

Jian-Zhong Jiang

List of Publications by Year in descending order

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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	Transition metal adatom and dimer adsorbed on graphene: Induced magnetization and electronic structures. <i>Physical Review B</i> , 2010, 81, .	3.2	234
2	Structural and magnetic properties of ball milled copper ferrite. <i>Journal of Applied Physics</i> , 1998, 84, 1101-1108.	2.5	176
3	Strain-Induced Isostructural and Magnetic Phase Transitions in Monolayer MoN ₂ . <i>Nano Letters</i> , 2016, 16, 4576-4582.	9.1	129
4	Negative expansions of interatomic distances in metallic melts. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 10068-10072.	7.1	115
5	Evidence of icosahedral short-range order in Zr ₇₀ Cu ₃₀ and Zr ₇₀ Cu ₂₉ Pd ₁ metallic glasses. <i>Applied Physics Letters</i> , 2003, 83, 3924-3926.	3.3	108
6	Absence of ferromagnetism in bulk polycrystalline Zn _{0.9} Co _{0.1} O. <i>Physical Review B</i> , 2006, 73, .	3.2	105
7	In situ synthesis of SnS ₂ @graphene nanocomposites for rechargeable lithium batteries. <i>Journal of Materials Chemistry</i> , 2012, 22, 9494.	6.7	105
8	Role of string-like collective atomic motion on diffusion and structural relaxation in glass forming Cu-Zr alloys. <i>Journal of Chemical Physics</i> , 2015, 142, 164506.	3.0	97
9	Two-dimensional ferroelectricity and switchable spin-textures in ultra-thin elemental Te multilayers. <i>Materials Horizons</i> , 2018, 5, 521-528.	12.2	96
10	Structure and Thermal Stability of Nanostructured Iron-doped Zirconia Prepared by High-energy Ball Milling. <i>Journal of Materials Research</i> , 1999, 14, 1343-1352.	2.6	92
11	Phase transitions in Ca _{1-x} Sr _x TiO ₃ perovskites: effects of composition and temperature. <i>Journal of Materials Chemistry</i> , 2000, 10, 1609-1615.	6.7	90
12	Trapping of cubic ZnO nanocrystallites at ambient conditions. <i>Applied Physics Letters</i> , 2002, 81, 4820-4822.	3.3	86
13	73 mm-diameter bulk metallic glass rod by copper mould casting. <i>Applied Physics Letters</i> , 2011, 99, .	3.3	84
14	High-pressure behavior of SnO ₂ nanocrystals. <i>Physical Review B</i> , 2005, 72, .	3.2	69
15	Structural behavior of Pd ₄₀ Cu ₃₀ Ni ₁₀ P ₂₀ bulk metallic glass below and above the glass transition. <i>Applied Physics Letters</i> , 2003, 82, 2589-2591.	3.3	68
16	Super elastic strain limit in metallic glass films. <i>Scientific Reports</i> , 2012, 2, 852.	3.3	68
17	Low-Density High-Strength Bulk Metallic Glasses and Their Composites: A Review. <i>Advanced Engineering Materials</i> , 2015, 17, 761-780.	3.5	68
18	Formation of quasicrystals in Zr _{46.8} Ti _{8.2} Cu _{7.5} Ni ₁₀ Be _{27.5} bulk glass. <i>Applied Physics Letters</i> , 2000, 77, 3935-3937.	3.3	67

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19	Origin of ferromagnetism in ZnO codoped with Ga and Co: Experiment and theory. <i>Physical Review B</i> , 2008, 78, .	3.2	65
20	A dual-phase alloy with ultrahigh strength-ductility synergy over a wide temperature range. <i>Science Advances</i> , 2021, 7, .	10.3	61
21	Large-scale synthesis of In ₂ S ₃ nanosheets and their rechargeable lithium-ion battery. <i>Journal of Materials Chemistry</i> , 2011, 21, 17063.	6.7	59
