Daniel J Kelly

List of Publications by Year
in descending order

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223 papers	11,916 citations	19608 61 h-index	35952 97 g-index
227 all docs	227 docs citations	227 times ranked	11279 citing authors

#	Article	IF	Citations
1	Biomaterial based modulation of macrophage polarization: a review and suggested design principles. Materials Today, 2015, 18, 313-325.	8.3	629
2	A comparison of different bioinks for 3D bioprinting of fibrocartilage and hyaline cartilage. Biofabrication, 2016, 8, 045002.	3.7	319
3	Simulation of tissue differentiation in a scaffold as a function of porosity, Young's modulus and dissolution rate: Application of mechanobiological models in tissue engineering. Biomaterials, 2007, 28, 5544-5554.	5.7	313
4	Tuning Alginate Bioink Stiffness and Composition for Controlled Growth Factor Delivery and to Spatially Direct MSC Fate within Bioprinted Tissues. Scientific Reports, 2017, 7, 17042.	1.6	267
5	Material stiffness influences the polarization state, function and migration mode of macrophages. Acta Biomaterialia, 2019, 89, 47-59.	4.1	245
6	3D Bioprinting for Cartilage and Osteochondral Tissue Engineering. Advanced Healthcare Materials, 2017, 6, 1700298.	3.9	238
7	3D Bioprinting of Developmentally Inspired Templates for Whole Bone Organ Engineering. Advanced Healthcare Materials, 2016, 5, 2353-2362.	3.9	209
8	Nano-particle mediated M2 macrophage polarization enhances bone formation and MSC osteogenesis in an IL-10 dependent manner. Biomaterials, 2020, 239, 119833.	5.7	207
9	The role of mechanical signals in regulating chondrogenesis and osteogenesis of mesenchymal stem cells. Birth Defects Research Part C: Embryo Today Reviews, 2010, 90, 75-85.	3.6	203
10	Mechanical regulation of mesenchymal stem cell differentiation. Journal of Anatomy, 2015, 227, 717-731.	0.9	179
11	Mechano-regulation of stem cell differentiation and tissue regeneration in osteochondral defects. Journal of Biomechanics, 2005, 38, 1413-1422.	0.9	175
12	3D printed microchannel networks to direct vascularisation during endochondral bone repair. Biomaterials, 2018, 162, 34-46.	5.7	175
13	The Response of Bone Marrow-Derived Mesenchymal Stem Cells to Dynamic Compression Following TGF-Î²3 Induced Chondrogenic Differentiation. Annals of Biomedical Engineering, 2010, 38, 2896-2909.	1.3	165
14	A Comparison of the Functionality and<i>In Vivo</i>Phenotypic Stability of Cartilaginous Tissues Engineered from Different Stem Cell Sources. Tissue Engineering - Part A, 2012, 18, 1161-1170.	1.6	148
15	The influence of plaque composition on underlying arterial wall stress during stent expansion: The case for lesion-specific stents. Medical Engineering and Physics, 2009, 31, 428-433.	0.8	144
16	Prediction of the Optimal Mechanical Properties for a Scaffold Used in Osteochondral Defect Repair. Tissue Engineering, 2006, 12, 2509-2519.	4.9	139
17	Fibrin hydrogels functionalized with cartilage extracellular matrix and incorporating freshly isolated stromal cells as an injectable for cartilage regeneration. Acta Biomaterialia, 2016, 36, 55-62.	4.1	133
18	The shape and size of hydroxyapatite particles dictate inflammatory responses following implantation. Scientific Reports, 2017, 7, 2922.	1.6	131

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19	3D bioprinting spatiotemporally defined patterns of growth factors to tightly control tissue regeneration. Science Advances, 2020, 6, eabb5093.	4.7	130
20	EFFECT OF CONTROLLED AXIAL MICROMOVEMENT ON HEALING OF TIBIAL FRACTURES. Lancet, The, 1986, 328, 1185-1187.	6.3	128
