Conrado Aparicio

List of Publications by Year
in descending order

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132 papers	6,254 citations	57758 44 h-index	76900 74 g-index
137 all docs	137 docs citations	137 times ranked	7897 citing authors

#	Article	IF	Citations
1	A self-assembly pathway to aligned monodomain gels. Nature Materials, 2010, 9, 594-601.	27.5	576
2	Nano-scale modification of titanium implant surfaces to enhance osseointegration. Acta Biomaterialia, 2019, 94, 112-131.	8.3	336
3	Corrosion behaviour of commercially pure titanium shot blasted with different materials and sizes of shot particles for dental implant applications. Biomaterials, 2003, 24, 263-273.	11.4	259
4	Bone regeneration mediated by biomimetic mineralization of a nanofiber matrix. Biomaterials, 2010, 31, 6004-6012.	11.4	241
5	Bio-inspired stable antimicrobial peptide coatings for dental applications. Acta Biomaterialia, 2013, 9, 8224-8231.	8.3	171
6	The influence of surface energy on competitive protein adsorption on oxidized NiTi surfaces. Biomaterials, 2007, 28, 586-594.	11.4	159
7	Micropatterning of bioactive self-assembling gels. Soft Matter, 2009, 5, 1228.	2.7	137
8	New oxidation treatment of NiTi shape memory alloys to obtain Ni-free surfaces and to improve biocompatibility. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2006, 77B, 249-256.	3.4	131
9	Mechanical performance of acrylic bone cements containing different radiopacifying agents. Biomaterials, 2002, 23, 1873-1882.	11.4	124
10	Biomimetic Mineralization of Woven Bone-Like Nanocomposites: Role of Collagen Cross-Links. Biomacromolecules, 2012, 13, 49-59.	5.4	117
11	In vivo evaluation of micro-rough and bioactive titanium dental implants using histometry and pull-out tests. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 1672-1682.	3.1	111
12	Spatial organization of osteoblast fibronectin matrix on titanium surfaces: Effects of roughness, chemical heterogeneity and surface energy. Acta Biomaterialia, 2010, 6, 291-301.	8.3	102
13	A reproducible oral microcosm biofilm model for testing dental materials. Journal of Applied Microbiology, 2012, 113, 1540-1553.	3.1	101
14	Present and future of tissue engineering scaffolds for dentinâ€pulp complex regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2019, 13, 58-75.	2.7	97
15	Comparison of the mechanical properties between tantalum and nickelâ€“titanium foams implant materials for bone ingrowth applications. Journal of Alloys and Compounds, 2007, 439, 67-73.	5.5	91
16	Surface biofunctionalization by covalent co-immobilization of oligopeptides. Colloids and Surfaces B: Biointerfaces, 2013, 107, 189-197.	5.0	89
17	Hydroxyapatite ceramic bodies with tailored mechanical properties for different applications. Journal of Biomedical Materials Research Part B, 2002, 60, 159-166.	3.1	86
18	Antimicrobial GL13K Peptide Coatings Killed and Ruptured the Wall of Streptococcus gordonii and Prevented Formation and Growth of Biofilms. PLoS ONE, 2014, 9, e111579.	2.5	86

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19	Degradation in the dentinâ€“composite interface subjected to multi-species biofilm challenges. Acta Biomaterialia, 2014, 10, 375-383.	8.3	83
20	Antimicrobial Agents Used in the Treatment of Periâ€Implantitis Alter the Physicochemistry and Cytocompatibility of Titanium Surfaces. Journal of Periodontology, 2016, 87, 809-819.	3.4	82
21	The effect of shot blasting and heat treatment on the fatigue behavior of titanium for dental implant applications. Dental Materials, 2007, 23, 486-491.	3.5	80
