Fraser Buchanan

List of Publications by Year
in descending order

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38 papers	981 citations	394421 19 h-index	434195 31 g-index
40 all docs	40 docs citations	40 times ranked	1390 citing authors

#	Article	IF	Citations
1	Printability of calcium phosphate: Calcium sulfate powders for the application of tissue engineered bone scaffolds using the 3D printing technique. Materials Science and Engineering C, 2014, 38, 1-10.	7.3	203
2	Designs from the deep: Marine organisms for bone tissue engineering. Biotechnology Advances, 2011, 29, 610-617.	11.7	80
3	The influence of gamma irradiation and aging on degradation mechanisms of ultra-high molecular weight polyethylene. Journal of Materials Science: Materials in Medicine, 2001, 12, 29-37.	3.6	46
4	Surface modification of poly(Îµ-caprolactone) using a dielectric barrier discharge in atmospheric pressure glow discharge mode. Acta Biomaterialia, 2009, 5, 2025-2032.	8.3	41
5	Influence of packaging conditions on the properties of gamma-irradiated UHMWPE following accelerated ageing and shelf ageing. Biomaterials, 1999, 20, 823-837.	11.4	40
6	Sintering of biphasic calcium phosphates. Journal of Materials Science: Materials in Medicine, 2010, 21, 2271-2279.	3.6	40
7	Short-fibre reinforcement of calcium phosphate bone cement. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2007, 221, 203-211.	1.8	36
8	Development of a bovine collagenâ€“apatitic calcium phosphate cement for potential fracture treatment through vertebroplasty. Acta Biomaterialia, 2012, 8, 4043-4052.	8.3	36
9	Development of three-dimensional printing polymer-ceramic scaffolds with enhanced compressive properties and tuneable resorption. Materials Science and Engineering C, 2018, 93, 975-986.	7.3	34
10	Influence of surface condition on the degradation behaviour and biocompatibility of additively manufactured WE43. Materials Science and Engineering C, 2021, 124, 112016.	7.3	29
11	Microabrasionâ€”a simple method to assess surface degradation of UHMWPE following sterilisation and ageing. Biomaterials, 2002, 23, 93-100.	11.4	28
12	Biocompatibility of calcium phosphate bone cement with optimized mechanical properties. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2016, 104, 308-315.	3.4	26
13	Osteogenic cell response to 3-D hydroxyapatite scaffolds developed via replication of natural marine sponges. Journal of Materials Science: Materials in Medicine, 2016, 27, 22.	3.6	25
14	Analysis of variables influencing the accelerated ageing behaviour of ultra-high molecular weight polyethylene (UHMWPE). Polymer Testing, 2002, 21, 623-631.	4.8	24
15	Interlaboratory studies on in vitro test methods for estimating in vivo resorption of calcium phosphate ceramics. Acta Biomaterialia, 2015, 25, 347-355.	8.3	24
16	Effects of poly (Îµ-caprolactone) coating on the properties of three-dimensional printed porous structures. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 70, 68-83.	3.1	23
17	A review on diatom biosilicification and their adaptive ability to uptake other metals into their frustules for potential application in bone repair. Journal of Materials Chemistry B, 2021, 9, 6728-6737.	5.8	22
18	The influence of inert packaging on the shelf ageing of gamma-irradiation sterilised ultra-high molecular weight polyethylene. Biomaterials, 2003, 24, 139-145.	11.4	21

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19	Biocompatibility of calcium phosphate bone cement with optimised mechanical properties: an in vivo study. Journal of Materials Science: Materials in Medicine, 2016, 27, 191.	3.6	21
20	The effect of patient gait on the material properties of UHMWPE in hip replacements. Biomaterials, 2005, 26, 4993-5001.	11.4	20
21	A comparison of the degradation behaviour of 3D printed PDLGA scaffolds incorporating bioglass or biosilica. Materials Science and Engineering C, 2021, 120, 111755.	7.3	20
22	Performance of calcium deficient hydroxyapatiteâ€“polyglycolic acid composites: an inÂvitro study. Journal of Materials Science: Materials in Medicine, 2010, 21, 2263-2270.	3.6	16
23	Binder jetting additive manufacturing of hydroxyapatite powders: Effects of adhesives on geometrical accuracy and green compressive strength. Additive Manufacturing, 2020, 36, 101645.	3.0	16
24	Identification of a suitable sterilisation method for collagen derived from a marine Demosponge. International Journal of Nano and Biomaterials, 2012, 4, 148.	0.1	14
25	Blueprints for the Next Generation of Bioinspired and Biomimetic Mineralised Composites for Bone Regeneration. Marine Drugs, 2018, 16, 288.	4.6	14
26	Low temperature gamma sterilization of a bioresorbable polymer, PLGA. Radiation Physics and Chemistry, 2018, 143, 27-32.	2.8	11
27	Injectable calcium phosphate cements for spinal bone repair. , 2014, , 26-61.		10
28	Evaluation of the in vitro cytotoxicity and modulation of the inflammatory response by the bioresorbable polymers poly(D,L-lactide-co-glycolide) and poly(L-lactide-co-glycolide). Acta Biomaterialia, 2021, 134, 261-275.	8.3	10
29	Surrogate Outcome Measures of In Vitro Osteoclast Resorption of Î² Tricalcium Phosphate. Advanced Healthcare Materials, 2017, 6, 1600947.	7.6	9
30	3D-printed patient-specific pelvis phantom for dosimetry measurements for prostate stereotactic radiotherapy with dominant intraprostatic lesion boost. Physica Medica, 2021, 92, 8-14.	0.7	8
31	Investigating Approaches for Three-Dimensional Printing of Hydroxyapatite Scaffolds for Bone Regeneration. Key Engineering Materials, 0, 631, 306-311.	0.4	7
32	Process-induced degradation of bioresorbable PDLGA in bone tissue scaffold production. Journal of Materials Science: Materials in Medicine, 2018, 29, 14.	3.6	5
33	A UV-Vis spectroscopic method for monitoring of additive particle properties during polymer compounding. Polymer Testing, 2018, 67, 392-398.	4.8	5
34	Experimental characterisation on the behaviour of PLLA for stretch blowing moulding of bioresorbable vascular scaffolds. International Journal of Material Forming, 2021, 14, 375-389.	2.0	4
35	Filament extrusion of bioresorbable PDLGA for additive manufacturing utilising diatom biosilica to inhibit process-induced thermal degradation. Journal of the Mechanical Behavior of Biomedical Materials, 2021, 116, 104265.	3.1	4
36	Application of a generic curriculum change management process to motivate and excite students. Engineering Education, 2008, 3, 37-44.	0.3	4

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37	Effect of Liquid/Powder Ratio on the Setting, Handling and Mechanical Properties of Collagenâ€“Apatitic Cements. Key Engineering Materials, 2011, 493-494, 415-421.	0.4	3
38	Hydrothermal synthesis of coccolith rich chalk to hydroxyapatite. International Journal of Nano and Biomaterials, 2012, 4, 81.	0.1	2