

Rajendran Nallaiyan

List of Publications by Year in descending order

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95
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times ranked

2678
citing authors

#	ARTICLE	IF	CITATIONS
1	Fabrication of chitosan/silica hybrid coating on AZ31 Mg alloy for orthopaedic applications. Journal of Magnesium and Alloys, 2023, 11, 614-628.	11.9	13
2	Effect of multilayer CrN/CrAlN coating on the corrosion and contact resistance behavior of 316L SS bipolar plate for high temperature proton exchange membrane fuel cell. Journal of Materials Science and Technology, 2022, 97, 134-146.	10.7	50
3	Biofunctionalization of Mg implants with gadolinium coating for bone regeneration. Surfaces and Interfaces, 2022, 31, 101948.	3.0	8
4	Electropolymerized PEDOT/TNTA hybrid composite: A promising biomaterial for orthopaedic application. Applied Surface Science, 2022, 595, 153534.	6.1	8
5	Silver nanoparticles incorporated polyaniline on TiO ₂ nanotube arrays: A nanocomposite platform to enhance the biocompatibility and antibiofilm. Surfaces and Interfaces, 2021, 22, 100892.	3.0	18
6	Corrosion resistant and conductive TiN/TiAlN multilayer coating on 316L SS: a promising metallic bipolar plate for proton exchange membrane fuel cell. Journal of Materials Science, 2021, 56, 10575-10596.	3.7	22
7	Bio-inspired polydopamine incorporated titania nanotube arrays for biomedical applications. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2021, 629, 127489.	4.7	16
8	In-vitro corrosion assessment of silicate-coated AZ31 Mg alloy in Earle's solution. Journal of Materials Science, 2020, 55, 3571-3587.	3.7	19
9	Non-invasive, Non-enzymatic, Biodegradable and Flexible Sweat Glucose Sensor and Its Electrochemical Studies. ChemistrySelect, 2020, 5, 11305-11321.	1.5	12
10	Fabrication of bioactive corrosion-resistant polyaniline/TiO ₂ nanotubes nanocomposite and their application in orthopedics. Journal of Materials Science, 2020, 55, 15602-15620.	3.7	11
11	Biocompatible gadolinium-coated magnesium alloy for biomedical applications. Journal of Materials Science, 2020, 55, 11582-11596.	3.7	30
12	Anticancer Activity of Samarium-Coated Magnesium Implants for Immunocompromised Patients. ACS Applied Bio Materials, 2020, 3, 4408-4416.	4.6	17
13	Polypyrrole/graphene oxide composite coating on Ti implants: a promising material for biomedical applications. Journal of Materials Science, 2020, 55, 5211-5229.	3.7	30
14	Selenium conversion coating on AZ31 Mg alloy: A solution for improved corrosion rate and enhanced bio-adaptability. Surface and Coatings Technology, 2019, 378, 124902.	4.8	23
15	Poly(m-phenylenediamine)-coated 316L SS: A promising material for bipolar plates in PEMFC environment. Materials and Corrosion - Werkstoffe Und Korrosion, 2019, 70, 1646-1656.	1.5	5
16	Surface Modification Methods for Titanium and Its Alloys and Their Corrosion Behavior in Biological Environment: A Review. Journal of Bio- and Tribo-Corrosion, 2019, 5, 1.	2.6	74
17	Investigation into the Corrosion Behavior of Copper/Aluminum Associated with Electric/Electronic Devices in Marine Environment. Journal of Failure Analysis and Prevention, 2019, 19, 250-257.	0.9	5
18	Dynamic electrochemical impedance study of fluoride conversion coating on AZ31 magnesium alloy to improve bio-adaptability for orthopedic application. Materials and Corrosion - Werkstoffe Und Korrosion, 2019, 70, 698-710.	1.5	32

