

# Conrado R M Afonso

## List of Publications by Year in descending order

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91  
papers

2,280  
citations

236925

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254184

43  
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94  
all docs

94  
docs citations

94  
times ranked

1966  
citing authors

#	ARTICLE	IF	CITATIONS
1	New insight on the solidification path of an alloy 625 weld overlay. <i>Journal of Materials Research and Technology</i> , 2013, 2, 228-237.	5.8	142
2	Influence of cooling rate on microstructure of Ti-Nb alloy for orthopedic implants. <i>Materials Science and Engineering C</i> , 2007, 27, 908-913.	7.3	118
3	Effects of double aging heat treatment on the microstructure, Vickers hardness and elastic modulus of Ti-Nb alloys. <i>Materials Characterization</i> , 2011, 62, 673-680.	4.4	87
4	Microstructure, corrosion behaviour and microhardness of a directionally solidified Sn-Cu solder alloy. <i>Electrochimica Acta</i> , 2011, 56, 8891-8899.	5.2	87
5	Aging response of the Ti-35Nb-7Zr-5Ta and Ti-35Nb-7Ta alloys. <i>Journal of Alloys and Compounds</i> , 2007, 433, 207-210.	5.5	85
6	Effects of composition and heat treatment on the mechanical behavior of Ti-Cu alloys. <i>Materials &amp; Design</i> , 2014, 55, 1006-1013.	5.1	77
7	High resolution transmission electron microscopy study of the hardening mechanism through phase separation in a $\beta$ -Ti-35Nb-7Zr-5Ta alloy for implant applications. <i>Acta Biomaterialia</i> , 2010, 6, 1625-1629.	8.3	74
8	Effect of cooling rate on Ti-Cu eutectoid alloy microstructure. <i>Materials Science and Engineering C</i> , 2009, 29, 1023-1028.	7.3	71
9	Microstructure evolution and mechanical properties of Al-Zn-Mg-Cu alloy reprocessed by spray-forming and heat treated at peak aged condition. <i>Journal of Alloys and Compounds</i> , 2013, 579, 169-173.	5.5	67
10	Fracture toughness of ISO 3183 X80M (API 5L X80) steel friction stir welds. <i>Engineering Fracture Mechanics</i> , 2010, 77, 2937-2945.	4.3	64
11	Correlations between aging heat treatment, % phase precipitation and mechanical properties of a cast Ti-Nb alloy. <i>Materials &amp; Design</i> , 2011, 32, 2387-2390.	5.1	57
12	Formation of Fe-based glassy matrix composite coatings by laser processing. <i>Surface and Coatings Technology</i> , 2014, 240, 336-343.	4.8	56
13	Hexagonal martensite decomposition and phase precipitation in Ti-Cu alloys. <i>Materials &amp; Design</i> , 2011, 32, 4608-4613.	5.1	55
14	Influence of phase transformations on dynamical elastic modulus and anelasticity of beta Ti-Nb-Fe alloys for biomedical applications. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2015, 46, 184-196.	3.1	50
15	Assessment of microstructure of alloy Inconel 686 dissimilar weld claddings. <i>Journal of Alloys and Compounds</i> , 2016, 684, 628-642.	5.5	48
16	Growth mechanisms of Ca- and P-rich MAO films in Ti-15Zr-xMo alloys for osseointegrative implants. <i>Surface and Coatings Technology</i> , 2018, 344, 373-382.	4.8	46
17	Effect of thermal aging at 475 $^{\circ}$ C on the properties of lean duplex stainless steel 2101. <i>Materials Characterization</i> , 2016, 114, 211-217.	4.4	45
18	Effect of the addition of Ta on microstructure and properties of Ti-Nb alloys. <i>Journal of Alloys and Compounds</i> , 2010, 504, 330-340.	5.5	39

