

João Quinta da Fonseca

List of Publications by Year in descending order

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108
papers

3,010
citations

186265

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117
all docs

117
docs citations

117
times ranked

1991
citing authors

#	ARTICLE	IF	CITATIONS
1	Plastic Strain Mapping with Sub-micron Resolution Using Digital Image Correlation. <i>Experimental Mechanics</i> , 2013, 53, 743-754.	2.0	192
2	An experimental study of the polycrystalline plasticity of austenitic stainless steel. <i>International Journal of Plasticity</i> , 2015, 74, 92-109.	8.8	154
3	Effect of β^2 grain growth on variant selection and texture memory effect during $\beta \rightarrow \beta'$ phase transformation in Ti-6Al-4V. <i>Acta Materialia</i> , 2012, 60, 1048-1058.	7.9	142
4	Full-field strain mapping by optical correlation of micrographs acquired during deformation. <i>Journal of Microscopy</i> , 2005, 218, 9-21.	1.8	137
5	How magnesium accommodates local deformation incompatibility: A high-resolution digital image correlation study. <i>Acta Materialia</i> , 2017, 133, 367-379.	7.9	134
6	The effect of aluminium on twinning in binary alpha-titanium. <i>Acta Materialia</i> , 2016, 103, 341-351.	7.9	126
7	Texture memory and variant selection during phase transformation of a zirconium alloy. <i>Acta Materialia</i> , 2009, 57, 5501-5511.	7.9	104
8	Deformation twinning in Ti-6Al-4V during low strain rate deformation to moderate strains at room temperature. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2010, 527, 5734-5744.	5.6	95
9	Influence of orientation on twin nucleation and growth at low strains in a magnesium alloy. <i>Acta Materialia</i> , 2014, 80, 380-391.	7.9	89
10	Deformation behaviour of an advanced nickel-based superalloy studied by neutron diffraction and electron microscopy. <i>Acta Materialia</i> , 2012, 60, 6829-6841.	7.9	82
11	The influence of rolling temperature on texture evolution and variant selection during $\beta \rightarrow \beta'$ phase transformation in Ti-6Al-4V. <i>Acta Materialia</i> , 2012, 60, 6013-6024.	7.9	77
12	The effect of β^2 phase on microstructure and texture evolution during thermomechanical processing of $\beta + \beta^2$ Ti alloy. <i>Acta Materialia</i> , 2013, 61, 3200-3213.	7.9	77
13	High-temperature deformation mechanisms in a polycrystalline nickel-base superalloy studied by neutron diffraction and electron microscopy. <i>Acta Materialia</i> , 2014, 74, 18-29.	7.9	75
14	Effect of nanoscale β^2 precipitation on strain localisation in a two-phase Ti-alloy. <i>Acta Materialia</i> , 2017, 129, 72-82.	7.9	75
15	Texture development in the cold rolling of IF steel. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004, 380, 365-377.	5.6	61
16	The effect of solid solution and gamma prime on the deformation modes in Ni-based superalloys. <i>Acta Materialia</i> , 2020, 194, 257-275.	7.9	57
17	Modelling the effect of elastic and plastic anisotropies on stresses at grain boundaries. <i>International Journal of Plasticity</i> , 2014, 61, 49-63.	8.8	56
18	A statistical study of the relationship between plastic strain and lattice misorientation on the surface of a deformed Ni-based superalloy. <i>Acta Materialia</i> , 2020, 195, 555-570.	7.9	55

