

Ben Britton

List of Publications by Citations

Source: <https://exaly.com/author-pdf/164425/ben-britton-publications-by-citations.pdf>

Version: 2024-04-17

This document has been generated based on the publications and citations recorded by exaly.com. For the latest version of this publication list, visit the link given above.

The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

120
papers

4,726
citations

38
h-index

66
g-index

127
ext. papers

5,523
ext. citations

5.3
avg, IF

6.14
L-index

#	Paper	IF	Citations
120	Uniform hexagonal graphene flakes and films grown on liquid copper surface. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 7992-6	11.5	351
119	Strains, planes, and EBSD in materials science. <i>Materials Today</i> , 2012 , 15, 366-376	21.8	217
118	Slip band-grain boundary interactions in commercial-purity titanium. <i>Acta Materialia</i> , 2014 , 76, 1-12	8.4	177
117	Measurement of geometrically necessary dislocation density with high resolution electron backscatter diffraction: effects of detector binning and step size. <i>Ultramicroscopy</i> , 2013 , 125, 1-9	3.1	166
116	Controlling the orientation, edge geometry, and thickness of chemical vapor deposition graphene. <i>ACS Nano</i> , 2013 , 7, 1351-9	16.7	159
115	Evolution of dislocation density distributions in copper during tensile deformation. <i>Acta Materialia</i> , 2013 , 61, 7227-7239	8.4	149
114	The effect of crystal orientation on the indentation response of commercially pure titanium: experiments and simulations. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2010 , 466, 695-719	2.4	135
113	High resolution electron backscatter diffraction measurements of elastic strain variations in the presence of larger lattice rotations. <i>Ultramicroscopy</i> , 2012 , 114, 82-95	3.1	128
112	Stress fields and geometrically necessary dislocation density distributions near the head of a blocked slip band. <i>Acta Materialia</i> , 2012 , 60, 5773-5782	8.4	126
111	Measurement of residual elastic strain and lattice rotations with high resolution electron backscatter diffraction. <i>Ultramicroscopy</i> , 2011 , 111, 1395-404	3.1	121
110	Electron backscatter diffraction study of dislocation content of a macrozone in hot-rolled Ti-6Al-4V alloy. <i>Scripta Materialia</i> , 2010 , 62, 639-642	5.6	109
109	Factors affecting the accuracy of high resolution electron backscatter diffraction when using simulated patterns. <i>Ultramicroscopy</i> , 2010 , 110, 1443-53	3.1	107
108	$\langle a \rangle$ Prismatic, $\langle a \rangle$ basal, and $\langle c+a \rangle$ slip strengths of commercially pure Zr by micro-cantilever tests. <i>Acta Materialia</i> , 2015 , 96, 249-257	8.4	100
107	Geometrically necessary dislocation density distributions in Ti-6Al-4V deformed in tension. <i>Acta Materialia</i> , 2011 , 59, 6489-6500	8.4	98
106	On the mechanistic basis of deformation at the microscale in hexagonal close-packed metals. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2015 , 471, 20140881	2.4	95
105	Nanoindentation study of slip transfer phenomenon at grain boundaries. <i>Journal of Materials Research</i> , 2009 , 24, 607-615	2.5	85
104	Tutorial: Crystal orientations and EBSD [Dr which way is up?. <i>Materials Characterization</i> , 2016 , 117, 113-126	3.9	83

