Jun-Hua Luan

List of Publications by Year in Descending Order

77 papers	2,680 citations	25 h-index	51 g-index
81 ext. papers	3,979 ext. citations	9 avg, IF	5.48 L-index

#	Paper	IF	Citations
77	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	5.3	1
76	Enhanced strength-ductility synergy via novel bifunctional nano-precipitates in a high-entropy alloy. *International Journal of Plasticity*, **2022**, 153, 103235	7.6	1
75	A highly distorted ultraelastic chemically complex Elinvar alloy.. *Nature*, **2022**, 602, 251-257	50.4	4
74	Anomalous precipitate-size-dependent ductility in multicomponent high-entropy alloys with dense nanoscale precipitates. *Acta Materialia*, **2022**, 223, 117480	8.4	8
73	Ultrastrong and ductile transient liquid phase (TLP) bonding joints reinforced by ordered multi-precipitates. *Composites Part B: Engineering*, **2022**, 231, 109568	10	1
72	Atomistic study of Al partitioning and its influence on nanoscale precipitation of Cu-rich nanocluster-strengthened steels. *Materials Characterization*, **2022**, 184, 111687	3.9	
71	Cu-assisted austenite reversion and enhanced TRIP effect in maraging stainless steels. *Journal of Materials Science and Technology*, **2022**, 104, 52-58	9.1	4
70	A new □+□Ti-alloy with refined microstructures and enhanced mechanical properties in the as-cast state. *Scripta Materialia*, **2022**, 207, 114260	5.6	2
69	Chemically complex intermetallic alloys: A new frontier for innovative structural materials. *Materials Today*, **2022**, 52, 161-174	21.8	1
68	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**, 143111	5.3	0
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	8	1
66	High-entropy induced a glass-to-glass transition in a metallic glass.. *Nature Communications*, **2022**, 13, 2183	17.4	1
65	Temperature-dependent microstructural evolutions and deformation mechanisms of (Ni2Co2FeCr)92Al4Nb4 high-entropy alloys. *Journal of Alloys and Compounds*, **2022**, 165597	5.7	0
64	In situ design of advanced titanium alloy with concentration modulations by additive manufacturing. *Science*, **2021**, 374, 478-482	33.3	18
63	Thermal stability and high-temperature mechanical performance of nanostructured W□u□r□rC composite. *Composites Part B: Engineering*, **2021**, 208, 108600	10	11
62	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	8.4	11
61	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	6.8	15

