

Sheng Guo

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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.

85
papers

6,770
citations

33
h-index

82
g-index

92
ext. papers

8,524
ext. citations

4.5
avg, IF

6.33
L-index

#	Paper	IF	Citations
85	Effect of valence electron concentration on stability of fcc or bcc phase in high entropy alloys. <i>Journal of Applied Physics</i> , 2011 , 109, 103505	2.5	1087
84	Phase stability in high entropy alloys: Formation of solid-solution phase or amorphous phase. <i>Progress in Natural Science: Materials International</i> , 2011 , 21, 433-446	3.6	984
83	A promising new class of high-temperature alloys: eutectic high-entropy alloys. <i>Scientific Reports</i> , 2014 , 4, 6200	4.9	604
82	Directly cast bulk eutectic and near-eutectic high entropy alloys with balanced strength and ductility in a wide temperature range. <i>Acta Materialia</i> , 2017 , 124, 143-150	8.4	483
81	More than entropy in high-entropy alloys: Forming solid solutions or amorphous phase. <i>Intermetallics</i> , 2013 , 41, 96-103	3.5	363
80	Ultrafine-Grained AlCoCrFeNi _{2.1} Eutectic High-Entropy Alloy. <i>Materials Research Letters</i> , 2016 , 4, 174-179	3.4	205
79	Entropy-driven phase stability and slow diffusion kinetics in an Al _{0.5} CoCrCuFeNi high entropy alloy. <i>Intermetallics</i> , 2012 , 31, 165-172	3.5	191
78	Alloy design for intrinsically ductile refractory high-entropy alloys. <i>Journal of Applied Physics</i> , 2016 , 120, 164902	2.5	158
77	Anomalous solidification microstructures in Co-free Al _x CrCuFeNi ₂ high-entropy alloys. <i>Journal of Alloys and Compounds</i> , 2013 , 557, 77-81	5.7	155
76	Tailoring nanostructures and mechanical properties of AlCoCrFeNi _{2.1} eutectic high entropy alloy using thermo-mechanical processing. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 675, 99-109	5.3	146
75	Nanoscale phase separation in a fcc-based CoCrCuFeNiAl _{0.5} high-entropy alloy. <i>Acta Materialia</i> , 2015 , 84, 145-152	8.4	142
74	Phase selection rules for cast high entropy alloys: an overview. <i>Materials Science and Technology</i> , 2015 , 31, 1223-1230	1.5	137
73	Promising properties and future trend of eutectic high entropy alloys. <i>Scripta Materialia</i> , 2020 , 187, 202-209	3.69	126
72	Simultaneous Strength-Ductility Enhancement of a Nano-Lamellar AlCoCrFeNi Eutectic High Entropy Alloy by Cryo-Rolling and Annealing. <i>Scientific Reports</i> , 2018 , 8, 3276	4.9	126
71	A new strategy to design eutectic high-entropy alloys using mixing enthalpy. <i>Intermetallics</i> , 2017 , 91, 124-128	3.5	124
70	Phase Selection in High-Entropy Alloys: From Nonequilibrium to Equilibrium. <i>Jom</i> , 2014 , 66, 1966-1972	2.1	109
69	Thermally stable laser cladded CoCrCuFeNi high-entropy alloy coating with low stacking fault energy. <i>Journal of Alloys and Compounds</i> , 2014 , 600, 210-214	5.7	87

