Changshun Ruan

List of Publications by Year
in descending order

61 papers	3,198 citations	159585 30 h-index	155660 55 g-index
62 all docs	62 docs citations	62 times ranked	4678 citing authors

#	Article	IF	Citations
1	Cell-matrix reciprocity in 3D culture models with nonlinear elasticity. Bioactive Materials, 2022, 9, 316-331.	15.6	36
2	3D-printed pre-tapped-hole scaffolds facilitate one-step surgery of predictable alveolar bone augmentation and simultaneous dental implantation. Composites Part B: Engineering, 2022, 229, 109461.	12.0	24
3	An optogenetic approach for regulating human parathyroid hormone secretion. Nature Communications, 2022, 13, 771.	12.8	6
4	A universally dispersible graphene-based ink modifier facilitates 3D printing of multi-functional tissue-engineered scaffolds. Materials and Design, 2022, 216, 110551.	7.0	5
5	Stepwise 3D-spatio-temporal magnesium cationic niche: Nanocomposite scaffold mediated microenvironment for modulating intramembranous ossification. Bioactive Materials, 2021, 6, 503-519.	15.6	27
6	Bioinspired mineralized collagen scaffolds for bone tissue engineering. Bioactive Materials, 2021, 6, 1491-1511.	15.6	161
7	Coaxial-printed small-diameter polyelectrolyte-based tubes with an electrostatic self-assembly of heparin and YIGSR peptide for antithrombogenicity and endothelialization. Bioactive Materials, 2021, 6, 1628-1638.	15.6	16
8	Clay-based nanocomposite hydrogel with attractive mechanical properties and sustained bioactive ion release for bone defect repair. Journal of Materials Chemistry B, 2021, 9, 2394-2406.	5.8	21
9	Fluorescence visualization directly monitors microphase separation behavior of shape memory polyurethanes. Applied Materials Today, 2021, 23, 100986.	4.3	5
10	Hyaluronic acid facilitates bone repair effects of calcium phosphate cement by accelerating osteogenic expression. Bioactive Materials, 2021, 6, 3801-3811.	15.6	38
11	3D-bioprinted BMSC-laden biomimetic multiphasic scaffolds for efficient repair of osteochondral defects in an osteoarthritic rat model. Biomaterials, 2021, 279, 121216.	11.4	81
12	Fractal Design Boosts Extrusion-Based 3D Printing of Bone-Mimicking Radial-Gradient Scaffolds. Research, 2021, 2021, 9892689.	5.7	12
13	ROS self-generation and hypoxia self-enhanced biodegradable magnetic nanotheranostics for targeted tumor therapy. Nanoscale Horizons, 2020, 5, 350-358.	8.0	20
14	Coaxial Scaleâ€Up Printing of Diameterâ€Tunable Biohybrid Hydrogel Microtubes with High Strength, Perfusability, and Endothelialization. Advanced Functional Materials, 2020, 30, 2001485.	14.9	73
15	Ratiometric Fluorescent Microgels for Sensing Extracellular Microenvironment pH during Biomaterial Degradation. ACS Omega, 2020, 5, 19796-19804.	3.5	5
16	Modification of PLGA Scaffold by MSCâ€Derived Extracellular Matrix Combats Macrophage Inflammation to Initiate Bone Regeneration via TGFâ€‹<i>Î²</i>â€Induced Protein. Advanced Healthcare Materials, 2020, 9, e2000353.	7.6	48
17	Photochemical Activity of Black Phosphorus for Nearâ€Infrared Light Controlled In Situ Biomineralization. Advanced Science, 2020, 7, 2000439.	11.2	51
18	Tissueâ€engineered parathyroid gland and its regulatory secretion of parathyroid hormone. Journal of Tissue Engineering and Regenerative Medicine, 2020, 14, 1363-1377.	2.7	0

