Joo Quinta da Fonseca

List of Publications by Citations

114 papers	2,130 citations	23 h-index	43 g-index
117 ext. papers	2,532 ext. citations	4.3 avg, IF	5.31 L-index

#	Paper	IF	Citations
114	Plastic Strain Mapping with Sub-micron Resolution Using Digital Image Correlation. *Experimental Mechanics*, **2013**, 53, 743-754	2.6	150
113	Full-field strain mapping by optical correlation of micrographs acquired during deformation. *Journal of Microscopy*, **2005**, 218, 9-21	1.9	127
112	An experimental study of the polycrystalline plasticity of austenitic stainless steel. *International Journal of Plasticity*, **2015**, 74, 92-109	7.6	120
111	Effect of β grain growth on variant selection and texture memory effect during α→β→α phase transformation in Ti-6Al-4V. *Acta Materialia*, **2012**, 60, 1048-1058	8.4	106
110	Texture memory and variant selection during phase transformation of a zirconium alloy. *Acta Materialia*, **2009**, 57, 5501-5511	8.4	92
109	The effect of aluminium on twinning in binary alpha-titanium. *Acta Materialia*, **2016**, 103, 341-351	8.4	88
108	How magnesium accommodates local deformation incompatibility: A high-resolution digital image correlation study. *Acta Materialia*, **2017**, 133, 367-379	8.4	84
107	Deformation twinning in Ti-6Al-4V during low strain rate deformation to moderate strains at room temperature. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2010**, 527, 5734-5744	5.3	77
106	Influence of orientation on twin nucleation and growth at low strains in a magnesium alloy. *Acta Materialia*, **2014**, 80, 380-391	8.4	73
105	High-temperature deformation mechanisms in a polycrystalline nickel-base superalloy studied by neutron diffraction and electron microscopy. *Acta Materialia*, **2014**, 74, 18-29	8.4	59
104	The effect of α phase on microstructure and texture evolution during thermomechanical processing of α+β Ti alloy. *Acta Materialia*, **2013**, 61, 3200-3213	8.4	59
103	The influence of rolling temperature on texture evolution and variant selection during α→β→α phase transformation in Ti-6Al-4V. *Acta Materialia*, **2012**, 60, 6013-6024	8.4	56
102	Deformation behaviour of an advanced nickel-based superalloy studied by neutron diffraction and electron microscopy. *Acta Materialia*, **2012**, 60, 6829-6841	8.4	53
101	Texture development in the cold rolling of IF steel. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2004**, 380, 365-377	5.3	53
100	Effect of nanoscale α2 precipitation on strain localisation in a two-phase Ti-alloy. *Acta Materialia*, **2017**, 129, 72-82	8.4	51
99	Modelling the effect of elastic and plastic anisotropies on stresses at grain boundaries. *International Journal of Plasticity*, **2014**, 61, 49-63	7.6	42
98	Microscopic strain localisation in Ti-6Al-4V during uniaxial tensile loading. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 680, 444-453	5.3	42

97	In situ neutron diffraction study of texture evolution and variant selection during the □→□ phase transformation in Ti□Al□V. *Acta Materialia*, **2012**, 60, 7169-7182	8.4	41
96	Evolution of intergranular stresses during in situ straining of IF steel with different grain sizes. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2006**, 437, 26-32	5.3	41
95	On the ductility of alpha titanium: The effect of temperature and deformation mode. *Acta Materialia*, **2018**, 149, 1-10	8.4	26
94	The effect of □-grain coarsening on variant selection and texture evolution in a near-□ Ti alloy. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2013**, 576, 272-279	5.3	25
93	Capturing the texture changes in a zirconium alloy during the allotropic phase transformation. *Scripta Materialia*, **2009**, 61, 399-402	5.6	25
92	Local Plastic Strain Measurement by EBSD. *Applied Mechanics and Materials*, **2007**, 7-8, 173-179	0.3	25
91	Synchrotron diffraction investigation of the distribution and influence of residual stresses in fatigue. *Fatigue and Fracture of Engineering Materials and Structures*, **2004**, 27, 609-622	3	23
90	The effect of solid solution and gamma prime on the deformation modes in Ni-based superalloys. *Acta Materialia*, **2020**, 194, 257-275	8.4	22
89	Twinning in structural material with a hexagonal close-packed crystal structure. *Journal of Strain Analysis for Engineering Design*, **2010**, 45, 377-390	1.3	22
88	Quantification of strain localisation in a bimodal two-phase titanium alloy. *Scripta Materialia*, **2018**, 145, 45-49	5.6	21
87	Macro and intergranular stress responses of austenitic stainless steel to 90□ strain path changes. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2012**, 546, 263-271	5.3	21
86	Residual Stresses in Linear Friction Welded IMI550. *Journal of Neutron Research*, **2004**, 12, 165-173	0.5	21
85	Identification of active slip mode in a hexagonal material by correlative scanning electron microscopy. *Acta Materialia*, **2019**, 175, 376-393	8.4	19
84	On the work hardening of titanium: new insights from nanoindentation. *Journal of Materials Science*, **2019**, 54, 7961-7974	4.3	19
83	Grain Breakup During Elevated Temperature Deformation of an HCP Metal. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2015**, 46, 2143-2156	2.3	19
82	Microstructure and texture evolution during thermomechanical processing of □-quenched Zr. *Acta Materialia*, **2015**, 88, 389-401	8.4	18
81	Enabling high resolution strain mapping in zirconium alloys. *Materials Characterization*, **2018**, 139, 355-363	3.9	18
80	A statistical study of the relationship between plastic strain and lattice misorientation on the surface of a deformed Ni-based superalloy. *Acta Materialia*, **2020**, 195, 555-570	8.4	18

