Ming-Hung Tsai

List of Publications by Year
in descending order

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49 papers	9,207 citations	109264 35 h-index	206029 48 g-index
49 all docs	49 docs citations	49 times ranked	4728 citing authors

#	Article	IF	Citations
1	High-Entropy Alloys: A Critical Review. Materials Research Letters, 2014, 2, 107-123.	4.1	2,186
2	Sluggish diffusion in Coâ€“Crâ€“Feâ€“Mnâ€“Ni high-entropy alloys. Acta Materialia, 2013, 61, 4887-4897.	3.8	1,552
3	Microstructure and wear behavior of AlxCo1.5CrFeNi1.5Tiy high-entropy alloys. Acta Materialia, 2011, 59, 6308-6317.	3.8	1,112
4	Enhanced mechanical properties of HfMoTaTiZr and HfMoNbTaTiZr refractory high-entropy alloys. Intermetallics, 2015, 62, 76-83.	1.8	407
5	Criterion for Sigma Phase Formation in Cr- and V-Containing High-Entropy Alloys. Materials Research Letters, 2013, 1, 207-212.	4.1	280
6	Ultrastrong Mg Alloy via Nano-spaced Stacking Faults. Materials Research Letters, 2013, 1, 61-66.	4.1	268
7	Deformation and annealing behaviors of high-entropy alloy Al0.5CoCrCuFeNi. Journal of Alloys and Compounds, 2009, 486, 427-435.	2.8	263
8	Physical Properties of High Entropy Alloys. Entropy, 2013, 15, 5338-5345.	1.1	243
9	Effect of temperature on mechanical properties of Al0.5CoCrCuFeNi wrought alloy. Journal of Alloys and Compounds, 2010, 490, 160-165.	2.8	241
10	Simultaneously increasing the strength and ductility of a refractory high-entropy alloy via grain refining. Materials Letters, 2016, 184, 200-203.	1.3	168
11	Thermal Stability and Performance of NbSiTaTiZr High-Entropy Alloy Barrier for Copper Metallization. Journal of the Electrochemical Society, 2011, 158, H1161.	1.3	166
12	Effect of nitrogen content and substrate bias on mechanical and corrosion properties of high-entropy films (AlCrSiTiZr)100â^'xNx. Surface and Coatings Technology, 2012, 206, 4106-4112.	2.2	159
13	Diffusion barrier properties of AlMoNbSiTaTiVZr high-entropy alloy layer between copper and silicon. Thin Solid Films, 2008, 516, 5527-5530.	0.8	155
14	Significant hardening due to the formation of a sigma phase matrix in a high entropy alloy. Intermetallics, 2013, 33, 81-86.	1.8	153
15	Solution strengthening of ductile refractory HfMo x NbTaTiZr high-entropy alloys. Materials Letters, 2016, 175, 284-287.	1.3	144
16	Structure and properties of two Alâ€“Crâ€“Nbâ€“Siâ€“Ti high-entropy nitride coatings. Surface and Coatings Technology, 2013, 221, 118-123.	2.2	128
17	A second criterion for sigma phase formation in high-entropy alloys. Materials Research Letters, 2016, 4, 90-95.	4.1	119
18	Refractory high entropy superalloys (RSAs). Scripta Materialia, 2020, 187, 445-452.	2.6	111