103	Crystal plasticity modelling and HR-DIC measurement of slip activation and strain localization in single and oligo-crystal Ni alloys under fatigue. <i>International Journal of Plasticity</i> , 2017 , 88, 70-88	7.6	77
102	Determination of Ti-6242 slip properties using micro-pillar test and computational crystal plasticity. <i>Journal of the Mechanics and Physics of Solids</i> , 2016 , 95, 393-410	5	73
101	High-resolution electron backscatter diffraction: An emerging tool for studying local deformation. <i>Journal of Strain Analysis for Engineering Design</i> , 2010 , 45, 365-376	1.3	67
100	Microstructurally sensitive crack nucleation around inclusions in powder metallurgy nickel-based superalloys. <i>Acta Materialia</i> , 2016 , 117, 333-344	8.4	66
99	The orientation and strain dependence of dislocation structure evolution in monotonically deformed polycrystalline copper. <i>International Journal of Plasticity</i> , 2015 , 69, 102-117	7.6	65
98	Fabrication and Field-Emission Properties of Large-Area Nanostructures of the Organic Charge-Transfer Complex Cu-TCNAQ. <i>Advanced Materials</i> , 2008 , 20, 309-313	24	65
97	Local strain rate sensitivity of single phase within a dual-phase Ti alloy. <i>Acta Materialia</i> , 2016 , 107, 298-309	8.4	63
96	Intrinsic anisotropy of strain rate sensitivity in single crystal alpha titanium. <i>Acta Materialia</i> , 2016 , 118, 317-330	8.4	63
95	A nanoindentation investigation of local strain rate sensitivity in dual-phase Ti alloys. <i>Journal of Alloys and Compounds</i> , 2016 , 672, 282-291	5.7	59
94	Growth of {112} twins in titanium: A combined experimental and modelling investigation of the local state of deformation. <i>Acta Materialia</i> , 2017 , 126, 221-235	8.4	58
93	Measurements of stress fields near a grain boundary: Exploring blocked arrays of dislocations in 3D. <i>Acta Materialia</i> , 2015 , 96, 229-236	8.4	54
92	Local deformation mechanisms of two-phase Ti alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016 , 649, 39-47	5.3	53
91	Geometrically necessary dislocation densities in olivine obtained using high-angular resolution electron backscatter diffraction. <i>Ultramicroscopy</i> , 2016 , 168, 34-45	3.1	52
90	In situ study of strontium segregation in La _{0.6} Sr _{0.4} Co _{0.2} Fe _{0.8} O ₃ in ambient atmospheres using high-temperature environmental scanning electron microscopy. <i>Journal of Materials Chemistry A</i> , 2018 , 6, 14120-14135	13	52
89	On the mechanistic basis of fatigue crack nucleation in Ni superalloy containing inclusions using high resolution electron backscatter diffraction. <i>Acta Materialia</i> , 2015 , 97, 367-379	8.4	51
88	Slip localization and fatigue crack nucleation near a non-metallic inclusion in polycrystalline nickel-based superalloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015 , 641, 328-339	5.3	48
87	Evolution of intragranular stresses and dislocation densities during cyclic deformation of polycrystalline copper. <i>Acta Materialia</i> , 2015 , 94, 193-204	8.4	48
86	Microstructural analysis of phase separation in iron chalcogenide superconductors. <i>Superconductor Science and Technology</i> , 2012 , 25, 084023	3.1	47

85	Mechanical and microstructural investigations of tungsten and doped tungsten materials produced via powder injection molding. <i>Nuclear Materials and Energy</i> , 2015 , 3-4, 22-31	2.1	46
84	Heterogeneous nucleation of Cu ₆ Sn ₅ in Sn-Cu-Al solders. <i>Journal of Alloys and Compounds</i> , 2015 , 619, 345-355	5.7	41
83	Crack nucleation using combined crystal plasticity modelling, high-resolution digital image correlation and high-resolution electron backscatter diffraction in a superalloy containing non-metallic inclusions under fatigue. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2016 , 472, 20150792	2.4	40
82	Mapping type III intragranular residual stress distributions in deformed copper polycrystals. <i>Acta Materialia</i> , 2013 , 61, 5895-5904	8.4	37
81	Direct detection of electron backscatter diffraction patterns. <i>Physical Review Letters</i> , 2013 , 111, 065506	7.4	36
80	Accumulation of geometrically necessary dislocations near grain boundaries in deformed copper. <i>Philosophical Magazine Letters</i> , 2012 , 92, 580-588	1	36
79	Formation of very large blocky alpha grains in Zircaloy-4. <i>Acta Materialia</i> , 2017 , 129, 510-520	8.4	35
78	Assessing the precision of strain measurements using electron backscatter diffraction--part 1: detector assessment. <i>Ultramicroscopy</i> , 2013 , 135, 126-35	3.1	35
77	Mechanical and microstructural testing of wire and arc additively manufactured sheet material. <i>Materials and Design</i> , 2020 , 192, 108675	8.1	35
76	In situ stable crack growth at the micron scale. <i>Nature Communications</i> , 2017 , 8, 108	17.4	33
75	In situ micropillar deformation of hydrides in Zircaloy-4. <i>Acta Materialia</i> , 2015 , 92, 81-96	8.4	32
74	Strain rate sensitivity in commercial pure titanium: The competition between slip and deformation twinning. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018 , 734, 385-397	5.3	32
73	Effect of dislocation density on improved radiation hardening resistance of nano-structured tungsten-rhenium. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 611, 388-393	5.3	32
72	On the nucleation and growth of {112} twin in commercial purity titanium: In situ investigation of the local stress field and dislocation density distribution. <i>Acta Materialia</i> , 2016 , 120, 292-301	8.4	31
71	Influence of self-assembly monolayers on the characteristics of copper phthalocyanine thin film transistor. <i>Applied Physics A: Materials Science and Processing</i> , 2005 , 80, 1541-1545	2.6	30
70	The effect of the beta phase on the micromechanical response of dual-phase titanium alloys. <i>International Journal of Fatigue</i> , 2017 , 100, 377-387	5	28
69	Deformation compatibility in a single crystalline Ni superalloy. <i>Proceedings of the Royal Society A: Mathematical, Physical and Engineering Sciences</i> , 2016 , 472, 20150690	2.4	28
68	Dislocation density distribution at slip band-grain boundary intersections. <i>Acta Materialia</i> , 2020 , 182, 172-183	8.4	28