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19	Synthesis and Anticorrosive Properties of Novel PVK-ZrO ₂ /Nano Composite Coatings on Steel-Substrate. E-Journal of Surface Science and Nanotechnology, 2018, 16, 5-13.	0.4	7
20	Electrochemical behavior of polypyrrole/chitosan composite coating on Ti metal for biomedical applications. Carbohydrate Polymers, 2018, 189, 126-137.	10.2	58
21	In-vitro bioactivity and electrochemical behavior of polyaniline encapsulated titania nanotube arrays for biomedical applications. Applied Surface Science, 2018, 439, 66-74.	6.1	31
22	In-vitro biocompatibility and corrosion resistance of electrochemically assembled PPy/TNTA hybrid material for biomedical applications. Applied Surface Science, 2018, 445, 320-334.	6.1	24
23	Improvement in the corrosion resistance of carbon steel in acidic condition using naphthalen-2-yl-naphthalene-2-carboxamide inhibitor. Journal of Colloid and Interface Science, 2018, 512, 618-628.	9.4	80
24	Effect of Fluoride Concentration and pH on Corrosion Behavior of Ti-15Mo in Artificial Saliva. Journal of Bio- and Tribo-Corrosion, 2018, 4, 1.	2.6	5
25	Biologically anchored chitosan/gelatin-SrHAP scaffold fabricated on Titanium against chronic osteomyelitis infection. International Journal of Biological Macromolecules, 2018, 110, 206-214.	7.5	18
26	Evaluation of the corrosion behavior of a TiN-coated 316L SS bipolar plate using dynamic electrochemical impedance spectroscopy. New Journal of Chemistry, 2018, 42, 14394-14409.	2.8	24
27	Influence of tunable diameter on the electrochemical behavior and antibacterial activity of titania nanotube arrays for biomedical applications. Materials Characterization, 2017, 129, 67-79.	4.4	42
28	Fabrication of nanoporous sodium niobate coating on 316L SS for orthopaedics. Ceramics International, 2017, 43, 11569-11579.	4.8	19
29	Corrosion and interfacial contact resistance behavior of electrochemically nitrided 316L SS bipolar plates for proton exchange membrane fuel cells. Energy, 2017, 133, 1050-1062.	8.8	60
30	Development of Self-Assembled Titania Nanopore Arrays for Orthopedic Applications. Journal of Bio- and Tribo-Corrosion, 2017, 3, 1.	2.6	12
31	Development of poly(vinylcarbazole)/alumina nanocomposite coatings for corrosion protection of 316L stainless steel in 3.5% NaCl medium. Journal of Applied Polymer Science, 2017, 134, 44937.	2.6	24
32	Effect of Acid Treatment on the Surface Modification of Ti-6Al-7Nb and Ti-5Al-2Nb-1Ta and Its Electrochemical Investigations in Simulated Body Fluid. Journal of Bio- and Tribo-Corrosion, 2017, 3, 1.	2.6	5
33	Weathering Steel in Industrial-Marine-Urban Environment: Field Study. Materials Transactions, 2016, 57, 148-155.	1.2	26
34	Drug release characteristics of quercetin-loaded TiO ₂ nanotubes coated with chitosan. International Journal of Biological Macromolecules, 2016, 93, 1633-1638.	7.5	54
35	Corrosion behavior of 316L and 304 stainless steels exposed to industrial-marine-urban environment: field study. RSC Advances, 2016, 6, 47314-47324.	3.6	45
36	Influence of bicarbonate concentration on the conversion layer formation onto AZ31 magnesium alloy and its electrochemical corrosion behaviour in simulated body fluid. RSC Advances, 2016, 6, 49910-49922.	3.6	20

