Zhiming Li

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.

119
papers

5,975
citations

125
ext. papers

8,297
ext. citations

38
h-index

76
g-index

6.86
L-index

#	Paper	IF	Citations
119	Strengthening and dynamic recrystallization mediated by Si-alloying in a refractory high entropy alloy. <i>Materials Science & amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 832, 142480	5.3	O
118	Combinatorial development of multicomponent Invar alloys via rapid alloy prototyping. <i>Materialia</i> , 2022 , 21, 101326	3.2	1
117	Radiation-assisted chemical short-range order formation in high-entropy alloys. <i>Scripta Materialia</i> , 2022 , 212, 114547	5.6	2
116	Temperature effect on tensile behavior of an interstitial high entropy alloy: Crystal plasticity modeling. <i>International Journal of Plasticity</i> , 2022 , 150, 103201	7.6	4
115	Understanding the hydrogen effect on pop-in behavior of an equiatomic high-entropy alloy during in-situ nanoindentation. <i>Journal of Materials Science and Technology</i> , 2022 , 98, 118-122	9.1	3
114	Unveiling the role of glassy nanodomains in strength and plasticity of crystalglass nanocomposites via atomistic simulation. <i>Journal of Applied Physics</i> , 2022 , 131, 085109	2.5	О
113	Massive interstitial solid solution alloys achieve near-theoretical strength <i>Nature Communications</i> , 2022 , 13, 1102	17.4	3
112	Making sustainable aluminum by recycling scrap: The science of dirtylalloys. <i>Progress in Materials Science</i> , 2022 , 100947	42.2	8
111	Multiple minor elements improve strength-ductility synergy of a high-entropy alloy. <i>Materials Science & amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 840, 142901	5.3	O
110	2430% Superplastic strain in a eutectic Au-Sn alloy with micrometer-sized grains maintained by spinodal-like decomposition. <i>Acta Materialia</i> , 2022 , 228, 117766	8.4	О
109	Effects of hydrogen and load frequency on the fatigue crack propagation behavior of selective laser melted Inconel 718 alloy. <i>International Journal of Fatigue</i> , 2022 , 160, 106848	5	O
108	The effect of interstitial carbon atoms on defect evolution in high entropy alloys under helium irradiation. <i>Acta Materialia</i> , 2022 , 117955	8.4	1
107	cardiGAN: A generative adversarial network model for design and discovery of multi principal element alloys. <i>Journal of Materials Science and Technology</i> , 2022 , 125, 81-96	9.1	O
106	Atomistic insights on the deformation mechanisms of Cox(CrNi)100-x multicomponent alloys: The effect of Co content. <i>Computational Materials Science</i> , 2022 , 211, 111559	3.2	2
105	Effects of interstitial C and N on hydrogen embrittlement behavior of non-equiatomic metastable FeMnCoCr high-entropy alloys. <i>Corrosion Science</i> , 2021 , 194, 109933	6.8	6
104	Symbiotic crystal-glass alloys via dynamic chemical partitioning. <i>Materials Today</i> , 2021 , 51, 6-6	21.8	4
103	A high-density non-equiatomic WTaMoNbV high-entropy alloy: Alloying behavior, microstructure and mechanical properties. <i>Journal of Alloys and Compounds</i> , 2021 , 894, 162505	5.7	2

