

Changshun Ruan

List of Publications by Year in descending order

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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	Antibacterial effects and biocompatibility of titanium surfaces with graded silver incorporation in titania nanotubes. <i>Biomaterials</i> , 2014, 35, 4255-4265.	11.4	319
2	Black Phosphorus Incorporated Hydrogel as a Sprayable and Biodegradable Photothermal Platform for Postsurgical Treatment of Cancer. <i>Advanced Science</i> , 2018, 5, 1700848.	11.2	289
3	Direct 3D Printing of High Strength Biohybrid Gradient Hydrogel Scaffolds for Efficient Repair of Osteochondral Defect. <i>Advanced Functional Materials</i> , 2018, 28, 1706644.	14.9	243
4	Osteochondral Regeneration with 3D-Printed Biodegradable High-Strength Supramolecular Polymer Reinforced Gelatin Hydrogel Scaffolds. <i>Advanced Science</i> , 2019, 6, 1900867.	11.2	239
5	3D-Printed High Strength Bioactive Supramolecular Polymer/Clay Nanocomposite Hydrogel Scaffold for Bone Regeneration. <i>ACS Biomaterials Science and Engineering</i> , 2017, 3, 1109-1118.	5.2	187
6	Biinspired mineralized collagen scaffolds for bone tissue engineering. <i>Bioactive Materials</i> , 2021, 6, 1491-1511.	15.6	161
7	3D-Bioprinted Osteoblast-Laden Nanocomposite Hydrogel Constructs with Induced Microenvironments Promote Cell Viability, Differentiation, and Osteogenesis both In Vitro and In Vivo. <i>Advanced Science</i> , 2018, 5, 1700550.	11.2	142
8	Biodegradable near-infrared-photoresponsive shape memory implants based on black phosphorus nanofillers. <i>Biomaterials</i> , 2018, 164, 11-21.	11.4	94
9	3D-bioprinted BMSC-laden biomimetic multiphasic scaffolds for efficient repair of osteochondral defects in an osteoarthritic rat model. <i>Biomaterials</i> , 2021, 279, 121216.	11.4	81
10	3D bioprinting scaffold using alginate/polyvinyl alcohol bioinks. <i>Materials Letters</i> , 2017, 189, 295-298.	2.6	76
11	Coaxial Scale-Up Printing of Diameter-Tunable Biohybrid Hydrogel Microtubes with High Strength, Perfusability, and Endothelialization. <i>Advanced Functional Materials</i> , 2020, 30, 2001485.	14.9	73
12	3D Printing of Mechanically Stable Calcium-Free Alginate-Based Scaffolds with Tunable Surface Charge to Enable Cell Adhesion and Facile Biofunctionalization. <i>Advanced Functional Materials</i> , 2019, 29, 1808439.	14.9	62
13	Adsorption Force of Fibronectin on Various Surface Chemistries and Its Vital Role in Osteoblast Adhesion. <i>Biomacromolecules</i> , 2015, 16, 973-984.	5.4	61
14	Effect of cellulose crystallinity on bacterial cellulose assembly. <i>Cellulose</i> , 2016, 23, 3417-3427.	4.9	59
15	Three-Dimensional Printing of Biodegradable Piperazine-Based Polyurethane-Urea Scaffolds with Enhanced Osteogenesis for Bone Regeneration. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 9415-9424.	8.0	51
16	Photochemical Activity of Black Phosphorus for Near-Infrared Light Controlled In Situ Biom mineralization. <i>Advanced Science</i> , 2020, 7, 2000439.	11.2	51
17	Modification of PLGA Scaffold by MSC-Derived Extracellular Matrix Combats Macrophage Inflammation to Initiate Bone Regeneration via TGF- β -Induced Protein. <i>Advanced Healthcare Materials</i> , 2020, 9, e2000353.	7.6	48
18	Biabsorbable cellulose composites prepared by an improved mineral-binding process for bone defect repair. <i>Journal of Materials Chemistry B</i> , 2016, 4, 1235-1246.	5.8	47