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19	Microscopic strain localisation in Ti-6Al-4V during uniaxial tensile loading. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 680, 444-453.	5.6	52
20	In situ neutron diffraction study of texture evolution and variant selection during the $\beta \rightarrow \alpha'$ phase transformation in Ti-6Al-4V. <i>Acta Materialia</i> , 2012, 60, 7169-7182.	7.9	50
21	Evolution of intergranular stresses during in situ straining of IF steel with different grain sizes. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2006, 437, 26-32.	5.6	45
22	Local Plastic Strain Measurement by EBSD. <i>Applied Mechanics and Materials</i> , 0, 7-8, 173-179.	0.2	43
23	On the ductility of alpha titanium: The effect of temperature and deformation mode. <i>Acta Materialia</i> , 2018, 149, 1-10.	7.9	39
24	Identification of active slip mode in a hexagonal material by correlative scanning electron microscopy. <i>Acta Materialia</i> , 2019, 175, 376-393.	7.9	38
25	Quantification of strain localisation in a bimodal two-phase titanium alloy. <i>Scripta Materialia</i> , 2018, 145, 45-49.	5.2	36
26	The effect of β grain coarsening on variant selection and texture evolution in a near- β Ti alloy. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 576, 272-279.	5.6	33
27	On the observation of annealing twins during simulating β -grain refinement in Ti-6Al-4V high deposition rate AM with in-process deformation. <i>Acta Materialia</i> , 2020, 186, 229-241.	7.9	33
28	Synchrotron diffraction investigation of the distribution and influence of residual stresses in fatigue. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2004, 27, 609-622.	3.4	32
29	On the work hardening of titanium: new insights from nanoindentation. <i>Journal of Materials Science</i> , 2019, 54, 7961-7974.	3.7	32
30	Enabling high resolution strain mapping in zirconium alloys. <i>Materials Characterization</i> , 2018, 139, 355-363.	4.4	28
31	Capturing the texture changes in a zirconium alloy during the allotropic phase transformation. <i>Scripta Materialia</i> , 2009, 61, 399-402.	5.2	27
32	Slip band characteristics in the presence of grain boundaries in nickel-based superalloy. <i>Acta Materialia</i> , 2020, 193, 229-238.	7.9	27
33	Characterisation of irradiation enhanced strain localisation in a zirconium alloy. <i>Materialia</i> , 2019, 5, 100248.	2.7	26
34	Macro and intergranular stress responses of austenitic stainless steel to 90° strain path changes. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2012, 546, 263-271.	5.6	24
35	Microstructure and texture evolution during thermomechanical processing of β -quenched Zr. <i>Acta Materialia</i> , 2015, 88, 389-401.	7.9	24
36	Element segregation and β formation in primary β of a near- β Ti-alloy. <i>Materials Characterization</i> , 2020, 164, 110327.	4.4	24

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37	Multi-dimensional study of the effect of early slip activity on fatigue crack initiation in a near- α titanium alloy. <i>Acta Materialia</i> , 2022, 233, 117967.	7.9	24
38	Residual Stresses in Linear Friction Welded IMI550. <i>Journal of Neutron Research</i> , 2004, 12, 165-173.	1.1	23
39	Twinning in structural material with a hexagonal close-packed crystal structure. <i>Journal of Strain Analysis for Engineering Design</i> , 2010, 45, 377-390.	1.8	23
40	The effect of λ size and alloy chemistry on dynamic strain ageing in advanced polycrystalline nickel base superalloys. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 573, 54-61.	5.6	23
41	Grain Breakup During Elevated Temperature Deformation of an HCP Metal. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2015, 46, 2143-2156.	2.2	22
42	Slip activity during low-stress cold creep deformation in a near- α titanium alloy. <i>Acta Materialia</i> , 2022, 229, 117691.	7.9	22
43	The effect of loading direction on strain localisation in wire arc additively manufactured Ti-6Al-4V. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 788, 139608.	5.6	20
44	Image Processing Issues in Digital Strain Mapping. , 2002, , .		19
45	Study of Lüders phenomena in reactor pressure vessel steels. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2013, 588, 151-166.	5.6	19
46	An evaluation of diffraction peak profile analysis (DPPA) methods to study plastically deformed metals. <i>Materials and Design</i> , 2016, 111, 331-343.	7.0	19
47	Understanding the role of local texture variation on slip activity in a two-phase titanium alloy. <i>Acta Materialia</i> , 2021, 216, 117111.	7.9	19
48	Three-dimensional observation and image-based modelling of thermal strains in polycrystalline alumina. <i>Acta Materialia</i> , 2013, 61, 7521-7533.	7.9	18
49	Effects of flow forming parameters on the development of residual stresses in Cr-Mo-V steel tubes. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2015, 624, 193-202.	5.6	18
50	Comparison between a near-field and a far-field indexing approach for characterization of a polycrystalline sample volume containing more than 1500 grains. <i>Journal of Applied Crystallography</i> , 2014, 47, 1402-1416.	4.5	17
51	A detailed study of texture changes during α - β processing of a zirconium alloy. <i>Journal of Alloys and Compounds</i> , 2019, 804, 65-83.	5.5	17
52	Comparison of sub-grain scale digital image correlation calculated using commercial and open-source software packages. <i>Materials Characterization</i> , 2020, 163, 110271.	4.4	17
53	Intergranular Stress Evolution in Titanium Studied by Neutron Diffraction and Self-consistent Modelling. <i>Journal of Neutron Research</i> , 2004, 12, 33-37.	1.1	16
54	Effect of pre-existing twinning on strain localization during deformation of a magnesium alloy. <i>Materials Letters</i> , 2017, 209, 94-96.	2.6	14