102	Iron-rich High Entropy Alloys 2021 , 389-421		1
101	Interstitial effects on the incipient plasticity and dislocation behavior of a metastable high-entropy alloy: Nanoindentation experiments and statistical modeling. <i>Acta Materialia</i> , 2021 , 206, 116633	8.4	21
100	Displacive transformation as pathway to prevent micro-cracks induced by thermal stress in additively manufactured strong and ductile high-entropy alloys. <i>Transactions of Nonferrous Metals Society of China</i> , 2021 , 31, 1059-1073	3.3	1
99	3d transition-metal high-entropy Invar alloy developed by adjusting the valence-electron concentration. <i>Physical Review Materials</i> , 2021 , 5,	3.2	3
98	A non-equiatomic FeNiCoCr high-entropy alloy with excellent anti-corrosion performance and strength-ductility synergy. <i>Corrosion Science</i> , 2021 , 183, 109341	6.8	32
97	Beyond Solid Solution High-Entropy Alloys: Tailoring Magnetic Properties via Spinodal Decomposition. <i>Advanced Functional Materials</i> , 2021 , 31, 2007668	15.6	21
96	Awakening the metastability of an interstitial high entropy alloy via severe deformation. <i>Scripta Materialia</i> , 2021 , 191, 96-100	5.6	12
95	Enhanced precipitation strengthening of multi-principal element alloys by Eand B2-phases. <i>Materials and Design</i> , 2021 , 198, 109315	8.1	4
94	Microstructure and deformation behavior of two TWIP/TRIP high entropy alloys upon grain refinement. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 802, 140661	5.3	12
93	The evolution of compositional and microstructural heterogeneities in a TaMo0.5ZrTi1.5Al0.1Si0.2 high entropy alloy. <i>Materials Characterization</i> , 2021 , 172, 110836	3.9	12
92	A TWIP-TRIP quinary high-entropy alloy: Tuning phase stability and microstructure for enhanced mechanical properties. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 801, 140441	5.3	13
91	Interstitial nitrogen enhances corrosion resistance of an equiatomic CoCrNi medium-entropy alloy in sulfuric acid solution. <i>Materials Characterization</i> , 2021 , 172, 110869	3.9	16
90	Enhancement of vacancy diffusion by C and N interstitials in the equiatomic FeMnNiCoCr high entropy alloy. <i>Acta Materialia</i> , 2021 , 215, 117093	8.4	7
89	Ultrastrong and Ductile Soft Magnetic High-Entropy Alloys via Coherent Ordered Nanoprecipitates. <i>Advanced Materials</i> , 2021 , 33, e2102139	24	18
88	Reactive wear protection through strong and deformable oxide nanocomposite surfaces. <i>Nature Communications</i> , 2021 , 12, 5518	17.4	8
87	Improving the hydrogen embrittlement resistance of a selective laser melted high-entropy alloy via modifying the cellular structures. <i>Corrosion Science</i> , 2021 , 190, 109695	6.8	11
86	The Temperature Dependence of Deformation Behaviors in High-Entropy Alloys: A Review. <i>Metals</i> , 2021 , 11, 2005	2.3	2
85	Enhanced strengthductility synergy and transformation-induced plasticity of the selective laser melting fabricated 304L stainless steel. <i>Additive Manufacturing</i> , 2020 , 35, 101300	6.1	12