22	Phase Selection, Lattice Distortions, and Mechanical Properties in High-Entropy Alloys. <i>Advanced Engineering Materials</i> , 2020, 22, 2000466.	3.5	59
23	Multiple unpinned Dirac points in group-Va single-layers with phosphorene structure. <i>Npj Computational Materials</i> , 2016, 2, .	8.7	57
24	Mechanically driven phase separation and corresponding microhardness change in Cu ₆₀ Zr ₂₀ Ti ₂₀ bulk metallic glass. <i>Applied Physics Letters</i> , 2005, 86, 081913.	3.3	53
25	Elastic properties of Pd ₄₀ Cu ₃₀ Ni ₁₀ P ₂₀ bulk glass in supercooled liquid region. <i>Applied Physics Letters</i> , 2001, 78, 1985-1987.	3.3	52
26	Pressure effect of glass transition temperature in Zr _{46.8} Ti _{8.2} Cu _{7.5} Ni ₁₀ Be _{27.5} bulk metallic glass. <i>Applied Physics Letters</i> , 2004, 84, 1871-1873.	3.3	52
27	Atomic structure and glass forming ability of Cu ₄₆ Zr ₄₆ Al ₈ bulk metallic glass. <i>Journal of Applied Physics</i> , 2008, 104, .	2.5	50
28	Free-volume evolution and its temperature dependence during rolling of Cu ₆₀ Zr ₂₀ Ti ₂₀ bulk metallic glass. <i>Applied Physics Letters</i> , 2005, 87, 101901.	3.3	47
29	Study on the quantum confinement effect on ultraviolet photoluminescence of crystalline ZnO nanoparticles with nearly uniform size. <i>Applied Physics Letters</i> , 2007, 90, 263113.	3.3	45
30	Structural stability of high entropy alloys under pressure and temperature. <i>Journal of Applied Physics</i> , 2017, 121, .	2.5	44
31	Analysis on variety and characteristics of maghemite. <i>Science China Earth Sciences</i> , 2010, 53, 1153-1162.	5.2	42
32	Achieving large macroscopic compressive plastic deformation and work-hardening-like behavior in a monolithic bulk metallic glass by tailoring stress distribution. <i>Applied Physics Letters</i> , 2008, 92, .	3.3	40
33	Crystallization of Cu ₆₀ Ti ₂₀ Zr ₂₀ metallic glass with and without pressure. <i>Journal of Materials Research</i> , 2003, 18, 895-898.	2.6	37
34	Origin of the low compressibility in hard nitride spinels. <i>Physical Review B</i> , 2003, 68, .	3.2	36
35	Phase transformations in nanocrystals. <i>Journal of Materials Science</i> , 2004, 39, 5103-5110.	3.7	36
36	Magnetism of O-Terminated ZnO(0001) with Adsorbates. <i>Journal of Physical Chemistry C</i> , 2009, 113, 16116-16120.	3.1	36

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37	Surface Tension and Viscosity of Cu ₅₀ Zr ₅₀ Measured by the Oscillating Drop Technique on Board the International Space Station. <i>Microgravity Science and Technology</i> , 2019, 31, 177-184.	1.4	35
38	Intermediate Temperature Brittleness in Metallic Glasses. <i>Advanced Materials</i> , 2017, 29, 1605537.	21.0	34
39	Origin of pressure-induced crystallization of Ce ₇₅ Al ₂₅ metallic glass. <i>Nature Communications</i> , 2015, 6, 6493.	12.8	33
40	Interfacial Free Energy Controlling Glass-Forming Ability of Cu-Zr Alloys. <i>Scientific Reports</i> , 2014, 4, 5167.	3.3	33
41	Deformation behavior of metallic glasses with shear band like atomic structure: a molecular dynamics study. <i>Scientific Reports</i> , 2016, 6, 30935.	3.3	33
42	Bulk Modulus and Structural Phase Transitions of Wurtzite CoO Nanocrystals. <i>Journal of Physical Chemistry C</i> , 2007, 111, 2-5.	3.1	29
43	High-pressure behavior of $\hat{\Gamma}^2$ -Ga ₂ O ₃ nanocrystals. <i>Journal of Applied Physics</i> , 2010, 107, 033520.	2.5	27