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55	Initial plasticity stages in Mg alloys containing Long-Period Stacking Ordered phases using High Resolution Digital Image Correlation (HRDIC) and in-situ synchrotron radiation. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2020, 772, 138716.	5.6	14
56	Co-deformation and dynamic annealing effects on the texture development during alpha \leftrightarrow beta processing of a model Zr-Nb alloy. <i>Acta Materialia</i> , 2021, 205, 116538.	7.9	14
57	The effect of loading direction and Sn alloying on the deformation modes of Zr: An in-situ neutron diffraction study. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2016, 650, 497-509.	5.6	13
58	The Effect of Lattice Misfit on Deformation Mechanisms at High Temperature. <i>Advanced Materials Research</i> , 0, 278, 144-149.	0.3	12
59	Peak broadening anisotropy in deformed face-centred cubic and hexagonal close-packed alloys. <i>Journal of Applied Crystallography</i> , 2014, 47, 1535-1551.	4.5	12
60	Measurement and modelling of textures in flow formed Cr-Mo-V steel tubes. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2017, 685, 7-18.	5.6	12
61	Measurement and modelling of residual stress effects on cracks. <i>Fatigue and Fracture of Engineering Materials and Structures</i> , 2007, 30, 243-257.	3.4	11
62	High-resolution digital image correlation study of the strain localization during loading of a shot-peened RR1000 nickel-based superalloy. <i>Acta Materialia</i> , 2021, 220, 117306.	7.9	11
63	Modeling Twin Clustering and Strain Localization in Hexagonal Close-Packed Metals. <i>Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science</i> , 2014, 45, 5883-5890.	2.2	10
64	The kinematics of deformation and the development of substructure in the particle deformation zone. <i>IOP Conference Series: Materials Science and Engineering</i> , 2015, 89, 012012.	0.6	10
65	Discontinuous yielding in wrought magnesium. <i>Computational Materials Science</i> , 2017, 132, 81-91.	3.0	10
66	Deformation path effects on the internal stress development in cold worked austenitic steel deformed in tension. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2014, 614, 326-337.	5.6	9
67	Back-stresses and geometrical hardening as competing mechanisms enhancing ductility in HCP metals. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2018, 729, 37-47.	5.6	9
68	The effect of cold work on the transformation kinetics and texture of a zirconium alloy during fast thermal cycling. <i>Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2019, 746, 424-433.	5.6	9
69	Prediction of the overall behavior of a 3D microstructure of austenitic steel by using FFT numerical scheme. <i>Procedia Engineering</i> , 2011, 10, 1883-1888.	1.2	8
70	Measurement of local plastic strain during uniaxial reversed loading of nickel alloy 625. <i>Materials Characterization</i> , 2020, 168, 110561.	4.4	8
71	The Effect of Aluminium on Deformation and Twinning in Alpha Titanium: The 45 Å Case. <i>Materials Science Forum</i> , 0, 765, 549-553.	0.3	7
72	Characterization of abnormal grain coarsening in Alloy 718. <i>MATEC Web of Conferences</i> , 2014, 14, 07004.	0.2	6

