A tribo-electrochemical apparatus for in vitro investiga metallic implant materials

Wear

252, 744-754

DOI: 10.1016/s0043-1648(02)00027-3

Citation Report

#	Article	IF	CITATIONS
1	Orthopaedic Prostheses. Series on Biomaterials and Bioengineering, 2004, , 61-105.	0.0	0
2	Influence of fretting regimes on the tribocorrosion behaviour of Ti6Al4V in 0.9wt.% sodium chloride solution. Wear, 2004, 256, 963-972.	1.5	108
3	Third body effects and material fluxes in tribocorrosion systems involving a sliding contact. Wear, 2004, 256, 517-524.	1.5	167
4	Tribological behavior of plasma Mo–N surface modified Ti–6Al–4V alloy. Surface and Coatings Technology, 2004, 179, 333-339.	2.2	66
5	Electrochemical effects on the fretting corrosion behaviour of Ti6Al4V in 0.9% sodium chloride solution. Wear, 2005, 259, 282-291.	1.5	101
6	Micro-abrasion–corrosion of a CoCrMo alloy in simulated artificial hip joint environments. Wear, 2005, 259, 898-909.	1.5	126
7	Improvement of Corrosion-Wear Resistance of Ti-6Al-4V Alloy by Plasma Mo-N Surface Modification. Advanced Engineering Materials, 2005, 7, 232-238.	1.6	21
8	Bridging the gap between tribology and corrosion: from wear maps to Pourbaix diagrams. International Materials Reviews, 2005, 50, 1-17.	9.4	53
10	Electrochemical and materials aspects of tribocorrosion systems. Journal Physics D: Applied Physics, 2006, 39, 3121-3127.	1.3	111
11	Influence of pH and corrosion inhibitors on the tribocorrosion of titanium in artificial saliva. Wear, 2006, 261, 994-1001.	1.5	152
12	The influence of proteins on the fretting–corrosion behaviour of a Ti6Al4V alloy. Wear, 2006, 261, 1002-1011.	1.5	74
13	EFFECT OF HOT DEFORMATION ON THE TRIBOLOGICAL BEHAVIOUR OF Ti-6Al-4V ALLOY. Canadian Metallurgical Quarterly, 2006, 45, 469-474.	0.4	1
14	Fretting and Minor Wear Mechanisms. , 2006, , 621-650.		0
15	Comparative behaviour in terms of wear and corrosion resistance of galvanized and zinc-iron coated steels. Revista Materia, 2007, 12, 618-623.	0.1	6
16	The corrosion/wear mechanisms of Ti–6Al–4V alloy for different scratching rates. Wear, 2007, 263, 412-418.	1.5	58
17	Synergistic effect of fretting wear and sliding wear of Co-alloy and Ti-alloy in Hanks' solution. Wear, 2007, 263, 492-500.	1.5	90
18	Onset of nanoscale wear of metallic implant materials: Influence of surface residual stresses and contact loads. Wear, 2007, 263, 1117-1123.	1.5	28
19	Corrosion degradation and prevention by surface modification of biometallic materials. Journal of Materials Science: Materials in Medicine, 2007, 18, 725-751.	1.7	201