22	Development of aÂBiodegradable Composite Scaffold for Bone Tissue Engineering: Physicochemical, Topographical, Mechanical, Degradation, and Biological Properties. Advances in Polymer Science, 2006, , 209-231.	0.8	78
23	Growth of bioactive surfaces on titanium and its alloys for orthopaedic and dental implants. Materials Science and Engineering C, 2002, 22, 53-60.	7.3	74
24	The use of micro-CT with image segmentation to quantify leakage in dental restorations. Dental Materials, 2015, 31, 382-390.	3.5	74
25	PLA-Based Mineral-Doped Scaffolds Seeded with Human Periapical Cyst-Derived MSCs: A Promising Tool for Regenerative Healing in Dentistry. Materials, 2019, 12, 597.	2.9	74
26	Human-osteoblast proliferation and differentiation on grit-blasted and bioactive titanium for dental applications. Journal of Materials Science: Materials in Medicine, 2002, 13, 1105-1111.	3.6	72
27	Collagen-functionalised titanium surfaces for biological sealing of dental implants: Effect of immobilisation process on fibroblasts response. Colloids and Surfaces B: Biointerfaces, 2014, 122, 601-610.	5.0	72
28	Imaging in vivo secondary caries and ex vivo dental biofilms using cross-polarization optical coherence tomography. Dental Materials, 2012, 28, 792-800.	3.5	71
29	Bioinspired Mineralization with Hydroxyapatite and Hierarchical Naturally Aligned Nanofibrillar Cellulose. ACS Applied Materials & Interfaces, 2019, 11, 27598-27604.	8.0	67
30	Orthopaedic osseointegration: Implantology and future directions. Journal of Orthopaedic Research, 2020, 38, 1445-1454.	2.3	66
31	Self-assembly dynamics and antimicrobial activity of all <scp>l</scp>- and <scp>d</scp>-amino acid enantiomers of a designer peptide. Nanoscale, 2019, 11, 266-275.	5.6	65
32	Adsorption of Fibronectin, Fibrinogen, and Albumin on TiO2: Time-Resolved Kinetics, Structural Changes, and Competition Study. Biointerphases, 2012, 7, 48.	1.6	63
33	Discerning the Role of Topography and Ion Exchange in Cell Response of Bioactive Tissue Engineering Scaffolds. Tissue Engineering - Part A, 2008, 14, 1341-1351.	3.1	61
34	Variation of roughness and adhesion strength of deposited apatite layers on titanium dental implants. Materials Science and Engineering C, 2011, 31, 320-324.	7.3	60
35	The influence of blasting and sterilization on static and time-related wettability and surface-energy properties of titanium surfaces. Surface and Coatings Technology, 2008, 202, 3470-3479.	4.8	58
36	Polylactic acid-based porous scaffolds doped with calcium silicate and dicalcium phosphate dihydrate designed for biomedical application. Materials Science and Engineering C, 2018, 82, 163-181.	7.3	58

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37	Effects of Molecular Weight and Concentration of Poly(Acrylic Acid) on Biomimetic Mineralization of Collagen. ACS Biomaterials Science and Engineering, 2018, 4, 2758-2766.	5.2	57
38	Mineralization of peptide amphiphile nanofibers and its effect on the differentiation of human mesenchymal stem cells. Acta Biomaterialia, 2012, 8, 2456-2465.	8.3	56
39	Electrochemical behaviour of oxidized NiTi shape memory alloys for biomedical applications. Surface and Coatings Technology, 2007, 201, 6484-6488.	4.8	54
40	Acceleration of apatite nucleation on microrough bioactive titanium for bone-replacing implants. Journal of Biomedical Materials Research - Part A, 2007, 82A, 521-529.	4.0	50
41	Antimicrobial properties and dentin bonding strength of magnesium phosphate cements. Acta Biomaterialia, 2013, 9, 8384-8393.	8.3	50
42	Bioceramics as nanomaterials. Nanomedicine, 2006, 1, 91-106.	3.3	48