84	Cyclic plasticity of an interstitial high-entropy alloy: experiments, crystal plasticity modeling, and simulations. <i>Journal of the Mechanics and Physics of Solids</i> , 2020 , 142, 103971	5	17
83	A novel equiaxed eutectic high-entropy alloy with excellent mechanical properties at elevated temperatures. <i>Materials Research Letters</i> , 2020 , 8, 373-382	7.4	14
82	Short-range order strengthening in boron-doped high-entropy alloys for cryogenic applications. <i>Acta Materialia</i> , 2020 , 194, 366-377	8.4	43
81	A novel supersaturated medium entropy alloy with superior tensile properties and corrosion resistance. <i>Scripta Materialia</i> , 2020 , 186, 381-386	5.6	26
80	A strong and ductile medium-entropy alloy resists hydrogen embrittlement and corrosion. <i>Nature Communications</i> , 2020 , 11, 3081	17.4	46
79	Carbon and nitrogen co-doping enhances phase stability and mechanical properties of a metastable high-entropy alloy. <i>Journal of Alloys and Compounds</i> , 2020 , 831, 154799	5.7	18
78	Interstitial doping enhances the strength-ductility synergy in a CoCrNi medium entropy alloy. <i>Materials Science & Discourse and Processing</i> , 2020 , 781, 139242	5.3	33
77	Amorphous bands induced by low temperature tension in a non-equiatomic CrMnFeCoNi alloy. <i>Acta Materialia</i> , 2020 , 188, 354-365	8.4	21
76	Effect of interstitial carbon on the evolution of early-stage irradiation damage in equi-atomic FeMnNiCoCr high-entropy alloys. <i>Journal of Applied Physics</i> , 2020 , 127, 025103	2.5	13
75	Hydrogen resistance of a 1 GPa strong equiatomic CoCrNi medium entropy alloy. <i>Corrosion Science</i> , 2020 , 167, 108510	6.8	16
74	Unveiling the mechanism of abnormal magnetic behavior of FeNiCoMnCu high-entropy alloys through a joint experimental-theoretical study. <i>Physical Review Materials</i> , 2020 , 4,	3.2	11
73	Role of magnetic ordering for the design of quinary TWIP-TRIP high entropy alloys. <i>Physical Review Materials</i> , 2020 , 4,	3.2	11
72	Grain boundary energy effect on grain boundary segregation in an equiatomic high-entropy alloy. <i>Physical Review Materials</i> , 2020 , 4,	3.2	15
71	Large creep formability and strength ductility synergy enabled by engineering dislocations in aluminum alloys. <i>International Journal of Plasticity</i> , 2020 , 134, 102774	7.6	17
70	Aging induced segregation and nanoprecipitation in a severely deformed equiatomic high-entropy alloy. <i>Materials Characterization</i> , 2020 , 165, 110369	3.9	5
69	Tuning microstructures and improving oxidation resistance of Nb-Si based alloys via electron beam surface melting. <i>Corrosion Science</i> , 2020 , 163, 108281	6.8	8
68	Yield strength increase of a CoCrNi medium entropy alloy by interstitial nitrogen doping at maintained ductility. <i>Scripta Materialia</i> , 2020 , 178, 391-397	5.6	58
67	Surface microstructure modification of hypereutectic Nb-Si based alloys to improve oxidation resistance without damaging fracture toughness. <i>Materials Characterization</i> , 2020 , 159, 110051	3.9	7

