

# Renato A Antunes

## List of Publications by Year in descending order

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86  
papers

2,297  
citations

304368

22  
h-index

223531

46  
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87  
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87  
docs citations

87  
times ranked

2409  
citing authors

#	ARTICLE	IF	CITATIONS
1	Corrosion of metal bipolar plates for PEM fuel cells: A review. <i>International Journal of Hydrogen Energy</i> , 2010, 35, 3632-3647.	3.8	399
2	Carbon materials in composite bipolar plates for polymer electrolyte membrane fuel cells: A review of the main challenges to improve electrical performance. <i>Journal of Power Sources</i> , 2011, 196, 2945-2961.	4.0	238
3	Corrosion fatigue of biomedical metallic alloys: Mechanisms and mitigation. <i>Acta Biomaterialia</i> , 2012, 8, 937-962.	4.1	203
4	Characterization of corrosion products formed on steels in the first months of atmospheric exposure. <i>Materials Research</i> , 2003, 6, 403-408.	0.6	148
5	Corrosion in biomass combustion: A materials selection analysis and its interaction with corrosion mechanisms and mitigation strategies. <i>Corrosion Science</i> , 2013, 76, 6-26.	3.0	137
6	Study of the corrosion resistance and in vitro biocompatibility of PVD TiCN-coated AISI 316 L austenitic stainless steel for orthopedic applications. <i>Surface and Coatings Technology</i> , 2010, 205, 2074-2081.	2.2	94
7	Materials selection for bipolar plates for polymer electrolyte membrane fuel cells using the Ashby approach. <i>Journal of Power Sources</i> , 2012, 206, 3-13.	4.0	71
8	Characterization of Corrosion Products on Carbon Steel Exposed to Natural Weathering and to Accelerated Corrosion Tests. <i>International Journal of Corrosion</i> , 2014, 2014, 1-9.	0.6	55
9	Electronic properties of the passive films formed on CoCrFeNi and CoCrFeNiAl high entropy alloys in sodium chloride solution. <i>Journal of Materials Research and Technology</i> , 2020, 9, 13879-13892.	2.6	53
10	Materials Selection of Optimized Titanium Alloys for Aircraft Applications. <i>Materials Research</i> , 2018, 21, .	0.6	42
11	Corrosion of thin, magnetron sputtered Nb 2 O 5 films. <i>Corrosion Science</i> , 2016, 102, 317-325.	3.0	41
12	Investigation on the corrosion resistance of carbon black-graphite-poly(vinylidene fluoride) composite bipolar plates for polymer electrolyte membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2011, 36, 12474-12485.	3.8	40
13	A comparative study of their in vitro corrosion behavior and cytotoxicity of a superferritic stainless steel, a Ti-13Nb-13Zr alloy, and an austenitic stainless steel in Hank's solution. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2005, 73B, 109-116.	1.6	39
14	Materials selection for hot stamped automotive body parts: An application of the Ashby approach based on the strain hardening exponent and stacking fault energy of materials. <i>Materials &amp; Design</i> , 2014, 63, 247-256.	5.1	37
15	Influence of injection temperature and pressure on the microstructure, mechanical and corrosion properties of a AlSiCu alloy processed by HPDC. <i>Materials and Design</i> , 2015, 88, 1071-1081.	3.3	36
16	Corrosion behavior of polyphenylene sulfide-carbon black-graphite composites for bipolar plates of polymer electrolyte membrane fuel cells. <i>International Journal of Hydrogen Energy</i> , 2014, 39, 16405-16418.	3.8	34
17	Correlation between the corrosion resistance and the semiconducting properties of the oxide film formed on AZ91D alloy after solution treatment. <i>Corrosion Science</i> , 2013, 69, 311-321.	3.0	31
18	Corrosion Processes of Physical Vapor Deposition-Coated Metallic Implants. <i>Critical Reviews in Biomedical Engineering</i> , 2009, 37, 425-460.	0.5	29

