Sheng Guo

List of Publications by Year in Descending Order

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	Evolution of microstructure and mechanical properties during annealing of heavily rolled AlCoCrFeNi2.1 eutectic high-entropy alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2022**, 833, 142558	5.3	0
84	Effect of Mo on high-temperature strength of refractory complex concentrated alloys: A perspective of electronegativity difference. *Journal of Alloys and Compounds*, **2022**, 164186	5.7	0
83	Electronic transport properties of the AlTiZrPdCuNi alloy in the high-entropy alloy and metallic glass forms.. *Scientific Reports*, **2022**, 12, 2271	4.9	0
82	Load redistribution in eutectic high entropy alloy AlCoCrFeNi2.1 during high temperature deformation. *Materialia*, **2022**, 22, 101392	3.2	
81	Grain refinement in additively manufactured ferritic stainless steel by in situ inoculation using pre-alloyed powder. *Scripta Materialia*, **2021**, 194, 113690	5.6	8
80	Temperature dependent load partitioning and slip mode transition in a eutectic AlCoCrFeNi2.1 high entropy alloy. *Materialia*, **2021**, 17, 101118	3.2	5
79	Novel high entropy alloys as binder in cermets: From design to sintering. *International Journal of Refractory Metals and Hard Materials*, **2021**, 99, 105592	4.1	1
78	Design of corrosion-resistant high-entropy alloys through valence electron concentration and new PHACOMP. *Journal of Alloys and Compounds*, **2021**, 883, 160787	5.7	2
77	Forming protective alumina scale for ductile refractory high-entropy alloys via aluminizing. *Intermetallics*, **2020**, 123, 106838	3.5	7
76	Promising properties and future trend of eutectic high entropy alloys. *Scripta Materialia*, **2020**, 187, 202-209	3.6	126
75	Benefits of the Selection and Use of High Entropy Alloys for High-Temperature Thermoelectric Applications **2020**, 383-410		
74	Microstructural characterization of eutectic and near-eutectic AlCoCrFeNi high-entropy alloys. *Journal of Alloys and Compounds*, **2020**, 822, 153558	5.7	10
73	In Situ Growth of CVD Graphene Directly on Dielectric Surface toward Application. *ACS Applied Electronic Materials*, **2020**, 2, 238-246	4	7
72	Alloying effect on the oxidation behavior of a ductile Al0.5Cr0.25Nb0.5Ta0.5Ti1.5 refractory high-entropy alloy. *Materials Today Advances*, **2020**, 7, 100104	7.4	2
71	Microstructure and texture of a severely warm-rolled and annealed AlCoCrFeNi2.1 eutectic high entropy alloy. *Journal of Physics: Conference Series*, **2019**, 1270, 012054	0.3	1
70	Microstructural design by severe warm-rolling for tuning mechanical properties of AlCoCrFeNi2.1 eutectic high entropy alloy. *Intermetallics*, **2019**, 114, 106601	3.5	13
69	Development and homogeneity of microstructure and texture in a lamellar AlCoCrFeNi2.1 eutectic high-entropy alloy severely strained in the warm-deformation regime. *Journal of Materials Research* , **2019**, 34, 687-699	2.5	11

68	Effects of mixing enthalpy and cooling rate on phase formation of AlxCoCrCuFeNi high-entropy alloys. *Materialia*, **2019**, 6, 100292	3.2	17
67	Nanostructuring with Structural-Compositional Dual Heterogeneities Enhances Strength-Ductility Synergy in Eutectic High Entropy Alloy. *Scientific Reports*, **2019**, 9, 11505	4.9	38
66	Microstructural, mechanical and electrochemical characterization of TiZrTaHfNb and Ti1.5ZrTa0.5Hf0.5Nb0.5 refractory high-entropy alloys for biomedical applications. *Intermetallics*, **2019**, 113, 106572	3.5	54
65	Engineering heterogeneous microstructure by severe warm-rolling for enhancing strength-ductility synergy in eutectic high entropy alloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 764, 138226	5.3	32
64	Quantification of microstructure in a eutectic high entropy alloy AlCoCrFeNi2.1. *IOP Conference Series: Materials Science and Engineering*, **2019**, 580, 012039	0.4	4
63	The Growth of Graphene on Ni-Cu Alloy Thin Films at a Low Temperature and Its Carbon Diffusion Mechanism. *Nanomaterials*, **2019**, 9,	5.4	6
62	Novel laser rapidly solidified medium-entropy high speed steel coatings with enhanced hot wear resistance. *Journal of Alloys and Compounds*, **2019**, 772, 719-727	5.7	18
61	Balancing Scattering Channels: A Panoscopic Approach toward Zero Temperature Coefficient of Resistance Using High-Entropy Alloys. *Advanced Materials*, **2019**, 31, e1805392	24	11
60	Corrosion behavior of Hf0.5Nb0.5Ta0.5Ti1.5Zr refractory high-entropy in aqueous chloride solutions. *Electrochemistry Communications*, **2019**, 98, 63-68	5.1	48
59	Simultaneous Strength-Ductility Enhancement of a Nano-Lamellar AlCoCrFeNi Eutectic High Entropy Alloy by Cryo-Rolling and Annealing. *Scientific Reports*, **2018**, 8, 3276	4.9	126
58	Accelerated oxidation in ductile refractory high-entropy alloys. *Intermetallics*, **2018**, 97, 58-66	3.5	40
57	Novel high-entropy and medium-entropy stainless steels with enhanced mechanical and anti-corrosion properties. *Materials Science and Technology*, **2018**, 34, 572-579	1.5	7
56	Preparing bulk ultrafine-microstructure high-entropy alloys via direct solidification. *Nanoscale*, **2018**, 10, 1912-1919	7.7	33
55	Anomalous thermal expansion in the deep super-cooled liquid region of a ZrCuAlAg bulk metallic glass. *Materials Research Letters*, **2018**, 6, 121-129	7.4	5
54	Processing of a new high entropy alloy: AlCrFeMoNiTi. *Powder Metallurgy*, **2018**, 61, 258-265	1.9	3
53	Strain-path controlled microstructure, texture and hardness evolution in cryo-deformed AlCoCrFeNi2.1 eutectic high entropy alloy. *Intermetallics*, **2018**, 97, 12-21	3.5	20
52	Effect of low temperature on tensile properties of AlCoCrFeNi2.1 eutectic high entropy alloy. *Materials Chemistry and Physics*, **2018**, 210, 207-212	4.4	56
51	Mechanistic insights into the transformation processes in Z-phase strengthened 12% Cr steels. *Materials and Design*, **2018**, 158, 237-247	8.1	3

