

Tien T Roehling

List of Publications by Year in descending order

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23
papers

2,500
citations

516710

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677142

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docs citations

23
times ranked

2343
citing authors

#	ARTICLE	IF	CITATIONS
1	A mesoscopic digital twin that bridges length and time scales for control of additively manufactured metal microstructures. <i>JPhys Materials</i> , 2021, 4, 034012.	4.2	14
2	Nondiffractive beam shaping for enhanced optothermal control in metal additive manufacturing. <i>Science Advances</i> , 2021, 7, eabg9358.	10.3	47
3	Toward multiscale simulations of tailored microstructure formation in metal additive manufacturing. <i>Materials Today</i> , 2021, 51, 65-86.	14.2	16
4	Microstructural control in metal laser powder bed fusion additive manufacturing using laser beam shaping strategy. <i>Acta Materialia</i> , 2020, 184, 284-305.	7.9	192
5	Controlling grain nucleation and morphology by laser beam shaping in metal additive manufacturing. <i>Materials and Design</i> , 2020, 195, 109071.	7.0	66
6	Controlling melt pool shape, microstructure and residual stress in additively manufactured metals using modified laser beam profiles. <i>Procedia CIRP</i> , 2020, 94, 200-204.	1.9	11
7	Cooling dynamics of two titanium alloys during laser powder bed fusion probed with in situ X-ray imaging and diffraction. <i>Materials and Design</i> , 2020, 195, 108987.	7.0	25
8	Process optimization of complex geometries using feed forward control for laser powder bed fusion additive manufacturing. <i>Additive Manufacturing</i> , 2020, 34, 101169.	3.0	46
9	Pressure dependence of the laser-metal interaction under laser powder bed fusion conditions probed by in situ X-ray imaging. <i>Additive Manufacturing</i> , 2020, 32, 101084.	3.0	19
10	Detecting keyhole pore defects and monitoring process signatures during laser powder bed fusion: A correlation between in situ pyrometry and ex situ X-ray radiography. <i>Additive Manufacturing</i> , 2020, 35, 101336.	3.0	43
11	Reducing residual stress by selective large-area diode surface heating during laser powder bed fusion additive manufacturing. <i>Additive Manufacturing</i> , 2019, 28, 228-235.	3.0	44
12	Additively manufactured hierarchical stainless steels with high strength and ductility. <i>Nature Materials</i> , 2018, 17, 63-71.	27.5	1,517
13	Spatial modulation of laser sources for microstructural control of additively manufactured metals. <i>Procedia CIRP</i> , 2018, 74, 607-610.	1.9	6
14	Modulating laser intensity profile ellipticity for microstructural control during metal additive manufacturing. <i>Acta Materialia</i> , 2017, 128, 197-206.	7.9	189
15	Laser beam ellipticity and microstructural control in metal additive manufacturing. , 2017, , .		0
16	Energetics of disordered and ordered rare earth oxide-stabilized bismuth oxide ionic conductors. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 2331-2337.	2.8	10
17	Energetics of Dysprosia-Stabilized Bismuth Oxide Electrolytes. <i>Chemistry of Materials</i> , 2012, 24, 4185-4191.	6.7	16
18	Effects of local Joule heating during the field assisted sintering of ionic ceramics. <i>Journal of the European Ceramic Society</i> , 2012, 32, 3667-3674.	5.7	65

#	ARTICLE	IF	CITATIONS
19	Local field strengths during early stage field assisted sintering (FAST) of dielectric materials. Journal of the European Ceramic Society, 2012, 32, 3659-3666.	5.7	51
20	Athermal and thermal mechanisms of sintering at high heating rates in the presence and absence of an externally applied field. Journal of the European Ceramic Society, 2012, 32, 3675-3683.	5.7	22
21	Energetics of stepwise disordering transformation in pyrochlores, RE ₂ Ti ₂ O ₇ (RE = Y, Gd and Dy). Acta Materialia, 2012, 60, 4303-4310.	7.9	25
22	Transparent Nanocrystalline Pure and Ca-Doped MgO by Spark Plasma Sintering of Anhydrous Nanoparticles. Journal of the American Ceramic Society, 2012, 95, 1185-1188.	3.8	38
23	Experimental Methodologies for Assessing the Surface Energy of Highly Hygroscopic Materials: The Case of Nanocrystalline Magnesia. Journal of Physical Chemistry C, 2011, 115, 23929-23935.	3.1	38