68	Phase stability and tensile properties of Co-free Al _{0.5} CrCuFeNi ₂ high-entropy alloys. <i>Journal of Alloys and Compounds</i> , 2014 , 584, 530-537	5.7	85
67	Solid solutioning in equiatomic alloys: Limit set by topological instability. <i>Journal of Alloys and Compounds</i> , 2014 , 583, 410-413	5.7	81
66	High-entropy alloys as high-temperature thermoelectric materials. <i>Journal of Applied Physics</i> , 2015 , 118, 184905	2.5	72
65	Identify the best glass forming ability criterion. <i>Intermetallics</i> , 2010 , 18, 883-888	3.5	71
64	Cold-rolling and recrystallization textures of a nano-lamellar AlCoCrFeNi _{2.1} eutectic high entropy alloy. <i>Intermetallics</i> , 2017 , 84, 42-51	3.5	68
63	Effect of heat treatment on microstructure and mechanical properties of spark plasma sintered AlCoCrFeNiTi _{0.5} high entropy alloy. <i>Materials Letters</i> , 2016 , 174, 53-56	3.3	62
62	Micromechanical characterization of casting-induced inhomogeneity in an Al _{0.8} CoCrCuFeNi high-entropy alloy. <i>Scripta Materialia</i> , 2011 , 64, 868-871	5.6	57
61	Effect of low temperature on tensile properties of AlCoCrFeNi _{2.1} eutectic high entropy alloy. <i>Materials Chemistry and Physics</i> , 2018 , 210, 207-212	4.4	56
60	Microstructural, mechanical and electrochemical characterization of TiZrTaHfNb and Ti _{1.5} ZrTa _{0.5} Hf _{0.5} Nb _{0.5} refractory high-entropy alloys for biomedical applications. <i>Intermetallics</i> , 2019 , 113, 106572	3.5	54
59	Formation of core-shell structure in high entropy alloy coating by laser cladding. <i>Applied Surface Science</i> , 2016 , 363, 543-547	6.7	53
58	New glass forming ability criterion derived from cooling consideration. <i>Intermetallics</i> , 2010 , 18, 2065-2068	3.5	52
57	Corrosion behavior of Hf _{0.5} Nb _{0.5} Ta _{0.5} Ti _{1.5} Zr refractory high-entropy in aqueous chloride solutions. <i>Electrochemistry Communications</i> , 2019 , 98, 63-68	5.1	48
56	Sunflower-like Solidification Microstructure in a Near-eutectic High-entropy Alloy. <i>Materials Research Letters</i> , 2013 , 1, 228-232	7.4	44
55	Accelerated oxidation in ductile refractory high-entropy alloys. <i>Intermetallics</i> , 2018 , 97, 58-66	3.5	40
54	Nanoindentation characterized initial creep behavior of a high-entropy-based alloy CoFeNi. <i>Intermetallics</i> , 2014 , 53, 183-186	3.5	40
53	Nanostructuring with Structural-Compositional Dual Heterogeneities Enhances Strength-Ductility Synergy in Eutectic High Entropy Alloy. <i>Scientific Reports</i> , 2019 , 9, 11505	4.9	38
52	Preparing bulk ultrafine-microstructure high-entropy alloys via direct solidification. <i>Nanoscale</i> , 2018 , 10, 1912-1919	7.7	33
51	Influence of Aging and Thermomechanical Treatments on the Mechanical Properties of a Nanocluster-Strengthened Ferritic Steel. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2012 , 43, 351-359	2.3	33

