Roberto B Figueiredo

List of Publications by Year
in descending order

85 papers	4,118 citations	109321 35 h-index	118850 62 g-index
85 all docs	85 docs citations	85 times ranked	1745 citing authors

#	Article	IF	Citations
1	The Effect of Ultragrain Refinement on the Strength and Strain Rate Sensitivity of a ZK60 Magnesium Alloy. Advanced Engineering Materials, 2022, 24, 2100846.	3.5	12
2	Using Plane Strain Compression Test to Evaluate the Mechanical Behavior of Magnesium Processed by HPT. Metals, 2022, 12, 125.	2.3	11
3	Effect of creep parameters on the steady-state flow stress of pure metals processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 835, 142666.	5.6	13
4	Effect of grain size on strength and strain rate sensitivity in metals. Journal of Materials Science, 2022, 57, 5210-5229.	3.7	32
5	Nanomaterials by severe plastic deformation: review of historical developments and recent advances. Materials Research Letters, 2022, 10, 163-256.	8.7	215
6	Designing ultrahard aluminum nanocomposites by severe mechanochemical processing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 801, 140422.	5.6	2
7	Development of segregations in a Mgâ€"Mnâ€"Nd alloy during HPT processing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 802, 140423.	5.6	9
8	Mechanical mixing of Mg and Zn using high-pressure torsion. Journal of Alloys and Compounds, 2021, 869, 159302.	5.5	19
9	Deformation mechanisms in ultrafine-grained metals with an emphasis on the Hallâ€"Petch relationship and strain rate sensitivity. Journal of Materials Research and Technology, 2021, 14, 137-159.	5.8	48
10	Redox reaction in a Mg/Nb2O5 nanocomposite processed by high-pressure torsion. Materials Letters, 2021, 303, 130418.	2.6	2
11	Mechanical Behavior and In Vitro Corrosion of Cubic Scaffolds of Pure Magnesium Processed by Severe Plastic Deformation. Metals, 2021, 11, 1791.	2.3	8
12	Inverse Hallâ€"Petch Behaviour in an AZ91 Alloy and in an AZ91â€"Al 2 O 3 Composite Consolidated by Highâ€Pressure Torsion. Advanced Engineering Materials, 2020, 22, 1900894.	3.5	16
13	Effect of Numbers of Turns of Highâ€Pressure Torsion on the Development of Exceptional Ductility in Pure Magnesium. Advanced Engineering Materials, 2020, 22, 1900565.	3.5	10
14	Retrieving the configuration of grain boundary structure in polycrystalline materials by extraordinary X-ray reflection analysis. Journal of Applied Crystallography, 2020, 53, 1006-1014.	4.5	1
15	Corrosion Behavior in Hank's Solution of a Magnesiumâ€"Hydroxyapatite Composite Processed by Highâ€Pressure Torsion. Advanced Engineering Materials, 2020, 22, 2000765.	3.5	8
16	Analysis of the creep behavior of fine-grained AZ31 magnesium alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2020, 787, 139489.	5.6	19
17	Using High-Pressure Torsion to Achieve Superplasticity in an AZ91 Magnesium Alloy. Metals, 2020, 10, 681.	2.3	19
18	Special Issue Celebrating Professor Terence G. Langdon's 80th Birthday. Advanced Engineering Materials, 2020, 22, 1901386.	3.5	3

