Michael J Mills

List of Publications by Year
in descending order

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54	2,410	331670	233421
papers	citations	21	45
		h-index	g-index

62	62	62	2602
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Deformation and creep modeling in polycrystalline Tiâ€“6Al alloys. Acta Materialia, 2003, 51, 4533-4549.	7.9	280
2	Magnetically-driven phase transformation strengthening in high entropy alloys. Nature Communications, 2018, 9, 1363.	12.8	263
3	Anataseâ€toâ€Rutile Transformation in Titania Powders. Journal of the American Ceramic Society, 2001, 84, 619-622.	3.8	262
4	Crystal plasticity modeling of deformation and creep in polycrystalline Ti-6242. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2006, 37, 1371-1388.	2.2	141
5	High resolution energy dispersive spectroscopy mapping of planar defects in L12-containing Co-base superalloys. Acta Materialia, 2015, 89, 423-437.	7.9	127
6	A study of the structure of Lomer and 60Â° dislocations in aluminium using high-resolution transmission electron microscopy. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1989, 60, 355-384.	0.6	112
7	Achieving superelasticity in additively manufactured NiTi in compression without post-process heat treatment. Scientific Reports, 2019, 9, 41.	3.3	110
8	Polarization-Induced pn Diodes in Wide-Band-Gap Nanowires with Ultraviolet Electroluminescence. Nano Letters, 2012, 12, 915-920.	9.1	106
9	Characterization of Metamorphic GaAsP/Si Materials and Devices for Photovoltaic Applications. IEEE Transactions on Electron Devices, 2010, 57, 3361-3369.	3.0	99
10	Three-Dimensional GaN/AlN Nanowire Heterostructures by Separating Nucleation and Growth Processes. Nano Letters, 2011, 11, 866-871.	9.1	97
11	Creep deformation mechanism mapping in nickel base disk superalloys. Materials at High Temperatures, 2016, 33, 372-383.	1.0	74
12	High-resolution characterization of the precipitation behavior of an Alâ€“Znâ€“Mgâ€“Cu alloy. Philosophical Magazine Letters, 2012, 92, 166-178.	1.2	59
13	Modeling displaciveâ€“diffusional coupled dislocation shearing of Î³â€² precipitates in Ni-base superalloys. Acta Materialia, 2011, 59, 3484-3497.	7.9	57
14	Knowledge of process-structure-property relationships to engineer better heat treatments for laser powder bed fusion additive manufactured Inconel 718. Additive Manufacturing, 2020, 31, 100977.	3.0	57
15	Solute segregation and deviation from bulk thermodynamics at nanoscale crystalline defects. Science Advances, 2016, 2, e1601796.	10.3	56
16	Growth behavior of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" altimg="si1.gif" overflow="scroll"><mml:mrow><mml:mi>Î³</mml:mi><mml:mo>'</mml:mo><mml:mo>/</mml:mo><mml:mi>Î³</mml:mi><mml:mo>'</ coprecipitates in Ni-Base superalloys. Acta Materialia, 2019, 164, 220-236.	7.9	54
17	Enabling Large Superalloy Parts Using Compact Coprecipitation of Î³â€² and Î³â€²â€². Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 708-717.	2.2	53
18	Fabrication of Freeâ€Standing Titaniaâ€Based Gas Sensors by the Oxidation of Metallic Titanium Foils. Journal of the American Ceramic Society, 2000, 83, 1007-1009.	3.8	48

#	Article	IF	Citations
19	High-resolution transmission electron microscopy studies of dislocation cores in metals and intermetallic compounds. Ultramicroscopy, 1994, 56, 79-93.	1.9	38
20	Microstructural Features Leading to Enhanced Resistance to Grain Boundary Creep Cracking in ALLVAC 718Plus. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 409-420.	2.2	25
21	Structureâ€Property Relationships of a High Strength Superelastic NiTiâ€“1Hf Alloy. Advanced Engineering Materials, 2018, 20, 1800046.	3.5	23
22	Study of Structure and Deformation Pathways in Ti-7Al Using Atomistic Simulations, Experiments, and Characterization. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 2222-2236.	2.2	19
23	Utilizing local phase transformation strengthening for nickel-base superalloys. Communications Materials, 2021, 2, .	6.9	19
24	On the origin of extraordinary cyclic strengthening of the austenitic stainless steel Sanicro 25 during fatigue at 700 Â°C. Journal of Materials Research, 2017, 32, 4342-4353.	2.6	18
25	Spectrum-optimized Si-based III-V multijunction photovoltaics. Proceedings of SPIE, 2012, , .	0.8	15
26	Effect of mixed partial occupation of metal sites on the phase stability of Î³-Cr23â˜xFe x C6 (xâ€‰=â€‰0â€“3) carbides. Scientific Reports, 2018, 8, 7279.	3.3	14
27	Static recovery in titanium alloys at lower temperatures. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2004, 387-389, 570-575.	5.6	13
28	Molecular Beam Epitaxy of Graded-Composition InGaN Nanowires. Journal of Electronic Materials, 2013, 42, 863-867.	2.2	13
29	Shearing mechanisms of co-precipitates in IN718. Acta Materialia, 2021, 220, 117305.	7.9	13
30	Investigations of the misfit dislocation structure at a CdTe(001)/ga As(001) interface using Stillinger-Weber potentials and high-resolution transmission electron microscopy. Philosophical Magazine A: Physics of Condensed Matter, Structure, Defects and Mechanical Properties, 1995, 72, 635-649.	0.6	12
31	Microstructural effects on the tensile properties and deformation behavior of a Ti-48Al gamma titanium aluminide. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2003, 34, 2113-2127.	2.2	10
32	Expanding the palette: Metamorphic strategies over multiple lattice constant ranges for extending the spectrum of accessible photovoltaic materials. , 2011, , .		10
33	Laser Powder Bed Fusion of NiTiHf High-Temperature Shape Memory Alloy: Effect of Process Parameters on the Thermomechanical Behavior. Metals, 2020, 10, 1522.	2.3	10
34	Sub-nanometer Resolution Chemi-STEM EDS Mapping of Superlattice Intrinsic Stacking Faults in Co-based Superalloys. Microscopy and Microanalysis, 2014, 20, 1028-1029.	0.4	6
35	Generalized stacking fault energy surface mismatch and dislocation transformation. Npj Computational Materials, 2021, 7, .	8.7	6
36	High-precision orientation mapping from spherical harmonic transform indexing of electron backscatter diffraction patterns. Ultramicroscopy, 2021, 222, 113187.	1.9	5

