

Mathew T Mathew

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

92
papers

1,634
citations

24
h-index

36
g-index

97
ext. papers

1,986
ext. citations

3.9
avg, IF

4.71
L-index

#	Paper	IF	Citations
92	Stability of cp-Ti and Ti-6Al-4V alloy for dental implants as a function of saliva pH - an electrochemical study. <i>Clinical Oral Implants Research</i> , 2012 , 23, 1055-62	4.8	105
91	Development of binary and ternary titanium alloys for dental implants. <i>Dental Materials</i> , 2017 , 33, 1244-1257	4.57	84
90	Influence of pH on the tribocorrosion behavior of CpTi in the oral environment: synergistic interactions of wear and corrosion. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2012 , 100, 1662-71	3.5	62
89	What is the role of lipopolysaccharide on the tribocorrosive behavior of titanium?. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2012 , 8, 71-85	4.1	61
88	Fabrication of anti-aging TiO ₂ nanotubes on biomedical Ti alloys. <i>PLoS ONE</i> , 2014 , 9, e96213	3.7	56
87	Wear-corrosion synergism in a CoCrMo hip bearing alloy is influenced by proteins. <i>Clinical Orthopaedics and Related Research</i> , 2012 , 470, 3109-17	2.2	53
86	Electrochemical behavior of bioactive coatings on cp-Ti surface for dental application. <i>Corrosion Science</i> , 2015 , 100, 133-146	6.8	49
85	Enhancing surface characteristics of Ti-6Al-4V for bio-implants using integrated anodization and thermal oxidation. <i>Journal of Materials Chemistry B</i> , 2014 , 2, 3597-3608	7.3	46
84	Effect of ZrO ₂ addition on the dry sliding wear behavior of laser clad Ti6Al4V alloy. <i>Wear</i> , 2015 , 328-329, 295-300	3.5	43
83	Mechanical, chemical and biological damage modes within head-neck tapers of CoCrMo and Ti6Al4V contemporary hip replacements. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2018 , 106, 1672-1685	3.5	42
82	Synthesis of calcium-phosphorous doped TiO ₂ nanotubes by anodization and reverse polarization: A promising strategy for an efficient biofunctional implant surface. <i>Applied Surface Science</i> , 2017 , 399, 682-701	6.7	41
81	In Vitro Investigation of the Effect of Oral Bacteria in the Surface Oxidation of Dental Implants. <i>Clinical Implant Dentistry and Related Research</i> , 2015 , 17 Suppl 2, e562-75	3.9	41
80	Improving the tribocorrosion resistance of Ti6Al4V surface by laser surface cladding with TiNiZrO ₂ composite coating. <i>Applied Surface Science</i> , 2015 , 345, 99-108	6.7	40
79	Tribocorrosion behavior of biofunctional titanium oxide films produced by micro-arc oxidation: Synergism and mechanisms. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016 , 60, 8-21	4.1	40
78	Dominant role of molybdenum in the electrochemical deposition of biological macromolecules on metallic surfaces. <i>Langmuir</i> , 2013 , 29, 4813-22	4	37
77	Fabrication of drug eluting implants: study of drug release mechanism from titanium dioxide nanotubes. <i>Journal Physics D: Applied Physics</i> , 2015 , 48, 275401	3	34
76	The role of nicotine, cotinine and caffeine on the electrochemical behavior and bacterial colonization to cp-Ti. <i>Materials Science and Engineering C</i> , 2015 , 56, 114-24	8.3	33