44	Extra plasticity governed by shear band deflection in gradient metallic glasses. <i>Nature Communications</i> , 2022, 13, 2120.	12.8	27
45	Electric field induced phase instability in typical (Na,K)(Nb,Sb)O ₃ -LiTaO ₃ ceramics near orthorhombic and tetragonal phase boundary. <i>Applied Physics Letters</i> , 2012, 101, 092906.	3.3	26
46	Influence of film thickness and nanograting period on color-filter behaviors of plasmonic metal Ag films. <i>Journal of Applied Physics</i> , 2014, 115, 113104.	2.5	26
47	High-Pressure Behavior of Nano Titanium Dioxide. <i>High Pressure Research</i> , 2002, 22, 385-389.	1.2	25
48	Glass transition, crystallization kinetics and pressure effect on crystallization of ZrNbCuNiBe bulk metallic glass. <i>Journal of Applied Physics</i> , 2002, 91, 4956-4960.	2.5	24
49	Pressure-induced phase transformations in the Ba ₈ Si ₄₆ clathrate. <i>Physical Review B</i> , 2006, 74, .	3.2	24
50	Local strain behavior of bulk metallic glasses under tension studied by in situ x-ray diffraction. <i>Applied Physics Letters</i> , 2009, 94, 011911.	3.3	24
51	Nucleation driven by orientational order in supercooled niobium as seen via <i>ab initio</i> molecular dynamics. <i>Physical Review B</i> , 2014, 89, .	3.2	23
52	Atomic picture of elastic deformation in a metallic glass. <i>Scientific Reports</i> , 2015, 5, 9184.	3.3	22
53	Topological Properties of Atomic Lead Film with Honeycomb Structure. <i>Scientific Reports</i> , 2016, 6, 21723.	3.3	21
54	Liquid-to-liquid crossover in the Galn eutectic alloy. <i>Physical Review B</i> , 2017, 95, .	3.2	21

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55	Identifying surface structural changes in a newly-developed Ga-based alloy with melting temperature below 10 $\times 10^3$ °C. Applied Surface Science, 2019, 492, 143-149.	6.1	21
56	Short-range structure of Zr ₄₁ Ti ₁₄ Cu _{12.5} Ni ₁₀ Be _{22.5} glass prepared by shock wave. Applied Physics Letters, 2004, 84, 4998-5000.	3.3	20
57	Electron density topology of high-pressure Ba ₈ Si ₄₆ from a combined Rietveld and maximum-entropy analysis. Physical Review B, 2007, 76, .	3.2	20
58	Abnormal correlation between phase transformation and cooling rate for pure metals. Scientific Reports, 2016, 6, 22391.	3.3	20
59	Structural Signature of $\hat{\nu}^2$ -Relaxation in La-Based Metallic Glasses. Journal of Physical Chemistry Letters, 2018, 9, 4308-4313.	4.6	20
60	Synthesis of ternary nitrides by mechanochemical alloying. Journal of Materials Chemistry, 2002, 12, 3113-3116.	6.7	18
61	Structural evolution and atomic dynamics in Ni-Nb metallic glasses: A molecular dynamics study. Journal of Chemical Physics, 2017, 147, 144503.	3.0	18
62	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
63	Pressure-induced electron topological transitions in Ba-doped Si clathrate. Physical Review B, 2011, 84, .	3.2	17
64	Pressure-induced structural change in liquid GaIn eutectic alloy. Scientific Reports, 2017, 7, 1139.	3.3	17
65	Heterogeneities in CuZr-based bulk metallic glasses studied by x-ray scattering. Journal of Physics Condensed Matter, 2011, 23, 075402.	1.8	15
66	Low temperature transport properties of Ce-Al metallic glasses. Journal of Applied Physics, 2011, 109, 113716.	2.5	15