#	ARTICLE	IF	CITATIONS
20	Effects of proteins and pH on tribocorrosion performance of cast CoCrMo – a combined electrochemical and tribological study. Tribology - Materials, Surfaces and Interfaces, 2008, 2, 150-160.	0.6	17
22	Fretting corrosion behaviour of Ti–6Al–4V/PMMA contact in simulated body fluid. Tribology - Materials, Surfaces and Interfaces, 2009, 3, 16-23.	0.6	8
23	Negative Synergism between Corrosion and Wear of Nickel-Free Austenitic Stainless Steel in Artificial Body Solution. Materials Science Forum, 0, 610-613, 1183-1187.	0.3	2
24	Triboelectrochemical behaviour of a Si3N4–TiN ceramic composite and a titanium alloy commonly used in biomedical applications. Wear, 2009, 266, 327-336.	1.5	22
25	Microstructural characterization of Ti–6Al–4V machining chips after remelting and severe deformation. Materials & Design, 2009, 30, 1825-1829.	5.1	11
26	Fabrication and characterization of nanostructured Ti6Al4V powder from machining scraps. Advanced Powder Technology, 2010, 21, 336-340.	2.0	27
27	Surface modification of CP-Ti to improve the fretting-corrosion resistance: Thermal oxidation vs. anodizing. Materials Science and Engineering C, 2010, 30, 921-927.	3.8	83
28	Fretting-corrosion mapping of CP-Ti in Ringer's solution. Wear, 2010, 268, 1537-1541.	1.5	13
29	Third body effects on friction and wear during fretting of steel contacts. Tribology International, 2011, 44, 1452-1460.	3.0	77
30	A multi-degradation test rig for studying the synergy effects of tribocorrosion interacting with 4-point static and cyclic bending. Wear, 2011, 271, 2978-2990.	1.5	15
31	In-vivo degradation mechanism of Ti-6Al-4V hip joints. Materials Science and Engineering C, 2011, 31, 120-127.	3.8	17
32	Fretting-corrosion behavior of $\hat{l}^2$ titanium alloys in simulated synovial fluid. Wear, 2011, 271, 1093-1102.	1.5	60
33	Fretting corrosion in biomedical implants. , 2011, , 401-423.		4
34	Fretting Wear Behavior of ZR-ALLOY in Na <sub>2</sub> SO <sub>4</sub> Solution. Advanced Materials Research, 2011, 239-242, 1633-1636.	0.3	0
35	Tribological Behaviors of Ti6Al4V with Surface Plasma Molybdenized. Materials Science Forum, 0, 704-705, 1253-1258.	0.3	1
36	Ion release during fretting at taper joint interface of hip joint prosthesis. Tribology - Materials, Surfaces and Interfaces, 2011, 5, 107-113.	0.6	2
37	Tribocorrosion Behaviors of Inconel 625 Alloy Sliding against 316 Steel in Seawater. Tribology Transactions, 2011, 54, 514-522.	1.1	39
38	Tribocorrosion behaviors of Ti–6Al–4V and Monel K500 alloys sliding against 316 stainless steel in artificial seawater. Transactions of Nonferrous Metals Society of China, 2012, 22, 1356-1365.	1.7	42

#	Article	IF	CITATIONS
39	Roughness evolution of metallic implant surfaces under contact loading and nanometer-scale chemical etching. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 14, 55-66.	1.5	7
40	Wear-Corrosion Synergism in a CoCrMo Hip Bearing Alloy Is Influenced by Proteins. Clinical Orthopaedics and Related Research, 2012, 470, 3109-3117.	0.7	61
41	Tribo-electrochemical characterization of metallic biomaterials for total joint replacement. Acta Biomaterialia, 2012, 8, 852-859.	4.1	118
42	Fretting corrosion of CoCrMo and Ti6Al4V interfaces. Biomaterials, 2012, 33, 5487-5503.	5.7	194
43	A novel modular fretting wear test rig. Wear, 2012, 274-275, 313-325.	1.5	21
44	Characteristics of Mo–Cr duplex-alloyed layer on Ti6Al4V by double glow plasma surface metallurgy. Surface and Coatings Technology, 2013, 228, S206-S209.	2.2	11
45	Potential and frequency effects on fretting corrosion of Ti6Al4V and CoCrMo surfaces. Journal of Biomedical Materials Research - Part A, 2013, 101A, 2602-2612.	2.1	75
46	Tribocorrosive behaviour of commonly used temporomandibular implants in a synovial fluid-like environment: Ti–6Al–4V and CoCrMo. Journal Physics D: Applied Physics, 2013, 46, 404002.	1.3	14
47	Fretting corrosion processes and wear mechanisms in medical implants., 2013,, 45-73.		5
48	Tribocorrosion mechanisms of Ti <sub>6</sub> Al <sub>4</sub> V biomedical alloys in artificial saliva with different pHs. Journal Physics D: Applied Physics, 2013, 46, 404003.	1.3	37
49	Fretting and Minor Wear Mechanisms. , 2014, , 647-677.		0
50	Prototype fretting device and some experimental results. Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology, 2014, 228, 266-275.	1.0	2
51	The tribocorrosion behaviors of Hastelloy C276 alloy in seawater. Industrial Lubrication and Tribology, 2014, 66, 9-14.	0.6	2
52	Effect of precipitated carbides on the fretting wear behavior of Inconel 600 alloy. Wear, 2014, 315, 58-67.	1.5	38
53	Surface engineered nanostructures on metallic biomedical materials for anti-abrasion., 2015,, 349-383.		1
55	Influence of the carbon content on the corrosion and tribocorrosion performance of Ti-DLC coatings for biomedical alloys. Tribology International, 2015, 88, 115-125.	3.0	89
56	Green Processes for Nanotechnology. , 2015, , .		34
57	Improved tribological, electrochemical and biocompatibility properties of Ti6Al4V alloy by gas-nitriding and Ti–C:H coating. Surface and Coatings Technology, 2015, 283, 70-79.	2.2	19