43	Chitosan-Recombinamer Layer-by-Layer Coatings for Multifunctional Implants. International Journal of Molecular Sciences, 2017, 18, 369.	4.1	47
44	Hydrophobic and antimicrobial dentin: A peptide-based 2-tier protective system for dental resin composite restorations. Acta Biomaterialia, 2019, 88, 251-265.	8.3	47
45	Discerning the Subfibrillar Structure of Mineralized Collagen Fibrils: A Model for the Ultrastructure of Bone. PLoS ONE, 2013, 8, e76782.	2.5	45
46	Biomechanical aspects of oral implants.. Clinical Oral Implants Research, 2006, 17, 52-54.	4.5	43
47	Peptide coatings enhance keratinocyte attachment towards improving the peri-implant mucosal seal. Biomaterials Science, 2018, 6, 1936-1945.	5.4	43
48	Dual Oral Tissue Adhesive Nanofiber Membranes for pH-Responsive Delivery of Antimicrobial Peptides. Biomacromolecules, 2020, 21, 4945-4961.	5.4	42
49	Hybrid nanocoatings of self-assembled organic-inorganic amphiphiles for prevention of implant infections. Acta Biomaterialia, 2022, 140, 338-349.	8.3	42
50	Bone-Inspired Mineralization with Highly Aligned Cellulose Nanofibers as Template. ACS Applied Materials & Interfaces, 2019, 11, 42486-42495.	8.0	41
51	Antibiofilm coatings based on protein-engineered polymers and antimicrobial peptides for preventing implant-associated infections. Biomaterials Science, 2020, 8, 2866-2877.	5.4	41
52	Static mechanical properties of hydroxyapatite (HA) powder-filled acrylic bone cements: Effect of type of HA powder. , 2005, 72B, 345-352.		38
53	Bioactive macroporous titanium implants highly interconnected. Journal of Materials Science: Materials in Medicine, 2016, 27, 151.	3.6	38
54	Biomimetic Mineralization of Recombinamer-Based Hydrogels toward Controlled Morphologies and High Mineral Density. ACS Applied Materials & Interfaces, 2015, 7, 25784-25792.	8.0	37

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55	Biomimetic mineralized hybrid scaffolds with antimicrobial peptides. Bioactive Materials, 2021, 6, 2250-2260.	15.6	36
56	Biomimetic treatment on dental implants for short-term bone regeneration. Clinical Oral Investigations, 2014, 18, 59-66.	3.0	34
57	Dentin Priming with Amphipathic Antimicrobial Peptides. Journal of Dental Research, 2019, 98, 1112-1121.	5.2	33
58	Harnessing biomolecules for bioinspired dental biomaterials. Journal of Materials Chemistry B, 2020, 8, 8713-8747.	5.8	33
59	A bioactive elastin-like recombinamer reduces unspecific protein adsorption and enhances cell response on titanium surfaces. Colloids and Surfaces B: Biointerfaces, 2014, 114, 225-233.	5.0	32
60	Low elastic modulus metals for joint prosthesis: Tantalum and nickelâ€“titanium foams. Journal of the European Ceramic Society, 2007, 27, 3391-3398.	5.7	31
61	Intrafibrillar Mineralization of Self-Assembled Elastin-Like Recombinamer Fibrils. ACS Applied Materials & Interfaces, 2017, 9, 5838-5846.	8.0	31
62	In vivo osseointegration of dental implants with an antimicrobial peptide coating. Journal of Materials Science: Materials in Medicine, 2017, 28, 76.	3.6	30
63	Solution and Solid-State Nuclear Magnetic Resonance Structural Investigations of the Antimicrobial Designer Peptide GL13K in Membranes. Biochemistry, 2017, 56, 4269-4278.	2.5	30
64	Hybrid Nanotopographical Surfaces Obtained by Biomimetic Mineralization of Statherinâ€Inspired Elastinâ€Like Recombinamers. Advanced Healthcare Materials, 2014, 3, 1638-1647.	7.6	29
65	Peptide-functionalized zirconia and new zirconia/titanium biocermets for dental applications. Journal of Dentistry, 2015, 43, 1162-1174.	4.1	29