66	Interfacial nanophases stabilize nanotwins in high-entropy alloys. <i>Acta Materialia</i> , 2020 , 185, 218-232	8.4	27
65	Crystal-Glass High-Entropy Nanocomposites with Near Theoretical Compressive Strength and Large Deformability. <i>Advanced Materials</i> , 2020 , 32, e2002619	24	22
64	Ultrastrong lightweight compositionally complex steels via dual-nanoprecipitation. <i>Science Advances</i> , 2020 , 6,	14.3	41
63	Impact of interstitial carbon on self-diffusion in CoCrFeMnNi high entropy alloys. <i>Scripta Materialia</i> , 2020 , 188, 264-268	5.6	12
62	Formation mechanism of Ecarbides and deformation behavior in Si-alloyed FeMnAlC lightweight steels. <i>Acta Materialia</i> , 2020 , 198, 258-270	8.4	20
61	On the formation of hierarchical microstructure in a Mo-doped NiCoCr medium-entropy alloy with enhanced strength-ductility synergy. <i>Scripta Materialia</i> , 2020 , 175, 1-6	5.6	37
60	Influence of carbon on the corrosion behaviour of interstitial equiatomic CoCrFeMnNi high-entropy alloys in a chlorinated concrete solution. <i>Corrosion Science</i> , 2020 , 163, 108287	6.8	39
59	Developing a high-strength Al-Mg-Si-Sc-Zr alloy for selective laser melting: Crack-inhibiting and multiple strengthening mechanisms. <i>Acta Materialia</i> , 2020 , 193, 83-98	8.4	123
58	Influence of phase decomposition on mechanical behavior of an equiatomic CoCuFeMnNi high entropy alloy. <i>Acta Materialia</i> , 2019 , 181, 25-35	8.4	28
57	Deformation-driven bidirectional transformation promotes bulk nanostructure formation in a metastable interstitial high entropy alloy. <i>Acta Materialia</i> , 2019 , 167, 23-39	8.4	46
56	The effects of carbon on the phase stability and mechanical properties of heat-treated FeNiMnCrAl high entropy alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing,</i> 2019 , 748, 59-73	5.3	13
55	Invar effects in FeNiCo medium entropy alloys: From an Invar treasure map to alloy design. <i>Intermetallics</i> , 2019 , 111, 106520	3.5	17
54	Joint contribution of transformation and twinning to the high strength-ductility combination of a FeMnCoCr high entropy alloy at cryogenic temperatures. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 759, 437-447	5.3	57
53	Competitive growth of nano-lamellae Nb/Nb3Si eutectics with enhanced hardness and toughness. <i>Applied Surface Science</i> , 2019 , 486, 22-27	6.7	6
52	Metastability alloy design. MRS Bulletin, 2019, 44, 266-272	3.2	29
51	Nonbasal Slip Systems Enable a Strong and Ductile Hexagonal-Close-Packed High-Entropy Phase. <i>Physical Review Letters</i> , 2019 , 122, 075502	7.4	54
50	In-situ observation of martensitic transformation in an interstitial metastable high-entropy alloy during cathodic hydrogen charging. <i>Scripta Materialia</i> , 2019 , 173, 56-60	5.6	23
49	Segregation-driven grain boundary spinodal decomposition as a pathway for phase nucleation in a high-entropy alloy. <i>Acta Materialia</i> , 2019 , 178, 1-9	8.4	50

48	Selective laser melting enabling the hierarchically heterogeneous microstructure and excellent mechanical properties in an interstitial solute strengthened high entropy alloy. <i>Materials Research Letters</i> , 2019 , 7, 453-459	7.4	68
47	Hydrogen susceptibility of an interstitial equimolar high-entropy alloy revealed by in-situ electrochemical microcantilever bending test. <i>Materials Science & Diplication of the Materials: Properties, Microstructure and Processing</i> , 2019 , 762, 138114	5.3	16
46	Effect of hydrogen-induced surface steps on the nanomechanical behavior of a CoCrFeMnNi high-entropy alloy revealed by in-situ electrochemical nanoindentation. <i>Intermetallics</i> , 2019 , 114, 1066	0 3 ·5	16
45	Grain boundary decohesion by nanoclustering Ni and Cr separately in CrMnFeCoNi high-entropy alloys. <i>Science Advances</i> , 2019 , 5, eaay0639	14.3	38
44	On the mechanism of extraordinary strain hardening in an interstitial high-entropy alloy under cryogenic conditions. <i>Journal of Alloys and Compounds</i> , 2019 , 781, 734-743	5.7	51
43	Interstitial equiatomic CoCrFeMnNi high-entropy alloys: carbon content, microstructure, and compositional homogeneity effects on deformation behavior. <i>Acta Materialia</i> , 2019 , 164, 400-412	8.4	123
42	Hierarchical microstructure design to tune the mechanical behavior of an interstitial TRIP-TWIP high-entropy alloy. <i>Acta Materialia</i> , 2019 , 163, 40-54	8.4	150
41	Corrosion behavior of an equiatomic CoCrFeMnNi high-entropy alloy compared with 304 stainless steel in sulfuric acid solution. <i>Corrosion Science</i> , 2018 , 134, 131-139	6.8	248
40	Boron doped ultrastrong and ductile high-entropy alloys. <i>Acta Materialia</i> , 2018 , 151, 366-376	8.4	139
39	In-situ SEM observation of phase transformation and twinning mechanisms in an interstitial high-entropy alloy. <i>Acta Materialia</i> , 2018 , 147, 236-246	8.4	108
38	Hydrogen embrittlement of an interstitial equimolar high-entropy alloy. <i>Corrosion Science</i> , 2018 , 136, 403-408	6.8	66
37	Correlative MicroscopyNovel Methods and Their Applications to Explore 3D Chemistry and Structure of Nanoscale Lattice Defects: A Case Study in Superalloys. <i>Jom</i> , 2018 , 70, 1736-1743	2.1	40
36	Influence of compositional inhomogeneity on mechanical behavior of an interstitial dual-phase high-entropy alloy. <i>Materials Chemistry and Physics</i> , 2018 , 210, 29-36	4.4	52
35	Unexpected cyclic stress-strain response of dual-phase high-entropy alloys induced by partial reversibility of deformation. <i>Scripta Materialia</i> , 2018 , 143, 63-67	5.6	46
34	Strain Rate Sensitivity of a TRIP-Assisted Dual-Phase High-Entropy Alloy. <i>Frontiers in Materials</i> , 2018 , 5,	4	24
33	Combinatorial metallurgical synthesis and processing of high-entropy alloys. <i>Journal of Materials Research</i> , 2018 , 33, 3156-3169	2.5	51
32	Beating hydrogen with its own weapon: Nano-twin gradients enhance embrittlement resistance of a high-entropy alloy. <i>Materials Today</i> , 2018 , 21, 1003-1009	21.8	7°
31	Ordering of Primary Carbonitrides in an Austenitic Steel Revealed by Transmission Electron Microscopy and Atom Probe Tomography. <i>Materials</i> , 2018 , 11,	3.5	1

