Richard A Otis

List of Publications by Year
in descending order

24 papers	1,871 citations	516710 16 h-index	610901 24 g-index
25 all docs	25 docs citations	25 times ranked	1444 citing authors

#	Article	IF	Citations
1	Modeling a class of thermal ice probes for accessing the solar systemâ€™s ocean worlds. Acta Astronautica, 2022, 193, 483-495.	3.2	2
2	Uncertainty reduction and quantification in computational thermodynamics. Computational Materials Science, 2022, 212, 111590.	3.0	2
3	Advances in additive manufacturing of metal-based functionally graded materials. International Materials Reviews, 2021, 66, 1-29.	19.3	169
4	Integration of Processing and Microstructure Models for Non-Equilibrium Solidification in Additive Manufacturing. Metals, 2021, 11, 570.	2.3	15
5	Sensitivity estimation for calculated phase equilibria. Journal of Materials Research, 2021, 36, 140-150.	2.6	11
6	Sensitivity estimation for calculated phase equilibria. Journal of Materials Research, 2021, 36, 1-11.	2.6	1
7	Analysis of formation and growth of the Ïƒ phase in additively manufactured functionally graded materials. Journal of Alloys and Compounds, 2020, 814, 151729.	5.5	28
8	Experimental validation of Scheilâ€“Gulliver simulations for gradient path planning in additively manufactured functionally graded materials. Materialia, 2020, 11, 100689.	2.7	36
9	A method for handling the extrapolation of solid crystalline phases to temperatures far above their melting point. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2020, 68, 101737.	1.6	19
10	ESPEI for efficient thermodynamic database development, modification, and uncertainty quantification: application to Cuâ€“Mg. MRS Communications, 2019, 9, 618-627.	1.8	49
11	Quantified uncertainty in thermodynamic modeling for materials design. Acta Materialia, 2019, 174, 9-15.	7.9	40
12	Characterization of a functionally graded material of Ti-6Al-4V to 304L stainless steel with an intermediate V section. Journal of Alloys and Compounds, 2018, 742, 1031-1036.	5.5	89
13	Computation of entropies and phase equilibria in refractory V-Nb-Mo-Ta-W high-entropy alloys. Acta Materialia, 2018, 143, 88-101.	7.9	55
14	Experimental analysis and thermodynamic calculations of an additively manufactured functionally graded material of V to Invar 36. Journal of Materials Research, 2018, 33, 1642-1649.	2.6	20
15	Additive manufacturing of a functionally graded material from Ti-6Al-4V to Invar: Experimental characterization and thermodynamic calculations. Acta Materialia, 2017, 127, 133-142.	7.9	298
16	An improved sampling strategy for global energy minimization of multi-component systems. Computational Materials Science, 2017, 130, 282-291.	3.0	11
17	High-Throughput Thermodynamic Modeling and Uncertainty Quantification for ICME. Jom, 2017, 69, 886-892.	1.9	31
18	Zinc-induced embrittlement in nickel-base superalloys by simulation and experiment. Philosophical Magazine Letters, 2017, 97, 335-342.	1.2	3

#	Article	IF	Citations
19	pycalphad: CALPHAD-based Computational Thermodynamics in Python. Journal of Open Research Software, 2017, 5, 1.	5.9	77
20	Thermodynamic remodeling of the Alâ€"Pt system towards an assessment of the Alâ€"Niâ€"Pt system. Calphad: Computer Coupling of Phase Diagrams and Thermochemistry, 2016, 55, 88-102.	1.6	4
21	Functionally graded material of 304L stainless steel and inconel 625 fabricated by directed energy deposition: Characterization and thermodynamic modeling. Acta Materialia, 2016, 108, 46-54.	7.9	432
22	Compositionally graded metals: A new frontier of additive manufacturing. Journal of Materials Research, 2014, 29, 1899-1910.	2.6	187
23	Toward an integrated computational system for describing the additive manufacturing process for metallic materials. Additive Manufacturing, 2014, 1-4, 52-63.	3.0	70
24	Developing Gradient Metal Alloys through Radial Deposition Additive Manufacturing. Scientific Reports, 2014, 4, 5357.	3.3	222