Eric J Payton

List of Publications by Year
in descending order

51 papers	1,284 citations	430874 18 h-index	361022 35 g-index
52 all docs	52 docs citations	52 times ranked	1163 citing authors

#	Article	IF	Citations
1	Effect of Mo on the microstructure and mechanical properties of (Hf0.73Ta0.27)100-XMoX (XÂ=Â0, 5, 16, 21) Tj ETQq1 1 0.784314 rgBT	3.8	3
2	Development of high density parts in the low-alloy, high-performance steel AF9628 using laser powder bed fusion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 838, 142656.	5.6	0
3	Crystallographic Analysis of Plate and Lath Martensite in Fe-Ni Alloys. Crystals, 2022, 12, 156.	2.2	10
4	Non-linear Transfer Functions for Accurately Estimating 3D Particle Size, Distribution, and Expected Error from 2D Cross Sections of a Lognormal Distribution of Spherical Particles. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 228-241.	2.2	2
5	An Investigation of the Development of Coarse Grains During Î² Annealing of Hot-Forged Ti-6Al-4V. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2021, 52, 1353-1367.	2.2	7
6	High-temperature mechanical properties and oxidation behavior of Hf-27Ta and Hf-21Ta-21X (X is Nb, Mo) Tj ETQq0 0 0 rgBT /Overlock	3.8	12
7	Microstructure and properties of an equiatomic TaTiZr alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 814, 141168.	5.6	17
8	An Analytical Model for Prediction of Denudation Zone Width in Laser Powder Bed Fusion Additive Manufacturing. Additive Manufacturing, 2021, , 102461.	3.0	1
9	Effect of Re on the Microstructure and Mechanical Properties of NbTiZr and TaTiZr Equiatomic Alloys. Metals, 2021, 11, 1819.	2.3	6
10	Correlative microscopy for quantification of prior austenite grain size in AF9628 steel. Materials Characterization, 2020, 159, 109835.	4.4	8
11	Characterization of Martensite Orientation Relationships in Steels and Ferrous Alloys from EBSD Data Using Bayesian Inference. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 142-153.	2.2	8
12	An Expanded Martensite Variant Selection Theory Accounting for Transformation Rotations and Applied Stress Fields: Predictions of Variant Clusters in Titanium. Jom, 2020, 72, 3594-3607.	1.9	2
13	Characterizing and Modeling the Precursors to Coarse Grain Formation during Beta-Annealing of Ti-6Al-4V. MATEC Web of Conferences, 2020, 321, 12007.	0.2	2
14	On the grain size proportionality constants calculated in M.I. Mendelson's â€œAverage Grain Size in Polycrystalline Ceramicsâ€• Journal of the American Ceramic Society, 2019, 102, 37-41.	3.8	23
15	Datasets acquired with correlative microscopy method for delineation of prior austenite grain boundaries and characterization of prior austenite grain size in a low-alloy high-performance steel. Data in Brief, 2019, 27, 104471.	1.0	6
16	Simulations of the relative importance of initial size advantage and boundary energy anisotropy in abnormal grain growth. Journal of Physics: Conference Series, 2019, 1270, 012046.	0.4	2
17	Application of the Maximum Flowâ€“Minimum Cut Algorithm to Segmentation and Clustering of Materials Datasets. Microscopy and Microanalysis, 2019, 25, 924-941.	0.4	10
18	High-Temperature Static Coarsening of Gamma-Prime Precipitates in NiAlCr-X Single Crystals. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 2289-2301.	2.2	7