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37	Super-X EDS Characterization of Chemical Segregation within a Superlattice Extrinsic Stacking Fault of a Ni- based Superalloy. Microscopy and Microanalysis, 2015, 21, 493-494.	0.4	4
38	In-Situ Î³-Î³â€² Lattice Parameter Evolution and Tertiary Burst Phenomena During Controlled Cooling of Commercial PM Nickel-Base Superalloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 2973.	2.2	4
39	Modeling Dislocation Dissociation and Cutting of Î³â€² Precipitates in Ni-Based Superalloys by the Phase Field Method. Materials Research Society Symposia Proceedings, 2002, 753, 1.	0.1	3
40	Oxidation-Related Microstructural Changes at a Crack Tip in Waspaloy After Elevated-Temperature Dwell-Fatigue Testing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 5574-5580.	2.2	3
41	Creep Behavior of Compact Î³â€²-Î³â€³ Coprecipitation Strengthened IN718-Variant Superalloy. Metals, 2021, 11, 1897.	2.3	3
42	Novel Characterization of Deformation Mechanisms in a Ni-base Superalloy Using HAADF Imaging and Atomic Ordering Analysis. Microscopy and Microanalysis, 2016, 22, 272-273.	0.4	2
43	On the Temperature Limits of Ni-Based Superalloys. Minerals, Metals and Materials Series, 2020, , 785-792.	0.4	2
44	Experimental Calibration & Multi-scale Simulation of Multi-modal Î³â€² Precipitation in Nickel Superalloys During Continuous Cooling. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 3122.	2.2	2
45	Microstructural Evaluation of LENSâ„¢ Deposited Nb-Ti-Si-Cr Alloys. Materials Research Society Symposia Proceedings, 2002, 753, 1.	0.1	1
46	Growth and characterization of InGaAs quantum dots on metamorphic GaAsP templates by molecular beam epitaxy. , 2012, , .		1
47	On the Role of Lamellar Interfaces on the Strength and Ductility of Two-Phase Titanium-Aluminum. Materials Research Society Symposia Proceedings, 1998, 552, 1.	0.1	0
48	A Revised Jogged-Screw Model For Creep Of Equiaxed Î³-TiAl: Identification Of The Key Substructural Parameters.. Materials Research Society Symposia Proceedings, 2002, 753, 1.	0.1	0
49	Application of a Modified Jogged-Screw Model for Creep of Titanium Aluminides: Evaluation Of The Key Substructural Parameters. Materials Research Society Symposia Proceedings, 2003, 778, 861/W7.6.1.	0.1	0
50	Microstructures of LENSâ„¢ Deposited Nb-Si Alloys. Materials Research Society Symposia Proceedings, 2004, 842, 108.	0.1	0
51	Considerations for Physical Facility Design and Management of a State-of-the-Art Electron Microscopy and Analysis Laboratory. Microscopy and Microanalysis, 2015, 21, 525-526.	0.4	0
52	Three-Dimensional in situ Reconstructions of Microstructures with Bimodal Grain Size Distributions. Microscopy and Microanalysis, 2019, 25, 370-371.	0.4	0
53	Structure, Morphology and Coarsening Behavior of MX (NbC) Nanoprecipitates in Fe-Ni-Cr Based Alloys. Microscopy and Microanalysis, 2019, 25, 2612-2613.	0.4	0
54	Application of a Modified Jogged-Screw Model for Creep of Titanium Aluminides: Evaluation Of The Key Substructural Parameters. Materials Research Society Symposia Proceedings, 2003, 779, 761.	0.1	0