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19	Nonlinear Optical Properties of Tungsten Leadâ€“Pyrophosphate Glasses Containing Metallic Copper Nanoparticles. <i>Plasmonics</i> , 2013, 8, 1667-1674.	3.4	37
20	Amorphous phase formation in spray deposited AlYNiCo and AlYNiCoZr alloys. <i>Scripta Materialia</i> , 2001, 44, 1625-1628.	5.2	35
21	Mechanical and thermal properties of friction-stir welded joints of high density polyethylene using a non-rotational shoulder tool. <i>International Journal of Advanced Manufacturing Technology</i> , 2018, 97, 2489-2499.	3.0	31
22	Amorphous phase formation during spray forming of Al <sub>84</sub> Y <sub>3</sub> Ni <sub>8</sub> Co <sub>4</sub> Zr <sub>1</sub> alloy. <i>Journal of Non-Crystalline Solids</i> , 2001, 284, 134-138.	3.1	30
23	Effect of Thermomechanical Treatments on the Phases, Microstructure, Microhardness and Youngâ€™s Modulus of Ti-25Ta-Zr Alloys. <i>Materials</i> , 2019, 12, 3210.	2.9	30
24	Microstructural characterization of a laser remelted coating of Al <sub>91</sub> Fe <sub>4</sub> Cr <sub>3</sub> Ti <sub>2</sub> quasicrystalline alloy. <i>Scripta Materialia</i> , 2009, 61, 709-712.	5.2	28
25	Aspectos metalÃºrgicos de revestimentos dissimilares com a superliga Ã base de nÃquel inconel 625. <i>Soldagem E Inspecao</i> , 2012, 17, 251-263.	0.6	27
26	Enhancement of Mechanical Properties of Aluminum and 2124 Aluminum Alloy by the Addition of Quasicrystalline Phases. <i>Materials Research</i> , 2016, 19, 74-79.	1.3	27
27	Microstructure assessment at high temperature in NiCoCrAlY overlay coating obtained by laser metal deposition. <i>Journal of Materials Research and Technology</i> , 2019, 8, 1761-1772.	5.8	26
28	New insights into the hardening and pitting corrosion mechanisms of thermally aged duplex stainless steel at 475Ã°C: A comparative study between 2205 and 2101 steels. <i>Journal of Materials Science and Technology</i> , 2022, 98, 123-135.	10.7	26
29	Microstructure study of Al 7050 alloy reprocessed by spray forming and hot-extrusion and aged at 121Ã°C. <i>Intermetallics</i> , 2013, 43, 182-187.	3.9	25
30	Influence of Nb content on the structure, morphology, nanostructure, and properties of titanium-niobium magnetron sputter deposited coatings for biomedical applications. <i>Surface and Coatings Technology</i> , 2017, 326, 424-428.	4.8	25
31	Fundamental studies of magneto-optical borogermanate glasses and derived optical fibers containing Tb <sup>3+</sup> . <i>Journal of Materials Research and Technology</i> , 2021, 11, 312-327.	5.8	25
32	Microstructure of directionally solidified Tiâ€“Fe eutectic alloy with low interstitial and high mechanical strength. <i>Journal of Crystal Growth</i> , 2011, 333, 40-47.	1.5	24
33	From Porous to Dense Nanostructured Î²-Ti alloys through High-Pressure Torsion. <i>Scientific Reports</i> , 2017, 7, 13618.	3.3	24
34	Spray forming of glass former Fe <sub>63</sub> Nb <sub>10</sub> Al <sub>4</sub> Si <sub>3</sub> B <sub>20</sub> alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2007, 449-451, 884-889.	5.6	23
35	Magneto-optical borogermanate glasses and fibers containing Tb <sup>3+</sup> . <i>Scientific Reports</i> , 2021, 11, 9906.	3.3	23
36	Study of La <sub>2-x</sub> CaxCuO <sub>4</sub> perovskites for the low temperature water gas shift reaction. <i>Applied Catalysis A: General</i> , 2012, 413-414, 85-93.	4.3	22