79	On the observation of annealing twins during simulating grain refinement in Ti6Al4V high deposition rate AM with in-process deformation. *Acta Materialia*, **2020**, 186, 229-241	8.4	17
78	Study of Lüders phenomena in reactor pressure vessel steels. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2013**, 588, 151-166	5.3	16
77	Image Processing Issues in Digital Strain Mapping **2002**,		16
76	Intergranular Stress Evolution in Titanium Studied by Neutron Diffraction and Self-consistent Modelling. *Journal of Neutron Research*, **2004**, 12, 33-37	0.5	15
75	Effects of flow forming parameters on the development of residual stresses in CrMoV steel tubes. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2015**, 624, 193-202	5.3	14
74	An evaluation of diffraction peak profile analysis (DPPA) methods to study plastically deformed metals. *Materials and Design*, **2016**, 111, 331-343	8.1	14
73	Three-dimensional observation and image-based modelling of thermal strains in polycrystalline alumina. *Acta Materialia*, **2013**, 61, 7521-7533	8.4	14
72	The effect of γ′ size and alloy chemistry on dynamic strain ageing in advanced polycrystalline nickel base superalloys. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2013**, 573, 54-61	5.3	13
71	Characterisation of irradiation enhanced strain localisation in a zirconium alloy. *Materialia*, **2019**, 5, 100248	3.2	13
70	Comparison between a near-field and a far-field indexing approach for characterization of a polycrystalline sample volume containing more than 1500 grains. *Journal of Applied Crystallography* , **2014**, 47, 1402-1416	3.8	12
69	Effect of pre-existing twinning on strain localization during deformation of a magnesium alloy. *Materials Letters*, **2017**, 209, 94-96	3.3	12
68	Element segregation and γ′ formation in primary α of a near-β Ti-alloy. *Materials Characterization*, **2020**, 164, 110327	3.9	12
67	Slip band characteristics in the presence of grain boundaries in nickel-based superalloy. *Acta Materialia*, **2020**, 193, 229-238	8.4	11
66	The effect of loading direction on strain localisation in wire arc additively manufactured Ti6Al4V. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing* , **2020**, 788, 139608	5.3	11
65	Peak broadening anisotropy in deformed face-centred cubic and hexagonal close-packed alloys. *Journal of Applied Crystallography*, **2014**, 47, 1535-1551	3.8	10
64	Modeling Twin Clustering and Strain Localization in Hexagonal Close-Packed Metals. *Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science*, **2014**, 45, 5883-5890	2.3	10
63	Comparison of sub-grain scale digital image correlation calculated using commercial and open-source software packages. *Materials Characterization*, **2020**, 163, 110271	3.9	9
62	Discontinuous yielding in wrought magnesium. *Computational Materials Science*, **2017**, 132, 81-91	3.2	8

