Xiangdong Zhu

List of Publications by Year
in descending order

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		201385	243296
71	2,284	27	44
papers	citations	h-index	g-index

76	76	76	2570
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Application of hydroxyapatite nanoparticles in tumor-associated bone segmental defect. Science Advances, 2019, 5, eaax6946.	4.7	175
2	Comparison of osteointegration property between PEKK and PEEK: Effects of surface structure and chemistry. Biomaterials, 2018, 170, 116-126.	5.7	141
3	Bone regeneration with micro/nano hybrid-structured biphasic calcium phosphate bioceramics at segmental bone defect and the induced immunoregulation of MSCs. Biomaterials, 2017, 147, 133-144.	5.7	134
4	Viscoelasticity in natural tissues and engineered scaffolds for tissue reconstruction. Acta Biomaterialia, 2019, 97, 74-92.	4.1	88
5	Role of biphasic calcium phosphate ceramic-mediated secretion of signaling molecules by macrophages in migration and osteoblastic differentiation of MSCs. Acta Biomaterialia, 2017, 51, 447-460.	4.1	76
6	A biomimetically hierarchical polyetherketoneketone scaffold for osteoporotic bone repair. Science Advances, 2020, 6, .	4.7	73
7	Effect of phase composition on protein adsorption and osteoinduction of porous calcium phosphate ceramics in mice. Journal of Biomedical Materials Research - Part A, 2014, 102, n/a-n/a.	2.1	66
8	Nano-Hydroxyapatite Coating Promotes Porous Calcium Phosphate Ceramic-Induced Osteogenesis Via BMP/Smad Signaling Pathway . International Journal of Nanomedicine, 2019, Volume 14, 7987-8000.	3.3	65
9	Roles of calcium phosphate-mediated integrin expression and MAPK signaling pathways in the osteoblastic differentiation of mesenchymal stem cells. Journal of Materials Chemistry B, 2016, 4, 2280-2289.	2.9	62
10	Stereolithography-Based Additive Manufacturing of High-Performance Osteoinductive Calcium Phosphate Ceramics by a Digital Light-Processing System. ACS Biomaterials Science and Engineering, 2020, 6, 1787-1797.	2.6	60
11	An improved polymeric sponge replication method for biomedical porous titanium scaffolds. Materials Science and Engineering C, 2017, 70, 1192-1199.	3.8	59
12	A bioceramic scaffold composed of strontium-doped three-dimensional hydroxyapatite whiskers for enhanced bone regeneration in osteoporotic defects. Theranostics, 2020, 10, 1572-1589.	4.6	58
13	Protein adsorption and zeta potentials of a biphasic calcium phosphate ceramic under various conditions. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2007, 82B, 65-73.	1.6	53
14	Selective effect of hydroxyapatite nanoparticles on osteoporotic and healthy bone formation correlates with intracellular calcium homeostasis regulation. Acta Biomaterialia, 2017, 59, 338-350.	4.1	53
15	Comparison of ectopic bone formation process induced by four calcium phosphate ceramics in mice. Materials Science and Engineering C, 2017, 70, 1000-1010.	3.8	51
16	Osteoinduction of porous titanium: A comparative study between acidâ€alkali and chemicalâ€thermal treatments. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2010, 95B, 387-396.	1.6	46
17	Fabrication of porous titanium scaffolds by stack sintering of microporous titanium spheres produced with centrifugal granulation technology. Materials Science and Engineering C, 2014, 43, 182-188.	3.8	44
18	Processing and Properties of Bioactive Surface-Porous PEKK. ACS Biomaterials Science and Engineering, 2016, 2, 977-986.	2.6	44