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37	Severe plastic deformation and different surface treatments on the biocompatible Ti13Nb13Zr and Ti35Nb7Zr5Ta alloys: Microstructural and phase evolutions, mechanical properties, and bioactivity analysis. <i>Journal of Alloys and Compounds</i> , 2020, 812, 152116.	5.5	20
38	Electrochemical corrosion behavior of gas atomized Al–Ni alloy powders. <i>Electrochimica Acta</i> , 2012, 69, 371-378.	5.2	19
39	Au and Pd nanoparticles supported on CeO <sub>2</sub> , TiO <sub>2</sub> , and Mn <sub>2</sub> O <sub>3</sub> oxides. <i>Applied Surface Science</i> , 2014, 315, 490-498.	6.1	19
40	Microstructural and mechanical properties analysis of extruded Sn–0.7Cu solder alloy. <i>Journal of Materials Research and Technology</i> , 2015, 4, 84-92.	5.8	19
41	Ti-Nb thin films deposited by magnetron sputtering on stainless steel. <i>Journal of Vacuum Science and Technology A: Vacuum, Surfaces and Films</i> , 2016, 34, .	2.1	18
42	Amorphous phase partitioning in FeCo-based metallic glass alloys. <i>Journal of Non-Crystalline Solids</i> , 2004, 348, 250-257.	3.1	15
43	Spray forming of the glass former Fe <sub>83</sub> Zr <sub>3.5</sub> Nb <sub>3.5</sub> B <sub>9</sub> Cu <sub>1</sub> alloy. <i>Materials Science &amp; Engineering A: Structural Materials: Properties, Microstructure and Processing</i> , 2004, 375-377, 571-576.	5.6	14
44	Microstructure development and mechanical properties of rapidly solidified Ti–Fe and Ti–Fe–Bi alloys. <i>Materials and Design</i> , 2015, 86, 221-229.	7.0	14
45	Phosphate glasses via coacervation route containing CdFe <sub>2</sub> O <sub>4</sub> nanoparticles: structural, optical and magnetic characterization. <i>Dalton Transactions</i> , 2018, 47, 5771-5779.	3.3	14
46	Mechanical Properties and the Microstructure of $\hat{1}^2$ Ti-35Nb-10Ta-xFe Alloys Obtained by Powder Metallurgy for Biomedical Applications. <i>Metals</i> , 2019, 9, 76.	2.3	14
47	Slow and rapid cooling of Al–Cu–Si ultrafine eutectic composites: Interplay of cooling rate and microstructure in mechanical properties. <i>Journal of Materials Research</i> , 2019, 34, 1381-1394.	2.6	14
48	Amorphous phase formation by spray forming of alloys [(Fe <sub>0.6</sub> Co <sub>0.4</sub> ) <sub>0.75</sub> B <sub>0.2</sub> Si <sub>0.05</sub> ] <sub>96</sub> Nb <sub>4</sub> and Fe <sub>66</sub> B <sub>30</sub> Nb <sub>4</sub> modified with Ti. <i>Journal of Alloys and Compounds</i> , 2011, 509, S148-S154.	5.5	13
49	Effect of Rapid Solidification on Microstructure and Elastic Modulus of $\hat{1}^2$ Ti–xNb–3Fe Alloys for Implant Applications. <i>Advanced Engineering Materials</i> , 2017, 19, 1600370.	3.5	13
50	Microstructure characterization of a directionally solidified Mg-12wt.%Zn alloy: Equiaxed dendrites, eutectic mixture and type/ morphology of intermetallics. <i>Materials Chemistry and Physics</i> , 2018, 204, 105-131.	4.0	13
51	A new SERS substrate based on niobium lead-pyrophosphate glasses obtained by Ag <sup>+</sup> /Na <sup>+</sup> ion exchange. <i>Sensors and Actuators B: Chemical</i> , 2018, 277, 347-352.	7.8	13
52	The Effect of Solution Heat Treatment Temperature on Phase Transformations, Microstructure and Properties of Ti-25Ta-xZr Alloys Used as a Biomaterial. <i>Journal of Materials Engineering and Performance</i> , 2020, 29, 2410-2417.	2.5	13
53	In-situ crystallization of amorphous Fe <sub>73</sub> –xNb <sub>x</sub> Al <sub>4</sub> Si <sub>3</sub> B <sub>20</sub> alloys through synchrotron radiation. <i>Journal of Non-Crystalline Solids</i> , 2006, 352, 3404-3409.	3.1	12
54	Effect of Cr Additions on Ferrite Recrystallization and Austenite Formation in Dual-Phase Steels Heat Treated in the Intercritical Temperature Range. <i>Materials Research</i> , 2016, 19, 258-266.	1.3	12