#	Article	IF	CITATIONS
58	Atomic aluminum content (x) effect on fretting-corrosion of Ti1â^'Al N coatings for orthopedic applications. Wear, 2016, 362-363, 87-96.	1.5	6
59	Surface engineering of Ti6Al4V surfaces for enhanced tribocorrosion performance in artificial seawater. Materials and Design, 2016, 104, 10-18.	3.3	76
60	Mechanically assisted crevice corrosion in metallic biomaterials: a review. Materials Technology, 2016, 31, 732-739.	1.5	18
61	Properties and Corrosion Performance of Self-reinforced Composite PEEK for Proposed Use as a Modular Taper Gasket. Clinical Orthopaedics and Related Research, 2016, 474, 2414-2427.	0.7	10
62	Fretting-corrosion behavior in hip implant modular junctions: The influence of friction energy and pH variation. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 62, 570-587.	1.5	41
63	Gas-phase supported rapid manufacturing of Ti-6Al-4V alloy spherical particles for 3D printing. Chemical Engineering Journal, 2016, 304, 232-240.	6.6	16
64	Study of corrosion in biocompatible metals for implants: A review. Journal of Alloys and Compounds, 2017, 701, 698-715.	2.8	427
65	Fretting corrosion of CoCr alloy: Effect of load and displacement on the degradation mechanisms. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2017, 231, 114-126.	1.0	13
66	Wireless Sensors for Smart Orthopedic Implants. Journal of Bio- and Tribo-Corrosion, 2017, 3, 1.	1.2	25
67	Wear and Corrosion Interactions at the Titanium/Zirconia Interface: Dental Implant Application. Journal of Prosthodontics, 2018, 27, 842-852.	1.7	40
68	Fretting corrosion between bone and calcium phosphate-calcium titanate coatings. Wear, 2018, 414-415, 366-375.	1.5	7
69	Tribological performance, electrochemical behavior and biocompatibility of high-temperature gas-nitrided Ti6Al4V alloy. Industrial Lubrication and Tribology, 2018, 70, 1536-1544.	0.6	2
70	Negative influence of biofilm on CoCrMo corrosion. Journal of Biomedical Materials Research - Part A, 2019, 107, 2556-2566.	2.1	4
71	Corrosion of Metallic Biomaterials: A Review. Materials, 2019, 12, 407.	1.3	497
72	Design, Material, and Seating Load Effects on InÂVitro Fretting Corrosion Performance of Modular Head-Neck Tapers. Journal of Arthroplasty, 2019, 34, 991-1002.	1.5	23
73	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.	1.2	74
74	Laser Additive Manufacturing of (Ti-6Al-4V)/10 wt.% Ag Composite Using Spherical Powders to Reduce Wear and Friction. Journal of Materials Engineering and Performance, 2019, 28, 12-19.	1.2	4
<b>7</b> 5	Finite element analysis of rig used for fretting experiments. Materials Today: Proceedings, 2020, 27, 2349-2354.	0.9	1

