

# Tao Yang

## List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

60  
papers

2,171  
citations

21  
h-index

46  
g-index

66  
ext. papers

3,481  
ext. citations

9.1  
avg, IF

5.35  
L-index

#	Paper	IF	Citations
60	Martensite colony engineering: A novel solution to realize the high ductility in full martensitic 3D-printed Ti alloys. <i>Materials and Design</i> , <b>2022</b> , 215, 110445	8.1	0
59	Anomalous precipitate-size-dependent ductility in multicomponent high-entropy alloys with dense nanoscale precipitates. <i>Acta Materialia</i> , <b>2022</b> , 223, 117480	8.4	8
58	Ultrastrong and ductile transient liquid phase (TLP) bonding joints reinforced by ordered multi-precipitates. <i>Composites Part B: Engineering</i> , <b>2022</b> , 231, 109568	10	1
57	Chemically complex intermetallic alloys: A new frontier for innovative structural materials. <i>Materials Today</i> , <b>2022</b> , 52, 161-174	21.8	1
56	Enhanced resistance to hydrogen embrittlement in a CrCoNi-based medium-entropy alloy via grain-boundary decoration of boron. <i>Materials Research Letters</i> , <b>2022</b> , 10, 278-286	7.4	1
55	L12-strengthened multicomponent Co-Al-Nb-based alloys with high strength and matrix-confined stacking-fault-mediated plasticity. <i>Acta Materialia</i> , <b>2022</b> , 229, 117763	8.4	2
54	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> , <b>2022</b> , 24, 100653	8	1
53	Dual heterogeneous structure facilitating an excellent strength-ductility combination in an additively manufactured multi-principal-element alloy. <i>Materials Research Letters</i> , <b>2022</b> , 10, 575-584	7.4	0
52	Temperature-dependent microstructural evolutions and deformation mechanisms of (Ni <sub>2</sub> Co <sub>2</sub> FeCr) <sub>92</sub> Al <sub>4</sub> Nb <sub>4</sub> high-entropy alloys. <i>Journal of Alloys and Compounds</i> , <b>2022</b> , 165597	5.7	0
51	In situ design of advanced titanium alloy with concentration modulations by additive manufacturing. <i>Science</i> , <b>2021</b> , 374, 478-482	33.3	18
50	Highly pressurized helium nanobubbles promote stacking-fault-mediated deformation in FeNiCoCr high-entropy alloy. <i>Acta Materialia</i> , <b>2021</b> , 210, 116843	8.4	9
49	Design of ultrastrong but ductile medium-entropy alloy with controlled precipitations and heterogeneous grain structures. <i>Applied Materials Today</i> , <b>2021</b> , 23, 101037	6.6	5
48	A novel L12-strengthened multicomponent Co-rich high-entropy alloy with both high $\sigma_{\text{solvus}}$ temperature and superior high-temperature strength. <i>Scripta Materialia</i> , <b>2021</b> , 199, 113826	5.6	12
47	Heterogeneous columnar-grained high-entropy alloys produce exceptional resistance to intermediate-temperature intergranular embrittlement. <i>Scripta Materialia</i> , <b>2021</b> , 194, 113622	5.6	12
46	Spinodal-modulated solid solution delivers a strong and ductile refractory high-entropy alloy. <i>Materials Horizons</i> , <b>2021</b> , 8, 948-955	14.4	8
45	Mechanisms for suppressing discontinuous precipitation and improving mechanical properties of NiAl-strengthened steels through nanoscale Cu partitioning. <i>Acta Materialia</i> , <b>2021</b> , 205, 116561	8.4	15
44	Interstitially strengthened metastable FeCoCr-based medium-entropy alloys with both high strength and large ductility. <i>Applied Physics Letters</i> , <b>2021</b> , 119, 051902	3.4	0