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55	Microstructural Evolution of HSLA ISO 3183 X80M (API 5L X80) Friction Stir Welded Joints. <i>Metals and Materials International</i> , 2018, 24, 1120-1132.	3.4	12
56	Processing, As-Cast Microstructure and Wear Characteristics of a Monotectic Al-Bi-Cu Alloy. <i>Journal of Materials Engineering and Performance</i> , 2019, 28, 1201-1212.	2.5	12
57	Ultrafine eutectic coatings from Fe-Nb-B powder using laser cladding. <i>Materials Characterization</i> , 2020, 160, 110080.	4.4	12
58	Characterization, corrosion resistance and hardness of rapidly solidified Ni $\epsilon$ -Nb alloys. <i>Journal of Alloys and Compounds</i> , 2020, 829, 154529.	5.5	12
59	Impact of Zr content on the nanostructure, mechanical, and tribological behaviors of $\hat{1}^2$ -Ti-Nb-Zr ternary alloy coatings. <i>Thin Solid Films</i> , 2021, 721, 138565.	1.8	12
60	Effects of Cooling Rate and Sn Addition on the Microstructure of Ti-Nb-Sn Alloys. <i>Solid State Phenomena</i> , 0, 172-174, 190-195.	0.3	11
61	An assessment of microstructure and properties of laser clad coatings of ultrafine eutectic $\hat{1}^2$ Ti-Fe-Nb-Sn composite for implants. <i>Surface and Coatings Technology</i> , 2017, 328, 161-171.	4.8	11
62	On the Process-Related Rivet Microstructural Evolution, Material Flow and Mechanical Properties of Ti-6Al-4V/GFRP Friction-Riveted Joints. <i>Materials</i> , 2017, 10, 184.	2.9	11
63	Experimental study and thermodynamic computational simulation of phase transformations in centrifugal casting bimetallic pipe of API 5L X65Q steel and Inconel 625 alloy. <i>Journal of Manufacturing Processes</i> , 2018, 32, 318-326.	5.9	11
64	Effect of friction spot welding parameters on the joint formation and mechanical properties of Al to Cu. <i>Welding in the World, Le Soudage Dans Le Monde</i> , 2019, 63, 33-41.	2.5	11
65	Metallic Glass Formation Upon Rapid Solidification of Fe <sub>60</sub> Cr <sub>8</sub> Nb <sub>8</sub> B <sub>24</sub> (at%) Alloy through LASER Cladding and Remelting. <i>Materials Research</i> , 2017, 20, 580-587.	1.3	9
66	New compositions of Fe $\epsilon$ -Co $\epsilon$ -Nb $\epsilon$ -Ba $\epsilon$ -Y BMG with wide supercooled liquid range, over 100 K. <i>Journal of Materials Research and Technology</i> , 2020, 9, 9174-9181.	5.8	9
67	Effects of laser surface melting on crystallographic texture, microstructure, elastic modulus and hardness of Ti $\sim$ 30Nb $\sim$ 4Sn alloy. <i>Transactions of Nonferrous Metals Society of China</i> , 2020, 30, 392-404.	4.2	9
68	The Effect of Solution Heat Treatment Time on the Phase Formation and Selected Mechanical Properties of Ti-25Ta-xZr Alloys for Application as Biomaterials. <i>Journal of Materials Engineering and Performance</i> , 2021, 30, 5905-5913.	2.5	9
69	Effect of Ni addition on bainite microstructure of low-carbon special bar quality steels and its influence on CCT diagrams. <i>Journal of Materials Research and Technology</i> , 2021, 15, 1266-1283.	5.8	9
70	Effects of Composition on Solidification Microstructure of Cast Titanium Alloys. <i>Materials Science Forum</i> , 0, 649, 183-188.	0.3	8
71	Rapid solidification of an Al-5Ni alloy processed by spray forming. <i>Materials Research</i> , 2012, 15, 779-785.	1.3	8
72	Characterization of phases, tensile properties, and fracture toughness in aircraft $\epsilon$ -grade aluminum alloys. <i>Material Design and Processing Communications</i> , 2019, 1, e79.	0.9	8