75	Thermally oxidized titania nanotubes enhance the corrosion resistance of Ti6Al4V. <i>Materials Science and Engineering C</i> , 2016 , 59, 677-689	8.3	32
74	Intergranular pitting corrosion of CoCrMo biomedical implant alloy. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2014 , 102, 850-9	3.5	31
73	Electrochemical behavior of titanium in artificial saliva: influence of pH. <i>Journal of Oral Implantology</i> , 2014 , 40, 3-10	1.2	28
72	Three-species biofilm model onto plasma-treated titanium implant surface. <i>Colloids and Surfaces B: Biointerfaces</i> , 2017 , 152, 354-366	6	27
71	Fretting-corrosion behavior in hip implant modular junctions: The influence of friction energy and pH variation. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2016 , 62, 570-587	4.1	26
70	Production of a biofunctional titanium surface using plasma electrolytic oxidation and glow-discharge plasma for biomedical applications. <i>Biointerphases</i> , 2016 , 11, 011013	1.8	26
69	Viscoelastic properties of electrochemically deposited protein/metal complexes. <i>Langmuir</i> , 2015 , 31, 4008-17	4	25
68	Surface-treated commercially pure titanium for biomedical applications: Electrochemical, structural, mechanical and chemical characterizations. <i>Materials Science and Engineering C</i> , 2016 , 65, 251-61	8.3	24
67	Wear and Corrosion Interactions at the Titanium/Zirconia Interface: Dental Implant Application. <i>Journal of Prosthodontics</i> , 2018 , 27, 842-852	3.9	23
66	Tribocorrosion and oral and maxillofacial surgical devices. <i>British Journal of Oral and Maxillofacial Surgery</i> , 2014 , 52, 396-400	1.4	23
65	An electrochemical investigation of TMJ implant metal alloys in an artificial joint fluid environment: the influence of pH variation. <i>Journal of Cranio-Maxillo-Facial Surgery</i> , 2014 , 42, 1052-61	3.6	23
64	Alloy Microstructure Dictates Corrosion Modes in THA Modular Junctions. <i>Clinical Orthopaedics and Related Research</i> , 2017 , 475, 3026-3043	2.2	23
63	Effects of dextrose and lipopolysaccharide on the corrosion behavior of a Ti-6Al-4V alloy with a smooth surface or treated with double-acid-etching. <i>PLoS ONE</i> , 2014 , 9, e93377	3.7	23
62	Titanium surface bio-functionalization using osteogenic peptides: Surface chemistry, biocompatibility, corrosion and tribocorrosion aspects. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2018 , 81, 26-38	4.1	21
61	Attachment of Porphyromonas gingivalis to corroded commercially pure titanium and titanium-aluminum-vanadium alloy. <i>Journal of Periodontology</i> , 2014 , 85, 1275-82	4.6	21
60	Electrochemical behaviour of laser-clad Ti6Al4V with CP Ti in 0.1 M oxalic acid solution. <i>Journal of Alloys and Compounds</i> , 2015 , 646, 753-759	5.7	20
59	Wear particles induce a new macrophage phenotype with the potential to accelerate material corrosion within total hip replacement interfaces. <i>Acta Biomaterialia</i> , 2020 , 101, 586-597	10.8	20
58	A Novel Investigation of the Formation of Titanium Oxide Nanotubes on Thermally Formed Oxide of Ti-6Al-4V. <i>Journal of Oral Implantology</i> , 2015 , 41, 523-31	1.2	18

57	Corrosion kinetics and topography analysis of Ti-6Al-4V alloy subjected to different mouthwash solutions. <i>Materials Science and Engineering C</i> , 2014 , 43, 1-10	8.3	18
56	Progression of Bio-Tribocorrosion in Implant Dentistry. <i>Frontiers in Mechanical Engineering</i> , 2020 , 6,	2.6	18
55	Biomimetic coatings enhance tribocorrosion behavior and cell responses of commercially pure titanium surfaces. <i>Biointerphases</i> , 2016 , 11, 031008	1.8	18
54	Tribocorrosion Behavior of Ti6Al4V Coated with a Bio-absorbable Polymer for Biomedical Applications. <i>Journal of Bio- and Tribo-Corrosion</i> , 2015 , 1, 1	2.9	16
53	In vitro simulation of fretting-corrosion in hip implant modular junctions: The influence of pH. <i>Medical Engineering and Physics</i> , 2018 , 52, 1-9	2.4	15
52	Surface treatment influences electrochemical stability of cpTi exposed to mouthwashes. <i>Materials Science and Engineering C</i> , 2016 , 59, 1079-1088	8.3	15
51	Influence of corrosion on lipopolysaccharide affinity for two different titanium materials. <i>Journal of Prosthetic Dentistry</i> , 2013 , 110, 462-70	4	15
50	Incorporation of Ca, P, and Si on bioactive coatings produced by plasma electrolytic oxidation: The role of electrolyte concentration and treatment duration. <i>Biointerphases</i> , 2015 , 10, 041002	1.8	15
49	Carburized titanium as a solid lubricant on hip implants: Corrosion, tribocorrosion and biocompatibility aspects. <i>Thin Solid Films</i> , 2018 , 665, 148-158	2.2	14
48	Transparent TiO ₂ nanotubes on zirconia for biomedical applications. <i>RSC Advances</i> , 2017 , 7, 30397-30410	0.7	13
47	Effect of tribolayer formation on corrosion of CoCrMo alloys investigated using scanning electrochemical microscopy. <i>Analytical Chemistry</i> , 2013 , 85, 7159-66	7.8	13
46	Physicochemical and in-vitro biological analysis of bio-functionalized titanium samples in a protein-rich medium. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2019 , 96, 152-164	4.1	10
45	Enhanced Tribocorrosion Resistance of Hard Ceramic Coated Ti-6Al-4V Alloy for Hip Implant Application: In-Vitro Simulation Study. <i>ACS Biomaterials Science and Engineering</i> , 2019 , 5, 4817-4824	5.5	9
44	In Vitro Evidence for Cell-Accelerated Corrosion Within Modular Junctions of Total Hip Replacements. <i>Journal of Orthopaedic Research</i> , 2020 , 38, 393-404	3.8	9
43	Ultrananocrystalline diamond coatings for the dental implant: electrochemical nature. <i>Surface Innovations</i> , 2017 , 5, 106-117	1.9	8
42	Adverse Local Tissue Responses to Failed Temporomandibular Joint Implants. <i>Journal of Oral and Maxillofacial Surgery</i> , 2017 , 75, 2076-2084	1.8	8
41	Electrochemically induced tribolayer with molybdenum for hip implants: Tribocorrosion and biocompatibility study. <i>Thin Solid Films</i> , 2017 , 644, 82-91	2.2	8
40	Investigation of five Hydroxy acids for enamel and dentin etching: Demineralization depth, resin adhesion and dentin enzymatic activity. <i>Dental Materials</i> , 2019 , 35, 900-908	5.7	8