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19	Calcium phosphate altered the cytokine secretion of macrophages and influenced the homing of mesenchymal stem cells. Journal of Materials Chemistry B, 2018, 6, 4765-4774.	2.9	44
20	Electrochemical Deposition of Nanostructured Hydroxyapatite Coating on Titanium with Enhanced Early Stage Osteogenic Activity and Osseointegration . International Journal of Nanomedicine, 2020, Volume 15, 6605-6618.	3.3	43
21	Construction of a magnesium hydroxide/graphene oxide/hydroxyapatite composite coating on Mgâ€“Caâ€“Znâ€“Ag alloy to inhibit bacterial infection and promote bone regeneration. Bioactive Materials, 2022, 18, 354-367.	8.6	43
22	Healing of osteoporotic bone defects by micro-/nano-structured calcium phosphate bioceramics. Nanoscale, 2019, 11, 2721-2732.	2.8	38
23	Optimal regenerative repair of large segmental bone defect in a goat model with osteoinductive calcium phosphate bioceramic implants. Bioactive Materials, 2022, 11, 240-253.	8.6	37
24	Dynamic competitive adsorption of boneâ€related proteins on calcium phosphate ceramic particles with different phase composition and microstructure. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2013, 101B, 1069-1077.	1.6	33
25	Construction of surface HA/TiO2 coating on porous titanium scaffolds and its preliminary biological evaluation. Materials Science and Engineering C, 2017, 70, 1047-1056.	3.8	31
26	Effects of Nanotopography Regulation and Silicon Doping on Angiogenic and Osteogenic Activities of Hydroxyapatite Coating on Titanium Implant . International Journal of Nanomedicine, 2020, Volume 15, 4171-4189.	3.3	31
27	Regulation of surface micro/nano structure and composition of polyetheretherketone and their influence on the behavior of MC3T3-E1 pre-osteoblasts. Journal of Materials Chemistry B, 2019, 7, 5713-5724.	2.9	30
28	Fabrication and characterization of porous 3D whisker-covered calcium phosphate scaffolds. Materials Letters, 2014, 128, 179-182.	1.3	29
29	Injectable strontium-doped hydroxyapatite integrated with phosphoserine-tethered poly(epsilon-lysine) dendrons for osteoporotic bone defect repair. Journal of Materials Chemistry B, 2018, 6, 7974-7984.	2.9	29
30	The in vitro and in vivo anti-melanoma effects of hydroxyapatite nanoparticles: influences of material factors . International Journal of Nanomedicine, 2019, Volume 14, 1177-1191.	3.3	29
31	The morphological effect of nanostructured hydroxyapatite coatings on the osteoinduction and osteogenic capacity of porous titanium. Nanoscale, 2020, 12, 24085-24099.	2.8	26
32	Fabrication and preliminary biological evaluation of a highly porous biphasic calcium phosphate scaffold with nano-hydroxyapatite surface coating. Ceramics International, 2018, 44, 1304-1311.	2.3	23
33	The biological effect of recombinant humanized collagen on damaged skin induced by UV-photoaging: An in vivo study. Bioactive Materials, 2022, 11, 154-165.	8.6	23
34	Bone mineral density, microarchitectural and mechanical alterations of osteoporotic rat bone under long-term whole-body vibration therapy. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 53, 341-349.	1.5	22
35	Evaluation on the corrosion resistance, antibacterial property and osteogenic activity of biodegradable Mg-Ca and Mg-Ca-Zn-Ag alloys. Journal of Magnesium and Alloys, 2022, 10, 3380-3396.	5.5	21
36	The directional migration and differentiation of mesenchymal stem cells toward vascular endothelial cells stimulated by biphasic calcium phosphate ceramic. International Journal of Energy Production and Management, 2018, 5, 129-139.	1.9	19

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37	Machine learning on properties of multiscale multisource hydroxyapatite nanoparticles datasets with different morphologies and sizes. Npj Computational Materials, 2021, 7, .	3.5	19
38	Fabrication and biological evaluation of 3D-printed calcium phosphate ceramic scaffolds with distinct macroporous geometries through digital light processing technology. International Journal of Energy Production and Management, 2022, 9, .	1.9	18
39	A serum protein adsorption profile on BCP ceramics and influence of the elevated adsorption of adhesive proteins on the behaviour of MSCs. Journal of Materials Chemistry B, 2018, 6, 7383-7395.	2.9	17
40	Promoting proliferation and differentiation of BMSCs by green tea polyphenols functionalized porous calcium phosphate. International Journal of Energy Production and Management, 2018, 5, 35-41.	1.9	17
41	Osteoporotic bone recovery by a bamboo-structured bioceramic with controlled release of hydroxyapatite nanoparticles. Bioactive Materials, 2022, 17, 379-393.	8.6	17
42	The positive role of macrophage secretion stimulated by BCP ceramic in the ceramic-induced osteogenic differentiation of pre-osteoblasts via Smad-related signaling pathways. RSC Advances, 2016, 6, 102134-102141.	1.7	16
43	Surface Stability and Morphology of Calcium Phosphate Tuned by pH Values and Lactic Acid Additives: Theoretical and Experimental Study. ACS Applied Materials & Interfaces, 2022, 14, 4836-4851.	4.0	16
44	Administration duration influences the effects of lowâ€magnitude, highâ€frequency vibration on ovariectomized rat bone. Journal of Orthopaedic Research, 2016, 34, 1147-1157.	1.2	15
45	A systematic assessment of hydroxyapatite nanoparticles used in the treatment of melanoma. Nano Research, 2020, 13, 2106-2117.	5.8	15
46	Enhanced osteogenic activity and antibacterial performance in vitro of polyetheretherketone by plasma-induced graft polymerization of acrylic acid and incorporation of zinc ions. Journal of Materials Chemistry B, 2021, 9, 7506-7515.	2.9	15
47	The optimized preparation of HA/L-TiO2/D-TiO2 composite coating on porous titanium and its effect on the behavior osteoblasts. International Journal of Energy Production and Management, 2020, 7, 505-514.	1.9	14
48	Strontium combined with bioceramics for osteoporotic bone repair: Oral intake or as a dopant?. Applied Materials Today, 2021, 22, 100927.	2.3	14
49	Adsorption and Release Behaviors of Vascular Endothelial Growth Factor on Porous Hydroxyapatite Ceramic Under Competitive Conditions. Journal of Biomaterials and Tissue Engineering, 2014, 4, 155-161.	0.0	14
50	Evaluation and regulation of the corrosion resistance of macroporous titanium scaffolds with bioactive surface films for biomedical applications. Journal of Materials Chemistry B, 2019, 7, 3455-3467.	2.9	13
51	Complexation of Injectable Biphasic Calcium Phosphate with Phosphoserine-Presenting Dendrons with Enhanced Osteoregenerative Properties. ACS Applied Materials & Interfaces, 2020, 12, 37873-37884.	4.0	13
52	The Morphology of Hydroxyapatite Nanoparticles Regulates Cargo Recognition in Clathrin-Mediated Endocytosis. Frontiers in Molecular Biosciences, 2021, 8, 627015.	1.6	13
53	Nano-hydroxyapatite-evoked immune response synchronized with controllable immune adjuvant release for strengthening melanoma-specific growth inhibition. Acta Biomaterialia, 2022, 145, 159-171.	4.1	12
54	Positive role of calcium phosphate ceramics regulated inflammation in the osteogenic differentiation of mesenchymal stem cells. Journal of Biomedical Materials Research - Part A, 2020, 108, 1305-1320.	2.1	11