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37	Editorial. , 2016, 104, 663-664.		0
38	Investigation of corrosion behavior of polypyrrole-coated Ti using dynamic electrochemical impedance spectroscopy (DEIS). RSC Advances, 2016, 6, 80275-80285.	3.6	20
39	Application of EIS and SECM Studies for Investigation of Anticorrosion Properties of Epoxy Coatings containing ZrO ₂ Nanoparticles on Mild Steel in 3.5% NaCl Solution. Journal of Failure Analysis and Prevention, 2016, 16, 1082-1091.	0.9	48
40	Green Nanosilver as Reinforcing Eco-Friendly Additive to Epoxy Coating for Augmented Anticorrosive and Antimicrobial Behavior. Silicon, 2016, 8, 277-298.	3.3	35
41	In-Vitro Biocompatibility Studies of Plasma-Nitrided Titanium Alloy Ti-21S Using Fibroblast Cells. Journal of Materials Engineering and Performance, 2016, 25, 1508-1514.	2.5	13
42	Effect of nitrides on the corrosion behaviour of 316L SS bipolar plates for Proton Exchange Membrane Fuel Cell (PEMFC). International Journal of Hydrogen Energy, 2015, 40, 3359-3369.	7.1	73
43	Electrochemical behavior and effect of heat treatment on morphology, crystalline structure of self-organized TiO ₂ nanotube arrays on Ti-6Al-7Nb for biomedical applications. Materials Science and Engineering C, 2015, 50, 394-401.	7.3	70
44	Electrochemical Corrosion and In Vitro Bioactivity of SiO ₂ :ZrO ₂ -Coated 316L Stainless Steel in Simulated Body Fluid. Journal of Materials Engineering and Performance, 2015, 24, 3056-3067.	2.5	12
45	Effect of plasma nitriding on structure and biocompatibility of self-organised TiO ₂ nanotubes on Ti-6Al-7Nb. RSC Advances, 2015, 5, 41763-41771.	3.6	24
46	Applications of dynamic electrochemical impedance spectroscopy (DEIS) to evaluate protective coatings formed on AZ31 magnesium alloy. RSC Advances, 2015, 5, 29589-29593.	3.6	9
47	Surface characteristics, corrosion resistance and MG63 osteoblast-like cells attachment behaviour of nano SiO ₂ -ZrO ₂ coated 316L stainless steel. RSC Advances, 2015, 5, 26007-26016.	3.6	25
48	Corrosion behaviour of tetrahedral amorphous carbon (ta-C) filled titania nano tubes. RSC Advances, 2015, 5, 93131-93138.	3.6	11
49	A Review on TiO ₂ Nanotubes: Influence of Anodization Parameters, Formation Mechanism, Properties, Corrosion Behavior, and Biomedical Applications. Journal of Bio- and Tribo-Corrosion, 2015, 1, 1.	2.6	179
50	Formation of a protective nitride layer by electrochemical nitridation on 316L SS bipolar plates for a proton exchange membrane fuel cell (PEMFC). RSC Advances, 2015, 5, 64466-64470.	3.6	18
51	Electrochemical behaviour and bioactivity of self-organized TiO ₂ nanotube arrays on Ti-6Al-4V in Hanks's solution for biomedical applications. Electrochimica Acta, 2015, 155, 411-420.	5.2	66
52	In-vitro biocompatibility and corrosion resistance of strontium incorporated TiO ₂ nanotube arrays for orthopaedic applications. Journal of Biomaterials Applications, 2014, 29, 113-129.	2.4	42
53	Effect of Sr on the bioactivity and corrosion resistance of nanoporous niobium oxide coating for orthopaedic applications. Materials Science and Engineering C, 2014, 36, 194-205.	7.3	18
54	Dynamic electrochemical impedance spectroscopy (DEIS) studies of AZ31 magnesium alloy in simulated body fluid solution. RSC Advances, 2014, 4, 27791-27795.	3.6	18