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19	Enhanced osteointegration of poly(methylmethacrylate) bone cements by incorporating strontium-containing borate bioactive glass. <i>Journal of the Royal Society Interface</i> , 2017, 14, 20161057.	3.4	46
20	High-strength hydrogel-based bioinks. <i>Materials Chemistry Frontiers</i> , 2019, 3, 1736-1746.	5.9	44
21	A shear-thinning adhesive hydrogel reinforced by photo-initiated crosslinking as a fit-to-shape tissue sealant. <i>Journal of Materials Chemistry B</i> , 2019, 7, 6488-6499.	5.8	43
22	Spatial Distribution of Biomaterial Microenvironment pH and Its Modulatory Effect on Osteoclasts at the Early Stage of Bone Defect Regeneration. <i>ACS Applied Materials & Interfaces</i> , 2019, 11, 9557-9572.	8.0	42
23	The efficient hemostatic effect of Antarctic krill chitosan is related to its hydration property. <i>Carbohydrate Polymers</i> , 2015, 132, 295-303.	10.2	41
24	Degradation studies on segmented polyurethanes prepared with poly (d, l-lactic acid) diol, hexamethylene diisocyanate and different chain extenders. <i>Polymer Degradation and Stability</i> , 2011, 96, 1687-1694.	5.8	40
25	Hyaluronic acid facilitates bone repair effects of calcium phosphate cement by accelerating osteogenic expression. <i>Bioactive Materials</i> , 2021, 6, 3801-3811.	15.6	38
26	13-93 bioactive glass/alginate composite scaffolds 3D printed under mild conditions for bone regeneration. <i>RSC Advances</i> , 2017, 7, 11880-11889.	3.6	37
27	The interfacial pH of acidic degradable polymeric biomaterials and its effects on osteoblast behavior. <i>Scientific Reports</i> , 2017, 7, 6794.	3.3	36
28	Cell-matrix reciprocity in 3D culture models with nonlinear elasticity. <i>Bioactive Materials</i> , 2022, 9, 316-331.	15.6	36
29	Design, synthesis and characterization of novel biodegradable shape memory polymers based on poly(D,L-lactic acid) diol, hexamethylene diisocyanate and piperazine. <i>Polymer International</i> , 2012, 61, 524-530.	3.1	34
30	Piperazine-based polyurethane-ureas with controllable degradation as potential bone scaffolds. <i>Polymer</i> , 2014, 55, 1020-1027.	3.8	31
31	Enhancing the Osteogenic Differentiation and Rapid Osseointegration of 3D Printed Ti6Al4V Implants via Nano-Topographic Modification. <i>Journal of Biomedical Nanotechnology</i> , 2018, 14, 707-715.	1.1	30
32	Stepwise 3D-spatio-temporal magnesium cationic niche: Nanocomposite scaffold mediated microenvironment for modulating intramembranous ossification. <i>Bioactive Materials</i> , 2021, 6, 503-519.	15.6	27
33	Nanoclay Incorporated Polyethylene-Glycol Nanocomposite Hydrogels for Stimulating <i>In Vitro</i> and <i>In Vivo</i> Osteogenesis. <i>Journal of Biomedical Nanotechnology</i> , 2018, 14, 662-674.	1.1	26
34	Enhanced activity and stability of industrial lipases immobilized onto spherelike bacterial cellulose. <i>International Journal of Biological Macromolecules</i> , 2018, 109, 1174-1181.	7.5	25
35	3D-printed pre-tapped-hole scaffolds facilitate one-step surgery of predictable alveolar bone augmentation and simultaneous dental implantation. <i>Composites Part B: Engineering</i> , 2022, 229, 109461.	12.0	24
36	Melt synthesis and characterization of poly(L-lactic acid) chain linked by multifunctional epoxy compound. <i>Journal Wuhan University of Technology, Materials Science Edition</i> , 2010, 25, 774-779.	1.0	23