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19	Temperature-programmable and enzymatically solidifiable gelatin-based bioinks enable facile extrusion bioprinting. Biofabrication, 2020, 12, 045003.	7.1	21
20	High-strength hydrogel-based bioinks. Materials Chemistry Frontiers, 2019, 3, 1736-1746.	5.9	44
21	Three-Dimensional Printing of Biodegradable Piperazine-Based Polyurethane-Urea Scaffolds with Enhanced Osteogenesis for Bone Regeneration. ACS Applied Materials & Interfaces, 2019, 11, 9415-9424.	8.0	51
22	Osteochondral Regeneration with 3Dâ€Printed Biodegradable Highâ€Strength Supramolecular Polymer Reinforcedâ€Gelatin Hydrogel Scaffolds. Advanced Science, 2019, 6, 1900867.	11.2	239
23	Spatial Distribution of Biomaterial Microenvironment pH and Its Modulatory Effect on Osteoclasts at the Early Stage of Bone Defect Regeneration. ACS Applied Materials & Interfaces, 2019, 11, 9557-9572.	8.0	42
24	3D Printing of Mechanically Stable Calciumâ€Free Alginateâ€Based Scaffolds with Tunable Surface Charge to Enable Cell Adhesion and Facile Biofunctionalization. Advanced Functional Materials, 2019, 29, 1808439.	14.9	62
25	Bioinks: 3D Printing of Mechanically Stable Calciumâ€Free Alginateâ€Based Scaffolds with Tunable Surface Charge to Enable Cell Adhesion and Facile Biofunctionalization (Adv. Funct. Mater. 9/2019). Advanced Functional Materials, 2019, 29, 1970053.	14.9	2
26	A shear-thinning adhesive hydrogel reinforced by photo-initiated crosslinking as a fit-to-shape tissue sealant. Journal of Materials Chemistry B, 2019, 7, 6488-6499.	5.8	43
27	Biodegradable near-infrared-photoresponsive shape memory implants based on black phosphorus nanofillers. Biomaterials, 2018, 164, 11-21.	11.4	94
28	Enhanced activity and stability of industrial lipases immobilized onto spherelike bacterial cellulose. International Journal of Biological Macromolecules, 2018, 109, 1174-1181.	7.5	25
29	Blackâ€Phosphorusâ€Incorporated Hydrogel as a Sprayable and Biodegradable Photothermal Platform for Postsurgical Treatment of Cancer. Advanced Science, 2018, 5, 1700848.	11.2	289
30	Fabrication of Vascularized Bone Flaps with Sustained Release of Recombinant Human Bone Morphogenetic Protein-2 and Arteriovenous Bundle. Tissue Engineering - Part A, 2018, 24, 1413-1422.	3.1	17
31	Direct 3D Printing of High Strength Biohybrid Gradient Hydrogel Scaffolds for Efficient Repair of Osteochondral Defect. Advanced Functional Materials, 2018, 28, 1706644.	14.9	243
32	Nanocomposite Hydrogels: 3Dâ€Bioprinted Osteoblastâ€Laden Nanocomposite Hydrogel Constructs with Induced Microenvironments Promote Cell Viability, Differentiation, and Osteogenesis both In Vitro and In Vivo (Adv. Sci. 3/2018). Advanced Science, 2018, 5, 1870013.	11.2	4
33	Vital role of hydroxyapatite particle shape in regulating the porosity and mechanical properties of the sintered scaffolds. Journal of Materials Science and Technology, 2018, 34, 503-507.	10.7	22
34	3Dâ€Bioprinted Osteoblastâ€Laden Nanocomposite Hydrogel Constructs with Induced Microenvironments Promote Cell Viability, Differentiation, and Osteogenesis both In Vitro and In Vivo. Advanced Science, 2018, 5, 1700550.	11.2	142
35	Strontium incorporation improves the bone-forming ability of scaffolds derived from porcine bone. Colloids and Surfaces B: Biointerfaces, 2018, 162, 279-287.	5.0	18
36	Enhancing the Osteogenic Differentiation and Rapid Osseointegration of 3D Printed Ti6Al4V Implants via Nano-Topographic Modification. Journal of Biomedical Nanotechnology, 2018, 14, 707-715.	1.1	30