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19	Corrosion and thermal stability of multi-walled carbon nanotube-graphite-acrylonitrile-butadiene-styrene composite bipolar plates for polymer electrolyte membrane fuel cells. <i>Journal of Power Sources</i> , 2013, 221, 345-355.	4.0	28
20	A review on Corrosion of High Entropy Alloys: Exploring the Interplay Between Corrosion Properties, Alloy Composition, Passive Film Stability and Materials Selection. <i>Materials Research</i> , 0, 25, .	0.6	27
21	Electrochemical Study of the AISI 409 Ferritic Stainless Steel: Passive Film Stability and Pitting Nucleation and Growth. <i>Materials Research</i> , 2017, 20, 1669-1680.	0.6	26
22	Effect of silicate-based films on the corrosion behavior of the API 5L X80 pipeline steel. <i>Corrosion Science</i> , 2018, 139, 21-34.	3.0	24
23	Corrosion Performance of Anodized AZ91D Magnesium Alloy: Effect of the Anodizing Potential on the Film Structure and Corrosion Behavior. <i>Journal of Materials Engineering and Performance</i> , 2014, 23, 593-603.	1.2	23
24	Polyaniline/Carbon black nanocomposites: The role of synthesis conditions on the morphology and properties. <i>Materials Today Communications</i> , 2018, 16, 14-21.	0.9	21
25	Study of the correlation between corrosion resistance and semi-conducting properties of the passive film of AISI 316L stainless steel in physiological solution. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2012, 63, 586-592.	0.8	20
26	Galvanic and asymmetry effects on the local electrochemical behavior of the 2098-T351 alloy welded by friction stir welding. <i>Journal of Materials Science and Technology</i> , 2020, 45, 162-175.	5.6	20
27	Passive film composition and stability of CoCrFeNi and CoCrFeNiAl high entropy alloys in chloride solution. <i>Materials Chemistry and Physics</i> , 2021, 267, 124582.	2.0	18
28	Preparation and characterization of the structure and corrosion behavior of wedge mold cast Fe <sub>43.2</sub> Co <sub>28.8</sub> B <sub>19.2</sub> Si <sub>4.8</sub> Nb <sub>4</sub> bulk amorphous alloy. <i>Journal of Alloys and Compounds</i> , 2016, 682, 412-417.	2.8	17
29	Surface chemistry and the corrosion behavior of magnetron sputtered niobium oxide films in sulfuric acid solution. <i>Applied Surface Science</i> , 2018, 462, 344-352.	3.1	17
30	Tartaric-sulphuric acid anodized clad AA2024-T3 post-treated in Ce-containing solutions at different temperatures: Corrosion behaviour and Ce ions distribution. <i>Applied Surface Science</i> , 2020, 534, 147634.	3.1	17
31	Surface chemistry, film morphology, local electrochemical behavior and cytotoxic response of anodized AZ31B magnesium alloy. <i>Journal of Materials Research and Technology</i> , 2020, 9, 14754-14770.	2.6	17
32	Exfoliation corrosion susceptibility in the zones of friction stir welded AA2098-T351. <i>Journal of Materials Research and Technology</i> , 2019, 8, 5916-5929.	2.6	15
33	Sensitization Behavior of Type 409 Ferritic Stainless Steel: Confronting DL-EPR Test and Practice W of ASTM A763. <i>Journal of Materials Engineering and Performance</i> , 2014, 23, 2164-2173.	1.2	14
34	The effect of manufacturing process induced near-surface deformed layer on the corrosion behaviour of AA2198-T851 Al-Cu-Li alloy. <i>Corrosion Engineering Science and Technology</i> , 2019, 54, 205-215.	0.7	14
35	Corrosion resistance of three austenitic stainless steels for biomedical applications. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2007, 58, 762-766.	0.8	13
36	The effect of mechanical polishing and finishing on the corrosion resistance of AISI 304 stainless steel. <i>Corrosion Engineering Science and Technology</i> , 2016, 51, 416-428.	0.7	13

