Bin Duan

List of Publications by Year
in descending order

81 papers	4,899 citations	87843 38 h-index	95218 68 g-index
87 all docs	87 docs citations	87 times ranked	6238 citing authors

#	Article	IF	Citations
1	3D Bioprinting of heterogeneous aortic valve conduits with alginate/gelatin hydrogels. Journal of Biomedical Materials Research - Part A, 2013, 101A, 1255-1264.	2.1	818
2	Three-dimensional nanocomposite scaffolds fabricated via selective laser sintering for bone tissue engineering. Acta Biomaterialia, 2010, 6, 4495-4505.	4.1	366
3	State-of-the-Art Review of 3D Bioprinting for Cardiovascular Tissue Engineering. Annals of Biomedical Engineering, 2017, 45, 195-209.	1.3	242
4	Living nanofiber yarn-based woven biotextiles for tendon tissue engineering using cell tri-culture and mechanical stimulation. Acta Biomaterialia, 2017, 62, 102-115.	4.1	147
5	Current progress in tissue engineering of heart valves: multiscale problems, multiscale solutions. Expert Opinion on Biological Therapy, 2015, 15, 1155-1172.	1.4	139
6	Customized Caâ€"P/PHBV nanocomposite scaffolds for bone tissue engineering: design, fabrication, surface modification and sustained release of growth factor. Journal of the Royal Society Interface, 2010, 7, S615-29.	1.5	131
7	Stiffness and adhesivity control aortic valve interstitial cell behavior within hyaluronic acid based hydrogels. Acta Biomaterialia, 2013, 9, 7640-7650.	4.1	123
8	Optimized fabrication of Caâ€"P/PHBV nanocomposite scaffolds via selective laser sintering for bone tissue engineering. Biofabrication, 2011, 3, 015001.	3.7	108
9	Mineralized nanofiber segments coupled with calcium-binding BMP-2 peptides for alveolar bone regeneration. Acta Biomaterialia, 2019, 85, 282-293.	4.1	108
10	3D Bioprinting of Breast Cancer Models for Drug Resistance Study. ACS Biomaterials Science and Engineering, 2018, 4, 4401-4411.	2.6	104
11	Fabrication of Aligned Nanofiber Polymer Yarn Networks for Anisotropic Soft Tissue Scaffolds. ACS Applied Materials & Interfaces, 2016, 8, 16950-16960.	4.0	102
12	Three-dimensional hyaluronic acid hydrogel-based models for in vitro human iPSC-derived NPC culture and differentiation. Journal of Materials Chemistry B, 2017, 5, 3870-3878.	2.9	95
13	Prevascularization of 3D printed bone scaffolds by bioactive hydrogels and cell coâ€culture. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2018, 106, 1788-1798.	1.6	94
14	The LINC complex, mechanotransduction, and mesenchymal stem cell function and fate. Journal of Biological Engineering, 2019, 13, 68.	2.0	91
15	Active tissue stiffness modulation controls valve interstitial cell phenotype and osteogenic potential in 3D culture. Acta Biomaterialia, 2016, 36, 42-54.	4.1	84
16	Chikungunya Virus: Pathophysiology, Mechanism, and Modeling. Viruses, 2017, 9, 368.	1.5	84
17	Fabrication of versatile dynamic hyaluronic acid-based hydrogels. Carbohydrate Polymers, 2020, 233, 115803.	5.1	83
18	Living nano-micro fibrous woven fabric/hydrogel composite scaffolds for heart valve engineering. Acta Biomaterialia, 2017, 51, 89-100.	4.1	81