66	Recombinant AMP/Polypeptide Self-Assembled Monolayers with Synergistic Antimicrobial Properties for Bacterial Strains of Medical Relevance. ACS Biomaterials Science and Engineering, 2019, 5, 4708-4716.	5.2	29
67	Improvement of the mechanical properties of acrylic bone cements by substitution of the radio-opaque agent. Journal of Materials Science: Materials in Medicine, 1999, 10, 733-737.	3.6	27
68	Effect of blasting treatment and Fn coating on MG63 adhesion and differentiation on titanium: a gene expression study using real-time RT-PCR. Journal of Materials Science: Materials in Medicine, 2011, 22, 617-627.	3.6	26
69	Development of tantalum scaffold for orthopedic applications produced by space-holder method. Materials and Design, 2015, 83, 112-119.	7.0	25
70	Modulation of supramolecular self-assembly of an antimicrobial designer peptide by single amino acid substitution: implications on peptide activity. Nanoscale Advances, 2019, 1, 4679-4682.	4.6	24
71	Polymeric nanoparticles protect the resin-dentin bonded interface from cariogenic biofilm degradation. Acta Biomaterialia, 2020, 111, 316-326.	8.3	24
72	Bacterial microleakage at the abutmentâ€implant interface, in vitro study. Clinical Implant Dentistry and Related Research, 2018, 20, 360-367.	3.7	22

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73	Surface characterization of completely degradable composite scaffolds. Journal of Materials Science: Materials in Medicine, 2005, 16, 1125-1130.	3.6	21
74	The salivary pellicle on dental biomaterials. Colloids and Surfaces B: Biointerfaces, 2021, 200, 111570.	5.0	20
75	Targeting the oral plaque microbiome with immobilized anti-biofilm peptides at tooth-restoration interfaces. PLoS ONE, 2020, 15, e0235283.	2.5	19
76	Antibacterial activity of a glass ionomer cement doped with copper nanoparticles. Dental Materials Journal, 2020, 39, 389-396.	1.8	19
77	Junctional epithelium and hemidesmosomes: Tape and rivets for solving the â€œpercutaneous device dilemmaâ€•in dental and other permanent implants. Bioactive Materials, 2022, 18, 178-198.	15.6	19
78	Oxidized nickelâ€“titanium foams for bone reconstructions: chemical and mechanical characterization. Journal of Materials Science: Materials in Medicine, 2007, 18, 2123-2129.	3.6	18
79	Quantifying dental biofilm growth using cross-polarization optical coherence tomography. Letters in Applied Microbiology, 2012, 54, 537-542.	2.2	18
80	Interfacial degradation of adhesive composite restorations mediated by oral biofilms and mechanical challenge in an extracted tooth model of secondary caries. Journal of Dentistry, 2017, 66, 62-70.	4.1	18
81	Keratinocyte-Specific Peptide-Based Surfaces for Hemidesmosome Upregulation and Prevention of Bacterial Colonization. ACS Biomaterials Science and Engineering, 2020, 6, 4929-4939.	5.2	18
82	Unraveling dominant surface physicochemistry to build antimicrobial peptide coatings with supramolecular amphiphiles. Nanoscale, 2020, 12, 20767-20775.	5.6	18
83	Biomimetic fabrication and characterization of collagen/strontium hydroxyapatite nanocomposite. Materials Letters, 2020, 274, 127982.	2.6	18
84	A novel dentin bond strength measurement technique using a composite disk in diametral compression. Acta Biomaterialia, 2012, 8, 1597-1602.	8.3	17
85	Differential neuronal and glial behavior on flat and micro patterned chitosan films. Colloids and Surfaces B: Biointerfaces, 2017, 158, 569-577.	5.0	17
86	Contact analysis of gap formation at dental implantâ€•abutment interface under oblique loading: A numericalâ€•experimental study. Clinical Implant Dentistry and Related Research, 2019, 21, 741-752.	3.7	17
