Lijie Zhang

List of Publications by Citations

124 papers	7,028 citations	50 h-index	82 g-index
134 ext. papers	8,185 ext. citations	7.2 avg, IF	6.44 L-index

#	Paper	IF	Citations
124	Nanotechnology and nanomaterials: Promises for improved tissue regeneration. *Nano Today*, **2009**, 4, 66-80	17.9	832
123	Carbon nanofibers and carbon nanotubes in regenerative medicine. *Advanced Drug Delivery Reviews* , **2009**, 61, 1097-114	18.5	355
122	The role of tissue engineering in articular cartilage repair and regeneration. *Critical Reviews in Biomedical Engineering*, **2009**, 37, 1-57	1.1	274
121	3D Bioprinting for Organ Regeneration. *Advanced Healthcare Materials*, **2017**, 6, 1601118	10.1	254
120	4D printing smart biomedical scaffolds with novel soybean oil epoxidized acrylate. *Scientific Reports* , **2016**, 6, 27226	4.9	200
119	4D printing of polymeric materials for tissue and organ regeneration. *Materials Today*, **2017**, 20, 577-591	21.8	200
118	3D Bioprinting a Cell-Laden Bone Matrix for Breast Cancer Metastasis Study. *ACS Applied Materials & Interfaces*, **2016**, 8, 30017-30026	9.5	176
117	Integrating biologically inspired nanomaterials and table-top stereolithography for 3D printed biomimetic osteochondral scaffolds. *Nanoscale*, **2015**, 7, 14010-22	7.7	151
116	Three-dimensional printing of nanomaterial scaffolds for complex tissue regeneration. *Tissue Engineering - Part B: Reviews*, **2015**, 21, 103-14	7.9	144
115	3D printed nanocomposite matrix for the study of breast cancer bone metastasis. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2016**, 12, 69-79	6	131
114	3D printing nano conductive multi-walled carbon nanotube scaffolds for nerve regeneration. *Journal of Neural Engineering*, **2018**, 15, 016018	5	129
113	Hierarchical Fabrication of Engineered Vascularized Bone Biphasic Constructs via Dual 3D Bioprinting: Integrating Regional Bioactive Factors into Architectural Design. *Advanced Healthcare Materials*, **2016**, 5, 2174-81	10.1	122
112	Arginine-glycine-aspartic acid modified rosette nanotube-hydrogel composites for bone tissue engineering. *Biomaterials*, **2009**, 30, 1309-20	15.6	118
111	3D bioprinted graphene oxide-incorporated matrix for promoting chondrogenic differentiation of human bone marrow mesenchymal stem cells. *Carbon*, **2017**, 116, 615-624	10.4	109
110	A synergistic approach to the design, fabrication and evaluation of 3D printed micro and nano featured scaffolds for vascularized bone tissue repair. *Nanotechnology*, **2016**, 27, 064001	3.4	106
109	Fabrication of a Highly Aligned Neural Scaffold via a Table Top Stereolithography 3D Printing and Electrospinning. *Tissue Engineering - Part A*, **2017**, 23, 491-502	3.9	101
108	Development of 3D printable conductive hydrogel with crystallized PEDOT:PSS for neural tissue engineering. *Materials Science and Engineering C*, **2019**, 99, 582-590	8.3	99