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19	3D printed composite scaffolds with dual small molecule delivery for mandibular bone regeneration. Biofabrication, 2020, 12, 035020.	3.7	77
20	3D printing of silk fibroin-based hybrid scaffold treated with platelet rich plasma for bone tissue engineering. Bioactive Materials, 2019, 4, 256-260.	8.6	76
21	Electrospun thymosin Beta-4 loaded PLGA/PLA nanofiber/ microfiber hybrid yarns for tendon tissue engineering application. Materials Science and Engineering C, 2020, 106, 110268.	3.8	75
22	Optimizing Photo-Encapsulation Viability of Heart Valve Cell Types in 3D Printable Composite Hydrogels. Annals of Biomedical Engineering, 2017, 45, 360-377.	1.3	71
23	Anisotropic scaffolds for peripheral nerve and spinal cord regeneration. Bioactive Materials, 2021, 6, 4141-4160.	8.6	71
24	Selective laser sintering and its application in biomedical engineering. MRS Bulletin, 2011, 36, 998-1005.	1.7	69
25	State-of-the-art review of advanced electrospun nanofiber yarn-based textiles for biomedical applications. Applied Materials Today, 2022, 27, 101473.	2.3	66
26	Tannic acid-inspired, self-healing, and dual stimuli responsive dynamic hydrogel with potent antibacterial and anti-oxidative properties. Journal of Materials Chemistry B, 2021, 9, 7182-7195.	2.9	65
27	Effect of scaffold morphology and cell co-culture on tenogenic differentiation of HADMSC on centrifugal melt electrospun poly (Lâ€'lactic acid) fibrous meshes. Biofabrication, 2017, 9, 044106.	3.7	61
28	3D printing of multilayered scaffolds for rotator cuff tendon regeneration. Bioactive Materials, 2020, 5, 636-643.	8.6	60
29	Crystallization kinetics of poly(<scp>L</scp>â€lactide)/carbonated hydroxyapatite nanocomposite microspheres. Journal of Applied Polymer Science, 2009, 113, 4100-4115.	1.3	59
30	Short-term hypoxic preconditioning promotes prevascularization in 3D bioprinted bone constructs with stromal vascular fraction derived cells. RSC Advances, 2017, 7, 29312-29320.	1.7	57
31	Electrospun conductive nanofiber yarns for accelerating mesenchymal stem cells differentiation and maturation into Schwann cell-like cells under a combination of electrical stimulation and chemical induction. Acta Biomaterialia, 2022, 139, 91-104.	4.1	56
32	Platelet-Rich Plasma for the Treatment of Tissue Infection: Preparation and Clinical Evaluation. Tissue Engineering - Part B: Reviews, 2019, 25, 225-236.	2.5	54
33	Establishment of a Human iPSC- and Nanofiber-Based Microphysiological Bloodâ€"Brain Barrier System. ACS Applied Materials & Interfaces, 2018, 10, 21825-21835.	4.0	48
34	Dynamic hyaluronic acid hydrogel with covalent linked gelatin as an anti-oxidative bioink for cartilage tissue engineering. Biofabrication, 2022, 14, 014107.	3.7	46
35	Mechanically robust cryogels with injectability and bioprinting supportability for adipose tissue engineering. Acta Biomaterialia, 2018, 74, 131-142.	4.1	45
36	3D Bioprinted Scaffolds Containing Viable Macrophages and Antibiotics Promote Clearance of <i>Staphylococcus aureus</i> Craniotomy-Associated Biofilm Infection. ACS Applied Materials & Interfaces, 2019, 11, 12298-12307.	4.0	44