87	Dual Self-Assembled Nanostructures from Intrinsically Disordered Protein Polymers with LCST Behavior and Antimicrobial Peptides. Biomacromolecules, 2020, 21, 4043-4052.	5.4	17
88	Male mice with elevated C-type natriuretic peptide-dependent guanylyl cyclase-B activity have increased osteoblasts, bone mass and bone strength. Bone, 2020, 135, 115320.	2.9	17
89	Effect of Oxygen Content on Grain Growth Kinetics of Titanium. Journal of Materials Synthesis and Processing, 2002, 10, 263-266.	0.3	16
90	Osseointegration of Grit-Blasted and Bioactive Titanium Implants: Histomorphometry in Minipigs. Key Engineering Materials, 2003, 254-256, 737-740.	0.4	16

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91	Dentin-composite bond strength measurement using the Brazilian disk test. Journal of Dentistry, 2016, 52, 37-44.	4.1	16
92	<scp>S</scp>urface immobilization and bioactivity of TGFâ€Î²1 inhibitor peptides for bone implant applications. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2016, 104, 385-394.	3.4	16
93	Physical-chemical interactions between dental materials surface, salivary pellicle and Streptococcus gordonii. Colloids and Surfaces B: Biointerfaces, 2020, 190, 110938.	5.0	16
94	Antimicrobial and enzyme-responsive multi-peptide surfaces for bone-anchored devices. Materials Science and Engineering C, 2021, 125, 112108.	7.3	16
95	Surface Immobilization Chemistry of a Laminin-Derived Peptide Affects Keratinocyte Activity. Coatings, 2020, 10, 560.	2.6	15
96	Oxidized NiTi surfaces enhance differentiation of osteoblastâ€like cells. Journal of Biomedical Materials Research - Part A, 2008, 85A, 108-114.	4.0	14
97	Fatigue failure of dentinâ€“composite disks subjected to cyclic diametral compression. Dental Materials, 2015, 31, 778-788.	3.5	14
98	Materials Surface Effects on Biological Interactions. NATO Science for Peace and Security Series A: Chemistry and Biology, 2010, , 233-252.	0.5	14
99	Relevant Properties for Immobilizing Short Peptides on Biosurfaces. Irbm, 2017, 38, 256-265.	5.6	12
100	Growth of Bioactive Surfaces on Dental Implants. Implant Dentistry, 2002, 11, 170-175.	1.3	11
101	In vitro cell response on CP-Ti surfaces functionalized with TGF-Î²1 inhibitory peptides. Journal of Materials Science: Materials in Medicine, 2018, 29, 73.	3.6	11
102	Loss of myocyte enhancer factor 2 expression in osteoclasts leads to opposing skeletal phenotypes. Bone, 2020, 138, 115466.	2.9	11
103	Development and calibration of biochemical models for testing dental restorations. Acta Biomaterialia, 2020, 109, 132-141.	8.3	11
104	Biofunctional Coatings for Dental Implants. Biological and Medical Physics Series, 2013, , 105-143.	0.4	9
105	Assessing near infrared optical properties of ceramic orthodontic brackets using crossâ€polarization optical coherence tomography. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2014, 102, 516-523.	3.4	9
106	Interactions of two enantiomers of a designer antimicrobial peptide with structural components of the bacterial cell envelope. Journal of Peptide Science, 2022, 28, e3299.	1.4	8
107	Tapping basement membrane motifs: Oral junctional epithelium for surface-mediated soft tissue attachment to prevent failure of percutaneous devices. Acta Biomaterialia, 2022, 141, 70-88.	8.3	8
108	The parotid secretory protein BPIFA2 is a salivary surfactant that affects lipopolysaccharide action. Experimental Physiology, 2020, 105, 1280-1292.	2.0	7

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109	Dual keratinocyte-attachment and anti-inflammatory coatings for soft tissue sealing around transmucosal oral implants. Biomaterials Science, 2022, 10, 665-677.	5.4	7
