

# Rui A Sousa

## List of Publications by Year in descending order

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Version: 2024-02-01

50  
papers

4,074  
citations

134610

34  
h-index

223390

49  
g-index

51  
all docs

51  
docs citations

51  
times ranked

6453  
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. <i>Acta Biomaterialia</i> , 2011, 7, 1009-1018.	4.1	487
2	Bioinert, biodegradable and injectable polymeric matrix composites for hard tissue replacement: state of the art and recent developments. <i>Composites Science and Technology</i> , 2004, 64, 789-817.	3.8	374
3	Development of silk-based scaffolds for tissue engineering of bone from human adipose-derived stem cells. <i>Acta Biomaterialia</i> , 2012, 8, 2483-2492.	4.1	210
4	Crosstalk between osteoblasts and endothelial cells co-cultured on a polycaprolactone-starch scaffold and the in vitro development of vascularization. <i>Biomaterials</i> , 2009, 30, 4407-4415.	5.7	193
5	Hierarchical starch-based fibrous scaffold for bone tissue engineering applications. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2009, 3, 37-42.	1.3	191
6	A practical perspective on ulvan extracted from green algae. <i>Journal of Applied Phycology</i> , 2013, 25, 407-424.	1.5	156
7	Marine algae sulfated polysaccharides for tissue engineering and drug delivery approaches. <i>Biomatter</i> , 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. <i>Acta Biomaterialia</i> , 2015, 12, 227-241.	4.1	140
9	The osteogenic differentiation of rat bone marrow stromal cells cultured with dexamethasone-loaded carboxymethylchitosan/poly(amidoamine) dendrimer nanoparticles. <i>Biomaterials</i> , 2009, 30, 804-813.	5.7	131
10	In Vitro Model of Vascularized Bone: Synergizing Vascular Development and Osteogenesis. <i>PLoS ONE</i> , 2011, 6, e28352.	1.1	107
11	Extraction and physico-chemical characterization of a versatile biodegradable polysaccharide obtained from green algae. <i>Carbohydrate Research</i> , 2010, 345, 2194-2200.	1.1	106
12	Development and Characterization of a Novel Hybrid Tissue Engineering-Based Scaffold for Spinal Cord Injury Repair. <i>Tissue Engineering - Part A</i> , 2010, 16, 45-54.	1.6	103
13	3D Plotted PCL Scaffolds for Stem Cell Based Bone Tissue Engineering. <i>Macromolecular Symposia</i> , 2008, 269, 92-99.	0.4	102
14	The enhancement of the mechanical properties of a high-density polyethylene. , 1999, 73, 2473-2483.		89
15	Development of Gellan Gum-Based Microparticles/Hydrogel Matrices for Application in the Intervertebral Disc Regeneration. <i>Tissue Engineering - Part C: Methods</i> , 2011, 17, 961-972.	1.1	87
16	Characterization of ulvan extracts to assess the effect of different steps in the extraction procedure. <i>Carbohydrate Polymers</i> , 2012, 88, 537-546.	5.1	81
17	Engineering cell-adhesive gellan gum spongy-like hydrogels for regenerative medicine purposes. <i>Acta Biomaterialia</i> , 2014, 10, 4787-4797.	4.1	81
18	Processing ulvan into 2D structures: Cross-linked ulvan membranes as new biomaterials for drug delivery applications. <i>International Journal of Pharmaceutics</i> , 2012, 426, 76-81.	2.6	80