39	Tribochemical Reactions in Metal-on-Metal Hip Joints Influence Wear and Corrosion 2013 , 292-309		8
38	Wear Characteristics and Volume Loss of CAD/CAM Ceramic Materials. <i>Journal of Prosthodontics</i> , 2019 , 28, e510-e518	3.9	8
37	Nanoscale Mechanical Evaluation of Electrochemically Generated Tribolayer on CoCrMo Alloy for Hip Joint Application. <i>Journal of Bio- and Tribo-Corrosion</i> , 2016 , 2, 1	2.9	7
36	Influence of molybdate ion and pH on the fretting corrosion of a CoCrMo-Titanium alloy couple. <i>Biotribology</i> , 2017 , 11, 20-28	2.3	6
35	Advancements in temporomandibular joint total joint replacements (TMJR). <i>Biomedical Engineering Letters</i> , 2019 , 9, 169-179	3.6	6
34	Design, Development, and Testing of a Compact Tribocorrosion Apparatus for Biomedical Applications. <i>Journal of Bio- and Tribo-Corrosion</i> , 2015 , 1, 1	2.9	6
33	The Role of Nicotine in the Corrosive Behavior of a Ti-6Al-4V Dental Implant. <i>Clinical Implant Dentistry and Related Research</i> , 2015 , 17 Suppl 2, e352-63	3.9	6
32	Fretting-corrosion in hip taper modular junctions: The influence of topography and pH levels - An in-vitro study. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021 , 118, 104443	4.1	6
31	Total Eradication of Bacterial Infection in Root Canal Treatment: An Electrochemical Approach. <i>ACS Biomaterials Science and Engineering</i> , 2018 , 4, 2623-2632	5.5	4
30	Interface Damage in Titanium Dental Implant Due to Tribocorrosion: The Role of Mastication Frequencies. <i>Journal of Bio- and Tribo-Corrosion</i> , 2019 , 5, 1	2.9	4
29	Physicochemical, osteogenic and corrosion properties of bio-functionalized ZnO thin films: Potential material for biomedical applications. <i>Ceramics International</i> , 2018 , 44, 21004-21014	5.1	4
28	Microbial Corrosion in Titanium-Based Dental Implants: How Tiny Bacteria Can Create a Big Problem?. <i>Journal of Bio- and Tribo-Corrosion</i> , 2021 , 7, 1	2.9	4
27	Nanotopography and Surface Stress Analysis of Ti6Al4V Bioimplant: An Alternative Design for Stability. <i>Jom</i> , 2015 , 67, 2518-2533	2.1	3
26	Hip implant performance prediction by acoustic emission techniques: a review. <i>Medical and Biological Engineering and Computing</i> , 2020 , 58, 1637-1650	3.1	3
25	A Servoelectric Apparatus with Potentiostat to Study the Fretting Corrosion of Cobalt-Chromium-Titanium Alloy Couples 2015 , 303-320		3
24	Are Damage Modes Related to Microstructure and Material Loss in Severely Damaged CoCrMo Femoral Heads?. <i>Clinical Orthopaedics and Related Research</i> , 2021 , 479, 2083-2096	2.2	3
23	In vitro Evaluation of Tribocorrosion Induced Failure Mechanisms at the Cell-Metal Interface for the Hip Implant Application . <i>Advanced Engineering Materials</i> , 2017 , 19, 1600797	3.5	2
22	Designing Corrosion-Resistant Alloys 2020 , 27-38		2

