Daniel Arcos

List of Publications by Year
in descending order

92 papers	8,368 citations	57631 44 h-index	45213 90 g-index
96 all docs	96 docs citations	96 times ranked	9119 citing authors

#	Article	IF	Citations
1	Mesoporous Materials for Drug Delivery. Angewandte Chemie - International Edition, 2007, 46, 7548-7558.	7.2	2,238
2	Solâ€“gel silica-based biomaterials and bone tissue regeneration. Acta Biomaterialia, 2010, 6, 2874-2888.	4.1	495
3	Ordered Mesoporous Bioactive Glasses for Bone Tissue Regeneration. Chemistry of Materials, 2006, 18, 3137-3144.	3.2	333
4	A unified in vitro evaluation for apatite-forming ability of bioactive glasses and their variants. Journal of Materials Science: Materials in Medicine, 2015, 26, 115.	1.7	275
5	Substituted hydroxyapatite coatings of bone implants. Journal of Materials Chemistry B, 2020, 8, 1781-1800.	2.9	252
6	Bioceramics for drug delivery. Acta Materialia, 2013, 61, 890-911.	3.8	238
7	Silicon substituted hydroxyapatites. A method to upgrade calcium phosphate based implants. Journal of Materials Chemistry, 2005, 15, 1509-1516.	6.7	232
8	Ordered Mesoporous Microspheres for Bone Grafting and Drug Delivery. Chemistry of Materials, 2009, 21, 1000-1009.	3.2	183
9	Aerosol-Assisted Synthesis of Magnetic Mesoporous Silica Spheres for Drug Targeting. Chemistry of Materials, 2007, 19, 3455-3463.	3.2	149
10	Influence of the Stabilization Temperature on Textural and Structural Features and Ion Release in SiO2â^’CaOâ^’P2O5Solâ^’Gel Glasses. Chemistry of Materials, 2002, 14, 1515-1522.	3.2	129
11	High-Performance Mesoporous Bioceramics Mimicking Bone Mineralization. Chemistry of Materials, 2008, 20, 3191-3198.	3.2	126
12	Multinuclear Solid-State NMR Studies of Ordered Mesoporous Bioactive Glasses. Journal of Physical Chemistry C, 2008, 112, 5552-5562.	1.5	125
13	Bioactivity in glass/PMMA composites used as drug delivery system. Biomaterials, 2001, 22, 701-708.	5.7	120
14	The relevance of biomaterials to the prevention and treatment of osteoporosis. Acta Biomaterialia, 2014, 10, 1793-1805.	4.1	120
15	Magnetic mesoporous silica spheres for hyperthermia therapy. Acta Biomaterialia, 2010, 6, 4522-4531.	4.1	117
16	Silicon Incorporation in Hydroxylapatite Obtained by Controlled Crystallization. Chemistry of Materials, 2004, 16, 2300-2308.	3.2	111
17	Interaction of an ordered mesoporous bioactive glass with osteoblasts, fibroblasts and lymphocytes, demonstrating its biocompatibility as a potential bone graft material. Acta Biomaterialia, 2010, 6, 892-899.	4.1	110
18	Essential Role of Calcium Phosphate Heterogeneities in 2D-Hexagonal and 3D-Cubic SiO₂â^’CaOâ^’P₂O₅ Mesoporous Bioactive Glasses. Chemistry of Materials, 2009, 21, 5474-5484.	3.2	95