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73	Assessment of anodization conditions and annealing temperature on the microstructure, elastic modulus, and wettability of $\hat{1}^2$ -Ti40Nb alloy. Thin Solid Films, 2021, 737, 138949.	1.8	8
74	Characterization of Glass Forming Alloy Fe <sub>43.2</sub> Co <sub>28.8</sub> B <sub>19.2</sub> Si <sub>4.8</sub> Nb <sub>4</sub> Processed by Spray Forming and Wedge Mold Casting Techniques. Materials Science Forum, 2011, 691, 23-26.	0.3	7
75	Anodic growth and pre-calcification on $\hat{1}^2$ -Ti-40Nb alloy: Effects on elastic modulus, electrochemical properties, and bioactivity. Ceramics International, 2022, 48, 27575-27589.	4.8	7
76	Effects of Mg addition on the phase formation, morphology, and mechanical and tribological properties of Ti-Nb-Mg immiscible alloy coatings produced by magnetron co-sputtering. Surface and Coatings Technology, 2020, 400, 126070.	4.8	6
77	Formation and microstructure of Ni <sub>62-x</sub> Nb <sub>38Ti x</sub> (x = 3, 6, 10 at.%) bulk metallic glasses. International Journal of Materials Research, 2012, 103, 1096-1101.	0.3	5
78	Evaluation of the Corrosion Resistant Weld Cladding Deposited by the TIG Cold Wire Feed Process. Materials Science Forum, 0, 783-786, 2822-2827.	0.3	5
79	Gas Atomization of Nanocrystalline Fe <sub>63</sub> Nb <sub>10</sub> Al <sub>4</sub> Si <sub>3</sub> B <sub>20</sub> Alloy. Journal of Metastable and Nanocrystalline Materials, 2004, 20-21, 175-182.	0.1	4
80	Nanostructural characterization of sputter deposited Ti-Nb coatings by automated crystallographic orientation mapping. Thin Solid Films, 2018, 661, 92-97.	1.8	4
81	Production and characterization of laser cladding coating of Fe <sub>66</sub> Co <sub>7</sub> Nb <sub>4</sub> B <sub>23</sub> (at.%) gas-atomized and ball-milled powders. Journal of Materials Research and Technology, 2021, 14, 2267-2280.	5.8	4
82	Microstructure of Spray Formed Fe <sub>83</sub> Nb <sub>4</sub> ZrTiB <sub>9</sub> Cu <sub>2</sub> Alloy. Materials Science Forum, 2003, 416-418, 388-394.	0.3	3
83	Overspray Powder Characterization of Fe-Based Glassy Alloy. Materials Science Forum, 0, 727-728, 468-475.	0.3	3
84	Laser Cladding of Fe-based Metallic Glass/MoS <sub>2</sub> Self-lubricating Composites: Effect of Power and Scanning Speed. Materials Research, 2017, 20, 836-841.	1.3	3
85	An exploratory study of TiO <sub>2</sub> -based multicomponent nanotubes on TiFeNbSn ultrafine eutectic alloy. Surface and Coatings Technology, 2021, 407, 126765.	4.8	3
86	Experimental assessment of low-temperature martensite transformations in Ni-rich polycrystalline Ni $\hat{e}$ Ti alloys. Journal of Materials Research and Technology, 2022, 18, 4990-5004.	5.8	3
87	Microstructural Characterization of Spray Deposited Al-Y-Ni-Co-Zr Alloy and Al-Y-Ni-Co-Zr + SiC Metal Matrix Composite. Materials Science Forum, 2002, 403, 95-100.	0.3	2
88	Rapid Solidification and Laser Cladding of Gas Atomized Ni-Nb-Sn Bulk Metallic Glass. Materials Science Forum, 0, 899, 311-316.	0.3	2
89	Effect of Fe Addition on Microstructure and Properties of Powder Metallurgy Ti <sub>35</sub> Nb <sub>10</sub> Ta Alloy. Materials Science Forum, 0, 899, 206-211.	0.3	2
90	Soft Magnetic Properties of Amorphous Fe <sub>73-x</sub> Nb <sub>x</sub> Al <sub>4</sub> Si <sub>3</sub> B <sub>20</sub> Alloys. Journal of Metastable and Nanocrystalline Materials, 2005, 24-25, 431-434.	0.1	0

#	ARTICLE	IF	CITATIONS
91	CARACTERIZAÇÃfO MICROESTRUTURAL DA INTERFACE DE TUBO BIMETÁLICO CENTRIFUGADO. , 0, , .		0