

Zeng-Bao Jiao

List of Publications by Year in descending order

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80
papers

4,901
citations

109137

35
h-index

95083

68
g-index

80
all docs

80
docs citations

80
times ranked

2546
citing authors

#	ARTICLE	IF	CITATIONS
1	Multicomponent intermetallic nanoparticles and superb mechanical behaviors of complex alloys. <i>Science</i> , 2018, 362, 933-937.	6.0	950
2	Heterogeneous precipitation behavior and stacking-fault-mediated deformation in a CoCrNi-based medium-entropy alloy. <i>Acta Materialia</i> , 2017, 138, 72-82.	3.8	553
3	Ultrahigh strength and ductility in newly developed materials with coherent nanolamellar architectures. <i>Nature Communications</i> , 2020, 11, 6240.	5.8	226
4	Synergistic effects of Cu and Ni on nanoscale precipitation and mechanical properties of high-strength steels. <i>Acta Materialia</i> , 2013, 61, 5996-6005.	3.8	188
5	Ultrahigh-strength and ductile superlattice alloys with nanoscale disordered interfaces. <i>Science</i> , 2020, 369, 427-432.	6.0	187
6	Precipitation mechanism and mechanical properties of an ultra-high strength steel hardened by nanoscale NiAl and Cu particles. <i>Acta Materialia</i> , 2015, 97, 58-67.	3.8	186
7	Co-precipitation of nanoscale particles in steels with ultra-high strength for a new era. <i>Materials Today</i> , 2017, 20, 142-154.	8.3	159
8	Superior high-temperature properties and deformation-induced planar faults in a novel L12-strengthened high-entropy alloy. <i>Acta Materialia</i> , 2020, 188, 517-527.	3.8	144
9	Control of nanoscale precipitation and elimination of intermediate-temperature embrittlement in multicomponent high-entropy alloys. <i>Acta Materialia</i> , 2020, 189, 47-59.	3.8	137
10	Effects of Mn partitioning on nanoscale precipitation and mechanical properties of ferritic steels strengthened by NiAl nanoparticles. <i>Acta Materialia</i> , 2015, 84, 283-291.	3.8	108
11	Effects of alloying elements on glass formation, mechanical and soft-magnetic properties of Fe-based metallic glasses. <i>Intermetallics</i> , 2011, 19, 1502-1508.	1.8	96
12	High-strength steels hardened mainly by nanoscale NiAl precipitates. <i>Scripta Materialia</i> , 2014, 87, 45-48.	2.6	95
13	Attractive In Situ Self-Reconstructed Hierarchical Gradient Structure of Metallic Glass for High Efficiency and Remarkable Stability in Catalytic Performance. <i>Advanced Functional Materials</i> , 2019, 29, 1807857.	7.8	74
14	Mechanical properties and deformation mechanisms of a novel austenite-martensite dual phase steel. <i>International Journal of Plasticity</i> , 2020, 128, 102677.	4.1	72
15	Strategies for improving ductility of ordered intermetallics. <i>Progress in Natural Science: Materials International</i> , 2016, 26, 1-12.	1.8	68
16	Hardening mechanisms and impact toughening of a high-strength steel containing low Ni and Cu additions. <i>Acta Materialia</i> , 2019, 172, 150-160.	3.8	64
17	Precipitate transformation from NiAl-type to Ni ₂ AlMn-type and its influence on the mechanical properties of high-strength steels. <i>Acta Materialia</i> , 2016, 110, 31-43.	3.8	57
18	High-Entropy Alloy (HEA)-Coated Nanolattice Structures and Their Mechanical Properties. <i>Advanced Engineering Materials</i> , 2018, 20, 1700625.	1.6	56

