Rui A Sousa

List of Publications by Year
in descending order

50 papers	4,074 citations	117625 34 h-index	189892 50 g-index
51 all docs	51 docs citations	51 times ranked	5765 citing authors

#	Article	IF	Citations
1	Three-dimensional plotted scaffolds with controlled pore size gradients: Effect of scaffold geometry on mechanical performance and cell seeding efficiency. Acta Biomaterialia, 2011, 7, 1009-1018.	8.3	487
2	Bioinert, biodegradable and injectable polymeric matrix composites for hard tissue replacement: state of the art and recent developments. Composites Science and Technology, 2004, 64, 789-817.	7.8	374
3	Development of silk-based scaffolds for tissue engineering of bone from human adipose-derived stem cells. Acta Biomaterialia, 2012, 8, 2483-2492.	8.3	210
4	Crosstalk between osteoblasts and endothelial cells co-cultured on a polycaprolactoneâ€"starch scaffold and the in vitro development of vascularization. Biomaterials, 2009, 30, 4407-4415.	11.4	193
5	Hierarchical starch-based fibrous scaffold for bone tissue engineering applications. Journal of Tissue Engineering and Regenerative Medicine, 2009, 3, 37-42.	2.7	191
6	A practical perspective on ulvan extracted from green algae. Journal of Applied Phycology, 2013, 25, 407-424.	2.8	156
7	Marine algae sulfated polysaccharides for tissue engineering and drug delivery approaches. Biomatter, 2012, 2, 278-289.	2.6	151
8	Bilayered silk/silk-nanoCaP scaffolds for osteochondral tissue engineering: In vitro and in vivo assessment of biological performance. Acta Biomaterialia, 2015, 12, 227-241.	8.3	140
9	The osteogenic differentiation of rat bone marrow stromal cells cultured with dexamethasone-loaded carboxymethylchitosan/poly(amidoamine) dendrimer nanoparticles. Biomaterials, 2009, 30, 804-813.	11.4	131
10	In Vitro Model of Vascularized Bone: Synergizing Vascular Development and Osteogenesis. PLoS ONE, 2011, 6, e28352.	2.5	107
11	Extraction and physico-chemical characterization of a versatile biodegradable polysaccharide obtained from green algae. Carbohydrate Research, 2010, 345, 2194-2200.	2.3	106
12	Development and Characterization of a Novel Hybrid Tissue Engineeringâ€"Based Scaffold for Spinal Cord Injury Repair. Tissue Engineering - Part A, 2010, 16, 45-54.	3.1	103
13	3D Plotted PCL Scaffolds for Stem Cell Based Bone Tissue Engineering. Macromolecular Symposia, 2008, 269, 92-99.	0.7	102
14	The enhancement of the mechanical properties of a high-density polyethylene. Journal of Applied Polymer Science, 1999, 73, 2473-2483.	2.6	89
15	Development of Gellan Gum-Based Microparticles/Hydrogel Matrices for Application in the Intervertebral Disc Regeneration. Tissue Engineering - Part C: Methods, 2011, 17, 961-972.	2.1	87
16	Characterization of ulvan extracts to assess the effect of different steps in the extraction procedure. Carbohydrate Polymers, 2012, 88, 537-546.	10.2	81
17	Engineering cell-adhesive gellan gum spongy-like hydrogels for regenerative medicine purposes. Acta Biomaterialia, 2014, 10, 4787-4797.	8.3	81
18	Processing ulvan into 2D structures: Cross-linked ulvan membranes as new biomaterials for drug delivery applications. International Journal of Pharmaceutics, 2012, 426, 76-81.	5.2	80