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37	FCAW repair welding cycles, HAZ microstructure and corrosion resistance of 2304 duplex stainless steel. Corrosion Engineering Science and Technology, 2016, 51, 573-580.	0.7	12
38	The local electrochemical behavior of the AA2098â€”T351 and surface preparation effects investigated by scanning electrochemical microscopy. Surface and Interface Analysis, 2019, 51, 982-992.	0.8	12
39	On the local corrosion behavior of coupled welded zones of the 2098-T351 Al-Cu-Li alloy produced by Friction Stir Welding (FSW): An amperometric and potentiometric microelectrochemical investigation. Electrochimica Acta, 2021, 373, 137910.	2.6	11
40	Surface interactions of a W-DLC-coated biomedical AISI 316L stainless steel in physiological solution. Journal of Materials Science: Materials in Medicine, 2013, 24, 863-876.	1.7	10
41	Structural Characterization and Corrosion Stability of a Si-Doped DLC Coating Applied on Cylinder Liner. Journal of Materials Engineering and Performance, 2014, 23, 3926-3933.	1.2	10
42	Influence of the Tungsten Content on Surface Properties of Electroless Ni-W-P Coatings. Materials Research, 2018, 21, .	0.6	10
43	Study of the Corrosion Process of AZ91D Magnesium Alloy during the First Hours of Immersion in 3.5â€”wt.% NaCl Solution. International Journal of Corrosion, 2018, 2018, 1-20.	0.6	9
44	Influence of Anodization on the Fatigue and Corrosion-Fatigue Behaviors of the AZ31B Magnesium Alloy. Metals, 2021, 11, 1573.	1.0	8
45	Properties of aluminum oxide thin film obtained by metal plasma immersion ion implantation and deposition after zirconium-based pretreatment. Vacuum, 2015, 121, 32-41.	1.6	7
46	Study of the correlation between flexible food packaging peeling resistance and surface composition for aluminum-metallized BOPP films aged at 60Â°C. Journal of Adhesion, 2017, 93, 4-17.	1.8	7
47	Investigation on the Relationship between the Surface Chemistry and the Corrosion Resistance of Electrochemically Nitrided AISI 304 Stainless Steel. International Journal of Corrosion, 2019, 2019, 1-12.	0.6	7
48	Surface Chemistry and Semiconducting Properties of Passive Film and Corrosion Resistance of Annealed Surgical Stainless Steel. Journal of Materials Engineering and Performance, 2020, 29, 6085-6100.	1.2	7
49	Structural Characterization, Global and Local Electrochemical Activity of Electroless Niâ€”P-Multiwalled Carbon Nanotube Composite Coatings on Pipeline Steel. Metals, 2021, 11, 982.	1.0	7
50	Surface properties enhancement by sulfur-doping TiO2 films. Materials Research Bulletin, 2021, 143, 111460.	2.7	7
51	Comparison of the corrosion resistance of DIN W. Nr. 1.4970 (15%Cr-15%Ni-1.2%Mo-Ti) and ASTM F-138 (17%Cr-13%Ni-2.5%Mo) austenitic stainless steels for biomedical applications. Materials Research, 2006, 9, 281-286.	0.6	7
52	Structural, Adhesion and Electrochemical Characterization of Electroless Plated Ni-P-Carbon Black Composite Films on API 5L X80 Steel. Journal of Materials Engineering and Performance, 2019, 28, 4751-4761.	1.2	6
53	The effect of surface pretreatment on the corrosion behaviour of silanated AA2198â€”T851 Alâ€”Cuâ€”Li alloy. Surface and Interface Analysis, 2019, 51, 275-289.	0.8	6
54	Development of an Al <sup>3+</sup> ion-selective microelectrode for the potentiometric microelectrochemical monitoring of corrosion sites on 2098â€”T351 aluminum alloy surfaces. Electrochimica Acta, 2022, 415, 140260.	2.6	6

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55	Investigation on the Corrosion Resistance of PIM 316L Stainless Steel in PEM Fuel Cell Simulated Environment. <i>Materials Science Forum</i> , 0, 660-661, 209-214.	0.3	4
56	Effect of Processing on Microstructure and Corrosion Mitigating Properties of Hydrotalcite Coatings on AA 6061 Alloy. <i>Materials Research</i> , 2015, 18, 1203-1208.	0.6	4
57	Effect of temperature on corrosion and semiconducting properties of oxide films formed on M5 zirconium alloy. <i>Corrosion Engineering Science and Technology</i> , 2016, 51, 104-109.	0.7	4
58	Corrosion Behavior of Metal Active Gas Welded Joints of a High-Strength Steel for Automotive Application. <i>Journal of Materials Engineering and Performance</i> , 2017, 26, 4718-4731.	1.2	4
59	Synthesis of few-layered graphene sheets as support of cobalt nanoparticles and its influence on CO hydrogenation. <i>Materials Science and Engineering B: Solid-State Materials for Advanced Technology</i> , 2021, 273, 115388.	1.7	4
60	Influence of the Treatment Time on the Surface Chemistry and Corrosion Behavior of Cerium-Based Conversion Coatings on the AZ91D Magnesium Alloy. <i>Materials Research</i> , 2019, 22, .	0.6	4
61	Quaternary CuAlMn-based alloys with Gd and Sn additions: Surface chemistry and corrosion behavior in sodium chloride solution. <i>Journal of Materials Research and Technology</i> , 2022, 16, 1213-1230.	2.6	4
62	A Cerium-Based Nanocoating for Corrosion Protection of the AA1230 as Clad Material for the AA2024-T3 Alloy. <i>Materials Research</i> , 2022, 25, .	0.6	4
63	Surface finishing effects on the corrosion behavior and electrochemical activity of 2098-T351 aluminum alloy investigated using scanning microelectrochemical techniques. <i>Materials Characterization</i> , 2022, 191, 112130.	1.9	4
64	Graphene-based coatings for magnesium alloys: exploring the correlation between coating architecture, deposition methods, corrosion resistance and materials selection. <i>Corrosion Reviews</i> , 2022, 40, 427-451.	1.0	4
65	The peeling resistance of flexible laminated food packaging: Roles of the NCO:OH ratio and aluminum surface aging times. <i>Journal of Adhesion</i> , 2018, 94, 784-798.	1.8	3
66	Preparation and characterization of copper thin film obtained by metal plasma immersion ion implantation and deposition. <i>Thin Solid Films</i> , 2018, 649, 136-141.	0.8	3
67	Corrosion of Al <sub>85</sub> Ni <sub>9</sub> Ce <sub>6</sub> amorphous alloy in the first hours of immersion in 3.5 wt% NaCl solution: The role of surface chemistry. <i>Surface and Interface Analysis</i> , 2020, 52, 50-62.	0.8	3
68	Global and Local Corrosion of Welded Joints of High-Strength Low-Alloy Automotive Steel. <i>Corrosion</i> , 2021, 77, 564-576.	0.5	3
69	Effect of Milling Parameters on the Stability of the Passive Film of AISI 304 Stainless Steel. <i>Journal of Materials Engineering and Performance</i> , 2021, 30, 8131.	1.2	3
70	Scanning Electrochemical Microscopy (SECM) Study of the Electrochemical Behavior of Anodized AZ31B Magnesium Alloy in Simulated Body Fluid. <i>Materials Research</i> , 2019, 22, .	0.6	3
71	Interplay between the composition of the passive film and the corrosion resistance of citric acid-passivated AISI 316L stainless steel. <i>Surface and Interface Analysis</i> , 2021, 53, 374-384.	0.8	3
72	Effects of Sn, Gd, and Mn additions on the surface chemistry and electrochemical behavior of CuAl-based alloys in sodium chloride solution. <i>Applied Surface Science</i> , 2022, 573, 151488.	3.1	3