107	3D bioprinting mesenchymal stem cell-laden construct with core-shell nanospheres for cartilage tissue engineering. *Nanotechnology*, **2018**, 29, 185101	3.4	92
106	Four-Dimensional Printing Hierarchy Scaffolds with Highly Biocompatible Smart Polymers for Tissue Engineering Applications. *Tissue Engineering - Part C: Methods*, **2016**, 22, 952-963	2.9	90
105	Biologically Inspired Smart Release System Based on 3D Bioprinted Perfused Scaffold for Vascularized Tissue Regeneration. *Advanced Science*, **2016**, 3, 1600058	13.6	90
104	Highly aligned nanocomposite scaffolds by electrospinning and electrospraying for neural tissue regeneration. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2015**, 11, 693-704	6	88
103	3D nano/microfabrication techniques and nanobiomaterials for neural tissue regeneration. *Nanomedicine*, **2014**, 9, 859-75	5.6	88
102	Biomimetic three-dimensional nanocrystalline hydroxyapatite and magnetically synthesized single-walled carbon nanotube chitosan nanocomposite for bone regeneration. *International Journal of Nanomedicine*, **2012**, 7, 2087-99	7.3	82
101	Enhanced bone tissue regeneration using a 3D printed microstructure incorporated with a hybrid nano hydrogel. *Nanoscale*, **2017**, 9, 5055-5062	7.7	81
100	3D Bioprinting: Biologically Inspired Smart Release System Based on 3D Bioprinted Perfused Scaffold for Vascularized Tissue Regeneration (Adv. Sci. 8/2016). *Advanced Science*, **2016**, 3,	13.6	78
99	Recent progress in interfacial tissue engineering approaches for osteochondral defects. *Annals of Biomedical Engineering*, **2012**, 40, 1628-40	4.7	77
98	3D bioprinting for cardiovascular regeneration and pharmacology. *Advanced Drug Delivery Reviews*, **2018**, 132, 252-269	18.5	76
97	Improved Human Bone Marrow Mesenchymal Stem Cell Osteogenesis in 3D Bioprinted Tissue Scaffolds with Low Intensity Pulsed Ultrasound Stimulation. *Scientific Reports*, **2016**, 6, 32876	4.9	73
96	Stereolithographic 4D Bioprinting of Multiresponsive Architectures for Neural Engineering. *Advanced Biology*, **2018**, 2, 1800101	3.5	73
95	Three-Dimensional-Bioprinted Dopamine-Based Matrix for Promoting Neural Regeneration. *ACS Applied Materials & Interfaces*, **2018**, 10, 8993-9001	9.5	72
94	Development of novel three-dimensional printed scaffolds for osteochondral regeneration. *Tissue Engineering - Part A*, **2015**, 21, 403-15	3.9	70
93	Biologically inspired rosette nanotubes and nanocrystalline hydroxyapatite hydrogel nanocomposites as improved bone substitutes. *Nanotechnology*, **2009**, 20, 175101	3.4	67
92	Enhanced osteoblast adhesion on self-assembled nanostructured hydrogel scaffolds. *Tissue Engineering - Part A*, **2008**, 14, 1353-64	3.9	66
91	The role of aquaporins in the anti-glioblastoma capacity of the cold plasma-stimulated medium. *Journal Physics D: Applied Physics*, **2017**, 50, 055401	3	65
90	Design of biomimetic and bioactive cold plasma-modified nanostructured scaffolds for enhanced osteogenic differentiation of bone marrow-derived mesenchymal stem cells. *Tissue Engineering - Part A*, **2014**, 20, 1060-71	3.9	64

89	Enhanced neural stem cell functions in conductive annealed carbon nanofibrous scaffolds with electrical stimulation. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2018**, 14, 2485-2494	6	64
88	Titanium dental implants surface-immobilized with gold nanoparticles as osteoinductive agents for rapid osseointegration. *Journal of Colloid and Interface Science*, **2016**, 469, 129-137	9.3	63
87	The Specific Vulnerabilities of Cancer Cells to the Cold Atmospheric Plasma-Stimulated Solutions. *Scientific Reports*, **2017**, 7, 4479	4.9	63
86	Enhanced human bone marrow mesenchymal stem cell chondrogenic differentiation in electrospun constructs with carbon nanomaterials. *Carbon*, **2016**, 97, 1-13	10.4	61
85	Engineering a biomimetic three-dimensional nanostructured bone model for breast cancer bone metastasis study. *Acta Biomaterialia*, **2015**, 14, 164-74	10.8	60
84	Photolithographic-stereolithographic-tandem fabrication of 4D smart scaffolds for improved stem cell cardiomyogenic differentiation. *Biofabrication*, **2018**, 10, 035007	10.5	57
83	Design of a Novel 3D Printed Bioactive Nanocomposite Scaffold for Improved Osteochondral Regeneration. *Cellular and Molecular Bioengineering*, **2015**, 8, 416-432	3.9	56
82	Multifunctional hydrogel coatings on the surface of neural cuff electrode for improving electrode-nerve tissue interfaces. *Acta Biomaterialia*, **2016**, 39, 25-33	10.8	55
81	3D printing of novel osteochondral scaffolds with graded microstructure. *Nanotechnology*, **2016**, 27, 414001	3.4	54
80	Enhanced human bone marrow mesenchymal stem cell functions in novel 3D cartilage scaffolds with hydrogen treated multi-walled carbon nanotubes. *Nanotechnology*, **2013**, 24, 365102	3.4	53
79	Development of Novel 3-D Printed Scaffolds With Core-Shell Nanoparticles for Nerve Regeneration. *IEEE Transactions on Biomedical Engineering*, **2017**, 64, 408-418	5	52
78	4D physiologically adaptable cardiac patch: A 4-month in vivo study for the treatment of myocardial infarction. *Science Advances*, **2020**, 6, eabb5067	14.3	52
77	Electrospun fibrous scaffolds for bone and cartilage tissue generation: recent progress and future developments. *Tissue Engineering - Part B: Reviews*, **2012**, 18, 478-86	7.9	52
76	Synergistic Effect of Cold Atmospheric Plasma and Drug Loaded Core-shell Nanoparticles on Inhibiting Breast Cancer Cell Growth. *Scientific Reports*, **2016**, 6, 21974	4.9	51
75	Recent advances in 3D printing: vascular network for tissue and organ regeneration. *Translational Research*, **2019**, 211, 46-63	11	50
74	Advances in 3D Bioprinting for Neural Tissue Engineering. *Advanced Biology*, **2018**, 2, 1700213	3.5	50
73	Biomimetic helical rosette nanotubes and nanocrystalline hydroxyapatite coatings on titanium for improving orthopedic implants. *International Journal of Nanomedicine*, **2008**, 3, 323-33	7.3	47
72	A 3D printed nano bone matrix for characterization of breast cancer cell and osteoblast interactions. *Nanotechnology*, **2016**, 27, 315103	3.4	46