(2014-2018)

30	Engineering heterostructured grains to enhance strength in a single-phase high-entropy alloy with maintained ductility. <i>Materials Research Letters</i> , 2018 , 6, 634-640	7.4	56
29	Bidirectional Transformation Enables Hierarchical Nanolaminate Dual-Phase High-Entropy Alloys. <i>Advanced Materials</i> , 2018 , 30, e1804727	24	110
28	Interstitial atoms enable joint twinning and transformation induced plasticity in strong and ductile high-entropy alloys. <i>Scientific Reports</i> , 2017 , 7, 40704	4.9	207
27	High-velocity deformation of AlCoCrFeNi high-entropy alloy: Remarkable resistance to shear failure. <i>Scientific Reports</i> , 2017 , 7, 42742	4.9	85
26	Hydrogen effects on microstructural evolution and passive film characteristics of a duplex stainless steel. <i>Electrochemistry Communications</i> , 2017 , 79, 28-32	5.1	42
25	A TRIP-assisted dual-phase high-entropy alloy: Grain size and phase fraction effects on deformation behavior. <i>Acta Materialia</i> , 2017 , 131, 323-335	8.4	323
24	Strong and Ductile Non-equiatomic High-Entropy Alloys: Design, Processing, Microstructure, and Mechanical Properties. <i>Jom</i> , 2017 , 69, 2099-2106	2.1	150
23	Hydrogen enhances strength and ductility of an equiatomic high-entropy alloy. <i>Scientific Reports</i> , 2017 , 7, 9892	4.9	98
22	Enhanced strength and ductility in a friction stir processing engineered dual phase high entropy alloy. <i>Scientific Reports</i> , 2017 , 7, 16167	4.9	91
21	Ab initio assisted design of quinary dual-phase high-entropy alloys with transformation-induced plasticity. <i>Acta Materialia</i> , 2017 , 136, 262-270	8.4	179
20	High-strain induced reverse martensitic transformation in an ultrafine-grained Ti-Nb-Ta-Zr alloy. <i>Philosophical Magazine Letters</i> , 2016 , 96, 189-195	1	1
19	Interfacial Mechanical Behavior and Electrochemical Corrosion Characteristics of Cold-Sprayed and Hot-Rolled Titanium/Stainless-Steel Couples . <i>Advanced Engineering Materials</i> , 2016 , 18, 1240-1249	3.5	8
18	Metastable high-entropy dual-phase alloys overcome the strength-ductility trade-off. <i>Nature</i> , 2016 , 534, 227-30	50.4	1718
17	Mechanical Behavior of Ultrafine-Grained Ti-6Al-4V Alloy Produced by Severe Warm Rolling: The Influence of Starting Microstructure and Reduction Ratio. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015 , 46, 5047-5057	2.3	13
16	Microstructure Evolution and Mechanical Behavior of Cold-Sprayed, Bulk Nanostructured Titanium. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014 , 45, 5017-50	28 ^{2.3}	12
15	Ultrafine-grained TiNbIIaIr alloy produced by ECAP at room temperature. <i>Journal of Materials Science</i> , 2014 , 49, 6656-6666	4.3	20
14	Nanoindentation hardness and elastic modulus of nano-grained titanium produced by asymmetric and symmetric rolling. <i>Journal of Nanoscience and Nanotechnology</i> , 2014 , 14, 7740-4	1.3	9
13	Nano-TiB2 reinforced ultrafine-grained pure Al produced by flux-assisted synthesis and asymmetrical rolling. <i>Journal of Materials Research</i> , 2014 , 29, 2514-2524	2.5	12