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19	Enhanced strength-ductility synergy via novel bifunctional nano-precipitates in a high-entropy alloy. <i>International Journal of Plasticity</i> , 2022, 153, 103235.	4.1	56
20	Achieving exceptional wear resistance in a compositionally complex alloy via tuning the interfacial structure and chemistry. <i>Acta Materialia</i> , 2020, 188, 697-710.	3.8	55
21	Improved ductility and oxidation resistance of cast Ti-6Al-4V alloys by microalloying. <i>Journal of Alloys and Compounds</i> , 2014, 602, 235-240.	2.8	54
22	Synergistic alloying effects on nanoscale precipitation and mechanical properties of ultrahigh-strength steels strengthened by Ni ₃ Ti, Mo-enriched, and Cr-rich co-precipitates. <i>Acta Materialia</i> , 2021, 209, 116788.	3.8	54
23	A novel L12-strengthened multicomponent Co-rich high-entropy alloy with both high $\hat{\gamma}$ -solvus temperature and superior high-temperature strength. <i>Scripta Materialia</i> , 2021, 199, 113826.	2.6	53
24	Microstructures and mechanical properties of CoCrFeMnNiV high entropy alloy films. <i>Journal of Alloys and Compounds</i> , 2020, 820, 153388.	2.8	52
25	Glass-forming ability enhanced by proper additions of oxygen in a Fe-based bulk metallic glass. <i>Applied Physics Letters</i> , 2009, 95, .	1.5	51
26	Synergistic effects of Al and Ti on the oxidation behaviour and mechanical properties of L12-strengthened FeCoCrNi high-entropy alloys. <i>Corrosion Science</i> , 2021, 184, 109365.	3.0	51
27	Effects of nanocrystal formation on the soft magnetic properties of Fe-based bulk metallic glasses. <i>Applied Physics Letters</i> , 2011, 99, .	1.5	50
28	Formation and crystallization behavior of Fe-based amorphous precursors with pre-existing $\hat{\gamma}$ -Fe nanoparticles—Structure and magnetic properties of high-Cu-content Fe-Si-B-Cu-Nb nanocrystalline alloys. <i>Journal of Materials Science and Technology</i> , 2021, 65, 171-181.	5.6	49
29	Mechanisms for suppressing discontinuous precipitation and improving mechanical properties of NiAl-strengthened steels through nanoscale Cu partitioning. <i>Acta Materialia</i> , 2021, 205, 116561.	3.8	48
30	Nanocrystalline Ag-W alloys lose stability upon solute desegregation from grain boundaries. <i>Acta Materialia</i> , 2018, 161, 194-206.	3.8	45
31	Refractory alloying additions on the thermal stability and mechanical properties of high-entropy alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 797, 140020.	2.6	45
32	Group precipitation and age hardening of nanostructured Fe-based alloys with ultra-high strengths. <i>Scientific Reports</i> , 2016, 6, 21364.	1.6	44
33	Glass formation and magnetic properties of Fe-C-Si-B-P-(Cr-Al-Co) bulk metallic glasses fabricated using industrial raw materials. <i>Journal of Magnetism and Magnetic Materials</i> , 2009, 321, 2833-2837.	1.0	38
34	Effects of welding and post-weld heat treatments on nanoscale precipitation and mechanical properties of an ultra-high strength steel hardened by NiAl and Cu nanoparticles. <i>Acta Materialia</i> , 2016, 120, 216-227.	3.8	36
35	L12-strengthened multicomponent Co-Al-Nb-based alloys with high strength and matrix-confined stacking-fault-mediated plasticity. <i>Acta Materialia</i> , 2022, 229, 117763.	3.8	36
36	Effects of Mo additions on the glass-forming ability and magnetic properties of bulk amorphous Fe-C-Si-B-P-Mo alloys. <i>Science China: Physics, Mechanics and Astronomy</i> , 2010, 53, 430-434.	2.0	34