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19	Dynamic Culturing of Cartilage Tissue: The Significance of Hydrostatic Pressure. Tissue Engineering - Part A, 2012, 18, 1979-1991.	3.1	79
20	Effect of scaffold architecture and BMP-2/BMP-7 delivery on in vitro bone regeneration. Journal of Materials Science: Materials in Medicine, 2010, 21, 2999-3008.	3.6	73
21	PDLLA enriched with ulvan particles as a novel 3D porous scaffold targeted for bone engineering. Journal of Supercritical Fluids, 2012, 65, 32-38.	3.2	66
22	New biotextiles for tissue engineering: Development, characterization and in vitro cellular viability. Acta Biomaterialia, 2013, 9, 8167-8181.	8.3	65
23	Tumor Growth Suppression Induced by Biomimetic Silk Fibroin Hydrogels. Scientific Reports, 2016, 6, 31037.	3.3	62
24	Bioactive macro/micro porous silk fibroin/nano-sized calcium phosphate scaffolds with potential for bone-tissue-engineering applications. Nanomedicine, 2013, 8, 359-378.	3.3	60
25	Processing and properties of bone-analogue biodegradable and bioinert polymeric composites. Composites Science and Technology, 2003, 63, 389-402.	7.8	59
26	The Role of Lipase and Î±-Amylase in the Degradation of Starch/Poly(É›-Caprolactone) Fiber Meshes and the Osteogenic Differentiation of Cultured Marrow Stromal Cells. Tissue Engineering - Part A, 2009, 15, 295-305.	3.1	58
27	<i>In Vitro</i> Cytotoxicity Assessment of Ulvan, a Polysaccharide Extracted from Green Algae. Phytotherapy Research, 2013, 27, 1143-1148.	5.8	58
28	Plasma-induced polymerization as a tool for surface functionalization of polymer scaffolds for bone tissue engineering: An in vitro study. Acta Biomaterialia, 2010, 6, 3704-3712.	8.3	51
29	Processing of degradable ulvan 3D porous structures for biomedical applications. Journal of Biomedical Materials Research - Part A, 2013, 101A, 998-1006.	4.0	51
30	Î±vÎ²3 and Î±5Î²1 integrin-specific ligands: From tumor angiogenesis inhibitors to vascularization promoters in regenerative medicine?. Biotechnology Advances, 2018, 36, 208-227.	11.7	51
31	Injection molding of a starch/EVOH blend aimed as an alternative biomaterial for temporary applications. Journal of Applied Polymer Science, 2000, 77, 1303-1315.	2.6	48
32	Unleashing the potential of supercritical fluids for polymer processing in tissue engineering and regenerative medicine. Journal of Supercritical Fluids, 2013, 79, 177-185.	3.2	48
33	Silk-based anisotropical 3D biotextiles for bone regeneration. Biomaterials, 2017, 123, 92-106.	11.4	48
34	<i>In vitro</i> and <i>in vivo</i> performance of methacrylated gellan gum hydrogel formulations for cartilage repair*. Journal of Biomedical Materials Research - Part A, 2018, 106, 1987-1996.	4.0	37
35	In vivo study of dendronlike nanoparticles for stem cells â€œtune-upâ€ from nano to tissues. Nanomedicine: Nanotechnology, Biology, and Medicine, 2011, 7, 914-924.	3.3	34
36	The Role of Biomaterials as Angiogenic Modulators of Spinal Cord Injury: Mimetics of the Spinal Cord, Cell and Angiogenic Factor Delivery Agents. Frontiers in Pharmacology, 2018, 9, 164.	3.5	34

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37	Interactions between Schwann and olfactory ensheathing cells with a starch/polycaprolactone scaffold aimed at spinal cord injury repair. Journal of Biomedical Materials Research - Part A, 2012, 100A, 470-476.	4.0	28
38	Structure development and interfacial interactions in high-density polyethylene/hydroxyapatite (HDPE/HA) composites molded with preferred orientation. Journal of Applied Polymer Science, 2002, 86, 2873-2886.	2.6	26
39	Human adipose-derived cells can serve as a single-cell source for the<i>in vitro</i>cultivation of vascularized bone grafts. Journal of Tissue Engineering and Regenerative Medicine, 2014, 8, 629-639.	2.7	23
40	Benefits of Spine Stabilization with Biodegradable Scaffolds in Spinal Cord Injured Rats. Tissue Engineering - Part C: Methods, 2013, 19, 101-108.	2.1	20
41	Influence of different surface modification treatments on silk biotextiles for tissue engineering applications. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2016, 104, 496-507.	3.4	19
42	Hierarchical scaffolds enhance osteogenic differentiation of human Whartonâ€™s jelly derived stem cells. Biofabrication, 2015, 7, 035009.	7.1	17
43	Mussel-Inspired Catechol Functionalisation as a Strategy to Enhance Biomaterial Adhesion: A Systematic Review. Polymers, 2021, 13, 3317.	4.5	16
44	Poly(ester-urethane) scaffolds: effect of structure on properties and osteogenic activity of stem cells. Journal of Tissue Engineering and Regenerative Medicine, 2015, 9, 930-942.	2.7	15
45	Sequential Application of Steady and Pulsatile Medium Perfusion Enhanced the Formation of Engineered Bone. Tissue Engineering - Part A, 2013, 19, 1244-1254.	3.1	13
46	Modulating cell adhesion to polybutylene succinate biotextile constructs for tissue engineering applications. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 2853-2863.	2.7	13
47	Synthesis and characterization of sensitive hydrogels based on semiâ€interpenetrated networks of poly[2â€ethylâ€(2â€pyrrolidone) methacrylate] and hyaluronic acid. Journal of Biomedical Materials Research - Part A, 2013, 101A, 157-166.	4.0	12
48	Synthesis and biological evaluation of a bioinspired, tissue-adhesive gellan gum-based hydrogel designed for minimally invasive delivery and retention of chondrogenic cells. Biomaterials Science, 2020, 8, 3697-3711.	5.4	12
49	Combination of enzymes and flow perfusion conditions improves osteogenic differentiation of bone marrow stromal cells cultured upon starch/poly(Îµâ€caprolactone) fiber meshes. Journal of Biomedical Materials Research - Part A, 2010, 94A, 1061-1069.	4.0	7
50	The enhancement of the mechanical properties of a high-density polyethylene. Journal of Applied Polymer Science, 1999, 73, 2473.	2.6	2