

Richard A Otis

List of Publications by Year in descending order

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Version: 2024-02-01

24
papers

1,871
citations

516215

16
h-index

610482

24
g-index

25
all docs

25
docs citations

25
times ranked

1444
citing authors

#	ARTICLE	IF	CITATIONS
1	Functionally graded material of 304L stainless steel and inconel 625 fabricated by directed energy deposition: Characterization and thermodynamic modeling. <i>Acta Materialia</i> , 2016, 108, 46-54.	3.8	432
2	Additive manufacturing of a functionally graded material from Ti-6Al-4V to Invar: Experimental characterization and thermodynamic calculations. <i>Acta Materialia</i> , 2017, 127, 133-142.	3.8	298
3	Developing Gradient Metal Alloys through Radial Deposition Additive Manufacturing. <i>Scientific Reports</i> , 2014, 4, 5357.	1.6	222
4	Compositionally graded metals: A new frontier of additive manufacturing. <i>Journal of Materials Research</i> , 2014, 29, 1899-1910.	1.2	187
5	Advances in additive manufacturing of metal-based functionally graded materials. <i>International Materials Reviews</i> , 2021, 66, 1-29.	9.4	169
6	Characterization of a functionally graded material of Ti-6Al-4V to 304L stainless steel with an intermediate V section. <i>Journal of Alloys and Compounds</i> , 2018, 742, 1031-1036.	2.8	89
7	pycalphad: CALPHAD-based Computational Thermodynamics in Python. <i>Journal of Open Research Software</i> , 2017, 5, 1.	2.7	77
8	Toward an integrated computational system for describing the additive manufacturing process for metallic materials. <i>Additive Manufacturing</i> , 2014, 1-4, 52-63.	1.7	70
9	Computation of entropies and phase equilibria in refractory V-Nb-Mo-Ta-W high-entropy alloys. <i>Acta Materialia</i> , 2018, 143, 88-101.	3.8	55
10	ESPEI for efficient thermodynamic database development, modification, and uncertainty quantification: application to Cu-Mg. <i>MRS Communications</i> , 2019, 9, 618-627.	0.8	49
11	Quantified uncertainty in thermodynamic modeling for materials design. <i>Acta Materialia</i> , 2019, 174, 9-15.	3.8	40
12	Experimental validation of Scheil-Gulliver simulations for gradient path planning in additively manufactured functionally graded materials. <i>Materialia</i> , 2020, 11, 100689.	1.3	36
13	High-Throughput Thermodynamic Modeling and Uncertainty Quantification for ICME. <i>Jom</i> , 2017, 69, 886-892.	0.9	31
14	Analysis of formation and growth of the β phase in additively manufactured functionally graded materials. <i>Journal of Alloys and Compounds</i> , 2020, 814, 151729.	2.8	28
15	Experimental analysis and thermodynamic calculations of an additively manufactured functionally graded material of V to Invar 36. <i>Journal of Materials Research</i> , 2018, 33, 1642-1649.	1.2	20
16	A method for handling the extrapolation of solid crystalline phases to temperatures far above their melting point. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , 2020, 68, 101737.	0.7	19
17	Integration of Processing and Microstructure Models for Non-Equilibrium Solidification in Additive Manufacturing. <i>Metals</i> , 2021, 11, 570.	1.0	15
18	An improved sampling strategy for global energy minimization of multi-component systems. <i>Computational Materials Science</i> , 2017, 130, 282-291.	1.4	11

#	ARTICLE	IF	CITATIONS
19	Sensitivity estimation for calculated phase equilibria. <i>Journal of Materials Research</i> , 2021, 36, 140-150.	1.2	11
20	Thermodynamic remodeling of the Al–Pt system towards an assessment of the Al–Ni–Pt system. <i>Calphad: Computer Coupling of Phase Diagrams and Thermochemistry</i> , 2016, 55, 88-102.	0.7	4
21	Zinc-induced embrittlement in nickel-base superalloys by simulation and experiment. <i>Philosophical Magazine Letters</i> , 2017, 97, 335-342.	0.5	3
22	Modeling a class of thermal ice probes for accessing the solar system’s ocean worlds. <i>Acta Astronautica</i> , 2022, 193, 483-495.	1.7	2
23	Uncertainty reduction and quantification in computational thermodynamics. <i>Computational Materials Science</i> , 2022, 212, 111590.	1.4	2
24	Sensitivity estimation for calculated phase equilibria. <i>Journal of Materials Research</i> , 2021, 36, 1-11.	1.2	1