60	Design of ultrastrong but ductile medium-entropy alloy with controlled precipitations and heterogeneous grain structures. *Applied Materials Today*, **2021**, 23, 101037	6.6	5
59	A novel L12-strengthened multicomponent Co-rich high-entropy alloy with both high γ′-solvus temperature and superior high-temperature strength. *Scripta Materialia*, **2021**, 199, 113826	5.6	12
58	Heterogenous columnar-grained high-entropy alloys produce exceptional resistance to intermediate-temperature intergranular embrittlement. *Scripta Materialia*, **2021**, 194, 113622	5.6	12
57	Precipitation behavior in G-phase strengthened ferritic stainless steels. *Acta Materialia*, **2021**, 205, 116542	8.4	8
56	Mechanisms for suppressing discontinuous precipitation and improving mechanical properties of NiAl-strengthened steels through nanoscale Cu partitioning. *Acta Materialia*, **2021**, 205, 116561	8.4	15
55	Rational design of chemically complex metallic glasses by hybrid modeling guided machine learning. *Npj Computational Materials*, **2021**, 7,	10.9	4
54	Phase Stability and Precipitation in L12-Strengthened CoCrNi Medium-Entropy Alloys at Intermediate Temperatures. *Journal of Phase Equilibria and Diffusion*, **2021**, 42, 781	1	
53	Multicomponent Ni-rich high-entropy alloy toughened with irregular-shaped precipitates and serrated grain boundaries. *Scripta Materialia*, **2021**, 204, 114066	5.6	4
52	Wear-resistance enhancement of nanostructured W-Cu-Cr composites. *International Journal of Refractory Metals and Hard Materials*, **2021**, 101, 105673	4.1	1
51	Breaking the strength-ductility paradox in advanced nanostructured Fe-based alloys through combined Cu and Mn additions. *Scripta Materialia*, **2020**, 186, 213-218	5.6	10
50	Precipitation kinetics and mechanical properties of nanostructured steels with Mo additions. *Materials Research Letters*, **2020**, 8, 187-194	7.4	8
49	Achieving exceptional wear resistance in a compositionally complex alloy via tuning the interfacial structure and chemistry. *Acta Materialia*, **2020**, 188, 697-710	8.4	16
48	Control of nanoscale precipitation and elimination of intermediate-temperature embrittlement in multicomponent high-entropy alloys. *Acta Materialia*, **2020**, 189, 47-59	8.4	47
47	Mechanical properties and deformation mechanisms of a novel austenite-martensite dual phase steel. *International Journal of Plasticity*, **2020**, 128, 102677	7.6	26
46	A Novel Multinary Intermetallic as an Active Electrocatalyst for Hydrogen Evolution. *Advanced Materials*, **2020**, 32, e2000385	24	72
45	Control of discontinuous and continuous precipitation of γ′-strengthened high-entropy alloys through nanoscale Nb segregation and partitioning. *Journal of Alloys and Compounds*, **2020**, 832, 154903	5.7	7
44	Water Splitting: A Novel Multinary Intermetallic as an Active Electrocatalyst for Hydrogen Evolution (Adv. Mater. 21/2020). *Advanced Materials*, **2020**, 32, 2070166	24	2
43	Accelerated design of novel W-free high-strength Co-base superalloys with extremely wide γ/γ′ region by machine learning and CALPHAD methods. *Acta Materialia*, **2020**, 186, 425-433	8.4	23

42	Microstructures and mechanical properties of CoCrFeMnNiV high entropy alloy films. *Journal of Alloys and Compounds*, **2020**, 820, 153388	5.7	25
41	Ultrahigh strength and ductility in newly developed materials with coherent nanolamellar architectures. *Nature Communications*, **2020**, 11, 6240	17.4	59
40	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	5.3	16
39	Ultrahigh-strength and ductile superlattice alloys with nanoscale disordered interfaces. *Science*, **2020**, 369, 427-432	33.3	72
38	Nanoparticles-strengthened high-entropy alloys for cryogenic applications showing an exceptional strength-ductility synergy. *Scripta Materialia*, **2019**, 164, 30-35	5.6	81
37	Exceptional nanostructure stability and its origins in the CoCrNi-based precipitation-strengthened medium-entropy alloy. *Materials Research Letters*, **2019**, 7, 152-158	7.4	29
36	Atomic-scale heterogeneity in large-plasticity Cu-doped metallic glasses. *Journal of Alloys and Compounds*, **2019**, 798, 517-522	5.7	11
35	Metallic Glass Catalysts: Attractive In Situ Self-Reconstructed Hierarchical Gradient Structure of Metallic Glass for High Efficiency and Remarkable Stability in Catalytic Performance (Adv. Funct. Mater. 19/2019). *Advanced Functional Materials*, **2019**, 29, 1970131	15.6	
34	Hardening mechanisms and impact toughening of a high-strength steel containing low Ni and Cu additions. *Acta Materialia*, **2019**, 172, 150-160	8.4	30
33	Attractive In Situ Self-Reconstructed Hierarchical Gradient Structure of Metallic Glass for High Efficiency and Remarkable Stability in Catalytic Performance. *Advanced Functional Materials*, **2019**, 29, 1807857	15.6	47
32	Hierarchical nanostructured aluminum alloy with ultrahigh strength and large plasticity. *Nature Communications*, **2019**, 10, 5099	17.4	45
31	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	5.3	10
30	High performance Fe-based nanocrystalline alloys with excellent thermal stability. *Journal of Alloys and Compounds*, **2019**, 776, 606-613	5.7	27
29	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	5.3	13
28	High-Entropy Alloy (HEA)-Coated Nanolattice Structures and Their Mechanical Properties. *Advanced Engineering Materials*, **2018**, 20, 1700625	3.5	40
27	Density fluctuations with fractal order in metallic glasses detected by synchrotron X-ray nano-computed tomography. *Acta Materialia*, **2018**, 155, 69-79	8.4	16
26	Atom-probe study of Cu and NiAl nanoscale precipitation and interfacial segregation in a nanoparticle-strengthened steel. *Materials Research Letters*, **2017**, 5, 562-568	7.4	22
25	Heterogeneous precipitation behavior and stacking-fault-mediated deformation in a CoCrNi-based medium-entropy alloy. *Acta Materialia*, **2017**, 138, 72-82	8.4	286

