Jonathan E Guyer

List of Publications by Citations

31 papers	1,298 citations	16 h-index	32 g-index
32 ext. papers	1,469 ext. citations	3.6 avg, IF	4.43 L-index

#	Paper	IF	Citations
31	FiPy: Partial Differential Equations with Python. *Computing in Science and Engineering*, **2009**, 11, 6-15	1.5	220
30	Application of Finite Element, Phase-field, and CALPHAD-based Methods to Additive Manufacturing of Ni-based Superalloys. *Acta Materialia*, **2017**, 139, 244-253	8.4	196
29	Morphological Stability of Alloy Thin Films. *Physical Review Letters*, **1995**, 74, 4031-4034	7.4	139
28	Phase field modeling of electrochemistry. I. Equilibrium. *Physical Review E*, **2004**, 69, 021603	2.4	117
27	Phase field modeling of electrochemistry. II. Kinetics. *Physical Review E*, **2004**, 69, 021604	2.4	86
26	On the primary spacing and microsegregation of cellular dendrites in laser deposited Ni–Nb alloys. *Modelling and Simulation in Materials Science and Engineering*, **2017**, 25, 065002	2	77
25	Morphological stability of alloy thin films. *Physical Review B*, **1996**, 54, 11710-11724	3.3	74
24	Morphological stability and compositional uniformity of alloy thin films. *Journal of Crystal Growth*, **1998**, 187, 150-165	1.6	53
23	Benchmark problems for numerical implementations of phase field models. *Computational Materials Science*, **2017**, 126, 139-151	3.2	41
22	Single-Track Melt-Pool Measurements and Microstructures in Inconel 625. *Jom*, **2018**, 70, 1011-1016	2.1	40
21	Diffusion under temperature gradient: A phase-field model study. *Journal of Applied Physics*, **2009**, 106, 034912	2.5	34
20	Simulation and analysis of Ni cellular growth during laser powder deposition of Ni-based superalloys. *Computational Materials Science*, **2018**, 144, 256-264	3.2	28
19	Morphological evolution of In0.26Ga0.74As grown under compression on GaAs(001) and under tension on InP(001). *Journal of Crystal Growth*, **2000**, 217, 1-12	1.6	28
18	Backcontact CdSe/CdTe windowless solar cells. *Solar Energy Materials and Solar Cells*, **2013**, 109, 246-253	6.4	25
17	Computation of the Kirkendall velocity and displacement fields in a one-dimensional binary diffusion couple with a moving interface. *Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences*, **2007**, 463, 3347-3373	2.4	21
16	Phase field benchmark problems for dendritic growth and linear elasticity. *Computational Materials Science*, **2018**, 149, 336-347	3.2	18
15	Formation of Nb-rich droplets in laser deposited Ni-matrix microstructures. *Scripta Materialia*, **2018**, 146, 36-40	5.6	14

14	Multicomponent phase-field model for extremely large partition coefficients. *Physical Review E*, **2014**, 89, 012409	2.4	11
13	Three dimensionally structured interdigitated back contact thin film heterojunction solar cells. *Journal of Applied Physics*, **2011**, 109, 073514	2.5	10
12	Predicting microstructure development during casting of drug-eluting coatings. *Acta Biomaterialia*, **2011**, 7, 604-13	10.8	10
11	Modeling electrochemistry in metallurgical processes. *Jom*, **2007**, 59, 35-43	2.1	10
10	Windowless CdSe/CdTe solar cells with differentiated back contacts: J-V, EQE, and photocurrent mapping. *ACS Applied Materials & Interfaces*, **2014**, 6, 15972-9	9.5	9
9	Kinetics governing phase separation of nanostructured SnxGe1□ alloys. *Physical Review B*, **2006**, 73,	3.3	9
8	Simulation of temperature, stress and microstructure fields during laser deposition of Ti□Al□V. *Modelling and Simulation in Materials Science and Engineering*, **2018**, 26, 075005	2	9
7	The effect of substrate material on silver nanoparticle antimicrobial efficacy. *Journal of Nanoscience and Nanotechnology*, **2010**, 10, 8456-62	1.3	6
6	PFHub: The Phase-Field Community Hub. *Journal of Open Research Software*, **2019**, 7,	2.3	5
5	(Invited) Three-Dimensionally Structured Thin Film Heterojunction Photovoltaics on Interdigitated Back-Contacts. *ECS Transactions*, **2010**, 28, 521-532	1	4
4	Diffuse reflectance spectroscopy for in situ process monitoring and control during molecular beam epitaxy growth of InGaAs/AlGaAs pseudomorphic high electron mobility transistors. *Journal of Vacuum Science & Technology an Official Journal of the American Vacuum Society B, Microelectronics Processing and Phenomena*, **2000**, 18, 2518		3
3	Real-time measurements of the pseudodielectric function of low-temperature-grown GaAs. *Applied Physics Letters*, **2000**, 77, 540-542	3.4	1
2	Co-Based superalloy morphology evolution: A phase field study based on experimental thermodynamic and kinetic data. *Acta Materialia*, **2022**, 233, 117978	8.4	0
1	Thermal instability and the growth of the InGaAs□AlGaAs pseudomorphic high electron mobility transistor system. *Applied Physics Letters*, **2007**, 90, 113504	3.4	