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55	Exposure to hydroxyapatite nanoparticles enhances Toll-like receptor 4 signal transduction and overcomes endotoxin tolerance in vitro and in vivo. Acta Biomaterialia, 2021, 135, 650-662.	4.1	11
56	Bioactive scaffolds based on collagen filaments with tunable physico-chemical and biological features. Soft Matter, 2020, 16, 4540-4548.	1.2	10
57	Application of femtosecond laser microfabrication in the preparation of advanced bioactive titanium surfaces. Journal of Materials Chemistry B, 2021, 9, 3912-3924.	2.9	10
58	A multi-level comparative analysis of human femoral cortical bone quality in healthy cadavers and surgical safe margin of osteosarcoma patients. Journal of the Mechanical Behavior of Biomedical Materials, 2017, 66, 111-118.	1.5	9
59	Study on an injectable biomedical paste using cross-linked sodium hyaluronate as a carrier of hydroxyapatite particles. Carbohydrate Polymers, 2018, 195, 378-386.	5.1	9
60	Role of Na+, K+-ATPase ion pump in osteoinduction. Acta Biomaterialia, 2021, 129, 293-308.	4.1	9
61	Enhanced bone regenerative properties of calcium phosphate ceramic granules in rabbit posterolateral spinal fusion through a reduction of grain size. Bioactive Materials, 2022, 11, 90-106.	8.6	9
62	Effect of Hydrothermal Media on the in-situ Whisker Growth on Biphasic Calcium Phosphate Ceramics. International Journal of Nanomedicine, 2021, Volume 16, 147-159.	3.3	8
63	The role of micro-vibration parameters in inflammatory responses of macrophages cultured on biphasic calcium phosphate ceramics and the resultant influence on osteogenic differentiation of mesenchymal stem cells. Journal of Materials Chemistry B, 2021, 9, 8003-8013.	2.9	7
64	The morphology of hydroxyapatite nanoparticles regulates clathrin-mediated endocytosis in melanoma cells and resultant anti-tumor efficiency. Nano Research, 2022, 15, 6256-6265.	5.8	7
65	Effect of process parameters on the microstructure and property of hydroxyapatite precursor powders and resultant sintered bodies. International Journal of Applied Ceramic Technology, 2019, 16, 444-454.	1.1	6
66	Application of osteoinductive calcium phosphate ceramics in childrenâ€™s endoscopic neurosurgery: report of five cases. International Journal of Energy Production and Management, 2018, 5, 221-227.	1.9	5
67	Application of osteoinductive calcium phosphate ceramics in giant cell tumor of the sacrum: report of six cases. International Journal of Energy Production and Management, 2022, 9, rbac017.	1.9	5
68	Comparative studies on micromechanical properties and biological performances in hydroxyapatite ceramics with micro/nanocrystalline. Journal of the American Ceramic Society, 2022, 105, 742.	1.9	4
69	Dopamine/DOPAC-assisted immobilization of bone morphogenetic protein-2 loaded Heparin/PEI nanogels onto three-dimentional printed calcium phosphate ceramics for enhanced osteoinductivity and osteogenicity. , 2022, 140, 213030.		4
70	Effect of surface microstructure on the antiâ€fibrosis/adhesion of hydroxyapatite ceramics in spinal repair of rabbits. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2019, 107, 2629-2637.	1.6	3
71	Porous titanium coating with sub-micro structure from anodic oxidation. , 2010, , .		0