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37	3D hydrogel breast cancer models for studying the effects of hypoxia on epithelial to mesenchymal transition. Oncotarget, 2018, 9, 32191-32203.	0.8	43
38	Effects of Hydroxyapatite and Hypoxia on Chondrogenesis and Hypertrophy in 3D Bioprinted ADMSC Laden Constructs. ACS Biomaterials Science and Engineering, 2017, 3, 826-835.	2.6	41
39	Effects of tunable, 3D-bioprinted hydrogels on human brown adipocyte behavior and metabolic function. Acta Biomaterialia, 2018, 71, 486-495.	4.1	38
40	Comparison of Mesenchymal Stem Cell Source Differentiation Toward Human Pediatric Aortic Valve Interstitial Cells within 3D Engineered Matrices. Tissue Engineering - Part C: Methods, 2015, 21, 795-807.	1.1	36
41	Review of advances in electrospinning-based strategies for spinal cord regeneration. Materials Today Chemistry, 2022, 24, 100944.	1.7	36
42	Large-Scale and Rapid Preparation of Nanofibrous Meshes and Their Application for Drug-Loaded Multilayer Mucoadhesive Patch Fabrication for Mouth Ulcer Treatment. ACS Applied Materials & Interfaces, 2019, 11, 28740-28751.	4.0	32
43	Combining electrospinning with hot drawing process to fabricate high performance poly (L-lactic) Tj ETQq1 1 0.784314 rgBT /Overlock	3.7	32
44	3D-Printed Hydrogel Technologies for Tissue-Engineered Heart Valves. 3D Printing and Additive Manufacturing, 2014, 1, 122-136.	1.4	31
45	3D Printed Hydrogels with Aligned Microchannels to Guide Neural Stem Cell Migration. ACS Biomaterials Science and Engineering, 2021, 7, 690-700.	2.6	30
46	Repair and regeneration of small intestine: A review of current engineering approaches. Biomaterials, 2020, 240, 119832.	5.7	28
47	Macrophage depletion in stellate ganglia alleviates cardiac sympathetic overactivation and ventricular arrhythmogenesis by attenuating neuroinflammation in heart failure. Basic Research in Cardiology, 2021, 116, 28.	2.5	26
48	Tendon-bioinspired wavy nanofibrous scaffolds provide tunable anisotropy and promote tenogenesis for tendon tissue engineering. Materials Science and Engineering C, 2021, 126, 112181.	3.8	26
49	Exosomes derived from differentiated human ADMSC with the Schwann cell phenotype modulate peripheral nerve-related cellular functions. Bioactive Materials, 2022, 14, 61-75.	8.6	26
50	A Scalable and Efficient Bioprocess for Manufacturing Human Pluripotent Stem Cell-Derived Endothelial Cells. Stem Cell Reports, 2018, 11, 454-469.	2.3	22
51	Surface modification of three-dimensional Ca-P/PHBV nanocomposite scaffolds by physical entrapment of gelatin and its in vitro biological evaluation. Frontiers of Materials Science, 2011, 5, 57-68.	1.1	21
52	Guiding Mesenchymal Stem Cells into Myelinating Schwann Cell-Like Phenotypes by Using Electrospun Coreâ€"Sheath Nanoyarns. ACS Biomaterials Science and Engineering, 2019, 5, 5284-5294.	2.6	20
53	Triâ€Layered and Gelâ€Like Nanofibrous Scaffolds with Anisotropic Features for Engineering Heart Valve Leaflets. Advanced Healthcare Materials, 2022, 11, e2200053.	3.9	19
54	Development of Cryogel-Based Guidance Conduit for Peripheral Nerve Regeneration. ACS Applied Bio Materials, 2019, 2, 4864-4871.	2.3	17