21	Oxygen tension regulates the osteogenic, chondrogenic and endochondral phenotype of bone marrow derived mesenchymal stem cells. Biochemical and Biophysical Research Communications, 2012, 417, 305-310.	1.0	128
22	The effect of concentration, thermal history and cell seeding density on the initial mechanical properties of agarose hydrogels. Journal of the Mechanical Behavior of Biomedical Materials, 2009, 2, 512-521.	1.5	127
23	3D extrusion bioprinting. Nature Reviews Methods Primers, 2021, 1, .	11.8	127
24	Recapitulating bone development through engineered mesenchymal condensations and mechanical cues for tissue regeneration. Science Translational Medicine, 2019, 11, .	5.8	126
25	Biofabrication of spatially organised tissues by directing the growth of cellular spheroids within 3D printed polymeric microchambers. Biomaterials, 2019, 197, 194-206.	5.7	122
26	Recapitulating endochondral ossification: a promising route to<i>in vivo</i>bone regeneration. Journal of Tissue Engineering and Regenerative Medicine, 2015, 9, 889-902.	1.3	112
27	Simulation of a balloon expandable stent in a realistic coronary arteryâ€"Determination of the optimum modelling strategy. Journal of Biomechanics, 2010, 43, 2126-2132.	0.9	110
28	Engineering osteochondral constructs through spatial regulation of endochondral ossification. Acta Biomaterialia, 2013, 9, 5484-5492.	4.1	106
29	Functional properties of cartilaginous tissues engineered from infrapatellar fat pad-derived mesenchymal stem cells. Journal of Biomechanics, 2010, 43, 920-926.	0.9	105
30	A role for the primary cilium in paracrine signaling between mechanically stimulated osteocytes and mesenchymal stem cells. Biochemical and Biophysical Research Communications, 2011, 412, 182-187.	1.0	105
31	Gene Delivery of TGF-Î²3 and BMP2 in an MSC-Laden Alginate Hydrogel for Articular Cartilage and Endochondral Bone Tissue Engineering. Tissue Engineering - Part A, 2016, 22, 776-787.	1.6	105
32	Evaluation of bone marrow stem cell response to PLA scaffolds manufactured by 3D printing and coated with polydopamine and type I collagen. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2019, 107, 37-49.	1.6	104
33	Dynamic compression can inhibit chondrogenesis of mesenchymal stem cells. Biochemical and Biophysical Research Communications, 2008, 377, 458-462.	1.0	103
34	Fiber Reinforced Cartilage ECM Functionalized Bioinks for Functional Cartilage Tissue Engineering. Advanced Healthcare Materials, 2019, 8, e1801501.	3.9	100
35	<sup />Three-Dimensional Bioprinting of Polycaprolactone Reinforced Gene Activated Bioinks for Bone Tissue Engineering. Tissue Engineering - Part A, 2017, 23, 891-900.	1.6	98
36	3D printing of fibre-reinforced cartilaginous templates for the regeneration of osteochondral defects. Acta Biomaterialia, 2020, 113, 130-143.	4.1	97

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37	Oxygen tension differentially regulates the functional properties of cartilaginous tissues engineered from infrapatellar fat pad derived MSCs and articular chondrocytes. Osteoarthritis and Cartilage, 2010, 18, 1345-1354.	0.6	94
38	Mechanical properties and cellular response of novel electrospun nanofibers for ligament tissue engineering: Effects of orientation and geometry. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 61, 258-270.	1.5	94
39	Pore-forming bioinks to enable spatio-temporally defined gene delivery in bioprinted tissues. Journal of Controlled Release, 2019, 301, 13-27.	4.8	93
40	Low oxygen tension is a more potent promoter of chondrogenic differentiation than dynamic compression. Journal of Biomechanics, 2010, 43, 2516-2523.	0.9	92