67	High-Temperature Mössbauer Spectroscopy of Mechanically Milled NiFe ₂ O ₄ . Hyperfine Interactions, 2002, 139/140, 325-333.	0.5	14
68	Pressure-induced phase transition in Co-doped ZnO. Physica Status Solidi (B): Basic Research, 2007, 244, 234-238.	1.5	14
69	Stability and Properties of Two-Dimensional Graphene Hydroxide. Journal of Physical Chemistry Letters, 2011, 2, 1310-1314.	4.6	14
70	Pressure-induced amorphous-to-amorphous reversible transformation in Pr ₇₅ Al ₂₅ . Journal of Applied Physics, 2013, 114, 213516.	2.5	14
71	The effect of composition on pressure-induced devitrification in metallic glasses. Applied Physics Letters, 2013, 102, .	3.3	14
72	Pressure-induced polyamorphism in a main-group metallic glass. Physical Review B, 2016, 94, .	3.2	14

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73	Deformation-induced reactions of ZnO and TiO ₂ . Journal of Materials Science, 2004, 39, 5389-5392.	3.7	13
74	A heterostructured Ag@In ₂ S ₃ composite with enhanced lithium storage capacity. Journal of Materials Chemistry A, 2013, 1, 5208.	10.3	13
75	Broad band optical band-reject filters in near-infrared regime utilizing bilayer Ag metasurface. Journal of Applied Physics, 2017, 121, .	2.5	13
76	Ammonia synthesis over multi- η -promoted iron catalysts obtained by high-energy ball-milling. Catalysis Letters, 1999, 61, 115-120.	2.6	12
77	Atomic-Level Mechanisms of Nucleation of Pure Liquid Metals during Rapid Cooling. ChemPhysChem, 2015, 16, 3916-3927.	2.1	12
78	Formation of perovskite-related structures CaMO ₃ (M = Sn, Ti) by mechanical milling. Journal of Materials Science, 2001, 36, 3637-3640.	3.7	11
79	X-ray Diffraction Study on Pressure-Induced Phase Transformation in Nanocrystalline GaAs. High Pressure Research, 2002, 22, 395-398.	1.2	11
80	Homogeneity of the superplastic Zr _{64.13} Cu _{15.75} Ni _{10.12} Al ₁₀ bulk metallic glass. Journal of Materials Research, 2009, 24, 3116-3120.	2.6	11
81	Cu ₅₅ Zr ₁₅ Al ₁₅ Ti Bulk Metallic Glass with Enhanced Glass-Forming Ability, Mechanical Properties, Corrosion Resistance and Biocompatibility. Advanced Engineering Materials, 2012, 14, 195-199.	3.5	11
82	Perspective on Structural Evolution and Relations with Thermophysical Properties of Metallic Liquids. Advanced Materials, 2017, 29, 1703136.	21.0	11
83	Size effect on atomic structure in low-dimensional Cu-Zr amorphous systems. Scientific Reports, 2017, 7, 7291.	3.3	11
84	Evidence of a stable binary CdCa quasicrystalline phase. Applied Physics Letters, 2001, 78, 1856-1857.	3.3	10
85	Temperature-Dependent Structural Evolution in Au ₄₄ Ga ₅₆ Liquid Eutectic Alloy. Journal of Physical Chemistry C, 2019, 123, 25209-25219.	3.1	10
86	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
87	Atomic packing in Mg ₆₁ Cu ₂₈ Gd ₁₁ bulk metallic glass. Applied Physics Letters, 2011, 98, 031901.	3.3	9
88	Novel Magnetic Field Modulation Concept Using Multiferroic Heterostructure for Magnetoresistive Sensors. Sensors, 2020, 20, 1440.	3.8	9
89	Production of Uniformly Sized Gallium-Based Liquid Alloy Nanodroplets via Ultrasonic Method and Their Li-Ion Storage. Materials, 2021, 14, 1759.	2.9	9
90	Temperature- and Pressure-Induced Polyamorphic Transitions in AuCuSi Alloy. Journal of Physical Chemistry C, 2019, 123, 20342-20350.	3.1	8