50	Magnetism of CoCrFeNiZrx eutectic high-entropy alloys. *Intermetallics*, **2018**, 93, 122-133	3.5	30
49	Invar effect of Fe-based bulk metallic glasses. *Intermetallics*, **2018**, 93, 318-322	3.5	11
48	Aluminizing for enhanced oxidation resistance of ductile refractory high-entropy alloys. *Intermetallics*, **2018**, 103, 40-51	3.5	32
47	Secondary hardening in laser rapidly solidified Fe68(MoWCrVCoNiAlCu)32 medium-entropy high-speed steel coatings. *Materials and Design*, **2018**, 159, 224-231	8.1	9
46	Cold-rolling and recrystallization textures of a nano-lamellar AlCoCrFeNi2.1 eutectic high entropy alloy. *Intermetallics*, **2017**, 84, 42-51	3.5	68
45	Parametric Study of Amorphous High-Entropy Alloys formation from two New Perspectives: Atomic Radius Modification and Crystalline Structure of Alloying Elements. *Scientific Reports*, **2017**, 7, 39917	4.9	15
44	Predicting solid solubility in CoCrFeNiMx (M = 4d transition metal) high-entropy alloys. *Journal of Applied Physics*, **2017**, 121, 194903	2.5	24
43	A new strategy to design eutectic high-entropy alloys using mixing enthalpy. *Intermetallics*, **2017**, 91, 124-128	3.5	124
42	Effect of High Configuration Entropy and Rare Earth Addition on Boride Precipitation and Mechanical Properties of Multi-principal-Element Alloys. *Journal of Materials Engineering and Performance*, **2017**, 26, 3750-3755	1.6	12
41	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. *Jom*, **2017**, 69, 2078-2083	2.1	15
40	Directly cast bulk eutectic and near-eutectic high entropy alloys with balanced strength and ductility in a wide temperature range. *Acta Materialia*, **2017**, 124, 143-150	8.4	483
39	Effect of severe cold-rolling and annealing on microstructure and mechanical properties of AlCoCrFeNi2.1 eutectic high entropy alloy. *IOP Conference Series: Materials Science and Engineering*, **2017**, 194, 012018	0.4	17
38	Formation of core□shell structure in high entropy alloy coating by laser cladding. *Applied Surface Science*, **2016**, 363, 543-547	6.7	53
37	Effect of heat treatment on microstructure and mechanical properties of spark plasma sintered AlCoCrFeNiTi0.5 high entropy alloy. *Materials Letters*, **2016**, 174, 53-56	3.3	62
36	Ultrafine-Grained AlCoCrFeNi2.1 Eutectic High-Entropy Alloy. *Materials Research Letters*, **2016**, 4, 174-179	7.4	205
35	Alloy design for intrinsically ductile refractory high-entropy alloys. *Journal of Applied Physics*, **2016**, 120, 164902	2.5	158
34	Phase Formation Rules **2016**, 21-49		10
33	Tailoring nanostructures and mechanical properties of AlCoCrFeNi2.1 eutectic high entropy alloy using thermo-mechanical processing. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 675, 99-109	5.3	146