41	Tissue-specific extracellular matrix scaffolds for the regeneration of spatially complex musculoskeletal tissues. Biomaterials, 2019, 188, 63-73.	5.7	91
42	Tensile and compressive properties of fresh human carotid atherosclerotic plaques. Journal of Biomechanics, 2009, 42, 2760-2767.	0.9	89
43	Controlled release of transforming growth factor-Î²3 from cartilage-extra-cellular-matrix-derived scaffolds to promote chondrogenesis of human-joint-tissue-derived stem cells. Acta Biomaterialia, 2014, 10, 4400-4409.	4.1	86
44	Deformation simulation of cells seeded on a collagen-GAG scaffold in a flow perfusion bioreactor using a sequential 3D CFD-elastostatics model. Medical Engineering and Physics, 2009, 31, 420-427.	0.8	84
45	Engineering cartilage or endochondral bone: A comparison of different naturally derived hydrogels. Acta Biomaterialia, 2015, 13, 245-253.	4.1	81
46	Electroconductive Biohybrid Collagen/Pristine Graphene Composite Biomaterials with Enhanced Biological Activity. Advanced Materials, 2018, 30, e1706442.	11.1	81
47	Substrate Stiffness and Oxygen as Regulators of Stem Cell Differentiation during Skeletal Tissue Regeneration: A Mechanobiological Model. PLoS ONE, 2012, 7, e40737.	1.1	80
48	Cellâ€"matrix interactions regulate mesenchymal stem cell response to hydrostatic pressure. Acta Biomaterialia, 2012, 8, 2153-2159.	4.1	80
49	Identification of mechanosensitive genes during skeletal development: alteration of genes associated with cytoskeletal rearrangement and cell signalling pathways. BMC Genomics, 2014, 15, 48.	1.2	80
50	The pericellular environment regulates cytoskeletal development and the differentiation of mesenchymal stem cells and determines their response to hydrostatic pressure. , 2013, 25, 167-178.		79
51	A Comparative Study of Shear Stresses in Collagen-Glycosaminoglycan and Calcium Phosphate Scaffolds in Bone Tissue-Engineering Bioreactors. Tissue Engineering - Part A, 2009, 15, 1141-1149.	1.6	77
52	Cyclic hydrostatic pressure promotes a stable cartilage phenotype and enhances the functional development of cartilaginous grafts engineered using multipotent stromal cells isolated from bone marrow and infrapatellar fat pad. Journal of Biomechanics, 2014, 47, 2115-2121.	0.9	77
53	Reinforcing interpenetrating network hydrogels with 3D printed polymer networks to engineer cartilage mimetic composites. Biofabrication, 2020, 12, 035011.	3.7	73
54	The Effect of Prosthesis Design on Vibration of the Reconstructed Ossicular Chain: A Comparative Finite Element Analysis of Four Prostheses. Otology and Neurotology, 2003, 24, 11-19.	0.7	72

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55	Postnatal changes to the mechanical properties of articular cartilage are driven by the evolution of its collagen network. , 2015, 29, 105-123.		72
56	3D bioprinting of prevascularised implants for the repair of critically-sized bone defects. Acta Biomaterialia, 2021, 126, 154-169.	4.1	71
57	Effects of in Vitro Preculture on in Vivo Development of Human Engineered Cartilage in an Ectopic Model. Tissue Engineering, 2005, 11, 1421-1428.	4.9	70
58	The effect of cyclic hydrostatic pressure on the functional development of cartilaginous tissues engineered using bone marrow derived mesenchymal stem cells. Journal of the Mechanical Behavior of Biomedical Materials, 2011, 4, 1257-1265.	1.5	69
59	The role of the superficial region in determining the dynamic properties of articular cartilage. Osteoarthritis and Cartilage, 2012, 20, 1417-1425.	0.6	69
60	An Endochondral Ossification-Based Approach to Bone Repair: Chondrogenically Primed Mesenchymal Stem Cell-Laden Scaffolds Support Greater Repair of Critical-Sized Cranial Defects Than Osteogenically Stimulated Constructs <i>In Vivo</i>. Tissue Engineering - Part A, 2016, 22, 556-567.	1.6	68
