Jun-Hua Luan

List of Publications by Year
in descending order

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80	5,442	94433 37	82547 72
papers	citations	h-index	g-index

81	81	81	2878
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Ductile CoCrFeNiMox high entropy alloys strengthened by hard intermetallic phases. Acta Materialia, 2016, 116, 332-342.	7.9	670
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	Entropy-driven phase stability and slow diffusion kinetics in an Al0.5CoCrCuFeNi high entropy alloy. Intermetallics, 2012, 31, 165-172.	3.9	252
4	Ultrahigh strength and ductility in newly developed materials with coherent nanolamellar architectures. Nature Communications, 2020, 11, 6240.	12.8	226
5	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
6	Ultrahigh-strength and ductile superlattice alloys with nanoscale disordered interfaces. Science, 2020, 369, 427-432.	12.6	187
7	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
8	Nanoparticles-strengthened high-entropy alloys for cryogenic applications showing an exceptional strength-ductility synergy. Scripta Materialia, 2019, 164, 30-35.	5.2	170
9	A Novel Multinary Intermetallic as an Active Electrocatalyst for Hydrogen Evolution. Advanced Materials, 2020, 32, e2000385.	21.0	169
10	In situ design of advanced titanium alloy with concentration modulations by additive manufacturing. Science, 2021, 374, 478-482.	12.6	168
11	Co-precipitation of nanoscale particles in steels with ultra-high strength for a new era. Materials Today, 2017, 20, 142-154.	14.2	159
12	Control of nanoscale precipitation and elimination of intermediate-temperature embrittlement in multicomponent high-entropy alloys. Acta Materialia, 2020, 189, 47-59.	7.9	137
13	Phase stability and tensile properties of Co-free Al0.5CrCuFeNi2 high-entropy alloys. Journal of Alloys and Compounds, 2014, 584, 530-537.	5.5	116
14	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
15	Hierarchical nanostructured aluminum alloy with ultrahigh strength and large plasticity. Nature Communications, 2019, 10, 5099.	12.8	97
16	High-strength steels hardened mainly by nanoscale NiAl precipitates. Scripta Materialia, 2014, 87, 45-48.	5.2	95
17	A highly distorted ultraelastic chemically complex Elinvar alloy. Nature, 2022, 602, 251-257.	27.8	75
18	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

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19	Mechanical properties and deformation mechanisms of a novel austenite-martensite dual phase steel. International Journal of Plasticity, 2020, 128, 102677.	8.8	72
20	Anomalous precipitate-size-dependent ductility in multicomponent high-entropy alloys with dense nanoscale precipitates. Acta Materialia, 2022, 223, 117480.	7.9	72
21	Strategies for improving ductility of ordered intermetallics. Progress in Natural Science: Materials International, 2016, 26, 1-12.	4.4	68
22	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
23	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
24	Accelerated design of novel W-free high-strength Co-base superalloys with extremely wide Î³/Î³Ê¹ region by machine learning and CALPHAD methods. Acta Materialia, 2020, 186, 425-433.	7.9	57
25	Highâ€Entropy Alloy (HEA)â€Coated Nanolattice Structures and Their Mechanical Properties. Advanced Engineering Materials, 2018, 20, 1700625.	3.5	56
26	Exceptional nanostructure stability and its origins in the CoCrNi-based precipitation-strengthened medium-entropy alloy. Materials Research Letters, 2019, 7, 152-158.	8.7	56
27	Enhanced strength-ductility synergy via novel bifunctional nano-precipitates in a high-entropy alloy. International Journal of Plasticity, 2022, 153, 103235.	8.8	56
28	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
29	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
30	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
31	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
32	High performance Fe-based nanocrystalline alloys with excellent thermal stability. Journal of Alloys and Compounds, 2019, 776, 606-613.	5.5	52
33	Microstructures and mechanical properties of CoCrFeMnNiV high entropy alloy films. Journal of Alloys and Compounds, 2020, 820, 153388.	5.5	52
34	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
35	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
36	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