71	Enhanced endothelial cell functions on rosette nanotube-coated titanium vascular stents. *International Journal of Nanomedicine*, **2009**, 4, 91-7	7.3	44
70	In vitro and in vivo evaluation of 3D bioprinted small-diameter vasculature with smooth muscle and endothelium. *Biofabrication*, **2019**, 12, 015004	10.5	44
69	The Strong Cell-based Hydrogen Peroxide Generation Triggered by Cold Atmospheric Plasma. *Scientific Reports*, **2017**, 7, 10831	4.9	43
68	Bio-Based Polymers for 3D Printing of Bioscaffolds. *Polymer Reviews*, **2018**, 58, 668-687	14	43
67	3D printing scaffold coupled with low level light therapy for neural tissue regeneration. *Biofabrication*, **2017**, 9, 025002	10.5	42
66	A novel near-infrared light responsive 4D printed nanoarchitecture with dynamically and remotely controllable transformation. *Nano Research*, **2019**, 12, 1381-1388	10	40
65	Three-Dimensional Printing Articular Cartilage: Recapitulating the Complexity of Native Tissue. *Tissue Engineering - Part B: Reviews*, **2017**, 23, 225-236	7.9	40
64	Novel biologically-inspired rosette nanotube PLLA scaffolds for improving human mesenchymal stem cell chondrogenic differentiation. *Biomedical Materials (Bristol)*, **2013**, 8, 065003	3.5	39
63	Greater osteoblast and mesenchymal stem cell adhesion and proliferation on titanium with hydrothermally treated nanocrystalline hydroxyapatite/magnetically treated carbon nanotubes. *Journal of Nanoscience and Nanotechnology*, **2012**, 12, 7692-702	1.3	38
62	Three-Dimensional Printing Biologically Inspired DNA-Based Gradient Scaffolds for Cartilage Tissue Regeneration. *ACS Applied Materials & Interfaces*, **2020**, 12, 33219-33228	9.5	35
61	Gelatin methacrylamide hydrogel with graphene nanoplatelets for neural cell-laden 3D bioprinting. *Annual International Conference of the IEEE Engineering in Medicine and Biology Society IEEE Engineering in Medicine and Biology Society Annual International Conference*, **2016**, 2016, 4185-4188	0.9	35
60	Tuning cell adhesion on titanium with osteogenic rosette nanotubes. *Journal of Biomedical Materials Research - Part A*, **2010**, 95, 550-63	5.4	34
59	3D Printed scaffolds with hierarchical biomimetic structure for osteochondral regeneration. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2019**, 19, 58-70	6	31
58	4D printing soft robotics for biomedical applications. *Additive Manufacturing*, **2020**, 36, 101567	6.1	30
57	Bioactive rosette nanotube-hydroxyapatite nanocomposites improve osteoblast functions. *Tissue Engineering - Part A*, **2012**, 18, 1741-50	3.9	29
56	4D anisotropic skeletal muscle tissue constructs fabricated by staircase effect strategy. *Biofabrication*, **2019**, 11, 035030	10.5	26
55	Lipid Coated Microbubbles and Low Intensity Pulsed Ultrasound Enhance Chondrogenesis of Human Mesenchymal Stem Cells in 3D Printed Scaffolds. *Scientific Reports*, **2016**, 6, 37728	4.9	26
54	Aggregation State of Metal-Based Nanomaterials at the Pulmonary Surfactant Film Determines Biophysical Inhibition. *Environmental Science & Technology*, **2018**, 52, 8920-8929	10.3	26