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91	Temperature-Induced Structural Changes in the Liquid GaInSn Eutectic Alloy. <i>Journal of Physical Chemistry C</i> , 2021, 125, 7413-7420.	3.1	8
92	MAGNETIC STRUCTURE OF ZINC-FERRITE APPROACHING NANOMETER SIZES. <i>International Journal of Modern Physics B</i> , 2001, 15, 3312-3316.	2.0	7
93	Enhancement of plasticity in Zr-based bulk metallic glasses. <i>Journal of Materials Research</i> , 2007, 22, 2454-2459.	2.6	7
94	The effect of cooling rate on the microstructure and mechanical properties of Mg-Zn-Gd-based alloys. <i>International Journal of Materials Research</i> , 2008, 99, 973-978.	0.3	7
95	Temperature Dependences of Peak Positions in Pair Distribution Function of Metallic Liquids. <i>Journal of Physical Chemistry B</i> , 2019, 123, 7055-7060.	2.6	7
96	Preparation of Fe-Mo-C ternary carbide by mechanical alloying. <i>Journal of Materials Chemistry</i> , 2001, 11, 864-868.	6.7	6
97	Some Issues in Liquid Metals Research. <i>Metals</i> , 2015, 5, 2128-2133.	2.3	6
98	Elastic Anomaly and Polyamorphic Transition in (La, Ce)-based Bulk Metallic Glass under Pressure. <i>Scientific Reports</i> , 2017, 7, 724.	3.3	6
99	Correlation Between Local Structure and Boson Peak in Metallic Glasses. <i>Journal of Low Temperature Physics</i> , 2017, 186, 172-181.	1.4	6
100	Structural evolution in liquid GaIn eutectic alloy under high temperature and pressure. <i>Journal of Applied Physics</i> , 2019, 126, .	2.5	6
101	Improved Tensile Ductility by Severe Plastic Deformation for Nano-Structured Metallic Glass. <i>Materials</i> , 2019, 12, 1611.	2.9	6
102	Structural evolution in bulk metallic glass under high-temperature tension. <i>Applied Physics Letters</i> , 2013, 102, 051909.	3.3	5
103	Shock-induced phase transitions of $\text{La-Ce}_3\text{Al}$. <i>Journal of Applied Physics</i> , 2013, 113, .	2.5	5
104	Layer-dependent semiconductor-metal transition of SnO/Si(001) heterostructure and device application. <i>Scientific Reports</i> , 2017, 7, 2570.	3.3	5
105	Synthesis and characterization of macroporous europium-doped $\text{Ca}_{12}\text{Al}_{14}\text{O}_{33}$ ($\text{C}_{12}\text{A}_7\text{:Eu}^{3+}$) and its application in metal ion detection. <i>New Journal of Chemistry</i> , 2019, 43, 8315-8324.	2.8	5
106	Different Thermal Responses of Local Structures in Pd ₄₃ Cu ₂₇ Ni ₁₀ P ₂₀ Alloy from Glass to Liquid. <i>Journal of Physical Chemistry C</i> , 2020, 124, 19817-19828.	3.1	5
107	β -Relaxation and Crystallization Behaviors in a Pulse-Current-Thermoplastic-Formed La-Based Bulk Metallic Glass. <i>Journal of Physical Chemistry B</i> , 2021, 125, 657-664.	2.6	5
108	Structural rejuvenation in a Zr-based bulk metallic glass via electropulsing treatment. <i>Applied Physics Letters</i> , 2021, 119, .	3.3	5

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109	Study on new magnetization property and its micro-mechanism that occurred in anti-ferromagnetic NiO nanoflowers with nearly uniform size. <i>Journal of Raman Spectroscopy</i> , 2014, 45, 822-825.	2.5	4
110	Reversible devitrification in amorphous As ₂ Se ₃ under pressure. <i>Physical Review B</i> , 2016, 94, .	3.2	4
111	Power-Law Feature of Structure in Metallic Glasses. <i>Journal of Physical Chemistry C</i> , 2019, 123, 27868-27874.	3.1	4