50	Engineering heterogeneous microstructure by severe warm-rolling for enhancing strength-ductility synergy in eutectic high entropy alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 764, 138226	5.3	32
49	Aluminizing for enhanced oxidation resistance of ductile refractory high-entropy alloys. <i>Intermetallics</i> , 2018 , 103, 40-51	3.5	32
48	Cooling rate effect on Young's modulus and hardness of a Zr-based metallic glass. <i>Journal of Alloys and Compounds</i> , 2011 , 509, 3269-3273	5.7	30
47	Magnetism of CoCrFeNiZrx eutectic high-entropy alloys. <i>Intermetallics</i> , 2018 , 93, 122-133	3.5	30
46	Application Prospects and Microstructural Features in Laser-Induced Rapidly Solidified High-Entropy Alloys. <i>Jom</i> , 2014 , 66, 2057-2066	2.1	26
45	Predicting solid solubility in CoCrFeNiMx (M = 4d transition metal) high-entropy alloys. <i>Journal of Applied Physics</i> , 2017 , 121, 194903	2.5	24
44	Boron effects on the ductility of a nano-cluster-strengthened ferritic steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2011 , 528, 855-859	5.3	22
43	Strain-path controlled microstructure, texture and hardness evolution in cryo-deformed AlCoCrFeNi2.1 eutectic high entropy alloy. <i>Intermetallics</i> , 2018 , 97, 12-21	3.5	20
42	Confocal fluorescence microscopy in alumina-based ceramics: Where does the signal come from?. <i>Journal of the European Ceramic Society</i> , 2010 , 30, 641-648	6	18
41	Novel laser rapidly solidified medium-entropy high speed steel coatings with enhanced hot wear resistance. <i>Journal of Alloys and Compounds</i> , 2019 , 772, 719-727	5.7	18
40	Effects of mixing enthalpy and cooling rate on phase formation of AlxCoCrCuFeNi high-entropy alloys. <i>Materialia</i> , 2019 , 6, 100292	3.2	17
39	Effect of severe cold-rolling and annealing on microstructure and mechanical properties of AlCoCrFeNi2.1 eutectic high entropy alloy. <i>IOP Conference Series: Materials Science and Engineering</i> , 2017 , 194, 012018	0.4	17
38	Amorphous and nanocrystalline Al82Ni10Y8 alloy powder prepared by gas atomization. <i>Intermetallics</i> , 2005 , 13, 393-398	3.5	16
37	Parametric Study of Amorphous High-Entropy Alloys formation from two New Perspectives: Atomic Radius Modification and Crystalline Structure of Alloying Elements. <i>Scientific Reports</i> , 2017 , 7, 39917	4.9	15
36	Effect of Heat Treatment on Borides Precipitation and Mechanical Properties of CoCrFeNiAl1.8Cu0.7B0.3Si0.1 High-Entropy Alloy Prepared by Arc-Melting and Laser-Cladding. <i>Jom</i> , 2017 , 69, 2078-2083	2.1	15
35	Quantitative optical fluorescence microprobe measurements of stresses around indentations in Al2O3 and Al2O3/SiC nanocomposites: The influence of depth resolution and specimen translucency. <i>Acta Materialia</i> , 2011 , 59, 2637-2647	8.4	15
34	High resolution optical microprobe investigation of surface grinding stresses in Al2O3 and Al2O3/SiC nanocomposites. <i>Journal of the European Ceramic Society</i> , 2011 , 31, 97-109	6	14
33	Microstructural design by severe warm-rolling for tuning mechanical properties of AlCoCrFeNi2.1 eutectic high entropy alloy. <i>Intermetallics</i> , 2019 , 114, 106601	3.5	13

32	Predicting the solid solubility limit in high-entropy alloys using the molecular orbital approach. <i>Journal of Applied Physics</i> , 2015 , 118, 194902	2.5	13
31	Cr ³⁺ microspectroscopy measurements and modelling of local variations in surface grinding stresses in polycrystalline alumina. <i>Journal of the European Ceramic Society</i> , 2010 , 30, 2533-2545	6	13
30	Effect of High Configuration Entropy and Rare Earth Addition on Boride Precipitation and Mechanical Properties of Multi-principal-Element Alloys. <i>Journal of Materials Engineering and Performance</i> , 2017 , 26, 3750-3755	1.6	12
29	Liquid Phase Separation and the Aging Effect on Mechanical and Electrical Properties of Laser Rapidly Solidified Cu _{100-x} Cr _x Alloys. <i>Metals</i> , 2015 , 5, 2119-2127	2.3	12
28	Development and homogeneity of microstructure and texture in a lamellar AlCoCrFeNi _{2.1} eutectic high-entropy alloy severely strained in the warm-deformation regime. <i>Journal of Materials Research</i> , 2019 , 34, 687-699	2.5	11
27	Balancing Scattering Channels: A Panoramic Approach toward Zero Temperature Coefficient of Resistance Using High-Entropy Alloys. <i>Advanced Materials</i> , 2019 , 31, e1805392	24	11
26	Invar effect of Fe-based bulk metallic glasses. <i>Intermetallics</i> , 2018 , 93, 318-322	3.5	11
25	Microstructural characterization of eutectic and near-eutectic AlCoCrFeNi high-entropy alloys. <i>Journal of Alloys and Compounds</i> , 2020 , 822, 153558	5.7	10
24	Phase Formation Rules 2016 , 21-49		10
23	Estimation of critical cooling rates for formation of amorphous alloys from critical sizes. <i>Journal of Non-Crystalline Solids</i> , 2012 , 358, 2753-2758	3.9	9
22	Secondary hardening in laser rapidly solidified Fe ₆₈ (MoWCrVCoNiAlCu) ₃₂ medium-entropy high-speed steel coatings. <i>Materials and Design</i> , 2018 , 159, 224-231	8.1	9
21	Grain refinement in additively manufactured ferritic stainless steel by in situ inoculation using pre-alloyed powder. <i>Scripta Materialia</i> , 2021 , 194, 113690	5.6	8
20	Forming protective alumina scale for ductile refractory high-entropy alloys via aluminizing. <i>Intermetallics</i> , 2020 , 123, 106838	3.5	7
19	Novel high-entropy and medium-entropy stainless steels with enhanced mechanical and anti-corrosion properties. <i>Materials Science and Technology</i> , 2018 , 34, 572-579	1.5	7
18	In Situ Growth of CVD Graphene Directly on Dielectric Surface toward Application. <i>ACS Applied Electronic Materials</i> , 2020 , 2, 238-246	4	7
17	The Growth of Graphene on Ni-Cu Alloy Thin Films at a Low Temperature and Its Carbon Diffusion Mechanism. <i>Nanomaterials</i> , 2019 , 9,	5.4	6
16	Anomalous thermal expansion in the deep super-cooled liquid region of a ZrCuAlAg bulk metallic glass. <i>Materials Research Letters</i> , 2018 , 6, 121-129	7.4	5
15	Temperature dependent load partitioning and slip mode transition in a eutectic AlCoCrFeNi _{2.1} high entropy alloy. <i>Materialia</i> , 2021 , 17, 101118	3.2	5