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73	Microstructure evolution and deformation texture during rolling of TIMETAL™ 407. Materialia, 2020, 9, 100596.	2.7	5
74	Texture Development during Rolling of ϵ - δ Dual-Phase ZrNb Alloys. , 2018, , 151-179.		5
75	Determination and Interpretation of Texture Evolution during Deformation of a Zirconium Alloy. , 2009, , 550-563.		5
76	Measuring and Predicting the Effects of Residual Stresses on Crack Propagation. Materials Science Forum, 2006, 524-525, 77-82.	0.3	4
77	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.	1.8	4
78	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.	1.8	4
79	Texture Formation in Flow Formed Ferritic Steel Tubes and the Influence of the Process Parameters. Materials Science Forum, 0, 783-786, 2602-2607.	0.3	4
80	Mechanical Property Mapping Using Image Correlation and Electronic Speckle Interferometry. Applied Mechanics and Materials, 2004, 1-2, 147-152.	0.2	3
81	Towards Modelling Intergranular Stress-Corrosion Cracks Using Experimentally Obtained Grain Topologies. , 2009, , .		3
82	Analysis of the Development of Abnormal Grains Structures During Beta Annealing of Ti-64 Wrought Products. MATEC Web of Conferences, 2020, 321, 12043.	0.2	3
83	Determination and Interpretation of Texture Evolution during Deformation of a Zirconium Alloy. Journal of ASTM International, 2008, 5, 1-14.	0.2	3
84	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.	7.9	3
85	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.	0.3	2
86	Constituent Particles and Dispersoids in an Al-Mn-Fe-Si Alloy Studied in Three-Dimensions by Serial Sectioning. Materials Science Forum, 0, 765, 451-455.	0.3	2
87	Microscopic strain localisation in WAAM Ti-6Al-4V during uniaxial tensile loading. MATEC Web of Conferences, 2020, 321, 03008.	0.2	2
88	The Effect of Loading Direction on Slip and Twinning in an Irradiated Zirconium Alloy. , 2021, , 233-261.		2
89	Predicting the Flow Stress of Zircaloy-4 under In-Reactor Accident Conditions. , 2018, , 214-239.		2
90	Finite Element Modeling of Hot Compression Testing of Titanium Alloys. Journal of Materials Engineering and Performance, 2022, 31, 7160-7175.	2.5	2

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91	Microyielding Effects in High-Volume-Fraction MMCs. <i>Advanced Engineering Materials</i> , 2001, 3, 913.	3.5	1
92	Intergranular Strains in Pre-Strained and Welded Pipes. <i>Materials Science Forum</i> , 0, 652, 13-18.	0.3	1
93	<i>In Situ&/i> Observation on the Influence of Å Grain Growth on Texture Evolution during Phase Transformation in Ti-6Al-4V. <i>Materials Science Forum</i> , 0, 702-703, 854-857.	0.3	1
94	<i>In-Situ&/i> Observation and Modelling of Intergranular Cracking in Polycrystalline Alumina. <i>Key Engineering Materials</i> , 0, 465, 560-563.	0.4	1
95	Texture and Microstructure Evolution of a Zirconium Alloy During Uniaxial Compression at 500Å°C. <i>Materials Science Forum</i> , 2013, 753, 42-45.	0.3	1
96	Quantifying Processing Map Uncertainties by Modeling the Hot-Compression Behavior of a Zr-2.5Nb Alloy. , 2021, , 93-122.		1
97	Local Strain Imaging during Mechanical Loading of Lamellar Microstructures in Titanium Based Alloys. <i>Applied Mechanics and Materials</i> , 2004, 1-2, 159-164.	0.2	0
98	Grain-Scale Heterogeneity Effect on Mechanistic Modelling of Cleavage Fracture of a Ferritic RPV Steel Forging Material. , 2008, , .		0
99	Influence of Temperature upon the Texture Evolution and Mechanical Behaviour of Zircaloy-4. <i>Materials Science Forum</i> , 0, 702-703, 834-837.	0.3	0
100	Measurement of Strain and Lattice Rotation in the Particle Deformation Zone. <i>Materials Science Forum</i> , 2013, 753, 21-24.	0.3	0
101	Comparing local deformation measurements to predictions from crystal plasticity during reverse loading of an aerospace alloy. <i>IOP Conference Series: Materials Science and Engineering</i> , 2019, 580, 012028.	0.6	0
102	The İ ₂ -plot, a multicomponent 1-D pole figure plot, to quantify the heterogeneity of plastic deformation. <i>Materials Characterization</i> , 2020, 160, 110114.	4.4	0
103	Assessing the Effect of Intrinsic Microscale Heterogeneity on Brittle Fracture of a Ferritic Steel. , 2007, , .		0
104	Texture Evolution of Zircaloy-2 During Beta-Quenching: Effect of Process Variables. , 2012, , 176-194.		0
105	Texture Evolution of Zircaloy-2 During Beta-Quenching: Effect of Process Variables. , 2012, , 176-194.		0
106	Influence of Sn on Deformation Mechanisms During Room Temperature Compression of Binary Zr-ÅSn Alloys. , 2015, , 138-158.		0
107	Understanding the Limits of Lattice Orientation Data Analysis in Environmental Degradation Studies. , 2016, , 2321-2333.		0
108	Understanding strain localisation behaviour in a near-Å Ti-alloy during initial loading below the yield stress. <i>MATEC Web of Conferences</i> , 2020, 321, 11039.	0.2	0