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55	Electrochemical Characterization of Carbon and Weathering Steels Corrosion Products to Determine the Protective Ability Using Carbon Paste Electrode (CPE). <i>Electroanalysis</i> , 2014, 26, 2419-2428.	2.9	13
56	Electrochemical and in vitro bioactivity of polypyrrole/ceramic nanocomposite coatings on 316L SS bio-implants. <i>Materials Science and Engineering C</i> , 2014, 43, 76-85.	7.3	42
57	Novel sol gel coating of Nb ₂ O ₅ on magnesium alloy for biomedical applications. <i>Surface and Coatings Technology</i> , 2014, 244, 131-141.	4.8	87
58	In vitro bioactivity and corrosion resistance of Zr incorporated TiO ₂ nanotube arrays for orthopaedic applications. <i>Applied Surface Science</i> , 2014, 316, 264-275.	6.1	37
59	Bioactive HA/TiO ₂ coating on magnesium alloy for biomedical applications. <i>Ceramics International</i> , 2014, 40, 6617-6630.	4.8	121
60	Evaluation of chemically modified Ti-5Mo-3Fe alloy surface: Electrochemical aspects and in vitro bioactivity on MG63 cells. <i>Applied Surface Science</i> , 2014, 307, 52-61.	6.1	17
61	Electrochemical polymerization of pyrrole over AZ31 Mg alloy for biomedical applications. <i>Electrochimica Acta</i> , 2013, 88, 310-321.	5.2	84
62	Corrosion behavior of electrochemically assembled nanoporous titania for biomedical applications. <i>Ceramics International</i> , 2013, 39, 959-967.	4.8	58
63	Inhibition effect of newly synthesised piperidine derivatives on the corrosion of brass in natural seawater. <i>Protection of Metals and Physical Chemistry of Surfaces</i> , 2013, 49, 763-775.	1.1	2
64	Investigations on the Thermal and Elastic Properties of ZnO-Incorporated Phosphate Glasses and Glass Ceramics. <i>Phosphorus, Sulfur and Silicon and the Related Elements</i> , 2012, 187, 831-849.	1.6	4
65	Influence of Ag ₂ O on crystallisation and structural modifications of phosphate glasses. <i>Phase Transitions</i> , 2012, 85, 630-649.	1.3	6
66	Investigations on <i>In Vitro</i> and Degradation Properties of ZnO-Added Phosphate-Based Glasses and Glass Ceramics. <i>Journal of the American Ceramic Society</i> , 2012, 95, 3490-3500.	3.8	11
67	Formation of nanoporous oxide layer over a binary β -phase titanium in simulated body fluid. <i>Journal of Porous Materials</i> , 2012, 19, 573-577.	2.6	12
68	Evaluation of in vitro bioactivity and MG63 Osteoblast cell response for TiO ₂ coated magnesium alloys. <i>Journal of Sol-Gel Science and Technology</i> , 2012, 64, 694-703.	2.4	24
69	Influence Of ZrO ₂ on The Physicochemical Properties of Phosphate-Based Glasses and Glass Ceramics. <i>Phosphorus, Sulfur and Silicon and the Related Elements</i> , 2012, 187, 1434-1449.	1.6	12
70	Surface Modification and In Vitro Characterization of Cp-Ti and Ti-5Al-2Nb-1Ta Alloy in Simulated Body Fluid. <i>Journal of Materials Engineering and Performance</i> , 2012, 21, 2177-2187.	2.5	19
71	Influence of Si nanoparticles on the electrochemical behavior of organic coatings on carbon steel in chloride environment. <i>Journal of Coatings Technology Research</i> , 2012, 9, 609-620.	2.5	18
72	Effect of Si nanoparticles on the corrosion protection performance of organic coating on carbon steel in chloride environment. <i>Metals and Materials International</i> , 2012, 18, 965-973.	3.4	17