112	Contribution of cryogenic thermal cycling to the atomic dynamics in a La-based bulk metallic glass with different initial states. <i>Journal of Applied Physics</i> , 2020, 127, .	2.5	4
113	Anomalous fast atomic dynamics in bulk metallic glasses. <i>Materials Today Physics</i> , 2021, 17, 100351.	6.0	4
114	The chemical heterogeneity of active surface of solid catalysts. <i>Journal of Materials Science</i> , 2000, 35, 5787-5789.	3.7	3
115	Tension and stress relaxation behavior of a La-based bulk metallic glass. <i>Journal of Materials Research</i> , 2007, 22, 3303-3308.	2.6	3
116	Broadband Optical Absorber Based on Nanopatterned Metallic Glass Thin Films. <i>Journal of Physical Chemistry Letters</i> , 2019, 10, 6055-6060.	4.6	3
117	Pressure-induced atomic packing change in Pd ₃₇ Ni ₃₇ S ₂₆ metallic glass. <i>Acta Materialia</i> , 2021, 216, 117116.	7.9	3
118	Short-range order controlling atomic dynamics in Y-based metallic glasses. <i>Physical Review B</i> , 2022, 105, .	3.2	3
119	Comment on "Pressure-induced amorphization of ZrTiCuNiBe bulk glass-forming alloy" [<i>Appl. Phys. Lett.</i> 79, 1106 (2001)]. <i>Applied Physics Letters</i> , 2002, 80, 700-700.	3.3	2
120	Pressure-induced structural change and nucleation in liquid aluminum. <i>Journal of Applied Physics</i> , 2018, 124, 225903.	2.5	2
121	Fabrication and optical behavior of AuCuSi amorphous alloy film. <i>Nanotechnology</i> , 2021, 32, 335702.	2.6	2
122	Aging Behaviors in a La-Based Metallic Glass Revealed by Two-Time Correlation Functions. <i>Journal of Physical Chemistry C</i> , 2020, 124, 22753-22760.	3.1	2
123	Correlation Between Viscosity and Local Atomic Structure in Liquid Zr ₅₆ Co ₂₈ Al ₁₆ Alloy. <i>Microgravity Science and Technology</i> , 2022, 34, 1.	1.4	2
124	Bulk Mg-Cu-Y-Al Alloys in the Amorphous, Supercooled Liquid and Crystalline States. <i>Materials Research Society Symposia Proceedings</i> , 2000, 644, 411.	0.1	1
125	Comment on "Unusual transition phenomenon in Zr-based bulk metallic glass upon heating at high pressure" [<i>Appl. Phys. Lett.</i> 80, 3087 (2002)]. <i>Applied Physics Letters</i> , 2002, 81, 3894-3895.	3.3	1
126	Surface compressive and softening effect on deformation mode transition in Ni-Nb metallic glassy thin films: A molecular dynamics study. <i>Journal of Applied Physics</i> , 2018, 124, 205304.	2.5	1

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127	Metallic Glassy Thin Films: Perspective on Mechanical, Magnetic, Biomedical, and Optical Properties. <i>Advanced Engineering Materials</i> , 2019, 21, 1900046.	3.5	1
128	Temperature-induced structural evolution in liquid Ag-Ga alloys. <i>Physical Review B</i> , 2020, 102, .	3.2	1
129	Laser-induced Growth of Square Hollow Microtubes on Vanadium Metal. <i>Journal of Materials Science Letters</i> , 1998, 17, 1301-1303.	0.5	0
130	Crystallization of Bulk Zr ₄₈ Nb ₈ Cu ₁₄ Ni ₁₂ Be ₁₈ Metallic Glass. <i>Materials Research Society Symposia Proceedings</i> , 2000, 644, 521.	0.1	0
131	MAGNETIC PROPERTIES OF NANOMETER-SIZED CRYSTALLINE AND AMORPHOUS PARTICLES (Invited). , 1998, , .		0
132	Ultrahigh specific hardness of Co-Ni-V-Al medium entropy alloy thin films. <i>Materials Today Communications</i> , 2022, 31, 103447.	1.9	0