boson Peak in Metallic Glasses. Journal of Low Temperature Physics, 2017, 186, 172-181.	1.4	6
46	Abnormal correlation between phase transformation and cooling rate for pure metals. Scientific Reports, 2016, 6, 22391.	3.3	20
47	Pressure-induced polyamorphism in a main-group metallic glass. Physical Review B, 2016, 94, .	3.2	14
48	Topological Properties of Atomic Lead Film with Honeycomb Structure. Scientific Reports, 2016, 6, 21723.	3.3	21
49	Reversible devitrification in amorphous As2Se3 under pressure. Physical Review B, 2016, 94, .	3.2	4
50	Multiple unpinned Dirac points in group-Va single-layers with phosphorene structure. Npj Computational Materials, 2016, 2, .	8.7	57
51	Deformation behavior of metallic glasses with shear band like atomic structure: a molecular dynamics study. Scientific Reports, 2016, 6, 30935.	3.3	33
52	Strain-Induced Isostructural and Magnetic Phase Transitions in Monolayer MoN₂. Nano Letters, 2016, 16, 4576-4582.	9.1	129
53	Atomicâ€Level Mechanisms of Nucleation of Pure Liquid Metals during Rapid Cooling. ChemPhysChem, 2015, 16, 3916-3927.	2.1	12
54	Some Issues in Liquid Metals Research. Metals, 2015, 5, 2128-2133.	2.3	6

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55	Atomic picture of elastic deformation in a metallic glass. Scientific Reports, 2015, 5, 9184.	3.3	22
56	Origin of pressure-induced crystallization of Ce75Al25 metallic glass. Nature Communications, 2015, 6, 6493.	12.8	33
57	Role of string-like collective atomic motion on diffusion and structural relaxation in glass forming Cu-Zr alloys. Journal of Chemical Physics, 2015, 142, 164506.	3.0	97
58	Lowâ€Density Highâ€Strength Bulk Metallic Glasses and Their Composites: A Review. Advanced Engineering Materials, 2015, 17, 761-780.	3.5	68
59	Influence of film thickness and nanograting period on color-filter behaviors of plasmonic metal Ag films. Journal of Applied Physics, 2014, 115, 113104.	2.5	26
60	Study on new magnetization property and its microâ€mechanism that occurred in antiâ€ferromagnetic NiO nanoflowers with nearly uniform size. Journal of Raman Spectroscopy, 2014, 45, 822-825.	2.5	4
61	Nucleation driven by orientational order in supercooled niobium as seen viaab initiomolecular dynamics. Physical Review B, 2014, 89, .	3.2	23
62	Interfacial Free Energy Controlling Glass-Forming Ability of Cu-Zr Alloys. Scientific Reports, 2014, 4, 5167.	3.3	33
63	A heterostructured Ag@In2S3 composite with enhanced lithium storage capacity. Journal of Materials Chemistry A, 2013, 1, 5208.	10.3	13
64	Structural evolution in bulk metallic glass under high-temperature tension. Applied Physics Letters, 2013, 102, 051909.	3.3	5
65	Shock-induced phase transitions of Î±-Ce3Al. Journal of Applied Physics, 2013, 113, .	2.5	5
66	Pressure-induced amorphous-to-amorphous reversible transformation in Pr75Al25. Journal of Applied Physics, 2013, 114, 213516.	2.5	14
67	Negative expansions of interatomic distances in metallic melts. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 10068-10072.	7.1	115
68	The effect of composition on pressure-induced devitrification in metallic glasses. Applied Physics Letters, 2013, 102, .	3.3	14
69	Super elastic strain limit in metallic glass films. Scientific Reports, 2012, 2, 852.	3.3	68
70	Electric field induced phase instability in typical (Na,K)(Nb,Sb)O₃-LiTaO₃ ceramics near orthorhombic and tetragonal phase boundary. Applied Physics Letters, 2012, 101, 092906.	3.3	26
71	In situ synthesis of SnS2@graphene nanocomposites for rechargeable lithium batteries. Journal of Materials Chemistry, 2012, 22, 9494.	6.7	105
72	Cuï£¿Zrï£¿Alï£¿Ti Bulk Metallic Glass with Enhanced Glassâ€Forming Ability, Mechanical Properties, Corrosion Resistance and Biocompatibility. Advanced Engineering Materials, 2012, 14, 195-199.	3.5	11