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19	Magnetic-Responsive Release Controlled by Hot Spot Effect. Langmuir, 2015, 31, 12777-12782.	1.6	91
20	Functionalizing Mesoporous Bioglasses for Longâ€Term Antiâ€Osteoporotic Drug Delivery. Chemistry - A European Journal, 2010, 16, 10879-10886.	1.7	86
21	Nanocolumnar coatings with selective behavior towards osteoblast and Staphylococcus aureus proliferation. Acta Biomaterialia, 2015, 15, 20-28.	4.1	85
22	Biomimetic Apatite Mineralization Mechanisms of Mesoporous Bioactive Glasses as Probed by Multinuclear ³¹P, ²⁹Si, ²³Na and ¹³C Solid-State NMR. Journal of Physical Chemistry C, 2010, 114, 19345-19356.	1.5	79
23	Upgrading Calcium Phosphate Scaffolds for Tissue Engineering Applications. Key Engineering Materials, 0, 377, 19-42.	0.4	77
24	Calcium sulphate-based cements containing cephalexin. Biomaterials, 2004, 25, 2629-2635.	5.7	76
25	Evolution of porosity duringin vitro hydroxycarbonate apatite growth in sol-gel glasses. , 2000, 51, 23-28.		70
26	The effect of the silicon incorporation on the hydroxylapatite structure. A neutron diffraction study. Solid State Sciences, 2004, 6, 987-994.	1.5	70
27	Solid-State ³¹P and ¹H NMR Investigations of Amorphous and Crystalline Calcium Phosphates Grown Biomimetically From a Mesoporous Bioactive Glass. Journal of Physical Chemistry C, 2011, 115, 20572-20582.	1.5	69
28	Mesoporous bioactive glass/É›-polycaprolactone scaffolds promote bone regeneration in osteoporotic sheep. Acta Biomaterialia, 2019, 90, 393-402.	4.1	66
29	Promising trends of bioceramics in the biomaterials field. Journal of Materials Science: Materials in Medicine, 2009, 20, 447-455.	1.7	65
30	Textural properties of SiO₂ Â· CaO Â· P₂O₅ glasses prepared by the sol-gel method. Journal of Materials Research, 2001, 16, 1345-1348.	1.2	63
31	Direct Probing of the Phosphate-Ion Distribution in Bioactive Silicate Glasses by Solid-State NMR: Evidence for Transitions between Random/Clustered Scenarios. Chemistry of Materials, 2013, 25, 1877-1885.	3.2	62
32	Synergistic effect of Si-hydroxyapatite coating and VEGF adsorption on Ti6Al4V-ELI scaffolds for bone regeneration in an osteoporotic bone environment. Acta Biomaterialia, 2019, 83, 456-466.	4.1	62
33	Biocompatibility andin vivogentamicin release from bioactive sol-gel glass implants. Journal of Biomedical Materials Research Part B, 2002, 61, 458-465.	3.0	59
34	Nanostructured Hybrid Materials for Bone Tissue Regeneration. Current Nanoscience, 2006, 2, 179-189.	0.7	57
35	From the bioactive glasses to the star gels. Journal of Materials Science: Materials in Medicine, 2006, 17, 1011-1017.	1.7	56
36	In vitro Evaluation of Potential Calcium Phosphate Scaffolds for Tissue Engineering. Tissue Engineering, 2006, 12, 279-290.	4.9	55

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37	Molecular gates in mesoporous bioactive glasses for the treatment of bone tumors and infection. Acta Biomaterialia, 2017, 50, 114-126.	4.1	54
38	Mesoporous magnetic microspheres for drug targeting. Solid State Sciences, 2008, 10, 421-426.	1.5	51
39	The response of pre-osteoblasts and osteoclasts to gallium containing mesoporous bioactive glasses. Acta Biomaterialia, 2018, 76, 333-343.	4.1	49
40	Bioactive Star Gels. Chemistry of Materials, 2006, 18, 5696-5703.	3.2	48
41	Local structures of mesoporous bioactive glasses and their surface alterations <i>in vitro</i> : inferences from solid-state nuclear magnetic resonance. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2012, 370, 1376-1399.	1.6	48
42	A bioactive sol-gel glass implant for in vivo gentamicin release. Experimental model in Rabbit. Journal of Orthopaedic Research, 2006, 24, 454-460.	1.2	46
43	<i>Inâ€vivo</i> behavior of Siâ€hydroxyapatite/polycaprolactone/DMB scaffolds fabricated by 3D printing. Journal of Biomedical Materials Research - Part A, 2013, 101A, 2038-2048.	2.1	46
44	Glassâ€"glass ceramic thermoseeds for hyperthermic treatment of bone tumors. Journal of Biomedical Materials Research - Part A, 2006, 79A, 533-543.	2.1	45
45	Supramolecular mechanisms in the synthesis of mesoporous magnetic nanospheres for hyperthermia. Journal of Materials Chemistry, 2012, 22, 64-72.	6.7	45
46	Comparison of the osteoblastic activity conferred on Si-doped hydroxyapatite scaffolds by different osteostatin coatings. Acta Biomaterialia, 2011, 7, 3555-3562.	4.1	43
47	Mesoporous bioactive glasses: Mechanical reinforcement by means of a biomimetic process. Acta Biomaterialia, 2011, 7, 2952-2959.	4.1	43
48	Covalently bonded dendrimer-maghemite nanosystems: nonviral vectors for in vitro gene magnetofection. Journal of Materials Chemistry, 2011, 21, 4598.	6.7	42
49	Novel ion-doped mesoporous glasses for bone tissue engineering: Study of their structural characteristics influenced by the presence of phosphorous oxide. Journal of Non-Crystalline Solids, 2017, 455, 90-97.	1.5	38
50	Effects of a mesoporous bioactive glass on osteoblasts, osteoclasts and macrophages. Journal of Colloid and Interface Science, 2018, 528, 309-320.	5.0	38
51	Mesoporous Microspheres with Doubly Ordered Coreâ^'Shell Structure. Chemistry of Materials, 2009, 21, 18-20.	3.2	36
52	Proton Environments in Biomimetic Calcium Phosphates Formed from Mesoporous Bioactive CaOâ€"SiO₂â€"P₂O₅ Glasses <i>in Vitro</i>: Insights from Solid-State NMR. Journal of Physical Chemistry C, 2017, 121, 13223-13238.	1.5	36
53	Nanocrystalline silicon substituted hydroxyapatite effects on osteoclast differentiation and resorptive activity. Journal of Materials Chemistry B, 2014, 2, 2910.	2.9	34
54	Nanocrystallinity effects on osteoblast and osteoclast response to silicon substituted hydroxyapatite. Journal of Colloid and Interface Science, 2016, 482, 112-120.	5.0	34