61	Hydrostatic pressure acts to stabilise a chondrogenic phenotype in porcine joint tissue derived stem cells. , 2012, 23, 121-134.		68
62	Coupling Freshly Isolated CD44⁺ Infrapatellar Fat Padâ€Derived Stromal Cells with a TGFâ€Î²3 Eluting Cartilage ECMâ€Derived Scaffold as a Singleâ€Stage Strategy for Promoting Chondrogenesis. Advanced Healthcare Materials, 2015, 4, 1043-1053.	3.9	67
63	Decellularization of porcine articular cartilage explants and their subsequent repopulation with human chondroprogenitor cells. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 55, 21-31.	1.5	66
64	Tissue differentiation and bone regeneration in an osteotomized mandible: a computational analysis of the latency period. Medical and Biological Engineering and Computing, 2008, 46, 283-298.	1.6	65
65	Modulating Gradients in Regulatory Signals within Mesenchymal Stem Cell Seeded Hydrogels: A Novel Strategy to Engineer Zonal Articular Cartilage. PLoS ONE, 2013, 8, e60764.	1.1	65
66	Mesenchymal stem cell fate following non-viral gene transfection strongly depends on the choice of delivery vector. Acta Biomaterialia, 2017, 55, 226-238.	4.1	65
67	An anisotropic inelastic constitutive model to describe stress softening and permanent deformation in arterial tissue. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 12, 9-19.	1.5	60
68	Biomaterial-based endochondral bone regeneration: a shift from traditional tissue engineering paradigms to developmentally inspired strategies. Materials Today Bio, 2019, 3, 100009.	2.6	60
69	Macrophage Polarization in Response to Collagen Scaffold Stiffness Is Dependent on Cross-Linking Agent Used To Modulate the Stiffness. ACS Biomaterials Science and Engineering, 2019, 5, 544-552.	2.6	60
70	Stresses in peripheral arteries following stent placement: a finite element analysis. Computer Methods in Biomechanics and Biomedical Engineering, 2009, 12, 25-33.	0.9	59
71	Chondrogenesis and Integration of Mesenchymal Stem Cells Within an InÂVitro Cartilage Defect Repair Model. Annals of Biomedical Engineering, 2009, 37, 2556-2565.	1.3	59
72	Anisotropic Shape-Memory Alginate Scaffolds Functionalized with Either Type I or Type II Collagen for Cartilage Tissue Engineering. Tissue Engineering - Part A, 2017, 23, 55-68.	1.6	57

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73	Expansion in the presence of FGF-2 enhances the functional development of cartilaginous tissues engineered using infrapatellar fat pad derived MSCs. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 11, 102-111.	1.5	56
74	Affinity-bound growth factor within sulfated interpenetrating network bioinks for bioprinting cartilaginous tissues. Acta Biomaterialia, 2021, 128, 130-142.	4.1	56
75	Porous decellularized tissue engineered hypertrophic cartilage as a scaffold for large bone defect healing. Acta Biomaterialia, 2015, 23, 82-90.	4.1	55
76	A comparison of fibrin, agarose and gellan gum hydrogels as carriers of stem cells and growth factor delivery microspheres for cartilage regeneration. Biomedical Materials (Bristol), 2013, 8, 035004.	1.7	54
77	Biofabrication of multiscale bone extracellular matrix scaffolds for bone tissue engineering. , 2019, 38, 168-187.		54
78	Osteoarthritis-associated basic calcium phosphate crystals alter immune cell metabolism and promote M1 macrophage polarization. Osteoarthritis and Cartilage, 2020, 28, 603-612.	0.6	53
79	Bone biomaterials for overcoming antimicrobial resistance: Advances in non-antibiotic antimicrobial approaches for regeneration of infected osseous tissue. Materials Today, 2021, 46, 136-154.	8.3	53