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73	Large-scale synthesis of In2S3 nanosheets and their rechargeable lithium-ion battery. Journal of Materials Chemistry, 2011, 21, 17063.	6.7	59
74	Stability and Properties of Two-Dimensional Graphene Hydroxide. Journal of Physical Chemistry Letters, 2011, 2, 1310-1314.	4.6	14
75	Heterogeneities in CuZr-based bulk metallic glasses studied by x-ray scattering. Journal of Physics Condensed Matter, 2011, 23, 075402.	1.8	15
76	Pressure-induced electron topological transitions in Ba-doped Si clathrate. Physical Review B, 2011, 84, .	3.2	17
77	Low temperature transport properties of Ce-Al metallic glasses. Journal of Applied Physics, 2011, 109, 113716.	2.5	15
78	Atomic packing in Mg61Cu28Gd11 bulk metallic glass. Applied Physics Letters, 2011, 98, 031901.	3.3	9
79	73 mm-diameter bulk metallic glass rod by copper mould casting. Applied Physics Letters, 2011, 99, .	3.3	84
80	Analysis on variety and characteristics of maghemite. Science China Earth Sciences, 2010, 53, 1153-1162.	5.2	42
81	Transition metal adatom and dimer adsorbed on graphene: Induced magnetization and electronic structures. Physical Review B, 2010, 81, .	3.2	234
82	High-pressure behavior of Î²-Ga2O3 nanocrystals. Journal of Applied Physics, 2010, 107, 033520.	2.5	27
83	Homogeneity of the superplastic Zr_{64.13}Cu_{15.75}Ni_{10.12}Al₁₀ bulk metallic glass. Journal of Materials Research, 2009, 24, 3116-3120.	2.6	11
84	Magnetism of O-Terminated ZnO(0001) with Adsorbates. Journal of Physical Chemistry C, 2009, 113, 16116-16120.	3.1	36
85	Local strain behavior of bulk metallic glasses under tension studied by in situ x-ray diffraction. Applied Physics Letters, 2009, 94, 011911.	3.3	24
86	Achieving large macroscopic compressive plastic deformation and work-hardening-like behavior in a monolithic bulk metallic glass by tailoring stress distribution. Applied Physics Letters, 2008, 92, .	3.3	40
87	Origin of ferromagnetism in ZnO codoped with Ga and Co: Experiment and theory. Physical Review B, 2008, 78, .	3.2	65
88	Atomic structure and glass forming ability of Cu46Zr46Al8 bulk metallic glass. Journal of Applied Physics, 2008, 104, .	2.5	50
89	The effect of cooling rate on the microstructure and mechanical properties of Mgâ€“Znâ€“Gd-based alloys. International Journal of Materials Research, 2008, 99, 973-978.	0.3	7
90	Electron density topology of high-pressure<mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:msub><mml:mi mathvariant="normal">Ba</mml:mi><mml:mn>8</mml:mn></mml:msub><mml:msub><mml:mi mathvariant="normal">Si</mml:mi><mml:mn>46</mml:mn></mml:msub></mml:mrow></mml:math>from a combined Rietveld and maximum-entropy analysis. Physical Review B, 2007, 76, .	3.2	20

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91	Enhancement of plasticity in Zr-based bulk metallic glasses. Journal of Materials Research, 2007, 22, 2454-2459.	2.6	7
92	Tension and stress relaxation behavior of a La-based bulk metallic glass. Journal of Materials Research, 2007, 22, 3303-3308.	2.6	3
93	Bulk Modulus and Structural Phase Transitions of Wurtzite CoO Nanocrystals. Journal of Physical Chemistry C, 2007, 111, 2-5.	3.1	29
94	Study on the quantum confinement effect on ultraviolet photoluminescence of crystalline ZnO nanoparticles with nearly uniform size. Applied Physics Letters, 2007, 90, 263113.	3.3	45
95	Pressure-induced phase transition in Co-doped ZnO. Physica Status Solidi (B): Basic Research, 2007, 244, 234-238.	1.5	14
96	Pressure-induced phase transformations in theBa8Si46clathrate. Physical Review B, 2006, 74, .	3.2	24
97	Absence of ferromagnetism in bulk polycrystallineZn0.9Co0.1O. Physical Review B, 2006, 73, .	3.2	105
98	Free-volume evolution and its temperature dependence during rolling of Cu60Zr20Ti20 bulk metallic glass. Applied Physics Letters, 2005, 87, 101901.	3.3	47
99	Mechanically driven phase separation and corresponding microhardness change in Cu60Zr20Ti20 bulk metallic glass. Applied Physics Letters, 2005, 86, 081913.	3.3	53
100	High-pressure behavior ofSnO2nanocrystals. Physical Review B, 2005, 72, .	3.2	69
101	Pressure effect of glass transition temperature in Zr46.8Ti8.2Cu7.5Ni10Be27.5 bulk metallic glass. Applied Physics Letters, 2004, 84, 1871-1873.	3.3	52
102	Short-range structure of Zr41Ti14Cu12.5Ni10Be22.5 glass prepared by shock wave. Applied Physics Letters, 2004, 84, 4998-5000.	3.3	20
103	Phase transformations in nanocrystals. Journal of Materials Science, 2004, 39, 5103-5110.	3.7	36
104	Deformation-induced reactions of ZnO and TiO2. Journal of Materials Science, 2004, 39, 5389-5392.	3.7	13
105	Origin of the low compressibility in hard nitride spinels. Physical Review B, 2003, 68, .	3.2	36
106	Crystallization of Cu₆₀Ti₂₀Zr₂₀ metallic glass with and without pressure. Journal of Materials Research, 2003, 18, 895-898.	2.6	37
107	Evidence of icosahedral short-range order in Zr70Cu30 and Zr70Cu29Pd1 metallic glasses. Applied Physics Letters, 2003, 83, 3924-3926.	3.3	108
108	Structural behavior of Pd40Cu30Ni10P20 bulk metallic glass below and above the glass transition. Applied Physics Letters, 2003, 82, 2589-2591.	3.3	68