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55	Chemical Homogeneity of Nanocrystalline Znâ€“Mn Spinel Ferrites Obtained by High-Energy Ball Milling. Journal of Solid State Chemistry, 1998, 141, 10-16.	1.4	33
56	Thermoseeds for interstitial magnetic hyperthermia: from bioceramics to nanoparticles. Journal of Physics Condensed Matter, 2013, 25, 484003.	0.7	33
57	Immobilization and bioactivity evaluation of FGF-1 and FGF-2 on powdered silicon-doped hydroxyapatite and their scaffolds for bone tissue engineering. Journal of Materials Science: Materials in Medicine, 2011, 22, 405-416.	1.7	32
58	Quantifying apatite formation and cation leaching from mesoporous bioactive glasses in vitro: a SEM, solid-state NMR and powder XRD study. Journal of Materials Chemistry, 2012, 22, 7214.	6.7	32
59	Crystallochemistry, textural properties, and in vitro biocompatibility of different siliconâ€doped calcium phosphates. Journal of Biomedical Materials Research - Part A, 2006, 78A, 762-771.	2.1	31
60	Surface Reactions of Mesoporous Bioactive Glasses Monitored by Solid-State NMR: Concentration Effects in Simulated Body Fluid. Journal of Physical Chemistry C, 2016, 120, 4961-4974.	1.5	31
61	Antibacterial Nanostructured Ti Coatings by Magnetron Sputtering: From Laboratory Scales to Industrial Reactors. Nanomaterials, 2019, 9, 1217.	1.9	30
62	Towards the Development of Smart 3D â€œGated Scaffoldsâ€• for Onâ€Command Delivery. Small, 2014, 10, 4859-4864.	5.2	28
63	Influence of a SiO2âˆ’CaOâˆ’P2O5Solâˆ’Gel Glass on the Bioactivity and Controlled Release of Ceramic/Polymer/Antibiotic Mixed Materials. Chemistry of Materials, 2003, 15, 4132-4138.	3.2	26
64	<i>In Vitro</i>Positive Biocompatibility Evaluation of Glassâ€“Glass Ceramic Thermoseeds for Hyperthermic Treatment of Bone Tumors. Tissue Engineering - Part A, 2008, 14, 617-627.	1.6	26
65	Composition-dependent in vitro apatite formation at mesoporous bioactive glass-surfaces quantified by solid-state NMR and powder XRD. RSC Advances, 2015, 5, 86061-86071.	1.7	25
66	Ipriflavone-Loaded Mesoporous Nanospheres with Potential Applications for Periodontal Treatment. Nanomaterials, 2020, 10, 2573.	1.9	24
67	Multiscale porosity in mesoporous bioglass 3D-printed scaffolds for bone regeneration. Materials Science and Engineering C, 2021, 120, 111706.	3.8	24
68	Ibuprofen release from hydrophilic ceramic-polymer composites. Biomaterials, 1997, 18, 1235-1242.	5.7	23
69	Tailoring the Structure of Bioactive Glasses: From the Nanoscale to Macroporous Scaffolds. International Journal of Applied Glass Science, 2016, 7, 195-205.	1.0	23
70	Incorporation and effects of mesoporous SiO2-CaO nanospheres loaded with ipriflavone on osteoblast/osteoclast cocultures. European Journal of Pharmaceutics and Biopharmaceutics, 2018, 133, 258-268.	2.0	23
71	Implantable Magnetic Glassâˆ’Ceramic Based on (Fe,Ca)SiO3Solid Solutions. Chemistry of Materials, 2002, 14, 64-70.	3.2	22
72	Bacterial adherence to SiO₂â€based multifunctional bioceramics. Journal of Biomedical Materials Research - Part A, 2009, 89A, 215-223.	2.1	22