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37	High-entropy induced a glass-to-glass transition in a metallic glass. <i>Nature Communications</i> , 2022, 13, 2183.	5.8	34
38	Synthesis of bulk glassy Fe-Ca-Si-B-P-Ga alloys with high glass-forming ability and good soft-magnetic properties. <i>Intermetallics</i> , 2010, 18, 1821-1825.	1.8	33
39	Cu-assisted austenite reversion and enhanced TRIP effect in maraging stainless steels. <i>Journal of Materials Science and Technology</i> , 2022, 104, 52-58.	5.6	32
40	Enhancing glass-forming ability via frustration of nano-clustering in alloys with a high solvent content. <i>Scientific Reports</i> , 2013, 3, 1983.	1.6	31
41	Control of discontinuous and continuous precipitation of ϵ -strengthened high-entropy alloys through nanoscale Nb segregation and partitioning. <i>Journal of Alloys and Compounds</i> , 2020, 832, 154903.	2.8	31
42	Size effects on the compressive deformation behaviour of a brittle Fe-based bulk metallic glass. <i>Philosophical Magazine Letters</i> , 2010, 90, 403-412.	0.5	30
43	Atom-probe study of Cu and NiAl nanoscale precipitation and interfacial segregation in a nanoparticle-strengthened steel. <i>Materials Research Letters</i> , 2017, 5, 562-568.	4.1	29
44	Effects of boron on the fracture behavior and ductility of cast Ti-6Al-4V alloys. <i>Scripta Materialia</i> , 2015, 100, 90-93.	2.6	28
45	Heterogeneous columnar-grained high-entropy alloys produce exceptional resistance to intermediate-temperature intergranular embrittlement. <i>Scripta Materialia</i> , 2021, 194, 113622.	2.6	25
46	Thermal stability and high-temperature mechanical performance of nanostructured W-Cu-Cr-ZrC composite. <i>Composites Part B: Engineering</i> , 2021, 208, 108600.	5.9	25
47	Precipitation behavior in G-phase strengthened ferritic stainless steels. <i>Acta Materialia</i> , 2021, 205, 116542.	3.8	23
48	High-temperature mechanical behavior of ultra-coarse cemented carbide with grain strengthening. <i>Journal of Materials Science and Technology</i> , 2022, 104, 8-18.	5.6	23
49	Effects of boron additions and solutionizing treatments on microstructures and ductility of forged Ti-6Al-4V alloys. <i>Journal of Alloys and Compounds</i> , 2015, 624, 170-178.	2.8	22
50	A novel ferritic steel family hardened by intermetallic compound G-phase. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 745, 390-399.	2.6	22
51	Effect of Mo:W ratio on segregation behavior and creep strength of nickel-based single crystal superalloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 744, 481-489.	2.6	20
52	Precipitation kinetics and mechanical properties of nanostructured steels with Mo additions. <i>Materials Research Letters</i> , 2020, 8, 187-194.	4.1	20
53	Breaking the strength-ductility paradox in advanced nanostructured Fe-based alloys through combined Cu and Mn additions. <i>Scripta Materialia</i> , 2020, 186, 213-218.	2.6	19
54	In situ neutron diffraction unravels deformation mechanisms of a strong and ductile FeCrNi medium entropy alloy. <i>Journal of Materials Science and Technology</i> , 2022, 116, 103-120.	5.6	16