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109	Comment on â€œUnusual transition phenomenon in Zr-based bulk metallic glass upon heating at high pressureâ€•[Appl. Phys. Lett. 80, 3087 (2002)]. Applied Physics Letters, 2002, 81, 3894-3895.	3.3	1
110	Comment on â€œPressure-induced amorphization of ZrTiCuNiBe bulk glass-forming alloyâ€•[Appl. Phys. Lett. 79, 1106 (2001)]. Applied Physics Letters, 2002, 80, 700-700.	3.3	2
111	High-Pressure Behavior of Nano Titanium Dioxide. High Pressure Research, 2002, 22, 385-389.	1.2	25
112	X-ray Diffraction Study on Pressure-Induced Phase Transformation in Nanocrystalline GaAs. High Pressure Research, 2002, 22, 395-398.	1.2	11
113	Glass transition, crystallization kinetics and pressure effect on crystallization of ZrNbCuNiBe bulk metallic glass. Journal of Applied Physics, 2002, 91, 4956-4960.	2.5	24
114	Synthesis of ternary nitrides by mechanochemical alloying. Journal of Materials Chemistry, 2002, 12, 3113-3116.	6.7	18
115	Trapping of cubic ZnO nanocrystallites at ambient conditions. Applied Physics Letters, 2002, 81, 4820-4822.	3.3	86
116	High-Temperature MÃ¶ssbauer Spectroscopy of Mechanically Milled NiFe2O4. Hyperfine Interactions, 2002, 139/140, 325-333.	0.5	14
117	Preparation of Feâ€“Moâ€“C ternary carbide by mechanical alloying. Journal of Materials Chemistry, 2001, 11, 864-868.	6.7	6
118	Grain-Size and Alloying Effects on the Pressure-Induced bcc-to-hcp Transition in Nanocrystalline Iron. Materials Transactions, 2001, 42, 1571-1574.	1.2	9
119	Formation of perovskite-related structures CaMO3 (M = Sn, Ti) by mechanical milling. Journal of Materials Science, 2001, 36, 3637-3640.	3.7	11
120	MAGNETIC STRUCTURE OF ZINC-FERRITE APPROACHING NANOMETER SIZES. International Journal of Modern Physics B, 2001, 15, 3312-3316.	2.0	7
121	Elastic properties of Pd40Cu30Ni10P20 bulk glass in supercooled liquid region. Applied Physics Letters, 2001, 78, 1985-1987.	3.3	52
122	Evidence of a stable binary CdCa quasicrystalline phase. Applied Physics Letters, 2001, 78, 1856-1857.	3.3	10
123	Bulk Mg-Cu-Y-Al Alloys in the Amorphous, Supercooled Liquid and Crystalline States. Materials Research Society Symposia Proceedings, 2000, 644, 411.	0.1	1
124	The chemical heterogeneity of active surface of solid catalysts. Journal of Materials Science, 2000, 35, 5787-5789.	3.7	3
125	Formation of quasicrystals in Zr46.8Ti8.2Cu7.5Ni10Be27.5 bulk glass. Applied Physics Letters, 2000, 77, 3935-3937.	3.3	67
126	Crystallization of Bulk Zr48Nb8Cu14Ni12Be18Metallic Glass. Materials Research Society Symposia Proceedings, 2000, 644, 521.	0.1	0

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127	Phase transitions in Ca1 â^' xSrxTiO3 perovskites: effects of composition and temperature. Journal of Materials Chemistry, 2000, 10, 1609-1615.	6.7	90
128	Ammonia synthesis over multiâ€promoted iron catalysts obtained by highâ€energy ballâ€milling. Catalysis Letters, 1999, 61, 115-120.	2.6	12
129	Structure and Thermal Stability of Nanostructured Iron-doped Zirconia Prepared by High-energy Ball Milling. Journal of Materials Research, 1999, 14, 1343-1352.	2.6	92
130	Laser-induced Growth of Square Hollow Microtubes on Vanadium Metal. Journal of Materials Science Letters, 1998, 17, 1301-1303.	0.5	0
131	Structural and magnetic properties of ball milled copper ferrite. Journal of Applied Physics, 1998, 84, 1101-1108.	2.5	176
132	MAGNETIC PROPERTIES OF NANOMETER-SIZED CRYSTALLINE AND AMORPHOUS PARTICLES (Invited). , 1998, , .		0