Zeng-Bao Jiao

List of Publications by Year
in descending order

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80 papers	4,901 citations	109321 35 h-index	95266 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. Science, 2018, 362, 933-937.	12.6	950
2	Heterogeneous precipitation behavior and stacking-fault-mediated deformation in a CoCrNi-based medium-entropy alloy. Acta Materialia, 2017, 138, 72-82.	7.9	553
3	Ultrahigh strength and ductility in newly developed materials with coherent nanolamellar architectures. Nature Communications, 2020, 11, 6240.	12.8	226
4	Synergistic effects of Cu and Ni on nanoscale precipitation and mechanical properties of high-strength steels. Acta Materialia, 2013, 61, 5996-6005.	7.9	188
5	Ultrahigh-strength and ductile superlattice alloys with nanoscale disordered interfaces. Science, 2020, 369, 427-432.	12.6	187
6	Precipitation mechanism and mechanical properties of an ultra-high strength steel hardened by nanoscale NiAl and Cu particles. Acta Materialia, 2015, 97, 58-67.	7.9	186
7	Co-precipitation of nanoscale particles in steels with ultra-high strength for a new era. Materials Today, 2017, 20, 142-154.	14.2	159
8	Superior high-temperature properties and deformation-induced planar faults in a novel L12-strengthened high-entropy alloy. Acta Materialia, 2020, 188, 517-527.	7.9	144
9	Control of nanoscale precipitation and elimination of intermediate-temperature embrittlement in multicomponent high-entropy alloys. Acta Materialia, 2020, 189, 47-59.	7.9	137
10	Effects of Mn partitioning on nanoscale precipitation and mechanical properties of ferritic steels strengthened by NiAl nanoparticles. Acta Materialia, 2015, 84, 283-291.	7.9	108
11	Effects of alloying elements on glass formation, mechanical and soft-magnetic properties of Fe-based metallic glasses. Intermetallics, 2011, 19, 1502-1508.	3.9	96
12	High-strength steels hardened mainly by nanoscale NiAl precipitates. Scripta Materialia, 2014, 87, 45-48.	5.2	95
13	Attractive In Situ Selfâ€Reconstructed Hierarchical Gradient Structure of Metallic Glass for High Efficiency and Remarkable Stability in Catalytic Performance. Advanced Functional Materials, 2019, 29, 1807857.	14.9	74
14	Mechanical properties and deformation mechanisms of a novel austenite-martensite dual phase steel. International Journal of Plasticity, 2020, 128, 102677.	8.8	72
15	Strategies for improving ductility of ordered intermetallics. Progress in Natural Science: Materials International, 2016, 26, 1-12.	4.4	68
16	Hardening mechanisms and impact toughening of a high-strength steel containing low Ni and Cu additions. Acta Materialia, 2019, 172, 150-160.	7.9	64
17	Precipitate transformation from NiAl-type to Ni2AlMn-type and its influence on the mechanical properties of high-strength steels. Acta Materialia, 2016, 110, 31-43.	7.9	57
18	Highâ€Entropy Alloy (HEA)â€Coated Nanolattice Structures and Their Mechanical Properties. Advanced Engineering Materials, 2018, 20, 1700625.	3.5	56