80	Meniscus ECMâ€functionalised hydrogels containing infrapatellar fat padâ€derived stem cells for bioprinting of regionally defined meniscal tissue. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, e1826-e1835.	1.3	52
81	Temporal and Spatial Changes in Cartilage-Matrix-Specific Gene Expression in Mesenchymal Stem Cells in Response to Dynamic Compression. Tissue Engineering - Part A, 2011, 17, 3085-3093.	1.6	51
82	The Influence of Expansion Rates on Mandibular Distraction Osteogenesis: A Computational Analysis. Annals of Biomedical Engineering, 2007, 35, 1940-1960.	1.3	49
83	Modulating microfibrillar alignment and growth factor stimulation to regulate mesenchymal stem cell differentiation. Acta Biomaterialia, 2017, 64, 148-160.	4.1	49
84	Infrapatellar Fat Pad-Derived Stem Cells Maintain Their Chondrogenic Capacity in Disease and Can be Used to Engineer Cartilaginous Grafts of Clinically Relevant Dimensions. Tissue Engineering - Part A, 2014, 20, 3050-3062.	1.6	48
85	Engineering large cartilage tissues using dynamic bioreactor culture at defined oxygen conditions. Journal of Tissue Engineering, 2018, 9, 204173141775371.	2.3	48
86	Dual non-viral gene delivery from microparticles within 3D high-density stem cell constructs for enhanced bone tissue engineering. Biomaterials, 2018, 161, 240-255.	5.7	46
87	Inelasticity of Human Carotid Atherosclerotic Plaque. Annals of Biomedical Engineering, 2011, 39, 2445-2455.	1.3	45
88	Biofabrication and bioprinting using cellular aggregates, microtissues and organoids for the engineering of musculoskeletal tissues. Acta Biomaterialia, 2021, 126, 1-14.	4.1	45
89	Chondrocytes and bone marrow-derived mesenchymal stem cells undergoing chondrogenesis in agarose hydrogels of solid and channelled architectures respond differentially to dynamic culture conditions. Journal of Tissue Engineering and Regenerative Medicine, 2011, 5, 747-758.	1.3	44
90	European Society of Biomechanics S.M. Perren Award 2012: The external mechanical environment can override the influence of local substrate in determining stem cell fate. Journal of Biomechanics, 2012, 45, 2483-2492.	0.9	44

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91	Integrating finite element modelling and 3D printing to engineer biomimetic polymeric scaffolds for tissue engineering. Connective Tissue Research, 2020, 61, 174-189.	1.1	44
92	Mechano-regulation of mesenchymal stem cell differentiation and collagen organisation during skeletal tissue repair. Biomechanics and Modeling in Mechanobiology, 2010, 9, 359-372.	1.4	43
93	Biochemical markers of the mechanical quality of engineered hyaline cartilage. Journal of Materials Science: Materials in Medicine, 2007, 18, 273-281.	1.7	42
94	A growth factor delivery system for chondrogenic induction of infrapatellar fat padâ€derived stem cells in fibrin hydrogels. Biotechnology and Applied Biochemistry, 2011, 58, 345-352.	1.4	42
95	Tissue Engineering Whole Bones Through Endochondral Ossification: Regenerating the Distal Phalanx. BioResearch Open Access, 2015, 4, 229-241.	2.6	39
96	Orthopaedic implant materials drive M1 macrophage polarization in a spleen tyrosine kinase- and mitogen-activated protein kinase-dependent manner. Acta Biomaterialia, 2018, 65, 426-435.	4.1	39
97	Glyoxal crossâ€linking of solubilized extracellular matrix to produce highly porous, elastic, and chondroâ€permissive scaffolds for orthopedic tissue engineering. Journal of Biomedical Materials Research - Part A, 2019, 107, 2222-2234.	2.1	39
98	Harnessing the innate and adaptive immune system for tissue repair and regeneration: Considering more than macrophages. Acta Biomaterialia, 2021, 133, 208-221.	4.1	39