67	The effect of pattern overlap on the accuracy of high resolution electron backscatter diffraction measurements. <i>Ultramicroscopy</i> , 2015 , 155, 62-73	3.1	26
66	A review of advances and challenges in EBSD strain mapping. <i>IOP Conference Series: Materials Science and Engineering</i> , 2014 , 55, 012020	0.4	26
65	Atomic scale analysis of grain boundary deuteride growth front in Zircaloy-4. <i>Scripta Materialia</i> , 2018 , 156, 42-46	5.6	25
64	Gazing at crystal balls: Electron backscatter diffraction pattern analysis and cross correlation on the sphere. <i>Ultramicroscopy</i> , 2019 , 207, 112836	3.1	24
63	In-service materials support for safety critical applications – A case study of a high strength Ti-alloy using advanced experimental and modelling techniques. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014 , 599, 166-173	5.3	24
62	Probing Deformation and Revealing Microstructural Mechanisms with Cross-Correlation-Based, High-Resolution Electron Backscatter Diffraction. <i>Jom</i> , 2013 , 65, 1245-1253	2.1	23
61	Measurement of probability distributions for internal stresses in dislocated crystals. <i>Applied Physics Letters</i> , 2014 , 105, 181907	3.4	23
60	Quantification Challenges for Atom Probe Tomography of Hydrogen and Deuterium in Zircaloy-4. <i>Microscopy and Microanalysis</i> , 2019 , 25, 481-488	0.5	22
59	Assessing the precision of strain measurements using electron backscatter diffraction--part 2: experimental demonstration. <i>Ultramicroscopy</i> , 2013 , 135, 136-41	3.1	21
58	Microstructure and formation mechanisms of hydrides in variable grain size Zircaloy-4 studied by electron backscatter diffraction. <i>Acta Materialia</i> , 2019 , 169, 76-87	8.4	21
57	A 200 W diode-side-pumped CW 2 μ m Tm:YAG laser with water cooling at 8°C. <i>Applied Physics B: Lasers and Optics</i> , 2011 , 103, 83-88	1.9	20
56	Indexing electron backscatter diffraction patterns with a refined template matching approach. <i>Ultramicroscopy</i> , 2019 , 207, 112845	3.1	19
55	The development of high strength brazing technique for Ti-6Al-4V using TiZrCuNi amorphous filler. <i>Materials Characterization</i> , 2017 , 131, 526-531	3.9	19
54	High-resolution characterization of microstructural evolution in RbxFe2-xSe2 crystals on annealing. <i>Physical Review B</i> , 2014 , 90,	3.3	19
53	The effect of cooling rate and grain size on hydride microstructure in Zircaloy-4. <i>Journal of Nuclear Materials</i> , 2019 , 513, 221-225	3.3	18
52	Dislocation Interactions in Olivine Revealed by HR-EBSD. <i>Journal of Geophysical Research: Solid Earth</i> , 2017 , 122, 7659-7678	3.6	17
51	Understanding deformation with high angular resolution electron backscatter diffraction (HR-EBSD). <i>IOP Conference Series: Materials Science and Engineering</i> , 2018 , 304, 012003	0.4	17
50	AstroEBSD: exploring new space in pattern indexing with methods launched from an astronomical approach. <i>Journal of Applied Crystallography</i> , 2018 , 51, 1525-1534	3.8	17