61	The Effect of Lattice Misfit on Deformation Mechanisms at High Temperature. *Advanced Materials Research*, **2011**, 278, 144-149	0.5	8
60	Predictionoftheoverallbehaviorofa3DmicrostructureofausteniticsteelbyusingFFTnumericalscheme. *Procedia Engineering*, **2011**, 10, 1883-1888		8
59	The effect of loading direction and Sn alloying on the deformation modes of Zr: An in-situ neutron diffraction study. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2016**, 650, 497-509	5.3	8
58	Measurement and modelling of textures in flow formed Cr-Mo-V steel tubes. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2017**, 685, 7-18	5.3	7
57	The kinematics of deformation and the development of substructure in the particle deformation zone. *IOP Conference Series: Materials Science and Engineering*, **2015**, 89, 012012	0.4	7
56	Deformation path effects on the internal stress development in cold worked austenitic steel deformed in tension. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2014**, 614, 326-337	5.3	7
55	Measurement and modelling of residual stress effects on cracks. *Fatigue and Fracture of Engineering Materials and Structures*, **2007**, 30, 243-257	3	7
54	The effect of cold work on the transformation kinetics and texture of a zirconium alloy during fast thermal cycling. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2019**, 746, 424-433	5.3	7
53	A detailed study of texture changes during alphaBeta processing of a zirconium alloy. *Journal of Alloys and Compounds*, **2019**, 804, 65-83	5.7	6
52	Initial plasticity stages in Mg alloys containing Long-Period Stacking Ordered phases using High Resolution Digital Image Correlation (HRDIC) and in-situ synchrotron radiation. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2020**, 772, 138716	5.3	6
51	Characterization of abnormal grain coarsening in Alloy 718. *MATEC Web of Conferences*, **2014**, 14, 07004	0.3	5
50	The Effect of Aluminium on Deformation and Twinning in Alpha Titanium: The 45Case. *Materials Science Forum*, **2013**, 765, 549-553	0.4	5
49	Determination and Interpretation of Texture Evolution during Deformation of a Zirconium Alloy550-550-14		5
48	Texture Formation in Flow Formed Ferritic Steel Tubes and the Influence of the Process Parameters. *Materials Science Forum*, **2014**, 783-786, 2602-2607	0.4	4
47	Effect of strain paths and residual delta ferrite on the failure of cold rolled austenitic stainless steels, type 304L. *Journal of Strain Analysis for Engineering Design*, **2013**, 48, 410-419	1.3	4
46	Measuring and Predicting the Effects of Residual Stresses on Crack Propagation. *Materials Science Forum*, **2006**, 524-525, 77-82	0.4	4
45	Co-deformation and dynamic annealing effects on the texture development during alphaBeta processing of a model Zr-Nb alloy. *Acta Materialia*, **2021**, 205, 116538	8.4	4
44	Back-stresses and geometrical hardening as competing mechanisms enhancing ductility in HCP metals. *Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing*, **2018**, 729, 37-47	5.3	4

43	Microstructure evolution and deformation texture during rolling of TIMETAL(R) 407. *Materialia*, **2020**, 9, 100596	3.2	3
42	Effects of martensite development on lattice strain evolution during the in situ deformation of austenitic stainless steels at cryogenic temperatures. *Journal of Strain Analysis for Engineering Design*, **2013**, 48, 306-312	1.3	3
41	Towards Modelling Intergranular Stress-Corrosion Cracks Using Experimentally Obtained Grain Topologies **2009**,		3
40	Constituent Particles and Dispersoids in an Al-Mn-Fe-Si Alloy Studied in Three-Dimensions by Serial Sectioning. *Materials Science Forum*, **2013**, 765, 451-455	0.4	2
39	Mechanical Property Mapping Using Image Correlation and Electronic Speckle Interferometry. *Applied Mechanics and Materials*, **2004**, 1-2, 147-152	0.3	2
38	Slip activity during low-stress cold creep deformation in a near-□itanium alloy. *Acta Materialia*, **2022**, 117691	8.4	2
37	Determination and Interpretation of Texture Evolution during Deformation of a Zirconium Alloy. *Journal of ASTM International*, **2008**, 5, 101255		2
36	Predicting the Flow Stress of Zircaloy-4 under In-Reactor Accident Conditions **2018**, 214-239		2
35	Analysis of the Development of Abnormal Grains Structures During Beta Annealing of Ti-64 Wrought Products. *MATEC Web of Conferences*, **2020**, 321, 12043	0.3	2
34	Measurement of local plastic strain during uniaxial reversed loading of nickel alloy 625. *Materials Characterization*, **2020**, 168, 110561	3.9	2
33	Microscopic strain localisation in WAAM Ti-6Al-4V during uniaxial tensile loading. *MATEC Web of Conferences*, **2020**, 321, 03008	0.3	2
32	Understanding the role of local texture variation on slip activity in a two-phase titanium alloy. *Acta Materialia*, **2021**, 216, 117111	8.4	2
31	High-resolution digital image correlation study of the strain localization during loading of a shot-peened RR1000 nickel-based superalloy. *Acta Materialia*, **2021**, 220, 117306	8.4	2
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29	Modelling and Measurement of Plastic Deformation and Grain Rotation at the Grain-to-Grain Level **2011**, 107-112		1
28	Intergranular Strains in Pre-Strained and Welded Pipes. *Materials Science Forum*, **2010**, 652, 13-18	0.4	1
27	In Situ Observation on the Influence of □Grain Growth on Texture Evolution during Phase Transformation in Ti-6A-4V. *Materials Science Forum*, **2011**, 702-703, 854-857	0.4	1
26	In-Situ Observation and Modelling of Intergranular Cracking in Polycrystalline Alumina. *Key Engineering Materials*, **2011**, 465, 560-563	0.4	1