53	Biomimetic biphasic 3-D nanocomposite scaffold for osteochondral regeneration. *AICHE Journal*, **2014**, 60, 432-442	3.6	25
52	Engineering a Novel 3D Printed Vascularized Tissue Model for Investigating Breast Cancer Metastasis to Bone. *Advanced Healthcare Materials*, **2020**, 9, e1900924	10.1	25
51	4D Self-Morphing Culture Substrate for Modulating Cell Differentiation. *Advanced Science*, **2020**, 7, 1902403	15.8	24
50	Cold Atmospheric Plasma Modified Electrospun Scaffolds with Embedded Microspheres for Improved Cartilage Regeneration. *PLoS ONE*, **2015**, 10, e0134729	3.7	24
49	Advanced 4D Bioprinting Technologies for Brain Tissue Modeling and Study. *International Journal of Smart and Nano Materials*, **2019**, 10, 177-204	3.6	23
48	3D Bioprinting-Tunable Small-Diameter Blood Vessels with Biomimetic Biphasic Cell Layers. *ACS Applied Materials & Interfaces*, **2020**, 12, 45904-45915	9.5	23
47	Directly Induced Neural Differentiation of Human Adipose-Derived Stem Cells Using Three-Dimensional Culture System of Conductive Microwell with Electrical Stimulation. *Tissue Engineering - Part A*, **2018**, 24, 537-545	3.9	23
46	Touch-Spun Nanofibers for Nerve Regeneration. *ACS Applied Materials & Interfaces*, **2020**, 12, 2067-2075	9.5	21
45	4D Printed Cardiac Construct with Aligned Myofibers and Adjustable Curvature for Myocardial Regeneration. *ACS Applied Materials & Interfaces*, **2021**, 13, 12746-12758	9.5	21
44	Integrating three-dimensional printing and nanotechnology for musculoskeletal regeneration. *Nanotechnology*, **2017**, 28, 382001	3.4	19
43	Biophysical Assessment of Pulmonary Surfactant Predicts the Lung Toxicity of Nanomaterials. *Small Methods*, **2018**, 2, 1700367	12.8	18
42	One-Step Fabrication of AgNPs Embedded Hybrid Dual Nanofibrous Oral Wound Dressings. *Journal of Biomedical Nanotechnology*, **2016**, 12, 2041-50	4	18
41	Integration of biological systems with electronic-mechanical assemblies. *Acta Biomaterialia*, **2019**, 95, 91-111	10.8	16
40	3D printing multiphasic osteochondral tissue constructs with nano to micro features via PCL based bioink. *Bioprinting*, **2020**, 17, e00066	7	15
39	Single-step synthesis of carbon encapsulated magnetic nanoparticles in arc plasma and potential biomedical applications. *Journal of Colloid and Interface Science*, **2018**, 509, 414-421	9.3	14
38	Recent advances in bioprinting technologies for engineering cardiac tissue. *Materials Science and Engineering C*, **2021**, 124, 112057	8.3	14
37	Integrating cold atmospheric plasma with 3D printed bioactive nanocomposite scaffold for cartilage regeneration. *Materials Science and Engineering C*, **2020**, 111, 110844	8.3	12
36	Simulated Body Fluid Nucleation of Three-Dimensional Printed Elastomeric Scaffolds for Enhanced Osteogenesis. *Tissue Engineering - Part A*, **2016**, 22, 940-8	3.9	11