32	Nanoscale phase separation in a fcc-based CoCrCuFeNiAl0.5 high-entropy alloy. *Acta Materialia*, **2015**, 84, 145-152	8.4	142
31	Predicting the solid solubility limit in high-entropy alloys using the molecular orbital approach. *Journal of Applied Physics*, **2015**, 118, 194902	2.5	13
30	High-entropy alloys as high-temperature thermoelectric materials. *Journal of Applied Physics*, **2015**, 118, 184905	2.5	72
29	Liquid Phase Separation and the Aging Effect on Mechanical and Electrical Properties of Laser Rapidly Solidified Cu100−xCrx Alloys. *Metals*, **2015**, 5, 2119-2127	2.3	12
28	Phase selection rules for cast high entropy alloys: an overview. *Materials Science and Technology*, **2015**, 31, 1223-1230	1.5	137
27	A promising new class of high-temperature alloys: eutectic high-entropy alloys. *Scientific Reports*, **2014**, 4, 6200	4.9	604
26	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
25	Phase Selection in High-Entropy Alloys: From Nonequilibrium to Equilibrium. *Jom*, **2014**, 66, 1966-1972	2.1	109
24	Nanoindentation characterized initial creep behavior of a high-entropy-based alloy CoFeNi. *Intermetallics*, **2014**, 53, 183-186	3.5	40
23	Application Prospects and Microstructural Features in Laser-Induced Rapidly Solidified High-Entropy Alloys. *Jom*, **2014**, 66, 2057-2066	2.1	26
22	Solid solutioning in equiatomic alloys: Limit set by topological instability. *Journal of Alloys and Compounds*, **2014**, 583, 410-413	5.7	81
21	Thermally stable laser cladded CoCrCuFeNi high-entropy alloy coating with low stacking fault energy. *Journal of Alloys and Compounds*, **2014**, 600, 210-214	5.7	87
20	Sunflower-like Solidification Microstructure in a Near-eutectic High-entropy Alloy. *Materials Research Letters*, **2013**, 1, 228-232	7.4	44
19	Anomalous solidification microstructures in Co-free AlxCrCuFeNi2 high-entropy alloys. *Journal of Alloys and Compounds*, **2013**, 557, 77-81	5.7	155
18	More than entropy in high-entropy alloys: Forming solid solutions or amorphous phase. *Intermetallics*, **2013**, 41, 96-103	3.5	363
17	Influence of Aging and Thermomechanical Treatments on the Mechanical Properties of a Nanocluster-Strengthened Ferritic Steel. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2012**, 43, 351-359	2.3	33
16	Entropy-driven phase stability and slow diffusion kinetics in an Al0.5CoCrCuFeNi high entropy alloy. *Intermetallics*, **2012**, 31, 165-172	3.5	191
15	Estimation of critical cooling rates for formation of amorphous alloys from critical sizes. *Journal of Non-Crystalline Solids*, **2012**, 358, 2753-2758	3.9	9

14	Effect of valence electron concentration on stability of fcc or bcc phase in high entropy alloys. *Journal of Applied Physics*, **2011**, 109, 103505	2.5	1087
13	Cooling rate effect on Young's modulus and hardness of a Zr-based metallic glass. *Journal of Alloys and Compounds*, **2011**, 509, 3269-3273	5.7	30
12	Micromechanical characterization of casting-induced inhomogeneity in an Al0.8CoCrCuFeNi high-entropy alloy. *Scripta Materialia*, **2011**, 64, 868-871	5.6	57
11	Phase stability in high entropy alloys: Formation of solid-solution phase or amorphous phase. *Progress in Natural Science: Materials International*, **2011**, 21, 433-446	3.6	984
10	Boron effects on the ductility of a nano-cluster-strengthened ferritic steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2011**, 528, 855-859	5.3	22
9	Quantitative optical fluorescence microprobe measurements of stresses around indentations in Al2O3 and Al2O3/SiC nanocomposites: The influence of depth resolution and specimen translucency. *Acta Materialia*, **2011**, 59, 2637-2647	8.4	15
8	High resolution optical microprobe investigation of surface grinding stresses in Al2O3 and Al2O3/SiC nanocomposites. *Journal of the European Ceramic Society*, **2011**, 31, 97-109	6	14
7	Identify the best glass forming ability criterion. *Intermetallics*, **2010**, 18, 883-888	3.5	71
6	New glass forming ability criterion derived from cooling consideration. *Intermetallics*, **2010**, 18, 2065-2068	3.5	52
5	Confocal fluorescence microscopy in alumina-based ceramics: Where does the signal come from?. *Journal of the European Ceramic Society*, **2010**, 30, 641-648	6	18
4	Cr3+ microspectroscopy measurements and modelling of local variations in surface grinding stresses in polycrystalline alumina. *Journal of the European Ceramic Society*, **2010**, 30, 2533-2545	6	13
3	Amorphous and nanocrystalline Al82Ni10Y8 alloy powder prepared by gas atomization. *Intermetallics*, **2005**, 13, 393-398	3.5	16
2	Microstructural evolution of Al82Ni10Y8 powders with different sizes. *International Journal of Materials Research*, **2005**, 96, 83-88		
1	Effect of Fe content on type and distribution of carbides in medium-entropy high-speed steels. *Tungsten*,1	4.6	