

Michael C Gao

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	Effects of Zr addition on lattice strains and electronic structures of NbTaTiV high-entropy alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2022, 831, 142293.	5.6	12
2	Ab initio free energies of liquid metal alloys: Application to the phase diagrams of Li-Na and K-Na. <i>Physical Review Materials</i> , 2022, 6, .	2.4	2
3	High-throughput design of high-performance lightweight high-entropy alloys. <i>Nature Communications</i> , 2021, 12, 4329.	12.8	112
4	Predicting temperature-dependent ultimate strengths of body-centered-cubic (BCC) high-entropy alloys. <i>Npj Computational Materials</i> , 2021, 7, .	8.7	13
5	Neural network-based order parameter for phase transitions and its applications in high-entropy alloys. <i>Nature Computational Science</i> , 2021, 1, 686-693.	8.0	14
6	Superior High-Temperature Strength in a Supersaturated Refractory High-Entropy Alloy. <i>Advanced Materials</i> , 2021, 33, e2102401.	21.0	89
7	Machine Learning and Data Analytics for Design and Manufacturing of High-Entropy Materials Exhibiting Mechanical or Fatigue Properties of Interest. , 2021, , 115-238.		2
8	Partitioning of tramp elements Cu and Si in a Ni-based superalloy and their effect on creep properties. <i>Materialia</i> , 2020, 13, 100843.	2.7	7
9	Lattice-Distortion-Enhanced Yield Strength in a Refractory High-Entropy Alloy. <i>Advanced Materials</i> , 2020, 32, e2004029.	21.0	121
10	Long-Term Creep Behavior of a CoCrFeNiMn High-Entropy Alloy. <i>Journal of Materials Engineering and Performance</i> , 2020, 29, 5822-5839.	2.5	15
11	Temperature dependence of elastic and plastic deformation behavior of a refractory high-entropy alloy. <i>Science Advances</i> , 2020, 6, .	10.3	101
12	Statistics of the NiCoCr medium-entropy alloy: Novel aspects of an old puzzle. <i>Npj Computational Materials</i> , 2020, 6, .	8.7	25
13	Machine-learning informed prediction of high-entropy solid solution formation: Beyond the Hume-Rothery rules. <i>Npj Computational Materials</i> , 2020, 6, .	8.7	99
14	First Principles Calculation of the Entropy of Liquid Aluminum. <i>Entropy</i> , 2019, 21, 131.	2.2	7
15	Compositional Design of Soft Magnetic High Entropy Alloys by Minimizing Magnetostriction Coefficient in $(\text{Fe}_{0.3}\text{Co}_{0.5}\text{Ni}_{0.2})_{100-x}(\text{Al}_{1/3}\text{Si}_{2/3})_x$ System. <i>Metals</i> , 2019, 9, 382.	2.3	27
16	Annealing effect for the $\text{Al}_{0.3}\text{CoCrFeNi}$ high-entropy alloy fibers. <i>Journal of Alloys and Compounds</i> , 2019, 778, 23-29.	5.5	29
17	Information Entropy of Liquid Metals. <i>Journal of Physical Chemistry B</i> , 2018, 122, 3550-3555.	2.6	22
18	Phase stability and transformation in a light-weight high-entropy alloy. <i>Acta Materialia</i> , 2018, 146, 280-293.	7.9	131

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19	Lattice distortion in a strong and ductile refractory high-entropy alloy. <i>Acta Materialia</i> , 2018, 160, 158-172.	7.9	325
20	Mechanical properties of refractory high-entropy alloys: Experiments and modeling. <i>Journal of Alloys and Compounds</i> , 2017, 696, 1139-1150.	5.5	307
21	Design of Light-Weight High-Entropy Alloys. <i>Entropy</i> , 2016, 18, 333.	2.2	162
22	MoNbTaV Medium-Entropy Alloy. <i>Entropy</i> , 2016, 18, 189.	2.2	106
23	Applications of Special Quasi-random Structures to High-Entropy Alloys. , 2016, , 333-368.		20
24	CALPHAD Modeling of High-Entropy Alloys. , 2016, , 399-444.		34
25	Understanding phase stability of Al-Co-Cr-Fe-Ni high entropy alloys. <i>Materials and Design</i> , 2016, 109, 425-433.	7.0	197
26	High-Entropy Alloys in Hexagonal Close-Packed Structure. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2016, 47, 3322-3332.	2.2	158
27	Deviation from high-entropy configurations in the atomic distributions of a multi-principal-element alloy. <i>Nature Communications</i> , 2015, 6, 5964.	12.8	530
28	Progress in High Entropy Alloys. <i>Jom</i> , 2015, 67, 2251-2253.	1.9	22
29	Design of Refractory High-Entropy Alloys. <i>Jom</i> , 2015, 67, 2653-2669.	1.9	134
30	Progress in High-Entropy Alloys. <i>Jom</i> , 2014, 66, 1964-1965.	1.9	31
31	Coherent precipitation in a high-temperature Cr-Ni-Al-Ti Alloy. <i>Journal of Materials Science</i> , 2014, 49, 805-810.	3.7	5
32	Microstructures and properties of high-entropy alloys. <i>Progress in Materials Science</i> , 2014, 61, 1-93.	32.8	4,761
33	Phase stability and elastic properties of Cr-V alloys. <i>Journal of Physics Condensed Matter</i> , 2013, 25, 075402.	1.8	31
34	Searching for Next Single-Phase High-Entropy Alloy Compositions. <i>Entropy</i> , 2013, 15, 4504-4519.	2.2	256
35	Gas-Alloy Interactions at Elevated Temperatures. <i>Jom</i> , 2012, 64, 1425-1425.	1.9	0
36	Computational Thermodynamic and Kinetic Modeling of High-Entropy Alloys and Amorphous Alloys. <i>Jom</i> , 2012, 64, 828-829.	1.9	7

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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	Thermodynamic Assessment of Cr-Rare Earth Systems. Journal of Phase Equilibria and Diffusion, 2009, 30, 578-586.	1.4	15
39	The first-principles design of ductile refractory alloys. Jom, 2008, 60, 61-65.	1.9	51
40	Lattice stability of aluminum-rare earth binary systems: A first-principles approach. Physical Review B, 2007, 75, .	3.2	59
41	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
42	First-principles calculation of lattice stability of C15-M ₂ R and their hypothetical C15 variants (M=Al,) Tj ETQq0 0 0 rgBT /Overlock 10 341-348.	1.6	21
43	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
44	Deformation-Induced Nanocrystal Precipitation in Al-Base Metallic Glasses. Materials Transactions, 2001, 42, 1741-1747.	1.2	52
45	Long-Term Creep Behavior of a CoCrFeNi Medium-Entropy Alloy. Journal of Materials Engineering and Performance, 0, , .	2.5	1