24	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	5.3	9
23	Co-precipitation of nanoscale particles in steels with ultra-high strength for a new era. *Materials Today*, **2017**, 20, 142-154	21.8	103
22	Group precipitation and age hardening of nanostructured Fe-based alloys with ultra-high strengths. *Scientific Reports*, **2016**, 6, 21364	4.9	32
21	Strategies for improving ductility of ordered intermetallics. *Progress in Natural Science: Materials International*, **2016**, 26, 1-12	3.6	45
20	Ductile CoCrFeNiMox high entropy alloys strengthened by hard intermetallic phases. *Acta Materialia*, **2016**, 116, 332-342	8.4	432
19	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	8.4	35
18	Copper-Rich Nanoclusters: Ferritic Steels Strengthened **2016**, 875-886		2
17	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	8.4	25
16	Effects of boron on the fracture behavior and ductility of cast Ti–Al–V alloys. *Scripta Materialia*, **2015**, 100, 90-93	5.6	21
15	Effects of boron additions and solutionizing treatments on microstructures and ductility of forged Ti–Al–V alloys. *Journal of Alloys and Compounds*, **2015**, 624, 170-178	5.7	17
14	Precipitation mechanism and mechanical properties of an ultra-high strength steel hardened by nanoscale NiAl and Cu particles. *Acta Materialia*, **2015**, 97, 58-67	8.4	126
13	Effects of Mn partitioning on nanoscale precipitation and mechanical properties of ferritic steels strengthened by NiAl nanoparticles. *Acta Materialia*, **2015**, 84, 283-291	8.4	72
12	Improved ductility and oxidation resistance of cast Ti–Al–V alloys by microalloying. *Journal of Alloys and Compounds*, **2014**, 602, 235-240	5.7	47
11	Phase stability and tensile properties of Co-free Al0.5CrCuFeNi2 high-entropy alloys. *Journal of Alloys and Compounds*, **2014**, 584, 530-537	5.7	85
10	Three-dimensional visualization and quantitative characterization of grains in polycrystalline iron. *Materials Characterization*, **2014**, 91, 65-75	3.9	19
9	High-strength steels hardened mainly by nanoscale NiAl precipitates. *Scripta Materialia*, **2014**, 87, 45-48	5.6	66
8	Synergistic effects of Cu and Ni on nanoscale precipitation and mechanical properties of high-strength steels. *Acta Materialia*, **2013**, 61, 5996-6005	8.4	134
7	Optimal approach of three-dimensional microstructure reconstructions and visualizations. *Materials Express*, **2013**, 3, 109-118	1.3	12

6	Topological correlations of grain faces in polycrystal with experimental verification. *Europhysics Letters*, **2013**, 104, 56006	1.6	2
5	Entropy-driven phase stability and slow diffusion kinetics in an Al0.5CoCrCuFeNi high entropy alloy. *Intermetallics*, **2012**, 31, 165-172	3.5	191
4	Topological correlations of three-dimensional grains. *Applied Physics Letters*, **2012**, 101, 041910	3.4	11
3	A note on grain topology-size relationship of three-dimensional polycrystalline microstructures. *Europhysics Letters*, **2012**, 99, 28001	1.6	2
2	Topology-dependent description of grain growth. *Europhysics Letters*, **2011**, 96, 38003	1.6	10
1	Single-element amorphous palladium nanoparticles formed via phase separation. *Nano Research*,1	10	