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19	Interface structures in Al-Nb2O5 nanocomposites processed by high-pressure torsion at room temperature. Materials Characterization, 2020, 162, 110222.	4.4	10
20	Development of functional TiO2 coatings deposited on cementitious materials. Construction and Building Materials, 2020, 250, 118732.	7.2	13
21	Cytotoxicity and Corrosion Behavior of Magnesium and Magnesium Alloys in Hank's Solution after Processing by Highâ€Pressure Torsion. Advanced Engineering Materials, 2019, 21, 1900391.	3.5	31
22	A magnesium-aluminium composite produced by high-pressure torsion. Journal of Alloys and Compounds, 2019, 804, 421-426.	5.5	29
23	Magnesium-Based Bioactive Composites Processed at Room Temperature. Materials, 2019, 12, 2609.	2.9	12
24	Finite Element Modelling of High-Pressure Torsion: An Overview. Materials Transactions, 2019, 60, 1139-1150.	1.2	26
25	Processing Magnesium and Its Alloys by Highâ€Pressure Torsion: An Overview. Advanced Engineering Materials, 2019, 21, 1801039.	3.5	51
26	The Effect of Highâ€Pressure Torsion on Microstructure, Hardness and Corrosion Behavior for Pure Magnesium and Different Magnesium Alloys. Advanced Engineering Materials, 2019, 21, 1801081.	3.5	42
27	Development of a magnesium-alumina composite through cold consolidation of machining chips by high-pressure torsion. Journal of Alloys and Compounds, 2019, 780, 422-427.	5.5	35
28	Developing magnesium-based composites through high-pressure torsion. Letters on Materials, 2019, 9, 541-545.	0.7	6
29	Consolidation of magnesium and magnesium-quasicrystal composites through highâ€‘pressure torsion. Letters on Materials, 2019, 9, 546-550.	0.7	11
30	The influences of quartz content and water-to-binder ratio on the microstructure and hardness of autoclaved Portland cement pastes. Cement and Concrete Composites, 2018, 91, 138-147.	10.7	18
31	Effect of severe plastic deformation on the biocompatibility and corrosion rate of pure magnesium. Journal of Materials Science, 2017, 52, 5992-6003.	3.7	77
32	Orientation imaging microscopy and microhardness in a ZK60 magnesium alloy processed by high-pressure torsion. Journal of Alloys and Compounds, 2017, 712, 185-193.	5.5	49
33	The effect of high-pressure torsion on the microstructure and properties of magnesium. IOP Conference Series: Materials Science and Engineering, 2017, 194, 012039.	0.6	6
34	Evidence for exceptional low temperature ductility in polycrystalline magnesium processed by severe plastic deformation. Acta Materialia, 2017, 122, 322-331.	7.9	139
35	Achieving superplastic properties in a ZK10 magnesium alloy processed by equal-channel angular pressing. Journal of Materials Research and Technology, 2017, 6, 129-135.	5.8	34
36	Microstructure and Hardness Evolution in Magnesium Processed by HPT. Materials Research, 2017, 20, 2-7.	1.3	17

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37	The Requirements for Superplasticity with an Emphasis on Magnesium Alloys. Advanced Engineering Materials, 2016, 18, 127-131.	3.5	30
38	Comparing the pozzolanic behavior of sugar cane bagasse ash to amorphous and crystalline SiO2. Cement and Concrete Composites, 2016, 71, 20-25.	10.7	66
39	The influence of grain size and strain rate on the mechanical behavior of pure magnesium. Journal of Materials Science, 2016, 51, 3013-3024.	3.7	65
40	Processing magnesium alloys by severe plastic deformation. IOP Conference Series: Materials Science and Engineering, 2014, 63, 012171.	0.6	16
41	Evaluating the Superplastic Flow of a Magnesium AZ31 Alloy Processed by Equal-Channel Angular Pressing. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2014, 45, 3197-3204.	2.2	16
42	Improving the fatigue behavior of dental implants through processing commercial purity titanium by equal-channel angular pressing. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 619, 312-318.	5.6	51
43	Modeling the temperature rise in high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 593, 185-188.	5.6	68
44	Interpretation of hardness evolution in metals processed by high-pressure torsion. Journal of Materials Science, 2014, 49, 6586-6596.	3.7	59
45	Microstructure and microtexture evolution with aging treatment in an Alâ€"Mgâ€"Si alloy severely deformed by HPT. Journal of Materials Science, 2013, 48, 4573-4581.	3.7	7
46	Structural and hardness inhomogeneities in Mgâ€"Alâ€"Zn alloys processed by high-pressure torsion. Journal of Materials Science, 2013, 48, 4661-4670.	3.7	37
47	Three-dimensional analysis of plastic flow during high-pressure torsion. Journal of Materials Science, 2013, 48, 4524-4532.	3.7	27
48	Heterogeneous flow during high-pressure torsion. Materials Research, 2013, 16, 571-576.	1.3	4
49	Microstructure and texture evolution in a magnesium alloy during processing by high-pressure torsion. Materials Research, 2013, 16, 577-585.	1.3	33
50	Fabricating Ultrafine-Grained Materials through the Application of Severe Plastic Deformation: a Review of Developments in Brazil. Journal of Materials Research and Technology, 2012, 1, 55-62.	5.8	39
51	Twenty-five years of severe plastic deformation: recent developments in evaluating the degree of homogeneity through the thickness of disks processed by high-pressure torsion. Journal of Materials Science, 2012, 47, 7719-7725.	3.7	47
52	Effect of temperature on the processing of a magnesium alloy by high-pressure torsion. Journal of Materials Science, 2012, 47, 7796-7806.	3.7	34
53	Analysis of plastic flow during high-pressure torsion. Journal of Materials Science, 2012, 47, 7807-7814.	3.7	52
54	Effect of aging on microstructural development in an Alâ€"Mgâ€"Si alloy processed by high-pressure torsion. Journal of Materials Science, 2012, 47, 7815-7820.	3.7	47