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19	Enhanced strength-ductility synergy via novel bifunctional nano-precipitates in a high-entropy alloy. International Journal of Plasticity, 2022, 153, 103235.	8.8	56
20	Achieving exceptional wear resistance in a compositionally complex alloy via tuning the interfacial structure and chemistry. Acta Materialia, 2020, 188, 697-710.	7.9	55
21	Improved ductility and oxidation resistance of cast Tiâ€“6Alâ€“4V alloys by microalloying. Journal of Alloys and Compounds, 2014, 602, 235-240.	5.5	54
22	Synergistic alloying effects on nanoscale precipitation and mechanical properties of ultrahigh-strength steels strengthened by Ni3Ti, Mo-enriched, and Cr-rich co-precipitates. Acta Materialia, 2021, 209, 116788.	7.9	54
23	A novel L12-strengthened multicomponent Co-rich high-entropy alloy with both high Î³â€²-solvus temperature and superior high-temperature strength. Scripta Materialia, 2021, 199, 113826.	5.2	53
24	Microstructures and mechanical properties of CoCrFeMnNiV high entropy alloy films. Journal of Alloys and Compounds, 2020, 820, 153388.	5.5	52
25	Glass-forming ability enhanced by proper additions of oxygen in a Fe-based bulk metallic glass. Applied Physics Letters, 2009, 95, .	3.3	51
26	Synergistic effects of Al and Ti on the oxidation behaviour and mechanical properties of L12-strengthened FeCoCrNi high-entropy alloys. Corrosion Science, 2021, 184, 109365.	6.6	51
27	Effects of nanocrystal formation on the soft magnetic properties of Fe-based bulk metallic glasses. Applied Physics Letters, 2011, 99, .	3.3	50
28	Formation and crystallization behavior of Fe-based amorphous precursors with pre-existing Î±-Fe nanoparticlesâ€”Structure and magnetic properties of high-Cu-content Fe-Si-B-Cu-Nb nanocrystalline alloys. Journal of Materials Science and Technology, 2021, 65, 171-181.	10.7	49
29	Mechanisms for suppressing discontinuous precipitation and improving mechanical properties of NiAl-strengthened steels through nanoscale Cu partitioning. Acta Materialia, 2021, 205, 116561.	7.9	48
30	Nanocrystalline Ag-W alloys lose stability upon solute desegregation from grain boundaries. Acta Materialia, 2018, 161, 194-206.	7.9	45
31	Refractory alloying additions on the thermal stability and mechanical properties of high-entropy alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 797, 140020.	5.6	45
32	Group precipitation and age hardening of nanostructured Fe-based alloys with ultra-high strengths. Scientific Reports, 2016, 6, 21364.	3.3	44
33	Glass formation and magnetic properties of Feâ€“Câ€“Siâ€“Bâ€“Pâ€“(Crâ€“Alâ€“Co) bulk metallic glasses fabricated using industrial raw materials. Journal of Magnetism and Magnetic Materials, 2009, 321, 2833-2837.	2.3	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. Acta Materialia, 2016, 120, 216-227.	7.9	36
35	L12-strengthened multicomponent Co-Al-Nb-based alloys with high strength and matrix-confined stacking-fault-mediated plasticity. Acta Materialia, 2022, 229, 117763.	7.9	36
36	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.	5.1	34

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37	High-entropy induced a glass-to-glass transition in a metallic glass. Nature Communications, 2022, 13, 2183.	12.8	34
38	Synthesis of bulk glassy Feâ€“Câ€“Siâ€“Bâ€“Pâ€“Ga alloys with high glass-forming ability and good soft-magnetic properties. Intermetallics, 2010, 18, 1821-1825.	3.9	33
39	Cu-assisted austenite reversion and enhanced TRIP effect in maraging stainless steels. Journal of Materials Science and Technology, 2022, 104, 52-58.	10.7	32
40	Enhancing glass-forming ability via frustration of nano-clustering in alloys with a high solvent content. Scientific Reports, 2013, 3, 1983.	3.3	31
41	Control of discontinuous and continuous precipitation of Î³Ê¹-strengthened high-entropy alloys through nanoscale Nb segregation and partitioning. Journal of Alloys and Compounds, 2020, 832, 154903.	5.5	31
42	Size effects on the compressive deformation behaviour of a brittle Fe-based bulk metallic glass. Philosophical Magazine Letters, 2010, 90, 403-412.	1.2	30
43	Atom-probe study of Cu and NiAl nanoscale precipitation and interfacial segregation in a nanoparticle-strengthened steel. Materials Research Letters, 2017, 5, 562-568.	8.7	29
44	Effects of boron on the fracture behavior and ductility of cast Tiâ€“6Alâ€“4V alloys. Scripta Materialia, 2015, 100, 90-93.	5.2	28
45	Heterogenous columnar-grained high-entropy alloys produce exceptional resistance to intermediate-temperature intergranular embrittlement. Scripta Materialia, 2021, 194, 113622.	5.2	25
46	Thermal stability and high-temperature mechanical performance of nanostructured Wâ€“Cuâ€“Crâ€“ZrC composite. Composites Part B: Engineering, 2021, 208, 108600.	12.0	25
47	Precipitation behavior in G-phase strengthened ferritic stainless steels. Acta Materialia, 2021, 205, 116542.	7.9	23
48	High-temperature mechanical behavior of ultra-coarse cemented carbide with grain strengthening. Journal of Materials Science and Technology, 2022, 104, 8-18.	10.7	23
49	Effects of boron additions and solutionizing treatments on microstructures and ductility of forged Tiâ€“6Alâ€“4V alloys. Journal of Alloys and Compounds, 2015, 624, 170-178.	5.5	22
50	A novel ferritic steel family hardened by intermetallic compound G-phase. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 745, 390-399.	5.6	22
51	Effect of Mo:W ratio on segregation behavior and creep strength of nickel-based single crystal superalloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 744, 481-489.	5.6	20
52	Precipitation kinetics and mechanical properties of nanostructured steels with Mo additions. Materials Research Letters, 2020, 8, 187-194.	8.7	20
53	Breaking the strength-ductility paradox in advanced nanostructured Fe-based alloys through combined Cu and Mn additions. Scripta Materialia, 2020, 186, 213-218.	5.2	19
54	In situ neutron diffraction unravels deformation mechanisms of a strong and ductile FeCrNi medium entropy alloy. Journal of Materials Science and Technology, 2022, 116, 103-120.	10.7	16

