Michael C Gao

List of Publications by Year
in descending order

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45 papers	8,236 citations	257101 24 h-index	288905 40 g-index
45 all docs	45 docs citations	45 times ranked	4703 citing authors

#	Article	IF	Citations
1	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.	2.6	12
2	Ab initio free energies of liquid metal alloys: Application to the phase diagrams of Li-Na and K-Na. Physical Review Materials, 2022, 6, .	0.9	2
3	High-throughput design of high-performance lightweight high-entropy alloys. Nature Communications, 2021, 12, 4329.	5.8	112
4	Predicting temperature-dependent ultimate strengths of body-centered-cubic (BCC) high-entropy alloys. Npj Computational Materials, 2021, 7, .	3.5	13
5	Neural network-based order parameter for phase transitions and its applications in high-entropy alloys. Nature Computational Science, 2021, 1, 686-693.	3.8	14
6	Superior Highâ€Temperature Strength in a Supersaturated Refractory Highâ€Entropy Alloy. Advanced Materials, 2021, 33, e2102401.	11.1	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. Materialia, 2020, 13, 100843.	1.3	7
9	Latticeâ€Distortionâ€Enhanced Yield Strength in a Refractory Highâ€Entropy Alloy. Advanced Materials, 2020, 32, e2004029.	11.1	121
10	Long-Term Creep Behavior of a CoCrFeNiMn High-Entropy Alloy. Journal of Materials Engineering and Performance, 2020, 29, 5822-5839.	1.2	15
11	Temperature dependence of elastic and plastic deformation behavior of a refractory high-entropy alloy. Science Advances, 2020, 6, .	4.7	101
12	Statistics of the NiCoCr medium-entropy alloy: Novel aspects of an old puzzle. Npj Computational Materials, 2020, 6, .	3.5	25
13	Machine-learning informed prediction of high-entropy solid solution formation: Beyond the Hume-Rothery rules. Npj Computational Materials, 2020, 6, .	3.5	99
14	First Principles Calculation of the Entropy of Liquid Aluminum. Entropy, 2019, 21, 131.	1.1	7
15	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.	1.0	27
16	Annealing effect for the Al0.3CoCrFeNi high-entropy alloy fibers. Journal of Alloys and Compounds, 2019, 778, 23-29.	2.8	29
17	Information Entropy of Liquid Metals. Journal of Physical Chemistry B, 2018, 122, 3550-3555.	1.2	22
18	Phase stability and transformation in a light-weight high-entropy alloy. Acta Materialia, 2018, 146, 280-293.	3.8	131

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19	Lattice distortion in a strong and ductile refractory high-entropy alloy. Acta Materialia, 2018, 160, 158-172.	3.8	325
20	Mechanical properties of refractory high-entropy alloys: Experiments and modeling. Journal of Alloys and Compounds, 2017, 696, 1139-1150.	2.8	307
21	Design of Light-Weight High-Entropy Alloys. Entropy, 2016, 18, 333.	1.1	162
22	MoNbTaV Medium-Entropy Alloy. Entropy, 2016, 18, 189.	1.1	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. Materials and Design, 2016, 109, 425-433.	3.3	197
26	High-Entropy Alloys in Hexagonal Close-Packed Structure. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 3322-3332.	1.1	158
27	Deviation from high-entropy configurations in the atomic distributions of a multi-principal-element alloy. Nature Communications, 2015, 6, 5964.	5.8	530
28	Progress in High Entropy Alloys. Jom, 2015, 67, 2251-2253.	0.9	22
29	Design of Refractory High-Entropy Alloys. Jom, 2015, 67, 2653-2669.	0.9	134
30	Progress in High-Entropy Alloys. Jom, 2014, 66, 1964-1965.	0.9	31
31	Coherent precipitation in a high-temperature Crâ€“Niâ€“Alâ€“Ti Alloy. Journal of Materials Science, 2014, 49, 805-810.	1.7	5
32	Microstructures and properties of high-entropy alloys. Progress in Materials Science, 2014, 61, 1-93.	16.0	4,761
33	Phase stability and elastic properties of Crâ€“V alloys. Journal of Physics Condensed Matter, 2013, 25, 075402.	0.7	31
34	Searching for Next Single-Phase High-Entropy Alloy Compositions. Entropy, 2013, 15, 4504-4519.	1.1	256
35	Gas-Alloy Interactions at Elevated Temperatures. Jom, 2012, 64, 1425-1425.	0.9	0
36	Computational Thermodynamic and Kinetic Modeling of High-Entropy Alloys and Amorphous Alloys. Jom, 2012, 64, 828-829.	0.9	7

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37	Thermodynamic modeling of the Pdâ€“S system supported by first-principles calculations. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2010, 34, 324-331.	0.7	8
38	Thermodynamic Assessment of Cr-Rare Earth Systems. Journal of Phase Equilibria and Diffusion, 2009, 30, 578-586.	0.5	15
39	The first-principles design of ductile refractory alloys. Jom, 2008, 60, 61-65.	0.9	51
40	Lattice stability of aluminum-rare earth binary systems: A first-principles approach. Physical Review B, 2007, 75, .	1.1	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.	1.1	20
42	First-principles calculation of lattice stability of C15â€“M2R and their hypothetical C15 variants (M=Al,) Tj ETQq0 0 0 rgBT /Overlock 10 341-348.	0.7	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.	1.1	95
44	Deformation-Induced Nanocrystal Precipitation in Al-Base Metallic Glasses. Materials Transactions, 2001, 42, 1741-1747.	0.4	52
45	Long-Term Creep Behavior of a CoCrFeNi Medium-Entropy Alloy. Journal of Materials Engineering and Performance, 0, , .	1.2	1