49	High-efficiency high-power QCW diode-side-pumped zigzag Nd:YAG ceramic slab laser. <i>Applied Physics B: Lasers and Optics</i> , 2013 , 111, 111-116	1.9	16
48	The role of titanium ligaments in the deformation of dual phase titanium alloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019 , 746, 394-405	5.3	16
47	Residual stress and adhesion of thermal spray coatings: Microscopic view by solidification and crystallisation analysis in the epitaxial CoNiCrAlY single splat. <i>Materials and Design</i> , 2018 , 153, 36-46	8.1	15
46	High-Angular Resolution Electron Backscatter Diffraction as a New Tool for Mapping Lattice Distortion in Geological Minerals. <i>Journal of Geophysical Research: Solid Earth</i> , 2019 , 124, 6337-6358	3.6	14
45	Analysis of local chemical and structural inhomogeneities in Fe ₃ Se _{1-x} Te _x single crystals. <i>Applied Physics Letters</i> , 2011 , 99, 192504	3.4	14
44	Using transmission Kikuchi diffraction to characterise variants in an titanium alloy. <i>Journal of Microscopy</i> , 2017 , 267, 318-329	1.9	13
43	Space rocks and optimising scanning electron channelling contrast. <i>Materials Characterization</i> , 2018 , 142, 422-431	3.9	12
42	Toward Predictive Understanding of Fatigue Crack Nucleation in Ni-Based Superalloys. <i>Jom</i> , 2017 , 69, 863-871	2.1	11
41	Constraints on the effective electron energy spectrum in backscatter Kikuchi diffraction. <i>Physical Review B</i> , 2019 , 99,	3.3	11
40	A new beta titanium alloy system reinforced with superlattice intermetallic precipitates. <i>Scripta Materialia</i> , 2017 , 140, 71-75	5.6	10
39	A Chemical and Morphological Study of Diesel Injector Nozzle Deposits - Insights into their Formation and Growth Mechanisms. <i>SAE International Journal of Fuels and Lubricants</i> , 2017 , 10, 106-114	1.8	9
38	Rapid electron backscatter diffraction mapping: Painting by numbers. <i>Materials Characterization</i> , 2019 , 147, 271-279	3.9	9
37	Variable temperature micropillar compression to reveal basal slip properties of Zircaloy-4. <i>Scripta Materialia</i> , 2019 , 162, 451-455	5.6	8
36	Deformation behaviour of [001] oriented MgO using combined in-situ nano-indentation and micro-Laue diffraction. <i>Acta Materialia</i> , 2018 , 145, 516-531	8.4	8
35	Using coupled micropillar compression and micro-Laue diffraction to investigate deformation mechanisms in a complex metallic alloy Al ₁₃ Co ₄ . <i>Applied Physics Letters</i> , 2016 , 108, 111902	3.4	8
34	Direct volumetric measurement of crystallographic texture using acoustic waves. <i>Acta Materialia</i> , 2018 , 159, 384-394	8.4	8
33	New techniques for imaging and identifying defects in electron microscopy. <i>MRS Bulletin</i> , 2019 , 44, 450-458	3.58	6
32	In-situ electron backscatter diffraction of thermal cycling in a single grain Cu/Sn-3Ag-0.5Cu/Cu solder joint. <i>Scripta Materialia</i> , 2020 , 175, 55-60	5.6	6