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37	Vital role of hydroxyapatite particle shape in regulating the porosity and mechanical properties of the sintered scaffolds. <i>Journal of Materials Science and Technology</i> , 2018, 34, 503-507.	10.7	22
38	Temperature-programmable and enzymatically solidifiable gelatin-based bioinks enable facile extrusion bioprinting. <i>Biofabrication</i> , 2020, 12, 045003.	7.1	21
39	Clay-based nanocomposite hydrogel with attractive mechanical properties and sustained bioactive ion release for bone defect repair. <i>Journal of Materials Chemistry B</i> , 2021, 9, 2394-2406.	5.8	21
40	Incorporating isosorbide as the chain extender improves mechanical properties of linear biodegradable polyurethanes as potential bone regeneration materials. <i>RSC Advances</i> , 2017, 7, 13886-13895.	3.6	20
41	ROS self-generation and hypoxia self-enhanced biodegradable magnetic nanotheranostics for targeted tumor therapy. <i>Nanoscale Horizons</i> , 2020, 5, 350-358.	8.0	20
42	Surface modification of paclitaxel-loaded tri-block copolymer PLGA-b-PEG-b-PLGA nanoparticles with protamine for liver cancer therapy. <i>Journal of Nanoparticle Research</i> , 2015, 17, 1.	1.9	19
43	Strontium incorporation improves the bone-forming ability of scaffolds derived from porcine bone. <i>Colloids and Surfaces B: Biointerfaces</i> , 2018, 162, 279-287.	5.0	18
44	Fabrication of Vascularized Bone Flaps with Sustained Release of Recombinant Human Bone Morphogenetic Protein-2 and Arteriovenous Bundle. <i>Tissue Engineering - Part A</i> , 2018, 24, 1413-1422.	3.1	17
45	Coaxial-printed small-diameter polyelectrolyte-based tubes with an electrostatic self-assembly of heparin and YIGSR peptide for antithrombogenicity and endothelialization. <i>Bioactive Materials</i> , 2021, 6, 1628-1638.	15.6	16
46	Stretching-induced nanostructures on shape memory polyurethane films and their regulation to osteoblasts morphology. <i>Colloids and Surfaces B: Biointerfaces</i> , 2016, 146, 431-441.	5.0	15
47	Improved hydrolytic stability of poly(dl-lactide) with epoxidized soybean oil. <i>Polymer Degradation and Stability</i> , 2010, 95, 485-490.	5.8	12
48	PEG derived hydrogel: A novel synthesis route under mild condition. <i>Materials Letters</i> , 2012, 67, 215-218.	2.6	12
49	Reversibly Reconfigurable Cross-Linking Induces Fusion of Separate Chitosan Hydrogel Films. <i>ACS Applied Bio Materials</i> , 2018, 1, 1695-1704.	4.6	12
50	Fractal Design Boosts Extrusion-Based 3D Printing of Bone-Mimicking Radial-Gradient Scaffolds. <i>Research</i> , 2021, 2021, 9892689.	5.7	12
51	Synthesis, characterization, and biocompatibility of a novel biomimetic material based on MGFâ€¢t24E modified poly(D, L â€¢lactic acid). <i>Journal of Biomedical Materials Research - Part A</i> , 2012, 100A, 3496-3502.	4.0	11
52	Synthesis and characterization of Ti(Tbse) ₂ and its application as a catalyst for ROP of <i>l</i> -lactide. <i>Polymer International</i> , 2012, 61, 1564-1574.	3.1	7
53	Tunable degradation of piperazineâ€¢based polyurethane ureas. <i>Journal of Applied Polymer Science</i> , 2014, 131, .	2.6	7
54	An optogenetic approach for regulating human parathyroid hormone secretion. <i>Nature Communications</i> , 2022, 13, 771.	12.8	6

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55	Ratiometric Fluorescent Microgels for Sensing Extracellular Microenvironment pH during Biomaterial Degradation. ACS Omega, 2020, 5, 19796-19804.	3.5	5
56	Fluorescence visualization directly monitors microphase separation behavior of shape memory polyurethanes. Applied Materials Today, 2021, 23, 100986.	4.3	5
57	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
58	Nanocomposite Hydrogels: 3D-Bioprinted Osteoblast-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
59	A novel functional biomaterial: Synthesis, characterization and in-vitro antibacterial activity. Materials Letters, 2013, 93, 282-284.	2.6	3
60	Bioinks: 3D Printing of Mechanically Stable Calcium-Free Alginate-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
61	Tissue-engineered parathyroid gland and its regulatory secretion of parathyroid hormone. Journal of Tissue Engineering and Regenerative Medicine, 2020, 14, 1363-1377.	2.7	0