Paul A Shade

List of Publications by Year
in descending order

43 papers	1,935 citations	331670 21 h-index	265206 42 g-index
45 all docs	45 docs citations	45 times ranked	1628 citing authors

#	Article	IF	Citations
1	Grain reorientation and stress-state evolution during cyclic loading of an <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e541" altimg="si1.svg"><mml:mi>Î±</mml:mi></mml:math>-Ti alloy below the elastic limit. International Journal of Fatigue, 2022, 156, 106614.	5.7	5
2	Effect of stress-relief heat treatments on the microstructure and mechanical response of additively manufactured IN625 thin-walled elements. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 846, 143288.	5.6	6
3	Dynamic recovery observed in distinct grains within a polycrystalline nickel-based superalloy during cyclic high temperature fatigue via high energy X-ray diffraction microscopy. Scripta Materialia, 2021, 192, 37-42.	5.2	8
4	In situ characterization of residual stress evolution during heat treatment of SiC/SiC ceramic matrix composites using highâ€energy Xâ€ray diffraction. Journal of the American Ceramic Society, 2021, 104, 1424-1435.	3.8	7
5	High-precision orientation mapping from spherical harmonic transform indexing of electron backscatter diffraction patterns. Ultramicroscopy, 2021, 222, 113187.	1.9	5
6	Grain-resolved temperature-dependent anisotropy in hexagonal Ti-7Al revealed by synchrotron X-ray diffraction. Materials Characterization, 2021, 174, 110943.	4.4	5
7	Statistical aspects of grain-level strain evolution and reorientation during the heating and elastic-plastic loading of a Ni-base superalloy at elevated temperature. Materialia, 2021, 16, 101063.	2.7	8
8	AFRL Additive Manufacturing Modeling Series: Challenge 4, In Situ Mechanical Test of an IN625 Sample with Concurrent High-Energy Diffraction Microscopy Characterization. Integrating Materials and Manufacturing Innovation, 2021, 10, 338-347.	2.6	12
9	AFRL Additive Manufacturing Modeling Series: Challenge 4, 3D Reconstruction of an IN625 High-Energy Diffraction Microscopy Sample Using Multi-modal Serial Sectioning. Integrating Materials and Manufacturing Innovation, 2021, 10, 129-141.	2.6	18
10	Deep learning approaches to semantic segmentation of fatigue cracking within cyclically loaded nickel superalloy. Computational Materials Science, 2021, 198, 110683.	3.0	11
11	Interpretation of intragranular strain fields in high-energy synchrotron X-ray experiments via finite element simulations and analysis of incompatible deformation. Materials and Design, 2021, 210, 110053.	7.0	7
12	The mechanical response of additively manufactured IN625 thin-walled structures. Scripta Materialia, 2021, 205, 114188.	5.2	11
13	AFRL Additive Manufacturing Modeling Series: Challenge 1, Characterization of Residual Strain Distribution in Additively-Manufactured Metal Parts Using Energy-Dispersive Diffraction. Integrating Materials and Manufacturing Innovation, 2021, 10, 525.	2.6	2
14	A complete grain-level assessment of the stress-strain evolution and associated deformation response in polycrystalline alloys. Acta Materialia, 2020, 201, 36-54.	7.9	27
15	Quantifying microscale drivers for fatigue failure via coupled synchrotron X-ray characterization and simulations. Nature Communications, 2020, 11, 3189.	12.8	30
16	Microscale Testing and Characterization Techniques for Benchmarking Crystal Plasticity Models at Microstructural Length Scales. , 2020, , 91-125.		1
17	X-ray characterization of the micromechanical response ahead of a propagating small fatigue crack in a Ni-based superalloy. Acta Materialia, 2019, 179, 342-359.	7.9	32
18	Exploring new links between crystal plasticity models and high-energy X-ray diffraction microscopy. Current Opinion in Solid State and Materials Science, 2019, 23, 100763.	11.5	32