21	Improvement of tribocorrosion behavior on titanium alloy by carbide-derived carbon (CDC). <i>Surface and Coatings Technology</i> , 2020 , 392, 125692	4.4	2
20	Effect of dentin biomodification delivered by experimental acidic and neutral primers on resin adhesion. <i>Journal of Dentistry</i> , 2020 , 99, 103354	4.8	2
19	Suitability of TiZr Alloy for Dental Implants: Tribocorrosion Investigation. <i>Journal of Bio- and Tribo-Corrosion</i> , 2021 , 7, 1	2.9	2
18	Prediction of tribocorrosion processes in titanium-based dental implants using acoustic emission technique: Initial outcome. <i>Materials Science and Engineering C</i> , 2021 , 123, 112000	8.3	2
17	Dentistry: Restorative and Regenerative Approaches 2019 , 332-347		2
16	SMART Biosensor for Early Diagnostic Detection of Metal Ion Release in Orthopedic Patients: Initial Outcome. <i>Journal of Bio- and Tribo-Corrosion</i> , 2018 , 4, 1	2.9	2
15	Tribocorrosion and TMJ TJR Devices 2016 , 251-263		1
14	Tribocorrosion in Hip Modular Taper Junctions: Load-Triggered Transitions in Electrochemical and Mechanical Behavior 2015 , 283-302		1
13	Non-invasive early detection of failure modes in total hip replacements (THR) via acoustic emission (AE). <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2021 , 118, 104484	4.1	1
12	The role of fretting-frequency on the damage modes of THR modular junction: In-vitro study. <i>Materials Science and Engineering C</i> , 2021 , 126, 112128	8.3	1
11	Mechanical, Electrochemical and Biological Behavior of 3D Printed-Porous Titanium for Biomedical Applications. <i>Journal of Bio- and Tribo-Corrosion</i> , 2021 , 7, 1	2.9	0
10	Peri-Implantitis in Relation to Titanium Corrosion: Current Status and Future Perspectives. <i>Journal of Bio- and Tribo-Corrosion</i> , 2022 , 8, 1	2.9	0
9	Total hip replacement monitoring: numerical models for the acoustic emission technique.. <i>Medical and Biological Engineering and Computing</i> , 2022 , 60, 1497	3.1	0
8	Corrosion Behavior of Selective Laser Melting (SLM) Manufactured Ti6Al4V Alloy in Saline and BCS Solution. <i>Journal of Bio- and Tribo-Corrosion</i> , 2022 , 8, 1	2.9	0
7	Microstructure and Electrochemical Behavior of Contemporary Ti6Al4V Implant Alloys. <i>Journal of Bio- and Tribo-Corrosion</i> , 2022 , 8, 1	2.9	0
6	Human Osteoblast Cell-Ti6Al4V Metal Alloy Interactions Under Varying Cathodic Potentials: A Pilot Study. <i>Journal of Bio- and Tribo-Corrosion</i> , 2017 , 3, 1	2.9	
5	A novel synthesis method of carbide-derived carbon (CDC) in open air for hip implants. <i>Surface and Coatings Technology</i> , 2021 , 428, 127857	4.4	
4	Tribocorrosion aspects of implant coatings: Hip replacements 2021 , 93-126		

- 3 Dynamic microfluidic bioreactor-Hip simulator (DMBH) system for implant toxicity monitoring. *Biotechnology and Bioengineering*, **2021**, 118, 4829-4839 4.9
- 2 The role of Vitamin E in hip implant-related corrosion and toxicity: Initial outcome. *Journal of the Mechanical Behavior of Biomedical Materials*, **2021**, 123, 104769 4.1
- 1 In vitro anti-erosive property of a mint containing bioactive ingredients. *American Journal of Dentistry*, **2021**, 34, 191-194 1.3