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73	Electrochemical Adsorption Properties and Inhibition of Brass Corrosion in Natural Seawater by Thiadiazole Derivatives: Experimental and Theoretical Investigation. <i>Industrial & Engineering Chemistry Research</i> , 2012, 51, 30-43.	3.7	39
74	Effect of Some Oxadiazole Derivatives on the Corrosion Inhibition of Brass in Natural Seawater. <i>Journal of Materials Engineering and Performance</i> , 2012, 21, 1363-1373.	2.5	9
75	EIS evaluation of protective performance and surface characterization of epoxy coating with aluminum nanoparticles after wet and dry corrosion test. <i>Journal of Solid State Electrochemistry</i> , 2012, 16, 2085-2093.	2.5	50
76	Corrosion inhibitive properties and electrochemical adsorption behaviour of some piperidine derivatives on brass in natural sea water. <i>Journal of Solid State Electrochemistry</i> , 2012, 16, 391-402.	2.5	22
77	<i>IN SITU</i> TEMPLATE SYNTHESIS OF PoPD@TiO_2 NANOCOMPOSITES FOR ACTIVE ANTI-CORROSIVE COATINGS ON 316L SS. <i>International Journal of Nanoscience</i> , 2011, 10, 1147-1152.	0.7	8
78	Switching on Antiferromagnetic Coupled Superparamagnetism by Annealing Ferromagnetic Mn/CdS Nanoparticles. <i>Journal of Physical Chemistry C</i> , 2011, 115, 11413-11419.	3.1	18
79	Structural and Textural Modifications of Ternary Phosphate Glasses by Thermal Treatment. <i>International Journal of Applied Glass Science</i> , 2011, 2, 222-234.	2.0	2
80	Sol-gel synthesis and characterisation of nanoporous zirconium titanate coated on 316L SS for biomedical applications. <i>Journal of Sol-Gel Science and Technology</i> , 2011, 59, 513-520.	2.4	33
81	Synthesis and characterization of nanoporous sodium-substituted hydrophilic titania ceramics coated on 316L SS for biomedical applications. <i>Journal of Coatings Technology Research</i> , 2011, 8, 595-604.	2.5	19
82	In Vitro Bioactivity of Surface-Modified Ti-2Ti Alloy for Biomedical Applications. <i>Journal of Materials Engineering and Performance</i> , 2011, 20, 1271-1277.	2.5	17
83	Surface modification of titanium by chemical and thermal methods – electrochemical impedance spectroscopic studies. <i>Corrosion Engineering Science and Technology</i> , 2011, 46, 585-591.	1.4	12
84	Evaluation of passive film behaviour of super austenitic stainless steels at different potential regions using dynamic electrochemical impedance spectroscopy. <i>Journal of Solid State Electrochemistry</i> , 2010, 14, 1197-1204.	2.5	6
85	Evaluation of corrosion behavior of surface modified Ti-6Al-4V ELI alloy in hanks solution. <i>Journal of Applied Electrochemistry</i> , 2010, 40, 285-293.	2.9	33
86	Electrochemical corrosion behavior of alloy 31 using dynamic electrochemical impedance spectroscopy. <i>Transactions of the Materials Research Society of Japan</i> , 2010, 35, 631-634.	0.2	2
87	Corrosion behavior of titanium alloys in Hanks solution. <i>Transactions of the Materials Research Society of Japan</i> , 2009, 34, 579-583.	0.2	2
88	Sol-gel derived porous zirconium dioxide coated on 316L SS for orthopedic applications. <i>Journal of Sol-Gel Science and Technology</i> , 2009, 52, 188-196.	2.4	38
89	Evaluation of effective biocides for SRB to control microbiologically influenced corrosion. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2008, 59, 329-334.	1.5	17
90	Crevice corrosion monitoring of titanium and its alloys using microelectrodes. <i>Materials and Corrosion - Werkstoffe Und Korrosion</i> , 2007, 58, 334-339.	1.5	13

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91	Electrochemical impedance spectroscopic characterisation of passive film formed over $\text{Ti-29Nb-13Ta-4.6Zr}$ alloy. <i>Electrochemistry Communications</i> , 2006, 8, 1309-1314.	4.7	50
92	Effect of Nitrogen implantation on the corrosion behaviour of Ti-6Al-7Nb and Ti-5Al-2Nb-1Ta orthopaedic alloys in Hanks solution. <i>Journal of Applied Electrochemistry</i> , 2004, 34, 271-276.	2.9	9
93	Corrosion inhibition of mild steel by benzotriazole derivatives in acidic medium. <i>Journal of Applied Electrochemistry</i> , 2003, 33, 1175-1182.	2.9	170
94	In vitro corrosion behaviour of plasma nitrided Ti-6Al-7Nb orthopaedic alloy in Hanks solution. <i>Science and Technology of Advanced Materials</i> , 2003, 4, 415-418.	6.1	17