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19	3D Reconstruction of an Additive Manufactured IN625 Tensile Sample Using Serial Sectioning and Multi-Modal Characterization. Microscopy and Microanalysis, 2019, 25, 342-343.	0.4	5
20	Measuring Ti-7Al slip system strengths at elevated temperature using high-energy X-ray diffraction. Scripta Materialia, 2018, 142, 96-100.	5.2	54
21	High frequency in situ fatigue response of Ni-base superalloy RenÃ©-N5 microcrystals. Acta Materialia, 2018, 144, 154-163.	7.9	26
22	Validation of micro-mechanical FFT-based simulations using High Energy Diffraction Microscopy on Ti-7Al. Acta Materialia, 2018, 154, 273-283.	7.9	50
23	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
24	Modeling slip system strength evolution in Ti-7Al informed by in-situ grain stress measurements. Acta Materialia, 2017, 128, 406-417.	7.9	97
25	Measured resolved shear stresses and Bishop-Hill stress states in individual grains of austenitic stainless steel. Acta Materialia, 2017, 141, 388-404.	7.9	26
26	Investigation of fatigue crack initiation from a non-metallic inclusion via high energy x-ray diffraction microscopy. Acta Materialia, 2017, 137, 71-84.	7.9	92
27	Crystal Plasticity Model Validation Using Combined High-Energy Diffraction Microscopy Data for a Ti-7Al Specimen. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 627-647.	2.2	53
28	Fiducial marker application method for position alignment of in situ multimodal X-ray experiments and reconstructions. Journal of Applied Crystallography, 2016, 49, 700-704.	4.5	26
29	Elastic interaction between twins during tensile deformation of austenitic stainless steel. Scripta Materialia, 2016, 120, 1-4.	5.2	30
30	Characterization of fatigue crack growth behavior in LENS fabricated Ti-6Al-4V using high-energy synchrotron x-ray microtomography. Additive Manufacturing, 2016, 12, 132-141.	3.0	39
31	Correlation of Thermally Induced Pores with Microstructural Features Using High Energy X-rays. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2016, 47, 5580-5588.	2.2	9
32	Combined near- and far-field high-energy diffraction microscopy dataset for Ti-7Al tensile specimen elastically loaded in situ. Integrating Materials and Manufacturing Innovation, 2016, 5, 94-102.	2.6	20
33	A rotational and axial motion system load frame insert for in situ high energy x-ray studies. Review of Scientific Instruments, 2015, 86, 093902.	1.3	96
34	The potential link between high angle grain boundary morphology and grain boundary deformation in a nickel-based superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 640, 280-286.	5.6	5
35	New opportunities for quantitative tracking of polycrystal responses in three dimensions. Current Opinion in Solid State and Materials Science, 2015, 19, 235-244.	11.5	102
36	Crystal Plasticity Finite Element Method Simulations for a Polycrystalline Ni Micro-Specimen Deformed in Tension. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 6352-6359.	2.2	22

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37	An apparatus for performing microtensile tests at elevated temperatures inside a scanning electron microscope. Acta Materialia, 2013, 61, 7500-7510.	7.9	32
38	Pre-straining effects on the power-law scaling of size-dependent strengthening in Ni single crystals. Scripta Materialia, 2013, 68, 207-210.	5.2	54
39	Experimental measurement of surface strains and local lattice rotations combined with 3D microstructure reconstruction from deformed polycrystalline ensembles at the micro-scale. Integrating Materials and Manufacturing Innovation, 2013, 2, 100-113.	2.6	19
40	Stencil mask methodology for the parallelized production of microscale mechanical test samples. Review of Scientific Instruments, 2012, 83, 053903.	1.3	14
41	Micro-compression testing of fcc metals: A selected overview of experiments and simulations. Jom, 2009, 61, 36-41.	1.9	60
42	Plasticity of Micrometer-Scale Single Crystals in Compression. Annual Review of Materials Research, 2009, 39, 361-386.	9.3	677
43	Application of micro-sample testing to study fundamental aspects of plastic flow. Scripta Materialia, 2006, 54, 759-764.	5.2	79