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19	Dynamic Culturing of Cartilage Tissue: The Significance of Hydrostatic Pressure. Tissue Engineering - Part A, 2012, 18, 1979-1991.	1.6	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.	1.7	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.	1.6	66
22	New biotextiles for tissue engineering: Development, characterization and in vitro cellular viability. Acta Biomaterialia, 2013, 9, 8167-8181.	4.1	65
23	Tumor Growth Suppression Induced by Biomimetic Silk Fibroin Hydrogels. Scientific Reports, 2016, 6, 31037.	1.6	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.	1.7	60
25	Processing and properties of bone-analogue biodegradable and bioinert polymeric composites. Composites Science and Technology, 2003, 63, 389-402.	3.8	59
26	The Role of Lipase and $\alpha$ -Amylase in the Degradation of Starch/Poly( $\epsilon$ -Caprolactone) Fiber Meshes and the Osteogenic Differentiation of Cultured Marrow Stromal Cells. Tissue Engineering - Part A, 2009, 15, 295-305.	1.6	58
27	<i>In Vitro</i> Cytotoxicity Assessment of Ulvan, a Polysaccharide Extracted from Green Algae. Phytotherapy Research, 2013, 27, 1143-1148.	2.8	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.	4.1	51
29	Processing of degradable ulvan 3D porous structures for biomedical applications. Journal of Biomedical Materials Research - Part A, 2013, 101A, 998-1006.	2.1	51
30	$\alpha$ 3 and $\alpha$ 5 $\beta$ 1 integrin-specific ligands: From tumor angiogenesis inhibitors to vascularization promoters in regenerative medicine?. Biotechnology Advances, 2018, 36, 208-227.	6.0	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.	1.3	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.	1.6	48
33	Silk-based anisotropical 3D biotextiles for bone regeneration. Biomaterials, 2017, 123, 92-106.	5.7	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.	2.1	37
35	In vivo study of dendronlike nanoparticles for stem cells $\uparrow$ from nano to tissues. Nanomedicine: Nanotechnology, Biology, and Medicine, 2011, 7, 914-924.	1.7	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.	1.6	34

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37	Interactions between Schwann and olfactory ensheathing cells with a starch/polycaprolactone scaffold aimed at spinal cord injury repair. <i>Journal of Biomedical Materials Research - Part A</i> , 2012, 100A, 470-476.	2.1	28
38	Structure development and interfacial interactions in high-density polyethylene/hydroxyapatite (HDPE/HA) composites molded with preferred orientation. <i>Journal of Applied Polymer Science</i> , 2002, 86, 2873-2886.	1.3	26
39	Human adipose-derived cells can serve as a single-cell source for the <i>in vitro</i> cultivation of vascularized bone grafts. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2014, 8, 629-639.	1.3	23
40	Benefits of Spine Stabilization with Biodegradable Scaffolds in Spinal Cord Injured Rats. <i>Tissue Engineering - Part C: Methods</i> , 2013, 19, 101-108.	1.1	20
41	Influence of different surface modification treatments on silk biotextiles for tissue engineering applications. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2016, 104, 496-507.	1.6	19
42	Hierarchical scaffolds enhance osteogenic differentiation of human Wharton's jelly derived stem cells. <i>Biofabrication</i> , 2015, 7, 035009.	3.7	17
43	Mussel-Inspired Catechol Functionalisation as a Strategy to Enhance Biomaterial Adhesion: A Systematic Review. <i>Polymers</i> , 2021, 13, 3317.	2.0	16
44	Poly(ester-urethane) scaffolds: effect of structure on properties and osteogenic activity of stem cells. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2015, 9, 930-942.	1.3	15
45	Sequential Application of Steady and Pulsatile Medium Perfusion Enhanced the Formation of Engineered Bone. <i>Tissue Engineering - Part A</i> , 2013, 19, 1244-1254.	1.6	13
46	Modulating cell adhesion to polybutylene succinate biotextile constructs for tissue engineering applications. <i>Journal of Tissue Engineering and Regenerative Medicine</i> , 2017, 11, 2853-2863.	1.3	13
47	Synthesis and characterization of sensitive hydrogels based on semi-interpenetrated networks of poly[2-(ethylpyrrolidone) methacrylate] and hyaluronic acid. <i>Journal of Biomedical Materials Research - Part A</i> , 2013, 101A, 157-166.	2.1	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. <i>Biomaterials Science</i> , 2020, 8, 3697-3711.	2.6	12
49	Combination of enzymes and flow perfusion conditions improves osteogenic differentiation of bone marrow stromal cells cultured upon starch/poly( $\epsilon$ -caprolactone) fiber meshes. <i>Journal of Biomedical Materials Research - Part A</i> , 2010, 94A, 1061-1069.	2.1	7
50	The enhancement of the mechanical properties of a high-density polyethylene. <i>Journal of Applied Polymer Science</i> , 1999, 73, 2473.	1.3	2