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37	Group precipitation and age hardening of nanostructured Fe-based alloys with ultra-high strengths. Scientific Reports, 2016, 6, 21364.	3.3	44
38	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
39	Density fluctuations with fractal order in metallic glasses detected by synchrotron X-ray nano-computed tomography. Acta Materialia, 2018, 155, 69-79.	7.9	35
40	High-entropy induced a glass-to-glass transition in a metallic glass. Nature Communications, 2022, 13, 2183.	12.8	34
41	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
42	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
43	A new Î±Â+ÂÎ² Ti-alloy with refined microstructures and enhanced mechanical properties in the as-cast state. Scripta Materialia, 2022, 207, 114260.	5.2	31
44	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
45	Chemically complex intermetallic alloys: A new frontier for innovative structural materials. Materials Today, 2022, 52, 161-174.	14.2	29
46	Effects of boron on the fracture behavior and ductility of cast Tiâ€“6Alâ€“4V alloys. Scripta Materialia, 2015, 100, 90-93.	5.2	28
47	Three-dimensional visualization and quantitative characterization of grains in polycrystalline iron. Materials Characterization, 2014, 91, 65-75.	4.4	27
48	Heterogenous columnar-grained high-entropy alloys produce exceptional resistance to intermediate-temperature intergranular embrittlement. Scripta Materialia, 2021, 194, 113622.	5.2	25
49	Thermal stability and high-temperature mechanical performance of nanostructured Wâ€“Cuâ€“Crâ€“ZrC composite. Composites Part B: Engineering, 2021, 208, 108600.	12.0	25
50	Precipitation behavior in G-phase strengthened ferritic stainless steels. Acta Materialia, 2021, 205, 116542.	7.9	23
51	Multicomponent Ni-rich high-entropy alloy toughened with irregular-shaped precipitates and serrated grain boundaries. Scripta Materialia, 2021, 204, 114066.	5.2	23
52	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
53	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
54	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

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55	Precipitation kinetics and mechanical properties of nanostructured steels with Mo additions. Materials Research Letters, 2020, 8, 187-194.	8.7	20
56	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
57	Optimal approach of three-dimensional microstructure reconstructions and visualizations. Materials Express, 2013, 3, 109-118.	0.5	18
58	Nanoscale Heterogeneities of Non-Noble Iron-Based Metallic Glasses toward Efficient Water Oxidation at Industrial-Level Current Densities. ACS Applied Materials & Interfaces, 2022, 14, 10288-10297.	8.0	18
59	Atomic-scale heterogeneity in large-plasticity Cu-doped metallic glasses. Journal of Alloys and Compounds, 2019, 798, 517-522.	5.5	17
60	Rational design of chemically complex metallic glasses by hybrid modeling guided machine learning. Npj Computational Materials, 2021, 7, .	8.7	17
61	Topology-dependent description of grain growth. Europhysics Letters, 2011, 96, 38003.	2.0	16
62	Ultrastrong and ductile transient liquid phase (TLP) bonding joints reinforced by ordered multi-precipitates. Composites Part B: Engineering, 2022, 231, 109568.	12.0	16
63	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
64	Topological correlations of three-dimensional grains. Applied Physics Letters, 2012, 101, 041910.	3.3	14
65	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
66	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
67	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
68	Design of ultrastrong but ductile medium-entropy alloy with controlled precipitations and heterogeneous grain structures. Applied Materials Today, 2021, 23, 101037.	4.3	11
69	Temperature-dependent microstructural evolutions and deformation mechanisms of (Ni2Co2FeCr)92Al4Nb4 high-entropy alloys. Journal of Alloys and Compounds, 2022, 918, 165597.	5.5	10
70	Wear-resistance enhancement of nanostructured W-Cu-Cr composites. International Journal of Refractory Metals and Hard Materials, 2021, 101, 105673.	3.8	8
71	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
72	Water Splitting: A Novel Multinary Intermetallic as an Active Electrocatalyst for Hydrogen Evolution (Adv. Mater. 21/2020). Advanced Materials, 2020, 32, 2070166.	21.0	6

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73	Single-element amorphous palladium nanoparticles formed via phase separation. Nano Research, 2022, 15, 5575-5580.	10.4	5
74	A note on grain topology-size relationship of three-dimensional polycrystalline microstructures. Europhysics Letters, 2012, 99, 28001.	2.0	4
75	Topological correlations of grain faces in polycrystal with experimental verification. Europhysics Letters, 2013, 104, 56006.	2.0	4
76	Strengthening nanocrystalline immiscible bimetallic composite by high-entropy effect. Composites Part B: Engineering, 2022, 243, 110127.	12.0	3
77	Copper-Rich Nanoclusters: Ferritic Steels Strengthened. , 2016, , 875-886.		2
78	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 5	14.9	1
79	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
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