43	Strain partitioning enables excellent tensile ductility in precipitated heterogeneous high-entropy alloys with gigapascal yield strength. <i>International Journal of Plasticity</i> , <b>2021</b> , 144, 103022	7.6	12
42	L12-Strengthened Co-Rich Alloys for High-Temperature Structural Applications: A Critical Review. <i>Advanced Engineering Materials</i> , <b>2021</b> , 23, 2100453	3.5	4
41	Multicomponent Ni-rich high-entropy alloy toughened with irregular-shaped precipitates and serrated grain boundaries. <i>Scripta Materialia</i> , <b>2021</b> , 204, 114066	5.6	4
40	Low-Temperature Calcination of Belite-Calcium Sulphoaluminate Cement Clinker and the Hydration Process. <i>Journal of Materials in Civil Engineering</i> , <b>2021</b> , 33, 04021350	3	0
39	Dual heterogeneous structures lead to ultrahigh strength and uniform ductility in a Co-Cr-Ni medium-entropy alloy. <i>Nature Communications</i> , <b>2020</b> , 11, 2390	17.4	83
38	Cocktail effects in understanding the stability and properties of face-centered-cubic high-entropy alloys at ambient and cryogenic temperatures. <i>Scripta Materialia</i> , <b>2020</b> , 187, 250-255	5.6	20
37	Towards superior mechanical properties of hetero-structured high-entropy alloys via engineering multicomponent intermetallic nanoparticles. <i>Scripta Materialia</i> , <b>2020</b> , 183, 39-44	5.6	21
36	Control of nanoscale precipitation and elimination of intermediate-temperature embrittlement in multicomponent high-entropy alloys. <i>Acta Materialia</i> , <b>2020</b> , 189, 47-59	8.4	47
35	Superior high-temperature properties and deformation-induced planar faults in a novel L12-strengthened high-entropy alloy. <i>Acta Materialia</i> , <b>2020</b> , 188, 517-527	8.4	50
34	Unveiling the Electronic Origin for Pressure-Induced Phase Transitions in High-Entropy Alloys. <i>Matter</i> , <b>2020</b> , 2, 751-763	12.7	5
33	A Novel Multinary Intermetallic as an Active Electrocatalyst for Hydrogen Evolution. <i>Advanced Materials</i> , <b>2020</b> , 32, e2000385	24	72
32	Control of discontinuous and continuous precipitation of $\eta$ -strengthened high-entropy alloys through nanoscale Nb segregation and partitioning. <i>Journal of Alloys and Compounds</i> , <b>2020</b> , 832, 154903 <sup>5-7</sup>	5.7	7
31	Water Splitting: A Novel Multinary Intermetallic as an Active Electrocatalyst for Hydrogen Evolution (Adv. Mater. 21/2020). <i>Advanced Materials</i> , <b>2020</b> , 32, 2070166	24	2
30	Accelerated design of novel W-free high-strength Co-base superalloys with extremely wide $\eta$ region by machine learning and CALPHAD methods. <i>Acta Materialia</i> , <b>2020</b> , 186, 425-433	8.4	23
29	Ultrahigh strength and ductility in newly developed materials with coherent nanolamellar architectures. <i>Nature Communications</i> , <b>2020</b> , 11, 6240	17.4	59
28	Refractory alloying additions on the thermal stability and mechanical properties of high-entropy alloys. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2020</b> , 797, 140020	5.3	16
27	Ultrahigh-strength and ductile superlattice alloys with nanoscale disordered interfaces. <i>Science</i> , <b>2020</b> , 369, 427-432	33.3	72
26	Martensitic transformation and mechanical behavior of a medium-entropy alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , <b>2020</b> , 786, 139371	5.3	10