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55	Remarkable cryogenic strengthening and toughening in nano-coherent CoCrFeNiTi _{0.2} high-entropy alloys via energetically-tuning polymorphous precipitates. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 842, 143111.	2.6	15
56	Compositional and microstructural optimization and mechanical-property enhancement of cast Ti alloys based on Ti-6Al-4V alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 704, 91-101.	2.6	14
57	Synergy of strengthening and toughening of a Cu-rich precipitate-strengthened steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 832, 142487.	2.6	14
58	Boosting electrochemical performance of Li-S batteries by cerium-based MOFs coated with polypyrrole. <i>Journal of Alloys and Compounds</i> , 2022, 901, 163649.	2.8	13
59	Ultrahigh-strength steels strengthened by nanoparticles. <i>Science Bulletin</i> , 2017, 62, 1043-1044.	4.3	12
60	Intermediate temperature embrittlement in a precipitation-hardened high-entropy alloy: The role of heterogeneous strain distribution and environmentally assisted intergranular damage. <i>Materials Today Physics</i> , 2022, 24, 100653.	2.9	12
61	Alloying effects on phase stability, mechanical properties, and deformation behavior of CoCrNi-based medium-entropy alloys at low temperatures. <i>Intermetallics</i> , 2022, 140, 107399.	1.8	9
62	Compositionally complex coherent precipitation-strengthened high-entropy alloys: a critical review. <i>Rare Metals</i> , 2022, 41, 2002-2015.	3.6	9
63	Low-carbon advanced nanostructured steels: Microstructure, mechanical properties, and applications. <i>Science China Materials</i> , 2021, 64, 1580-1597.	3.5	8
64	Wear-resistance enhancement of nanostructured W-Cu-Cr composites. <i>International Journal of Refractory Metals and Hard Materials</i> , 2021, 101, 105673.	1.7	8
65	Abrasive wear behavior of TiC-strengthened eutectic high chromium cast iron composites. <i>Materials Today Communications</i> , 2021, 29, 102906.	0.9	8
66	Simultaneous enhancement of strength and ductility via microband formation and nanotwinning in an L12-strengthened alloy. <i>Fundamental Research</i> , 2024, 4, 147-157.	1.6	8
67	Compressive fracture characteristics of Zr-based bulk metallic glass. <i>Science China: Physics, Mechanics and Astronomy</i> , 2010, 53, 823-827.	2.0	7
68	Microstructure, mechanical properties and biocompatibility of laser metal deposited Ti-23Nb coatings on a NiTi substrate. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 848, 143402.	2.6	7
69	Single-element amorphous palladium nanoparticles formed via phase separation. <i>Nano Research</i> , 2022, 15, 5575-5580.	5.8	5
70	Three-point bending fracture characteristics of bulk metallic glasses. <i>Science China: Physics, Mechanics and Astronomy</i> , 2010, 53, 654-657.	2.0	4
71	Irradiation-induced solute trapping by preexisting nanoprecipitates in high-strength low-alloy steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 849, 143510.	2.6	4
72	Strengthening nanocrystalline immiscible bimetallic composite by high-entropy effect. <i>Composites Part B: Engineering</i> , 2022, 243, 110127.	5.9	3

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73	Copper-Rich Nanoclusters: Ferritic Steels Strengthened. , 2016, , 875-886.		2
74	Multicomponent Precipitation and Strengthening in Intermetallic-Strengthened Alloys. <i>Frontiers in Materials</i> , 0, 9, .	1.2	2
75	Effects of density difference of constituent elements on glass formation in TiCu-based bulk metallic glasses. <i>Progress in Natural Science: Materials International</i> , 2013, 23, 469-474.	1.8	1
76	Metallic Glass Catalysts: Attractive In Situ Self-Reconstructed Hierarchical Gradient Structure of Metallic Glass for High Efficiency and Remarkable Stability in Catalytic Performance (<i>Adv. Funct. Mater.</i>)	1.0	0
77	Phase Stability and Precipitation in L12-Strengthened CoCrNi Medium-Entropy Alloys at Intermediate Temperatures. <i>Journal of Phase Equilibria and Diffusion</i> , 2021, 42, 781-793.	0.5	1
78	Metallic Materials for Making Multi-Scaled Metallic Parts and Structures. , 2022, , 19-36.		0
79	Control of Nanoscale Precipitation and Elimination of Intermediate-Temperature Embrittlement in Multicomponent High-Entropy Alloys. <i>SSRN Electronic Journal</i> , 0, , .	0.4	0
80	Atomistic study of Al partitioning and its influence on nanoscale precipitation of Cu-rich nanocluster-strengthened steels. <i>Materials Characterization</i> , 2022, 184, 111687.	1.9	0