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19	Dissolution of the Alpha Phase in Ti-6Al-4V During Isothermal and Continuous Heat Treatment. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 2356-2370.	2.2	18
20	CALPHAD-aided development of quaternary multi-principal element refractory alloys based on NbTiZr. Journal of Alloys and Compounds, 2019, 783, 729-742.	5.5	54
21	Analysis of Misorientation Relationships Between Austenite Parents and Twins. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2019, 50, 837-855.	2.2	9
22	A Transfer Function for Relating Mean 2D Cross-Section Measurements to Mean 3D Particle Sizes. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2018, 49, 4424-4428.	2.2	13
23	Analysis of EBSD Grain Size Measurements Using Microstructure Simulations and a Customizable Pattern Matching Library for Grain Perimeter Estimation. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 2375-2395.	2.2	18
24	Reduction in the thermodynamic nucleation barrier via the heteroepitaxial recrystallization mechanism. Scripta Materialia, 2017, 136, 128-131.	5.2	5
25	The Kinetics of Precipitate Dissolution in a Nickel-Base Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 5567-5578.	2.2	22
26	Delineation of Prior Austenite Grain Boundaries in a Low-Alloy High-Performance Steel. Metallography, Microstructure, and Analysis, 2017, 6, 610-618.	1.0	20
27	Classification of creep crack and cavitation sites in tempered martensite ferritic steel microstructures using MTEX toolbox for EBSD. Materials Science and Technology, 2015, 31, 547-553.	1.6	12
28	Austeniteâ€“martensite/bainite orientation relationship: Characterisation parameters and their application. Materials Science and Technology, 2014, 30, 1125-1130.	1.6	30
29	Plastic Flow and Microstructure Evolution during Thermomechanical Processing of a PM Nickel-Base Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2013, 44, 2778-2798.	2.2	54
30	Effect of initial grain size on grain coarsening in the presence of an unstable population of pinning particles. Acta Materialia, 2013, 61, 1316-1326.	7.9	19
31	The Backscatter Electron Signal as an Additional Tool for Phase Segmentation in Electron Backscatter Diffraction. Microscopy and Microanalysis, 2013, 19, 929-941.	0.4	21
32	Phase Identification by Image Processing of EBSD Patterns. Microscopy and Microanalysis, 2013, 19, 842-843.	0.4	4
33	Advanced EBSD Pattern Interpretation through Iterative Post-Processing. Microscopy and Microanalysis, 2013, 19, 728-729.	0.4	1
34	Experimental measurement of the kinetics of gamma prime dissolution during supersolvus heat treatment of powder metallurgical Ni-based disk superalloys. Journal of Materials Science, 2012, 47, 7305-7311.	3.7	8
35	On the presence of work-hardened zones around fibers in a short-fiber-reinforced Al metal matrix composite. Acta Materialia, 2012, 60, 6051-6064.	7.9	16
36	Microstructure Evolution during Supersolvus Heat Treatment of a Powder Metallurgy Nickel-Base Superalloy. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2012, 43, 1649-1661.	2.2	48

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37	High-temperature strength and damage evolution in short fiber reinforced aluminum alloys studied by miniature creep testing and synchrotron microtomography. Acta Materialia, 2012, 60, 67-78.	7.9	27
38	On the effect of grain boundary segregation on creep and creep rupture. Acta Materialia, 2012, 60, 2982-2998.	7.9	25
39	On the nature of internal interfaces in a tempered martensite ferritic steel and their evolution during long-term creep. Scripta Materialia, 2012, 66, 1045-1048.	5.2	23
40	The effectiveness of coincidence site lattice criteria in predicting creep cavitation resistance. Journal of Materials Science, 2012, 47, 2915-2927.	3.7	14
41	Revisiting Sphere Unfolding Relationships for the Stereological Analysis of Segmented Digital Microstructure Images. Journal of Minerals and Materials Characterization and Engineering, 2012, 11, 221-242.	0.4	5
42	Stereology of backscatter electron images of etched surfaces for characterization of particle size distributions and volume fractions: Estimation of imaging bias via Monte Carlo simulations. Materials Characterization, 2011, 62, 563-574.	4.4	5
43	Improvement of NiTi Shape Memory Actuator Performance Through Ultraâ€Fine Grained and Nanocrystalline Microstructures. Advanced Engineering Materials, 2011, 13, 256-268.	3.5	56
44	On the formation and growth of intermetallic phases during interdiffusion between low-carbon steel and aluminum alloys. Acta Materialia, 2011, 59, 1586-1600.	7.9	397
45	Mean-field statistical simulation of grain coarsening in the presence of stable and unstable pinning particles. Acta Materialia, 2011, 59, 4587-4594.	7.9	19
46	Etching and High-Resolution Backscatter Electron Imaging for Semi-Automated Segmentation and Stereology of the Gamma Prime Phase in Ni-based Superalloys. Microscopy and Microanalysis, 2010, 16, 682-683.	0.4	0
47	Suppression of Ni₄Ti₃ Precipitation by Grain Size Refinement in Niâ€Rich NiTi Shape Memory Alloys. Advanced Engineering Materials, 2010, 12, 747-753.	3.5	60
48	Where Does the Lithium Go? â€“ A Study of the Precipitates in the Stir Zone of a Friction Stir Weld in a Liâ€containing 2xxx Series Al Alloy. Advanced Engineering Materials, 2010, 12, 298-303.	3.5	12
49	Semi-automated characterization of the phase in Ni-based superalloys via high-resolution backscatter imaging. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 2684-2692.	5.6	32
50	On the characterization of recrystallized fraction using electron backscatter diffraction: A direct comparison to local hardness in an IF steel using nanoindentation. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2010, 527, 7854-7864.	5.6	59
51	Simulation study of effects of initial particle size distribution on dissolution. Acta Materialia, 2009, 57, 316-325.	7.9	52