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55	Processing a twinning-induced plasticity steel by high-pressure torsion. Scripta Materialia, 2012, 67, 649-652.	5.2	45
56	Influence of Pressing Temperature on Microstructure Evolution and Mechanical Behavior of Ultrafineâ€Grained Cu Processed by Equalâ€Channel Angular Pressing. Advanced Engineering Materials, 2012, 14, 185-194.	3.5	32
57	Evolution of Strength and Homogeneity in a Magnesium AZ31 Alloy Processed by Highâ€Pressure Torsion at Different Temperatures. Advanced Engineering Materials, 2012, 14, 1018-1026.	3.5	74
58	Using finite element modeling to examine the temperature distribution in quasi-constrained high-pressure torsion. Acta Materialia, 2012, 60, 3190-3198.	7.9	271
59	Using finite element modeling to examine the flow processes in quasi-constrained high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 8198-8204.	5.6	273
60	Influence of strain rate on the characteristics of a magnesium alloy processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 3601-3608.	5.6	62
61	Structure and mechanical properties of commercial purity titanium processed by ECAP at room temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7708-7714.	5.6	66
62	Deformation Heterogeneity on the Cross-Sectional Planes of a Magnesium Alloy Processed by High-Pressure Torsion. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2011, 42, 3013-3021.	2.2	44
63	Intrinsically Ductile Failure in a Nanocrystalline Beta Titanium Alloy. Advanced Engineering Materials, 2011, 13, 1108-1113.	3.5	3
64	An investigation of hardness homogeneity throughout disks processed by high-pressure torsion. Acta Materialia, 2011, 59, 308-316.	7.9	174
65	Development of structural heterogeneities in a magnesium alloy processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 4500-4506.	5.6	82
66	Stable and Unstable Flow in Materials Processed by Equal-Channel Angular Pressing with an Emphasis on Magnesium Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2010, 41, 778-786.	2.2	50
67	Avoiding cracks and inhomogeneities in billets processed by ECAP. Journal of Materials Science, 2010, 45, 4561-4570.	3.7	62
68	Influence of high-pressure torsion on microstructural evolution in an Alâ€"Znâ€"Mgâ€"Cu alloy. Journal of Materials Science, 2010, 45, 4621-4630.	3.7	48
69	Grain refinement and mechanical behavior of a magnesium alloy processed by ECAP. Journal of Materials Science, 2010, 45, 4827-4836.	3.7	179
70	Structural Evolution on the Cross-Section of an AZ31 Magnesium Alloy Processed by High-Pressure Torsion. Materials Science Forum, 2010, 667-669, 247-252.	0.3	4
71	The characteristics of superplastic flow in a magnesium alloy processed by ECAP. International Journal of Materials Research, 2009, 100, 843-846.	0.3	10
72	The nature of grain refinement in equal-channel angular pressing: a comparison of representative fcc and hcp metals. International Journal of Materials Research, 2009, 100, 1638-1646.	0.3	25

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73	Strategies for achieving high strain rate superplasticity in magnesium alloys processed by equal-channel angular pressing. Scripta Materialia, 2009, 61, 84-87.	5.2	73
74	Principles of grain refinement and superplastic flow in magnesium alloys processed by ECAP. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2009, 501, 105-114.	5.6	171
75	Principles of grain refinement in magnesium alloys processed by equal-channel angular pressing. Journal of Materials Science, 2009, 44, 4758-4762.	3.7	137
76	Achieving Microstructural Refinement in Magnesium Alloys through Severe Plastic Deformation. Materials Transactions, 2009, 50, 111-116.	1.2	7
77	Using Severe Plastic Deformation for the Processing of Advanced Engineering Materials. Materials Transactions, 2009, 50, 1613-1619.	1.2	34
78	Nanocrystalline body-centred cubic beta-titanium alloy processed by high-pressure torsion. International Journal of Materials Research, 2009, 100, 1662-1667.	0.3	25
79	Developing superplasticity in a magnesium AZ31 alloy by ECAP. Journal of Materials Science, 2008, 43, 7366-7371.	3.7	89
80	The processing of difficult-to-work alloys by ECAP with an emphasis on magnesium alloys. Acta Materialia, 2007, 55, 4769-4779.	7.9	179
81	Developing Superplastic Ductilities in Ultrafine-Grained Metals. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2007, 38, 1891-1898.	2.2	28
82	The development of superplastic ductilities and microstructural homogeneity in a magnesium ZK60 alloy processed by ECAP. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 430, 151-156.	5.6	109
83	Processing Different Magnesium Alloys through HPT. Materials Science Forum, 0, 783-786, 2617-2622.	0.3	4
84	Low Temperature Superplasticity in Ultrafine-Grained AZ31 Alloy. Defect and Diffusion Forum, 0, 385, 59-64.	0.4	6
85	Recent Developments in the Processing of Advanced Materials Using Severe Plastic Deformation. Materials Science Forum, 0, 1016, 3-8.	0.3	1