Michael C Gao

List of Publications by Year in descending order

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#	Article	IF	CITATIONS
1	Microstructures and properties of high-entropy alloys. Progress in Materials Science, 2014, 61, 1-93.	32.8	4,761
2	Deviation from high-entropy configurations in the atomic distributions of a multi-principal-element alloy. Nature Communications, 2015, 6, 5964.	12.8	530
3	Lattice distortion in a strong and ductile refractory high-entropy alloy. Acta Materialia, 2018, 160, 158-172.	7.9	325
4	Mechanical properties of refractory high-entropy alloys: Experiments and modeling. Journal of Alloys and Compounds, 2017, 696, 1139-1150.	5.5	307
5	Searching for Next Single-Phase High-Entropy Alloy Compositions. Entropy, 2013, 15, 4504-4519.	2.2	256
6	Understanding phase stability of Al-Co-Cr-Fe-Ni high entropy alloys. Materials and Design, 2016, 109, 425-433.	7.0	197
7	Design of Light-Weight High-Entropy Alloys. Entropy, 2016, 18, 333.	2.2	162
8	High-Entropy Alloys in Hexagonal Close-Packed Structure. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 3322-3332.	2.2	158
9	Design of Refractory High-Entropy Alloys. Jom, 2015, 67, 2653-2669.	1.9	134
10	Phase stability and transformation in a light-weight high-entropy alloy. Acta Materialia, 2018, 146, 280-293.	7.9	131
11	Latticeâ€Distortionâ€Enhanced Yield Strength in a Refractory Highâ€Entropy Alloy. Advanced Materials, 2020, 32, e2004029.	21.0	121
12	High-throughput design of high-performance lightweight high-entropy alloys. Nature Communications, 2021, 12, 4329.	12.8	112
13	MoNbTaV Medium-Entropy Alloy. Entropy, 2016, 18, 189.	2.2	106
14	Temperature dependence of elastic and plastic deformation behavior of a refractory high-entropy alloy. Science Advances, 2020, 6, .	10.3	101
15	Machine-learning informed prediction of high-entropy solid solution formation: Beyond the Hume-Rothery rules. Npj Computational Materials, 2020, 6, .	8.7	99
16	Reassessment of Al-Ce and Al-Nd binary systems supported by critical experiments and first-principles energy calculations. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2005, 36, 3269-3279.	2.2	95
17	Superior Highâ€Temperature Strength in a Supersaturated Refractory Highâ€Entropy Alloy. Advanced Materials, 2021, 33, e2102401.	21.0	89
18	Lattice stability of aluminum-rare earth binary systems: A first-principles approach. Physical Review B, 2007, 75, .	3.2	59

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19	Deformation-Induced Nanocrystal Precipitation in Al-Base Metallic Glasses. Materials Transactions, 2001, 42, 1741-1747.	1.2	52
20	The first-principles design of ductile refractory alloys. Jom, 2008, 60, 61-65.	1.9	51
21	CALPHAD Modeling of High-Entropy Alloys. , 2016, , 399-444.		34
22	Phase stability and elastic properties of Cr–V alloys. Journal of Physics Condensed Matter, 2013, 25, 075402.	1.8	31
23	Progress in High-Entropy Alloys. Jom, 2014, 66, 1964-1965.	1.9	31
24	Annealing effect for the Al0.3CoCrFeNi high-entropy alloy fibers. Journal of Alloys and Compounds, 2019, 778, 23-29.	5.5	29
25	Compositional Design of Soft Magnetic High Entropy Alloys by Minimizing Magnetostriction Coefficient in (Fe0.3Co0.5Ni0.2)100â°x(Al1/3Si2/3)x System. Metals, 2019, 9, 382.	2.3	27
26	Statistics of the NiCoCr medium-entropy alloy: Novel aspects of an old puzzle. Npj Computational Materials, 2020, 6, .	8.7	25
27	Progress in High Entropy Alloys. Jom, 2015, 67, 2251-2253.	1.9	22
28	Information Entropy of Liquid Metals. Journal of Physical Chemistry B, 2018, 122, 3550-3555.	2.6	22
29	First-principles calculation of lattice stability of C15–M2R and their hypothetical C15 variants (M=Al,) Tj ETQq1 341-348.	1 0.7843 1.6	14 rgBT /Ove 21
30	Glass Formation, Phase Equilibria, and Thermodynamic Assessment of the Al-Ce-Co System Assisted by First-Principles Energy Calculations. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 2540-2551.	2.2	20
31	Applications of Special Quasi-random Structures to High-Entropy Alloys. , 2016, , 333-368.		20
32	Thermodynamic Assessment of Cr-Rare Earth Systems. Journal of Phase Equilibria and Diffusion, 2009, 30, 578-586.	1.4	15
33	Long-Term Creep Behavior of a CoCrFeNiMn High-Entropy Alloy. Journal of Materials Engineering and Performance, 2020, 29, 5822-5839.	2.5	15
34	Neural network-based order parameter for phase transitions and its applications in high-entropy alloys. Nature Computational Science, 2021, 1, 686-693.	8.0	14
35	Predicting temperature-dependent ultimate strengths of body-centered-cubic (BCC) high-entropy alloys. Npj Computational Materials, 2021, 7, .	8.7	13
36	Effects of Zr addition on lattice strains and electronic structures of NbTaTiV high-entropy alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 831, 142293.	5.6	12

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37	Thermodynamic modeling of the Pd–S system supported by first-principles calculations. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2010, 34, 324-331.	1.6	8
38	Computational Thermodynamic and Kinetic Modeling of High-Entropy Alloys and Amorphous Alloys. Jom, 2012, 64, 828-829.	1.9	7
39	First Principles Calculation of the Entropy of Liquid Aluminum. Entropy, 2019, 21, 131.	2.2	7
40	Partitioning of tramp elements Cu and Si in a Ni-based superalloy and their effect on creep properties. Materialia, 2020, 13, 100843.	2.7	7
41	Coherent precipitation in a high-temperature Cr–Ni–Al–Ti Alloy. Journal of Materials Science, 2014, 49, 805-810.	3.7	5
42	Machine Learning and Data Analytics for Design and Manufacturing of High-Entropy Materials Exhibiting Mechanical or Fatigue Properties of Interest. , 2021, , 115-238.		2
43	Ab initio free energies of liquid metal alloys: Application to the phase diagrams of Li-Na and K-Na. Physical Review Materials, 2022, 6, .	2.4	2
44	Long-Term Creep Behavior of a CoCrFeNi Medium-Entropy Alloy. Journal of Materials Engineering and Performance, 0, , .	2.5	1
45	Gas-Alloy Interactions at Elevated Temperatures. Jom, 2012, 64, 1425-1425.	1.9	0