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55	Injectable, antioxidative, and neurotrophic factor-deliverable hydrogel for peripheral nerve regeneration and neuropathic pain relief. Applied Materials Today, 2021, 24, 101090.	2.3	17
56	Controllable fabrication of alginate/poly-L-ornithine polyelectrolyte complex hydrogel networks as therapeutic drug and cell carriers. Acta Biomaterialia, 2022, 138, 182-192.	4.1	17
57	Nanofiber-structured hydrogel yarns with pH-response capacity and cardiomyocyte-drivability for bio-microactuator application. Acta Biomaterialia, 2017, 60, 144-153.	4.1	16
58	TLR2 and caspase-1 signaling are critical for bacterial containment but not clearance during craniotomy-associated biofilm infection. Journal of Neuroinflammation, 2020, 17, 114.	3.1	16
59	Regulation of Schwann Cell and DRG Neurite Behaviors within Decellularized Peripheral Nerve Matrix. ACS Applied Materials & Interfaces, 2022, 14, 8693-8704.	4.0	15
60	Electrostatic Flocking of Insulative and Biodegradable Polymer Microfibers for Biomedical Applications. Advanced Healthcare Materials, 2021, 10, e2100766.	3.9	14
61	Nonisothermal meltâ€crystallization behavior of calcium phosphate/poly(3â€hydroxybutyrateâ€<i>co</i>â€3â€hydroxyvalerate) nanocomposite microspheres. Polymer Engineering and Science, 2011, 51, 1580-1591.	1.5	13
62	Spatial Regulation of Valve Interstitial Cell Phenotypes within Three-Dimensional Micropatterned Hydrogels. ACS Biomaterials Science and Engineering, 2019, 5, 1416-1425.	2.6	13
63	Inhibition of Pyk2 and Src activity improves Cx43 gap junction intercellular communication. Journal of Molecular and Cellular Cardiology, 2020, 149, 27-40.	0.9	13
64	Design and Evaluation of an In Vitro Mild Traumatic Brain Injury Modeling System Using 3D Printed Mini Impact Device on the 3D Cultured Human iPSC Derived Neural Progenitor Cells. Advanced Healthcare Materials, 2021, 10, e2100180.	3.9	13
65	3D bioprinting of multilayered scaffolds with spatially differentiated ADMSCs for rotator cuff tendon-to-bone interface regeneration. Applied Materials Today, 2022, 27, 101510.	2.3	13
66	Manufacturing human pluripotent stem cell derived endothelial cells in scalable and cell-friendly microenvironments. Biomaterials Science, 2019, 7, 373-388.	2.6	12
67	The Role of Fluid Shear and Metastatic Potential in Breast Cancer Cell Migration. Journal of Biomechanical Engineering, 2020, 142, .	0.6	11
68	Materials and Their Biomedical Applications. , 2019, , 135-152.		9
69	Age related extracellular matrix and interstitial cell phenotype in pulmonary valves. Scientific Reports, 2020, 10, 21338.	1.6	9
70	Concise review: Harnessing iPSC-derived cells for ischemic heart disease treatment. Journal of Translational Internal Medicine, 2020, 8, 20-25.	1.0	9
71	The effects of maturation and aging on the rotator cuff tendonâ€toâ€bone interface. FASEB Journal, 2021, 35, e22066.	0.2	9
72	3D bioprinted white adipose model for in vitro study of cancer-associated cachexia induced adipose tissue remodeling. Biofabrication, 2022, 14, 034106.	3.7	9

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73	Implantable Nanotube Sensor Platform for Rapid Analyte Detection. Macromolecular Bioscience, 2019, 19, e1800469.	2.1	8
74	Differentiating human pluripotent stem cells into vascular smooth muscle cells in three dimensional thermoreversible hydrogels. Biomaterials Science, 2019, 7, 347-361.	2.6	7
75	Chikungunya Virus Infection Impairs the Function of Osteogenic Cells. MSphere, 2020, 5, .	1.3	7
76	Largeâ€scale synthesis of compressible and reâ€expandable threeâ€dimensional nanofiber matrices. Nano Select, 2021, 2, 1566-1579.	1.9	7
77	Spatiotemporal Characterizations of Spontaneously Beating Cardiomyocytes with Adaptive Reference Digital Image Correlation. Scientific Reports, 2019, 9, 18382.	1.6	5
78	Nanocomposite Scaffolds for Bone Tissue Engineering: Design, Fabrication, Surface Modification and Sustained Release of Growth Factor. Materials Research Society Symposia Proceedings, 2011, 1301, 99.	0.1	4
79	THREE-DIMENSIONAL NANOCOMPOSITE SCAFFOLDS FOR BONE TISSUE ENGINEERING: FROM DESIGN TO APPLICATION. Nano LIFE, 2012, 02, 1250005.	0.6	3
80	The Prospect of Nanoparticle Systems for Modulating Immune Cell Polarization During Central Nervous System Infection. Frontiers in Immunology, 2021, 12, 670931.	2.2	3
81	Hydrogen Peroxide Scavenging Restores N-Type Calcium Channels in Cardiac Vagal Postganglionic Neurons and Mitigates Myocardial Infarction-Evoked Ventricular Arrhythmias in Type 2 Diabetes Mellitus. Frontiers in Cardiovascular Medicine, 2022, 9, 871852.	1.1	0