25	Nanoparticles-strengthened high-entropy alloys for cryogenic applications showing an exceptional strength-ductility synergy. <i>Scripta Materialia</i> , <b>2019</b> , 164, 30-35	5.6	81
24	Exceptional nanostructure stability and its origins in the CoCrNi-based precipitation-strengthened medium-entropy alloy. <i>Materials Research Letters</i> , <b>2019</b> , 7, 152-158	7.4	29
23	Precipitation-hardened high-entropy alloys for high-temperature applications: A critical review. <i>MRS Bulletin</i> , <b>2019</b> , 44, 854-859	3.2	25
22	Outstanding tensile properties of a precipitation-strengthened FeCoNiCrTi0.2 high-entropy alloy at room and cryogenic temperatures. <i>Acta Materialia</i> , <b>2019</b> , 165, 228-240	8.4	178
21	Development of high-strength Co-free high-entropy alloys hardened by nanosized precipitates. <i>Scripta Materialia</i> , <b>2018</b> , 148, 51-55	5.6	84
20	Precipitation hardening in CoCrFeNi-based high entropy alloys. <i>Materials Chemistry and Physics</i> , <b>2018</b> , 210, 2-11	4.4	95
19	Novel Co-Ti-V-base superalloys reinforced by L12-ordered $\eta$ phase. <i>Intermetallics</i> , <b>2018</b> , 92, 126-132	3.5	40
18	Multicomponent intermetallic nanoparticles and superb mechanical behaviors of complex alloys. <i>Science</i> , <b>2018</b> , 362, 933-937	33.3	513
17	Ductilizing brittle high-entropy alloys via tailoring valence electron concentrations of precipitates by controlled elemental partitioning. <i>Materials Research Letters</i> , <b>2018</b> , 6, 600-606	7.4	18
16	L12-strengthened high-entropy alloys for advanced structural applications. <i>Journal of Materials Research</i> , <b>2018</b> , 33, 2983-2997	2.5	49
15	Heterogeneous precipitation behavior and stacking-fault-mediated deformation in a CoCrNi-based medium-entropy alloy. <i>Acta Materialia</i> , <b>2017</b> , 138, 72-82	8.4	286
14	Experimental investigations of microstructures and phase equilibria in the CoNiTi ternary system. <i>Journal of Alloys and Compounds</i> , <b>2016</b> , 664, 141-148	5.7	12
13	A Novel Self-Assembling Al-based Composite Powder with High Hydrogen Generation Efficiency. <i>Scientific Reports</i> , <b>2015</b> , 5, 17428	4.9	25
12	Experimental investigation of phase equilibria and microstructure in the CoNiTi ternary system. <i>Intermetallics</i> , <b>2014</b> , 49, 121-131	3.5	26
11	A degradable polycyclic cross-linker for UV-curing nanoimprint lithography. <i>Journal of Materials Chemistry C</i> , <b>2014</b> , 2, 1836	7.1	20
10	Fabrication of Ag nanodot array over large area for surface-enhanced Raman scattering using hybrid nanoimprint mold made from AAO template. <i>Applied Physics A: Materials Science and Processing</i> , <b>2014</b> , 117, 909-915	2.6	8
9	Sub-50 nm UV-curing nanoimprint based on fluoropolymer, CYTOP, mold. <i>Applied Physics A: Materials Science and Processing</i> , <b>2014</b> , 116, 79-84	2.6	4
8	Linear relationship of the enhanced magnetization of Fe atoms versus the radius difference of the constituent metals in Fe/f.c.c. metal multilayers. <i>Physica Status Solidi A</i> , <b>1995</b> , 149, 677-683		1

7	A possible new Fe?Cu alloy phase with two-dimensional long-range order. <i>Physica Status Solidi A</i> , <b>1994</b> , 142, K33-K36		1
6	Microstructure and magnetic properties of Co/Pd multilayer films. <i>Physica Status Solidi A</i> , <b>1994</b> , 142, 443-450		5
5	Phase evolution upon ion mixing and solid-state reaction and thermodynamic interpretation in the Ni-Nb system. <i>Journal of Applied Physics</i> , <b>1993</b> , 73, 1702-1710	2.5	54
4	Metastable Phase Formation in the Fe?Cu System by Ion Irradiation and Solid State Interdiffusion. <i>Physica Status Solidi A</i> , <b>1993</b> , 135, 199-206		3
3	Microstructure and Magnetic Properties of the Fe/Cu Nano-Multilayers by Vapour Deposition. <i>Physica Status Solidi A</i> , <b>1993</b> , 135, 573-580		6
2	Strengthening and fracture mechanisms of a precipitation hardening high-entropy alloy fabricated by selective laser melting. <i>Virtual and Physical Prototyping</i> , 1-17	10.1	4
1	Compositionally complex coherent precipitation-strengthened high-entropy alloys: a critical review. <i>Rare Metals</i> , 1	5.5	0