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37	Nanoclay Incorporated Polyethylene-Glycol Nanocomposite Hydrogels for Stimulating<i> In Vitro</i> and<i> In Vivo</i> Osteogenesis. Journal of Biomedical Nanotechnology, 2018, 14, 662-674.	1.1	26
38	Reversibly Reconfigurable Cross-Linking Induces Fusion of Separate Chitosan Hydrogel Films. ACS Applied Bio Materials, 2018, 1, 1695-1704.	4.6	12
39	13-93 bioactive glass/alginate composite scaffolds 3D printed under mild conditions for bone regeneration. RSC Advances, 2017, 7, 11880-11889.	3.6	37
40	3D-Printed High Strength Bioactive Supramolecular Polymer/Clay Nanocomposite Hydrogel Scaffold for Bone Regeneration. ACS Biomaterials Science and Engineering, 2017, 3, 1109-1118.	5.2	187
41	Enhanced osteointegration of poly(methylmethacrylate) bone cements by incorporating strontium-containing borate bioactive glass. Journal of the Royal Society Interface, 2017, 14, 20161057.	3.4	46
42	Incorporating isosorbide as the chain extender improves mechanical properties of linear biodegradable polyurethanes as potential bone regeneration materials. RSC Advances, 2017, 7, 13886-13895.	3.6	20
43	3D bioprinting scaffold using alginate/polyvinyl alcohol bioinks. Materials Letters, 2017, 189, 295-298.	2.6	76
44	The interfacial pH of acidic degradable polymeric biomaterials and its effects on osteoblast behavior. Scientific Reports, 2017, 7, 6794.	3.3	36
45	Stretching-induced nanostructures on shape memory polyurethane films and their regulation to osteoblasts morphology. Colloids and Surfaces B: Biointerfaces, 2016, 146, 431-441.	5.0	15
46	Effect of cellulose crystallinity on bacterial cellulose assembly. Cellulose, 2016, 23, 3417-3427.	4.9	59
47	Bioabsorbable cellulose composites prepared by an improved mineral-binding process for bone defect repair. Journal of Materials Chemistry B, 2016, 4, 1235-1246.	5.8	47
48	Adsorption Force of Fibronectin on Various Surface Chemistries and Its Vital Role in Osteoblast Adhesion. Biomacromolecules, 2015, 16, 973-984.	5.4	61
49	The efficient hemostatic effect of Antarctic krill chitosan is related to its hydration property. Carbohydrate Polymers, 2015, 132, 295-303.	10.2	41
50	Surface modification of paclitaxel-loaded tri-block copolymer PLGA-b-PEG-b-PLGA nanoparticles with protamine for liver cancer therapy. Journal of Nanoparticle Research, 2015, 17, 1.	1.9	19
51	Antibacterial effects and biocompatibility of titanium surfaces with graded silver incorporation in titania nanotubes. Biomaterials, 2014, 35, 4255-4265.	11.4	319
52	Piperazine-based polyurethane-ureas with controllable degradation as potential bone scaffolds. Polymer, 2014, 55, 1020-1027.	3.8	31
53	Tunable degradation of piperazineâ€based polyurethane ureas. Journal of Applied Polymer Science, 2014, 131, .	2.6	7
54	A novel functional biomaterial: Synthesis, characterization and in-vitro antibacterial activity. Materials Letters, 2013, 93, 282-284.	2.6	3

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55	Synthesis, characterization, and biocompatibility of a novel biomimetic material based on MGFâ€Ct24E modified poly(D, L â€lactic acid). Journal of Biomedical Materials Research - Part A, 2012, 100A, 3496-3502.	4.0	11
56	Design, synthesis and characterization of novel biodegradable shape memory polymers based on poly(<scp>D</scp>,<scp>L</scp>â€lactic acid) diol, hexamethylene diisocyanate and piperazine. Polymer International, 2012, 61, 524-530.	3.1	34
57	Synthesis and characterization of Ti(Tbse)₂ and its application as a catalyst for ROP of <i>rac</i>â€Lactide. Polymer International, 2012, 61, 1564-1574.	3.1	7
58	PEG derived hydrogel: A novel synthesis route under mild condition. Materials Letters, 2012, 67, 215-218.	2.6	12
59	Degradation studies on segmented polyurethanes prepared with poly (d, l-lactic acid) diol, hexamethylene diisocyanate and different chain extenders. Polymer Degradation and Stability, 2011, 96, 1687-1694.	5.8	40
60	Improved hydrolytic stability of poly(dl-lactide) with epoxidized soybean oil. Polymer Degradation and Stability, 2010, 95, 485-490.	5.8	12
61	Melt synthesis and characterization of poly(L-lactic acid) chain linked by multifunctional epoxy compound. Journal Wuhan University of Technology, Materials Science Edition, 2010, 25, 774-779.	1.0	23