25	Evolution of Internal Stresses during the Plastic Deformation of IF Steel and Their Correlation with Crystal Orientation. *Materials Science Forum*, **2005**, 495-497, 1055-1060	0.4	1
24	Microyielding Effects in High-Volume-Fraction MMCs. *Advanced Engineering Materials*, **2001**, 3, 913	3.5	1
23	Texture Development during Rolling of α+β Dual-Phase ZrNb Alloys **2018**, 151-179		1
22	Quantifying Processing Map Uncertainties by Modeling the Hot-Compression Behavior of a Zr-2.5Nb Alloy **2021**, 93-122		1
21	The Effect of Aluminium on Deformation and Twinning in Alpha Titanium: The ND Case **2016**, 1051-1055		1
20	Slip Band Characterisation in Ti-6Al-4V with Varying Degrees of Macrozones **2016**, 1129-1134		1
19	Finite Element Modeling of Hot Compression Testing of Titanium Alloys. *Journal of Materials Engineering and Performance*,1	1.6	1
18	The evolution of abnormally coarse grain structures in beta-annealed Ti-6Al%-4V% rolled plates, observed by in-situ investigation. *Acta Materialia*, **2021**, 221, 117362	8.4	0
17	The Effect of Loading Direction on Slip and Twinning in an Irradiated Zirconium Alloy **2021**, 233-261		0
16	Multi-dimensional study of the effect of early slip activity on fatigue crack initiation in a near-α titanium alloy. *Acta Materialia*, **2022**, 233, 117967	8.4	0
15	In-Situ High Temperature EBSD Analysis of the Effect of a Deformation Step on the Alpha to Beta Transition in Additive Manufactured Ti-6Al-4V **2016**, 1283-1288		
14	The Effect of Strain and Temperature Profiles on Static Recrystallization during Solution Heat Treatment After Hot Deformation of Alloy 718 **2014**, 873-884		
13	Measurement of Strain and Lattice Rotation in the Particle Deformation Zone. *Materials Science Forum*, **2013**, 753, 21-24	0.4	
12	Influence of Temperature upon the Texture Evolution and Mechanical Behaviour of Zircaloy-4. *Materials Science Forum*, **2011**, 702-703, 834-837	0.4	
11	Local Strain Imaging during Mechanical Loading of Lamellar Microstructures in Titanium Based Alloys. *Applied Mechanics and Materials*, **2004**, 1-2, 159-164	0.3	
10	Assessment of Defects Under Combined Primary and Residual Stresses **2006**, 223-232		
9	Understanding strain localisation behaviour in a near-β Ti-alloy during initial loading below the yield stress. *MATEC Web of Conferences*, **2020**, 321, 11039	0.3	
8	Influence of Sn on Deformation Mechanisms During Room Temperature Compression of Binary Zr–Sn Alloys **2015**, 138-158		

7 Understanding the Limits of Lattice Orientation Data Analysis in Environmental Degradation Studies **2016**, 2321-2333

6 Texture Evolution of Zircaloy-2 During Beta-Quenching: Effect of Process Variables **2012**, 176-194

5 Texture Evolution of Zircaloy-2 During Beta-Quenching: Effect of Process Variables **2012**, 176-194

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3 The Eplot, a multicomponent 1-D pole figure plot, to quantify the heterogeneity of plastic deformation. *Materials Characterization*, **2020**, 160, 110114 3.9

2 3D characterisation of early twin formation in Ti-4Al by diffraction contrast tomography **2016**, 1077-1082

1 Comparing local deformation measurements to predictions from crystal plasticity during reverse loading of an aerospace alloy. *IOP Conference Series: Materials Science and Engineering*, **2019**, 580, 012028 8.4