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73	Electrochemical characterization of alloy segregation in the near-surface deformed layer of welded zones of an Al-Cu-Li alloy using scanning electrochemical microscopy. <i>Electrochimica Acta</i> , 2022, 427, 140873.	2.6	3
74	Study of the Correlation between Microstructure and Corrosion Resistance of the AZ91D Magnesium Alloy. <i>Materials Science Forum</i> , 2018, 930, 405-410.	0.3	2
75	Corrosion protection of the AA2198 alloy by environmentally friendly organic-inorganic sol-gel coating based on bis-(triethoxysilyl) ethane. <i>Surface and Interface Analysis</i> , 2021, 53, 314-329.	0.8	2
76	Hydrogen Embrittlement of Zirconium-Based Alloys for Nuclear Fuel Cladding. <i>Innovations in Corrosion and Materials Science</i> , 2015, 4, 96-106.	0.2	2
77	Surface Analysis, Microstructural Characterization and Local Corrosion Processes in Decarburized SAE 9254 Spring Steel. <i>Corrosion</i> , 2019, 75, 1474-1486.	0.5	1
78	Exploring the relationship between the surface chemistry and the corrosion behavior of electropolymerized polypyrrole films deposited on the surgical ISO 5832-1 stainless steel. <i>Surface and Interface Analysis</i> , 2020, 52, 635-644.	0.8	1
79	On the Interaction between Uniaxial Stress Loading and the Corrosion Behavior of the ISO 5832-1 Surgical Stainless Steel. <i>Journal of Materials Engineering and Performance</i> , 2021, 30, 2691-2707.	1.2	1
80	Tribological Evaluation of an Optical Fiber Laser Marked Stainless Steel for Biomedical Applications. <i>IFMBE Proceedings</i> , 2019, , 99-103.	0.2	1
81	The Corrosion Behaviour of TiN-Coated Powder Injection Molded AISI 316L Steel. <i>Materials Science Forum</i> , 2006, 530-531, 105-110.	0.3	0
82	Effect of Passivation Treatments on the Corrosion Resistance of PIM 316L Stainless Steel in a PEM Fuel Cell Simulated Environment. <i>Materials Science Forum</i> , 2012, 727-728, 96-101.	0.3	0
83	Gold nanochannels oxidation by confined water. <i>RSC Advances</i> , 2020, 10, 36980-36987.	1.7	0
84	Influence of the Electrolyte Composition on the Corrosion Behavior of Anodized AZ31B Magnesium Alloy. <i>Materials Science Forum</i> , 2020, 1012, 424-429.	0.3	0
85	Stress Corrosion Cracking of Structural Nuclear Materials: Influencing Factors and Materials Selection. <i>Innovations in Corrosion and Materials Science</i> , 2020, 10, 5-24.	0.2	0
86	Bipolar Plates in Redox Flow Batteries, Fuel Cells and Electrolyzers. , 2022, , 514-523.		0