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55	Remarkable cryogenic strengthening and toughening in nano-coherent CoCrFeNiTi0.2 high-entropy alloys via energetically-tuning polymorphous precipitates. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 842, 143111.	5.6	15
56	Compositional and microstructural optimization and mechanical-property enhancement of cast Ti alloys based on Ti-6Al-4V alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 704, 91-101.	5.6	14
57	Synergy of strengthening and toughening of a Cu-rich precipitate-strengthened steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 832, 142487.	5.6	14
58	Boosting electrochemical performance of Li-S batteries by cerium-based MOFs coated with polypyrrole. Journal of Alloys and Compounds, 2022, 901, 163649.	5.5	13
59	Ultrahigh-strength steels strengthened by nanoparticles. Science Bulletin, 2017, 62, 1043-1044.	9.0	12
60	Intermediate temperature embrittlement in a precipitation-hardened high-entropy alloy: The role of heterogeneous strain distribution and environmentally assisted intergranular damage. Materials Today Physics, 2022, 24, 100653.	6.0	12
61	Alloying effects on phase stability, mechanical properties, and deformation behavior of CoCrNi-based medium-entropy alloys at low temperatures. Intermetallics, 2022, 140, 107399.	3.9	9
62	Compositionally complex coherent precipitation-strengthened high-entropy alloys: a critical review. Rare Metals, 2022, 41, 2002-2015.	7.1	9
63	Low-carbon advanced nanostructured steels: Microstructure, mechanical properties, and applications. Science China Materials, 2021, 64, 1580-1597.	6.3	8
64	Wear-resistance enhancement of nanostructured W-Cu-Cr composites. International Journal of Refractory Metals and Hard Materials, 2021, 101, 105673.	3.8	8
65	Abrasive wear behavior of TiC-strengthened eutectic high chromium cast iron composites. Materials Today Communications, 2021, 29, 102906.	1.9	8
66	Simultaneous enhancement of strength and ductility via microband formation and nanotwinning in an L12-strengthened alloy. Fundamental Research, 2024, 4, 147-157.	3.3	8
67	Compressive fracture characteristics of Zr-based bulk metallic glass. Science China: Physics, Mechanics and Astronomy, 2010, 53, 823-827.	5.1	7
68	Microstructure, mechanical properties and biocompatibility of laser metal deposited Tiâ€“23Nb coatings on a NiTi substrate. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 848, 143402.	5.6	7
69	Single-element amorphous palladium nanoparticles formed via phase separation. Nano Research, 2022, 15, 5575-5580.	10.4	5
70	Three-point bending fracture characteristics of bulk metallic glasses. Science China: Physics, Mechanics and Astronomy, 2010, 53, 654-657.	5.1	4
71	Irradiation-induced solute trapping by preexisting nanoprecipitates in high-strength low-alloy steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 849, 143510.	5.6	4
72	Strengthening nanocrystalline immiscible bimetallic composite by high-entropy effect. Composites Part B: Engineering, 2022, 243, 110127.	12.0	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. Frontiers in Materials, 0, 9, .	2.4	2
75	Effects of density difference of constituent elements on glass formation in TiCu-based bulk metallic glasses. Progress in Natural Science: Materials International, 2013, 23, 469-474.	4.4	1
76	Metallic Glass Catalysts: Attractive In Situ Selfâ€Reconstructed Hierarchical Gradient Structure of Metallic Glass for High Efficiency and Remarkable Stability in Catalytic Performance (Adv. Funct.) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 6	14.9	1
77	Phase Stability and Precipitation in L12-Strengthened CoCrNi Medium-Entropy Alloys at Intermediate Temperatures. Journal of Phase Equilibria and Diffusion, 2021, 42, 781-793.	1.4	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. SSRN Electronic Journal, 0, , .	0.4	0
80	Atomistic study of Al partitioning and its influence on nanoscale precipitation of Cu-rich nanocluster-strengthened steels. Materials Characterization, 2022, 184, 111687.	4.4	0