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73	Response of osteoblasts and preosteoblasts to calcium deficient and Si substituted hydroxyapatites treated at different temperatures. Colloids and Surfaces B: Biointerfaces, 2015, 133, 304-313.	2.5	21
74	Design of thermoresponsive polymeric gates with opposite controlled release behaviors. RSC Advances, 2016, 6, 42510-42516.	1.7	21
75	In vitro colonization of stratified bioactive scaffolds by pre-osteoblast cells. Acta Biomaterialia, 2016, 44, 73-84.	4.1	20
76	Crystal-Chemical Characteristics of Siliconâˆ’Neodymium Substituted Hydroxyapatites Studied by Combined X-ray and Neutron Powder Diffraction. Chemistry of Materials, 2005, 17, 57-64.	3.2	19
77	Signaling Pathways of Immobilized FGFâ€•2 on Siliconâ€•Substituted Hydroxyapatite. Macromolecular Bioscience, 2012, 12, 446-453.	2.1	19
78	<i>In vitro</i> evaluation of glassâ€“glass ceramic thermoseedâ€•induced hyperthermia on human osteosarcoma cell line. Journal of Biomedical Materials Research - Part A, 2012, 100A, 64-71.	2.1	19
79	Mesoporous Bioactive Glasses Equipped with Stimuliâ€•Responsive Molecular Gates for Controlled Delivery of Levofloxacin against Bacteria. Chemistry - A European Journal, 2018, 24, 18944-18951.	1.7	19
80	The effect of biomimetic mineralization of 3D-printed mesoporous bioglass scaffolds on physical properties and in vitro osteogenicity. Materials Science and Engineering C, 2020, 109, 110572.	3.8	19
81	An Immunological Approach to the Biocompatibility of Mesoporous SiO_2-CaO Nanospheres. International Journal of Molecular Sciences, 2020, 21, 8291.	1.8	17
82	Neutron scattering for the study of improved bone implants. Physica B: Condensed Matter, 2004, 350, E607-E610.	1.3	16
83	High glucose alters the secretome of mechanically stimulated osteocyteâ€•like cells affecting osteoclast precursor recruitment and differentiation. Journal of Cellular Physiology, 2017, 232, 3611-3621.	2.0	15
84	Effective Actions of Ion Release from Mesoporous Bioactive Glass and Macrophage Mediators on the Differentiation of Osteoprogenitor and Endothelial Progenitor Cells. Pharmaceutics, 2021, 13, 1152.	2.0	14
85	Effects of Ipriflavone-Loaded Mesoporous Nanospheres on the Differentiation of Endothelial Progenitor Cells and Their Modulation by Macrophages. Nanomaterials, 2021, 11, 1102.	1.9	12
86	Early in vitro response of macrophages and T lymphocytes to nanocrystalline hydroxyapatites. Journal of Colloid and Interface Science, 2014, 416, 59-66.	5.0	9
87	Features of aminopropyl modified mesoporous silica nanoparticles. Implications on the active targeting capability. Materials Chemistry and Physics, 2018, 220, 260-269.	2.0	9
88	Textural Evolution of a Sol-Gel Glass Surface in SBF. Key Engineering Materials, 2004, 254-256, 27-30.	0.4	4
89	Syntesis of Mesoporous Microparticles for Biomedical Applications. Key Engineering Materials, 0, 377, 181-194.	0.4	3
90	Improved Mechanical Properties in Nb_2O_5/V_2O_5 Doped Spinel Ferrites. Journal of Solid State Chemistry, 1999, 148, 376-379.	1.4	2

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91	Multifunctional Nano and Microparticles for Drug Delivery Systems. Key Engineering Materials, 2010, 441, 333-355.	0.4	2
92	Biomaterials: Towards the Development of Smart 3D â€œGated Scaffoldsâ€•for On-Command Delivery (Small 23/2014). Small, 2014, 10, 4858-4858.	5.2	0