110	Development of standard protocols for biofilm-biomaterial interface testing. , 2022, 1, 100008.		7
111	Strontium- and peptide-modified silicate nanostructures for dual osteogenic and antimicrobial activity. , 2022, 135, 212735.		7
112	Biomimetic Treatments on Dental Implants for Immediate Loading Applications. Journal of Medical Devices, Transactions of the ASME, 2009, 3, .	0.7	6
113	Mechanism of fracture of NiTi superelastic endodontic rotary instruments. Journal of Materials Science: Materials in Medicine, 2018, 29, 131.	3.6	6
114	A Novel Dental Polymer with a Flipped External Ester Group Design that Resists Degradation via Polymer Backbone Preservation. ACS Biomaterials Science and Engineering, 2020, 6, 5609-5619.	5.2	5
115	Relevant Aspects of Piranha Passivation in Ti6Al4V Alloy Dental Meshes. Coatings, 2022, 12, 154.	2.6	5
116	Structure and Mechanical Properties of Cortical Bone. Pergamon Materials Series, 2000, 4, 33-71.	0.2	4
117	Development of a 3D matrix for modeling mammalian spinal cord injury in vitro. Neural Regeneration Research, 2016, 11, 1810.	3.0	4
118	Enzyme-Mediated Mineralization of TiO₂ Nanotubes Subjected to Different Heat Treatments. Crystal Growth and Design, 2019, 19, 7112-7121.	3.0	3
119	Measuring Wettability of Biosurfaces at the Microscale. Methods in Molecular Biology, 2012, 811, 163-177.	0.9	3
120	Development of Provisional Extracellular Matrix on Biomaterials Interface: Lessons from In Vitro Cell Culture. NATO Science for Peace and Security Series A: Chemistry and Biology, 2010, , 19-43.	0.5	3
121	Utilizing a degradation prediction pathway system to understand how a novel methacrylate derivative polymer with flipped external ester groups retains physico-mechanical properties following esterase exposure. Dental Materials, 2022, 38, 251-265.	3.5	3
122	Guiding bone formation using semiâ€onlay calcium phosphate implants in an ovine calvarial model. Journal of Tissue Engineering and Regenerative Medicine, 2022, 16, 435-447.	2.7	3
123	Cell Behaviour of Calcium Phosphate Bone Cement Modified with a Protein-Based Foaming Agent. Key Engineering Materials, 2005, 284-286, 117-120.	0.4	2
124	Nanostructured surfaces of cranio-maxillofacial and dental implants. , 2018, , 13-40.		2
125	Cell responses to titanium and titanium alloys. , 2020, , 423-452.		2
126	On the proliferation of cell proliferation tests. , 2020, , 175-193.		2

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127	Assessing ex vivo dental biofilms and in vivo composite restorations using cross-polarization optical coherence tomography. , 2012, , .		1
128	Systemic versus free antibiotic delivery in preventing acute exogenous implant related infection in a rat model. Journal of Orthopaedic Research, 2021, , .	2.3	1
129	Culture and characterization of various porcine integumentary-connective tissue-derived mesenchymal stromal cells to facilitate tissue adhesion to percutaneous metal implants. Stem Cell Research and Therapy, 2021, 12, 604.	5.5	1
130	Antimicrobial-peptide coating that ruptures the wall of Gram positive bacteria. Dental Materials, 2014, 30, e86-e87.	3.5	0
131	Correction to â€œRecombinant AMP/Polypeptide Self-Assembled Monolayers with Synergistic Antimicrobial Properties for Bacterial Strains of Medical Relevanceâ€. ACS Biomaterials Science and Engineering, 2019, 5, 6319-6319.	5.2	0
132	4138 Development of an Antibiofilm Resorbable Membrane for Treating Peri-implantitis. Journal of Clinical and Translational Science, 2020, 4, 121-121.	0.6	0