35	3D printing novel in vitro cancer cell culture model systems for lung cancer stem cell study. *Materials Science and Engineering C*, **2021**, 122, 111914	8.3	11
34	Dual 3D printing for vascularized bone tissue regeneration. *Acta Biomaterialia*, **2021**, 123, 263-274	10.8	11
33	Three-Dimensional Printing: A Catalyst for a Changing Orthopaedic Landscape. *JBJS Reviews*, **2020**, 8, e0076	2.6	10
32	How can 3D printing be a powerful tool in nanomedicine?. *Nanomedicine*, **2018**, 13, 251-253	5.6	10
31	Enhanced neuronal differentiation of neural stem cells with mechanically enhanced touch-spun nanofibrous scaffolds. *Nanomedicine: Nanotechnology, Biology, and Medicine*, **2020**, 24, 102152	6	10
30	Enhanced Osteogenic Differentiation of Human Mesenchymal Stem Cells Using Microbubbles and Low Intensity Pulsed Ultrasound on 3D Printed Scaffolds. *Advanced Biology*, **2019**, 3, e1800257	3.5	10
29	4D printing in biomedical applications: emerging trends and technologies. *Journal of Materials Chemistry B*, **2021**, 9, 7608-7632	7.3	10
28	Enhanced human bone marrow mesenchymal stem cell functions on cathodic arc plasma-treated titanium. *International Journal of Nanomedicine*, **2015**, 10, 7385-96	7.3	8
27	Inhibition of Human Breast Cancer Cell Proliferation by Low-Intensity Ultrasound Stimulation. *Journal of Ultrasound in Medicine*, **2020**, 39, 2043-2052	2.9	6
26	Nanotechnology and 3D Bioprinting for Neural Tissue Regeneration **2015**, 307-331		5
25	Nanobiotechnology and Nanostructured Therapeutic Delivery Systems. *Recent Patents on Biomedical Engineering*, **2012**, 5, 29-40		5
24	Biomaterials and 3D Printing Techniques for Neural Tissue Regeneration **2016**, 1-24		5
23	Emerging 4D printing strategies for next-generation tissue regeneration and medical devices.. *Advanced Materials*, **2021**, e2109198	24	5
22	Nanomaterials for Improved Orthopedic and Bone Tissue Engineering Applications **2010**, 205-241		4
21	Recent advances in bioprinting technologies for engineering hepatic tissue. *Materials Science and Engineering C*, **2021**, 123, 112013	8.3	4
20	Enhanced Human Bone Marrow Mesenchymal Stem Cell Chondrogenic Differentiation on Cold Atmospheric Plasma Modified Cartilage Scaffold. *Materials Research Society Symposia Proceedings*, **2014**, 1723, 1		3
19	Development of a Novel 3D Bioprinted In Vitro Nano Bone Model for Breast Cancer Bone Metastasis Study. *Materials Research Society Symposia Proceedings*, **2014**, 1724, 1		3
18	Enhanced Human Bone Marrow Mesenchymal Stem Cell Functions in 3D Bioprinted Biologically Inspired Osteochondral Construct **2013**,		2

17	Nanotechnology: A Toolkit for Cell Behavior **2015**, 1-24		1
16	Development of Biomimetic and Bioactive 3D Nanocomposite Scaffolds for Osteochondral Regeneration **2013**,		1
15	Development of a Biomimetic Electrospun Microfibrous Scaffold With Multiwall Carbon Nanotubes for Cartilage Regeneration **2013**,		1
14	Novel Biologically Inspired Nanostructured Scaffolds for Directing Chondrogenic Differentiation of Mesenchymal Stem Cells. *Materials Research Society Symposia Proceedings*, **2013**, 1498, 59-66		1
13	Orthopedic implants from bioactive rosette nanotubes/poly(2-hydroxyethyl methacrylate)/nano-hydroxyapatite composites. *Materials Research Society Symposia Proceedings*, **2012**, 1417, 99		1
12	Development of Novel Nanostructured Tissue Engineering Scaffold Materials through Self-assembly for Bed-side Orthopedic Applications. *Materials Research Society Symposia Proceedings*, **2006**, 950, 1		1
11	Osteoblast Behaviors on Novel Self-assembled Helical Rosette Nanotubes and Hydrogel Composites for Bone Tissue Engineering. *Materials Research Society Symposia Proceedings*, **2007**, 1056, 1		1
10	The effect of insertion technique and surgeon experience on the pullout strength of orthopaedic screws. *Current Orthopaedic Practice*, **2016**, 27, 69-71	0.4	1
9	Programmable Culture Substrates: 4D Self-Morphing Culture Substrate for Modulating Cell Differentiation (Adv. Sci. 5/2020). *Advanced Science*, **2020**, 7, 2070034	13.6	0
8	Acoustic Droplet Vaporization of Perfluorocarbon Droplets in 3D-Printable Gelatin Methacrylate Scaffolds. *Ultrasound in Medicine and Biology*, **2021**, 47, 3263-3274	3.5	0
7	Nanotechnology and 3D/4D Bioprinting for Neural Tissue Regeneration **2022**, 427-458		0
6	An in vitro analysis of the effect of geometry-induced flows on endothelial cell behavior in 3D printed small-diameter blood vessels **2022**, 212832		0
5	TISSUE ENGINEERING APPROACHES FOR KNEE JOINT REPAIR **2014**, 371-400		
4	Design a Biologically Inspired Nanostructured Coating for Better Osseointegration. *Materials Research Society Symposia Proceedings*, **2012**, 1418, 111		
3	Different Cell Responses on Biologically Inspired Nano-coatings for Orthopedic Applications. *Materials Research Society Symposia Proceedings*, **2009**, 1209, 1		
2	Cell Sources and Nanotechnology for Neural Tissue Engineering **2016**, 207-226		
1	Nanotechnology: A Toolkit for Cell Behavior **2015**, 3-32		