12	Face-centered tetragonal titanium hydrides in fine-grained commercial pure (grade 2) titanium. <i>Materials Letters</i> , 2013 , 105, 16-19	3.3	9
11	Yield point elongation in fine-grained titanium. <i>Materials Letters</i> , 2013 , 96, 1-4	3.3	41
10	Lilers-like deformation induced by delta-ferrite-assisted martensitic transformation in a dual-phase high-manganese steel. <i>Scripta Materialia</i> , 2012 , 67, 297-300	5.6	45
9	Effects of annealing on microstructure and mechanical properties of nano-grained titanium produced by combination of asymmetric and symmetric rolling. <i>Materials Science & amp; Engineering A: Structural Materials: Properties, Microstructure and Processing,</i> 2012 , 558, 309-318	5.3	74
8	Influence of superalloy substrate roughness on adhesion and oxidation behavior of magnetron-sputtered NiCoCrAlY coatings. <i>Applied Surface Science</i> , 2011 , 257, 10414-10420	6.7	18
7	High-temperature tribological properties of Ni-P alloy coatings deposited by electro-brush plating. <i>Rare Metals</i> , 2011 , 30, 669-675	5.5	7
6	Characterization and oxidation behavior of NiCoCrAlY coating fabricated by electrophoretic deposition and vacuum heat treatment. <i>Applied Surface Science</i> , 2011 , 257, 4616-4620	6.7	25
5	High Temperature Wear Behaviors of Electro-Brush Plating Ni-P Coatings. <i>Advanced Materials Research</i> , 2010 , 97-101, 1506-1509	0.5	1
4	Microstructure and oxidation resistance of magnetron-sputtered nanocrystalline NiCoCrAlY coatings on nickel-based superalloy. <i>Journal of Alloys and Compounds</i> , 2010 , 505, 675-679	5.7	30
3	EFFECTS OF HEATTREAT TEMPERATURE ON MICROSTRUCTURE OF ELECTROBRUSH PLATING NiP COATINGS. <i>Jinshu Xuebao/Acta Metallurgica Sinica</i> , 2010 , 46, 867-872		10
2	Interplay between eutectic and dendritic growths dominated by Si content for Nb-Si-Ti alloys via rapid solidification. <i>Journal of Manufacturing Science and Engineering, Transactions of the ASME</i> ,1-20	3.3	1
1	Cryogenic mechanical behavior of a TRIP-assisted dual-phase high-entropy alloy. <i>Nano Research</i> ,1	10	4