#	Article	IF	CITATIONS
76	Fretting-corrosion behavior of electroless Ni-P/Ni-P-TiO2 coatings obtained on AZ91D magnesium alloy by a chromium-free process. Surfaces and Interfaces, 2020, 21, 100733.	1.5	13
77	In vitro fretting crevice corrosion damage of CoCrMo alloys in phosphate buffered saline: Debris generation, chemistry and distribution. Acta Biomaterialia, 2020, 114, 449-459.	4.1	27
78	Experimental Investigation on Fretting Wear Behavior of Piezoceramics under Sphere-on-Flat Contact. Tribology Transactions, 2020, 63, 971-985.	1.1	9
79	Fretting fatigue crack initiation and propagation in Ti6Al4V sheets under tribocorrosive conditions of artificial seawater and physiological solutions. Proceedings of the Institution of Mechanical Engineers, Part L: Journal of Materials: Design and Applications, 2020, 234, 1526-1534.	0.7	5
80	Investigation of corrosion behavior and surface properties of plasma sprayed HA/Sr reinforced coatings on CoCr alloys. Materials Chemistry and Physics, 2020, 253, 123330.	2.0	15
81	Improving the fretting biocorrosion of Ti6Al4V alloy bone screw by decorating structure optimised TiO2 nanotubes layer. Journal of Materials Science and Technology, 2020, 49, 47-55.	5.6	12
82	An Experimental Study on the Fretting Corrosion Behaviours of Three Material Pairs at Modular Interfaces for Hip Joint Implants. Lubricants, 2021, 9, 12.	1.2	10
83	A Preliminary Analysis of the Wear Pathways of Sliding Contacts on Temporomandibular Joint Total Joint Replacement Prostheses. Metals, 2021, 11, 685.	1.0	3
84	Tribocorrosion Resistance of Dental Implant Alloysâ€"Assessment of cp-Ti, Ti6Al4V, and NiCr in Neutral and Acidified Saliva. Journal of Bio- and Tribo-Corrosion, 2021, 7, 1.	1.2	4
85	Electrolytic deposition of composite coatings on 316L SS and its in vitro corrosion resistive behavior in simulated body fluid solution. Chemical Papers, 2021, 75, 4779.	1.0	4
86	Fretting crevice corrosion of 316ÂL stainless steel in physiological phosphate buffered saline: Load, potential and alloy counterface effects. Tribology International, 2021, 164, 107198.	3.0	16
87	Role of Proteins on the Electrochemical Behavior of Implanted Metallic Alloys, Reproducibility and Time-Frequency Approach from EIS (Electrochemical Impedance Spectroscopy)., 0,,.		0
88	Effect of Solute Oxygen on Compressive Fatigue Strength of Spinal Fixation Rods Made of Ti–29Nb–13Ta–4.6Zr Alloys. Materials Transactions, 2016, 57, 1993-1997.	0.4	3
89	Mechanically Assisted Electrochemical Degradation of Alumina-TiC Composites. , 2018, , 149-171.		0
90	â£. Electrochemical Measurements in Various Environments―Electrochemical Measurements of Metallic Biomaterials―. Zairyo To Kankyo/ Corrosion Engineering, 2018, 67, 479-486.	0.0	0
92	Revealing physical interpretation of time constants in electrochemical impedance spectra of Mg via Tribo-EIS measurements. Electrochimica Acta, 2022, 404, 139582.	2.6	23
93	GELİŞMİŞ KOROZYON DİRENCİ İÇİN ELOKSALLI METALİK İMPLANTLARIN ELEKTROKİMYASAL İNCELENMESİ. , 2022, 21, 117-135.	DAVRANIÅ	žLARININ
94	Fretting wear of biomedical Ti alloys. Materia Japan, 2022, 61, 419-425.	0.1	0

# ARTICLE IF CITATIONS

95 (Bio)Tribocorrosion in Dental Implants: Principles and Techniques of Investigation. Applied Sciences (Switzerland), 2022, 12, 7421. 10