14	Quantification of microstructure in a eutectic high entropy alloy AlCoCrFeNi _{2.1} . <i>IOP Conference Series: Materials Science and Engineering</i> , 2019 , 580, 012039	0.4	4
13	Processing of a new high entropy alloy: AlCrFeMoNiTi. <i>Powder Metallurgy</i> , 2018 , 61, 258-265	1.9	3
12	Mechanistic insights into the transformation processes in Z-phase strengthened 12% Cr steels. <i>Materials and Design</i> , 2018 , 158, 237-247	8.1	3
11	Alloying effect on the oxidation behavior of a ductile Al _{0.5} Cr _{0.25} Nb _{0.5} Ta _{0.5} Ti _{1.5} refractory high-entropy alloy. <i>Materials Today Advances</i> , 2020 , 7, 100104	7.4	2
10	Design of corrosion-resistant high-entropy alloys through valence electron concentration and new PHACOMP. <i>Journal of Alloys and Compounds</i> , 2021 , 883, 160787	5.7	2
9	Microstructure and texture of a severely warm-rolled and annealed AlCoCrFeNi _{2.1} eutectic high entropy alloy. <i>Journal of Physics: Conference Series</i> , 2019 , 1270, 012054	0.3	1
8	Novel high entropy alloys as binder in cermets: From design to sintering. <i>International Journal of Refractory Metals and Hard Materials</i> , 2021 , 99, 105592	4.1	1
7	Evolution of microstructure and mechanical properties during annealing of heavily rolled AlCoCrFeNi _{2.1} eutectic high-entropy alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022 , 833, 142558	5.3	0
6	Effect of Mo on high-temperature strength of refractory complex concentrated alloys: A perspective of electronegativity difference. <i>Journal of Alloys and Compounds</i> , 2022 , 164186	5.7	0
5	Electronic transport properties of the AlTiZrPdCuNi alloy in the high-entropy alloy and metallic glass forms.. <i>Scientific Reports</i> , 2022 , 12, 2271	4.9	0
4	Microstructural evolution of AlNi ₃ powders with different sizes. <i>International Journal of Materials Research</i> , 2005 , 96, 83-88		
3	Benefits of the Selection and Use of High Entropy Alloys for High-Temperature Thermoelectric Applications 2020 , 383-410		
2	Effect of Fe content on type and distribution of carbides in medium-entropy high-speed steels. <i>Tungsten</i> ,1	4.6	
1	Load redistribution in eutectic high entropy alloy AlCoCrFeNi _{2.1} during high temperature deformation. <i>Materialia</i> , 2022 , 22, 101392	3.2	