31	Intermetallic size and morphology effects on creep rate of Sn-3Ag-0.5Cu solder. <i>International Journal of Plasticity</i> , 2021 , 137, 102904	7.6	6
30	The effect of β hydride on the micromechanical deformation of a Zr alloy studied by in situ high angular resolution electron backscatter diffraction. <i>Scripta Materialia</i> , 2019 , 173, 101-105	5.6	5
29	Evaluating Creep Deformation in Controlled Microstructures of Sn-3Ag-0.5Cu Solder. <i>Journal of Electronic Materials</i> , 2019 , 48, 107-121	1.9	5
28	Advancing characterisation with statistics from correlative electron diffraction and X-ray spectroscopy, in the scanning electron microscope. <i>Ultramicroscopy</i> , 2020 , 211, 112944	3.1	5
27	In-situ study of creep in Sn-3Ag-0.5Cu solder. <i>Acta Materialia</i> , 2020 , 196, 31-43	8.4	4
26	Stress induced martensite variants revealed by in situ high resolution electron backscatter diffraction (HR-EBSD). <i>Materials and Design</i> , 2018 , 151, 83-88	8.1	4
25	Slip β hydride interactions in Zircaloy-4: Multiscale mechanical testing and characterisation. <i>Acta Materialia</i> , 2020 , 200, 537-550	8.4	4
24	Comment on "An Experimental Study on Evolution of Grain-Scale Stress/Strain and Geometrical Necessary Dislocations in Advanced TA15 Titanium Alloy during Uniaxial Tension Deformation" <i>Advanced Engineering Materials</i> , 2017 , 19, 1700051	3.5	3
23	Indexing Electron Backscatter Diffraction Patterns with a Refined Template Matching Approach. <i>Microscopy and Microanalysis</i> , 2019 , 25, 1962-1963	0.5	3
22	Effect of high temperature service on the complex through-wall microstructure of centrifugally cast HP40 reformer tube. <i>Materials Characterization</i> , 2021 , 177, 111070	3.9	3
21	TrueEBSD: Correcting spatial distortions in electron backscatter diffraction maps. <i>Ultramicroscopy</i> , 2021 , 221, 113130	3.1	3
20	The Role of Lengthscale in the Creep of Sn-3Ag-0.5Cu Solder Microstructures. <i>Journal of Electronic Materials</i> , 2021 , 50, 926-938	1.9	3
19	Characterisation of carbonaceous deposits on diesel injector nozzles. <i>Fuel</i> , 2020 , 274, 117629	7.1	2
18	Gender issues in fundamental physics: Strumia's bibliometric analysis fails to account for key confounders and confuses correlation with causation. <i>Quantitative Science Studies</i> , 2021 , 2, 263-272	3.8	2
17	Investigating spatio-temporal deformation in single crystal Ni-based superalloys using in-situ diffraction experiments and modelling. <i>Materialia</i> , 2020 , 9, 100635	3.2	1
16	Stress Concentrations, Slip Bands and Grain Boundaries In Commercially Pure Titanium 2016 , 1017-1021		1
15	In-situ diffraction based observations of slip near phase boundaries in titanium through micropillar compression. <i>Materials Characterization</i> , 2022 , 184, 111695	3.9	1
14	Spherical-angular dark field imaging and sensitive microstructural phase clustering with unsupervised machine learning. <i>Ultramicroscopy</i> , 2020 , 219, 113132	3.1	1

13	Fracture Energy Measurement of Prismatic Plane and Σ Boundary in Cemented Carbide. <i>Jom</i> , 2021 , 73, 1589-1596	2.1	1
12	Correlative statistical microstructural assessment of precipitates and their distribution, with simultaneous electron backscatter diffraction and energy dispersive X-ray spectroscopy. <i>Materials Characterization</i> , 2021 , 176, 111071	3.9	1
11	Evaluation of Local Rate Sensitivity in a Dwell-Sensitive Ti6242 Using Micropillar Compression 2016 , 498-498		1
10	Synthesis and interfacial activity of petroleum sulfonate. <i>Petroleum Science and Technology</i> , 2016 , 34, 517-522	1.4	1
9	Interfacial activity of alkyl hydroxyl sulfobetaine against crude oil. <i>Petroleum Science and Technology</i> , 2016 , 34, 587-592	1.4	1
8	Quantitative Precipitate Classification and Grain Boundary Property Control in Co/Ni-Base Superalloys. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2021 , 52, 1649	2.3	0
7	Development of local plasticity around voids during tensile deformation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2021 , 814, 141227	5.3	0
6	Optimizing broad ion beam polishing of zircaloy-4 for electron backscatter diffraction analysis. <i>Micron</i> , 2022 , 103268	2.3	0
5	Microstructure and Formation Mechanisms of δ -Hydrides in Variable Grain Size Zircaloy-4 Studied by Electron Backscatter Diffraction. <i>Microscopy and Microanalysis</i> , 2019 , 25, 1588-1589	0.5	
4	Analysis of Dislocation Densities using High Resolution Electron Backscatter Diffraction. <i>Microscopy and Microanalysis</i> , 2015 , 21, 1891-1892	0.5	
3	Pattern Overlap and High Resolution Electron Backscatter Diffraction. <i>Microscopy and Microanalysis</i> , 2015 , 21, 2045-2046	0.5	
2	Micromechanical approaches to understand dwell fatigue: from titanium a-b microstructures to disc thermal alleviation. <i>MATEC Web of Conferences</i> , 2020 , 321, 04004	0.3	
1	Data on a new beta titanium alloy system reinforced with superlattice intermetallic precipitates. <i>Data in Brief</i> , 2018 , 17, 863-869	1.2	