Michael J Welland

List of Publications by Year
in descending order

Source: https://exaly.com/author-pdf/6072660/publications.pdf

Version: 2024-02-01

22	562	759233 12	752698 20
papers	citations	h-index	g-index

22	22	22	790
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Avalanching strain dynamics during the hydriding phase transformation in individual palladium nanoparticles. Nature Communications, 2015, 6, 10092.	12.8	87
2	Recent advances in the study of the UO2â€“PuO2 phase diagram at high temperatures. Journal of Nuclear Materials, 2014, 448, 330-339.	2.7	83
3	Three-dimensional imaging of dislocation dynamics during the hydriding phase transformation. Nature Materials, 2017, 16, 565-571.	27.5	81
4	Unit mechanisms of fission gas release: Current understanding and future needs. Journal of Nuclear Materials, 2018, 504, 300-317.	2.7	80
5	Miscibility Gap Closure, Interface Morphology, and Phase Microstructure of 3D Li_xFePO₄ Nanoparticles from Surface Wetting and Coherency Strain. ACS Nano, 2015, 9, 9757-9771.	14.6	52
6	Computer simulations of non-congruent melting of hyperstoichiometric uranium dioxide. Journal of Nuclear Materials, 2009, 385, 358-363.	2.7	30
7	Revisiting the melting temperature of NpO2 and the challenges associated with high temperature actinide compound measurements. Journal of Applied Physics, 2012, 111, .	2.5	22
8	An atomistically informed mesoscale model for growth and coarsening during discharge in lithium-oxygen batteries. Journal of Chemical Physics, 2015, 143, 224113.	3.0	22
9	The ZrCâ€“C eutectic structure and melting behaviour: A high-temperature radiance spectroscopy study. Journal of the European Ceramic Society, 2013, 33, 1349-1361.	5.7	20
10	A comparison of Stefan and Phase Field modeling techniques for the simulation of melting nuclear fuel. Journal of Nuclear Materials, 2008, 376, 229-239.	2.7	13
11	Review of high temperature thermochemical properties and application in phase-field modelling of incipient melting in defective fuel. Journal of Nuclear Materials, 2011, 412, 342-349.	2.7	13
12	Multicomponent phase-field model for extremely large partition coefficients. Physical Review E, 2014, 89, 012409.	2.1	13
13	On the interpretation of chemical potentials computed from equilibrium thermodynamic codes. Journal of Nuclear Materials, 2015, 464, 48-52.	2.7	12
14	Linearization-based method for solving a multicomponent diffusion phase-field model with arbitrary solution thermodynamics. Physical Review E, 2017, 95, 063312.	2.1	11
15	Network percolation using a two-species included phase model to predict fission gas accommodation and venting. Journal of Nuclear Materials, 2019, 515, 170-186.	2.7	6
16	Co-development of experimental and simulation methods for the laser flash heating and melting technique: The thermoelastic effects of UO2. International Journal of Thermal Sciences, 2018, 132, 174-185.	4.9	5
17	Intra- and intergranular fission gas transport on large irregular hexagonal grain networks by an included phase model. Journal of Nuclear Materials, 2020, 542, 152456.	2.7	5
18	A novel model of third phase inclusions on two phase boundaries. Materials Theory, 2017, 1, .	4.3	4

#	Article	IF	Citations
19	Modelling the growth and evolution of statistically significant populations of intergranular fission gas bubbles by IPM. Journal of Nuclear Materials, 2022, 566, 153777.	2.7	2
20	Simple Method of Including Density Variation in Quantitative Continuum Phase-Change Models. Physical Review Letters, 2022, 128, 075701.	7.8	1
21	Multiscale Mesoscale Modeling of Porosity Evolution in Oxide Fuels. Journal of Nuclear Engineering and Radiation Science, 2020, 6, .	0.4	0
22	Introducing density variation and pressure in thermodynamically self-consistent continuum phase-change models including phase-field. Physical Review Materials, 2022, 6, .	2.4	0