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19	Influence of substrate temperature on structure and mechanical, properties of multi-element (AlCrTaTiZr)N coatings. Surface and Coatings Technology, 2007, 201, 6993-6998.	2.2	89
20	Corrosion mechanism of annealed equiatomic AlCoCrFeNi tri-phase high-entropy alloy in 0.5 M H2SO4 aerated aqueous solution. Corrosion Science, 2019, 157, 462-471.	3.0	89
21	Thermally stable amorphous (AlMoNbSiTaTiVZr)50N50 nitride film as diffusion barrier in copper metallization. Applied Physics Letters, 2008, 92, .	1.5	87
22	Effects of substrate bias on the structure and mechanical properties of (Al1.5CrNb0.5Si0.5Ti)Nx coatings. Thin Solid Films, 2012, 520, 6183-6188.	0.8	86
23	Superior Oxidation Resistance of (Al_{0.34}Cr_{0.22}Nb_{0.11}Si_{0.11}Ti_{0.22})₅₀N₅₀ Nitride. Journal of the Electrochemical Society, 2013, 160, C531-C535.	1.3	83
24	Morphology, structure and composition of precipitates in Al0.3CoCrCu0.5FeNi high-entropy alloy. Intermetallics, 2013, 32, 329-336.	1.8	82
25	Evolution of structure and properties of multi-component (AlCrTaTiZr)Ox films. Thin Solid Films, 2010, 518, 2732-2737.	0.8	80
26	Strong amorphization of high-entropy AlBCrSiTi nitride film. Thin Solid Films, 2012, 520, 2613-2618.	0.8	79
27	Effect of atomic size difference on the type of major intermetallic phase in arc-melted CoCrFeNiX high-entropy alloys. Journal of Alloys and Compounds, 2017, 695, 1479-1487.	2.8	70
28	Three Strategies for the Design of Advanced High-Entropy Alloys. Entropy, 2016, 18, 252.	1.1	61
29	Intermetallic Phases in High-Entropy Alloys: Statistical Analysis of their Prevalence and Structural Inheritance. Metals, 2019, 9, 247.	1.0	58
30	Effects of nitrogen flow ratio on the structure and properties of reactively sputtered (AlMoNbSiTaTiVZr)N_xcoatings. Journal Physics D: Applied Physics, 2008, 41, 235402.	1.3	57
31	Intrinsic surface hardening and precipitation kinetics of Al0.3CrFe1.5MnNi0.5 multi-component alloy. Journal of Alloys and Compounds, 2013, 551, 12-18.	2.8	50
32	Incorrect predictions of simple solid solution high entropy alloys: Cause and possible solution. Scripta Materialia, 2017, 127, 6-9.	2.6	49
33	Machining Performance of Sputter-Deposited (Al0.34Cr0.22Nb0.11Si0.11Ti0.22)50N50 High-Entropy Nitride Coatings. Coatings, 2015, 5, 312-325.	1.2	47
34	Theories for predicting simple solid solution high-entropy alloys: Classification, accuracy, and important factors impacting accuracy. Scripta Materialia, 2020, 188, 80-87.	2.6	47
35	Microstructure and aging behaviour of Al₅Cr₃₂Fe₃₅Ni₂₂Ti₆ high entropy alloy. Materials Science and Technology, 2015, 31, 1165-1170.	0.8	42
36	Dislocations with edge components in nanocrystalline bcc Mo. Journal of Materials Research, 2013, 28, 1820-1826.	1.2	28

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37	On the phase constituents of three CoCrFeNiX (XÂ= V, Nb, Ta) high-entropy alloys after prolonged annealing. Journal of Alloys and Compounds, 2020, 823, 153524.	2.8	27
38	Reply to comments on "Sluggish diffusion in Co-Cr-Fe-Mn-Ni high-entropy alloys" by K.Y. Tsai, M.H. Tsai and J.W. Yeh, Acta Materialia 61 (2013) 4887-4897. Scripta Materialia, 2017, 135, 158-159.	2.6	25
39	Atomic-scale homogenization in an fcc-based high-entropy alloy via severe plastic deformation. Journal of Alloys and Compounds, 2016, 686, 15-23.	2.8	23
40	Lattice distortion and atomic ordering of the sigma precipitates in CoCrFeNiMo high-entropy alloy. Journal of Alloys and Compounds, 2021, 851, 156909.	2.8	21
41	Microstructure and tensile properties of Al_{0.5}CoCrCuFeNi alloys produced by simple rolling and annealing. Materials Science and Technology, 2015, 31, 1178-1183.	0.8	20
42	Effect of Cu on the interfacial reaction between Sn-based solders and FeCoNiCu alloys. Intermetallics, 2022, 144, 107530.	1.8	9
43	On the phase constituents of four CoCrFeNiX (X = Y, Ti, Zr, Hf) high-entropy alloys after prolonged annealing. Journal of Materials Research and Technology, 2020, 9, 11231-11243.	2.6	8
44	Mechanical and thermodynamic data-driven design of Al-Co-Cr-Fe-Ni multi-principal element alloys. Materials Today Communications, 2021, 26, 102096.	0.9	8
45	B2-strengthened Al-Co-Cr-Fe-Ni high entropy alloy with high ductility. Materials Letters, 2022, 325, 132828.	1.3	8
46	On the phase constituents of three CoCrFeNiX (X = Cr, Mo, W) high-entropy alloys after prolonged annealing. Materials Chemistry and Physics, 2022, 276, 125431.	2.0	7
47	On the phase constituents of three CoCrFeNiX (XÂ=ÂB, Al, Ga) high-entropy alloys after prolonged annealing. Journal of Alloys and Compounds, 2022, 900, 163388.	2.8	5
48	High-Entropy Coatings. , 2016, , 469-491.		4
49	Quantitative prediction of solid solubility limit in single phase high-entropy alloys. Applied Physics Letters, 2021, 119, 141906.	1.5	3