99	Tissue engineering scaled-up, anatomically shaped osteochondral constructs for joint resurfacing. , 2015, 30, 163-186.		39
100	Engineering of Large Cartilaginous Tissues Through the Use of Microchanneled Hydrogels and Rotational Culture. Tissue Engineering - Part A, 2009, 15, 3213-3220.	1.6	38
101	Effect of a degraded core on the mechanical behaviour of tissueengineered cartilage constructs: A poro-elastic finite element analysis. Medical and Biological Engineering and Computing, 2004, 42, 9-13.	1.6	37
102	Site specific inelasticity of arterial tissue. Journal of Biomechanics, 2012, 45, 1393-1399.	0.9	37
103	The Influence of Construct Scale on the Composition and Functional Properties of Cartilaginous Tissues Engineered Using Bone Marrow-Derived Mesenchymal Stem Cells. Tissue Engineering - Part A, 2012, 18, 382-396.	1.6	36
104	Finite element modelling of diseased carotid bifurcations generated from in vivo computerised tomographic angiography. Computers in Biology and Medicine, 2010, 40, 419-429.	3.9	35
105	The effects of dynamic compression on the development of cartilage grafts engineered using bone marrow and infrapatellar fat pad derived stem cells. Biomedical Materials (Bristol), 2015, 10, 055011.	1.7	35
106	Infrapatellar Fat Pad Stem Cells: From Developmental Biology to Cell Therapy. Stem Cells International, 2017, 2017, 1-10.	1.2	34
107	The Role of Environmental Factors in Regulating the Development of Cartilaginous Grafts Engineered Using Osteoarthritic Human Infrapatellar Fat Padâ€“Derived Stem Cells. Tissue Engineering - Part A, 2012, 18, 1531-1541.	1.6	33
108	Cyclic Tensile Strain Can Play a Role in Directing both Intramembranous and Endochondral Ossification of Mesenchymal Stem Cells. Frontiers in Bioengineering and Biotechnology, 2017, 5, 73.	2.0	33

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109	Integrating melt electrowriting and inkjet bioprinting for engineering structurally organized articular cartilage. Biomaterials, 2022, 283, 121405.	5.7	33
110	The role of oxygen as a regulator of stem cell fate during fracture repair in TSP2â€null mice. Journal of Orthopaedic Research, 2013, 31, 1585-1596.	1.2	32
111	Remodelling of collagen fibre transition stretch and angular distribution in soft biological tissues and cell-seeded hydrogels. Biomechanics and Modeling in Mechanobiology, 2012, 11, 325-339.	1.4	31
112	Hypoxia mimicking hydrogels to regulate the fate of transplanted stem cells. Acta Biomaterialia, 2019, 88, 314-324.	4.1	31
113	Growth plate extracellular matrix-derived scaffolds for large bone defect healing. , 2017, 33, 130-142.		31
114	Chondrogenically primed mesenchymal stem cell-seeded alginate hydrogels promote early bone formation in critically-sized defects. European Polymer Journal, 2015, 72, 464-472.	2.6	30
115	<sup />Hierarchically Structured Electrospun Scaffolds with Chemically Conjugated Growth Factor for Ligament Tissue Engineering. Tissue Engineering - Part A, 2017, 23, 823-836.	1.6	30
116	A mechanoâ€regulation model of fracture repair in vertebral bodies. Journal of Orthopaedic Research, 2011, 29, 433-443.	1.2	29
117	Altering the Architecture of Tissue Engineered Hypertrophic Cartilaginous Grafts Facilitates Vascularisation and Accelerates Mineralisation. PLoS ONE, 2014, 9, e90716.	1.1	29
118	A Comparison of Self-Assembly and Hydrogel Encapsulation as a Means to Engineer Functional Cartilaginous Grafts Using Culture Expanded Chondrocytes. Tissue Engineering - Part C: Methods, 2014, 20, 52-63.	1.1	29
119	The consequences of the mechanical environment of peripheral arteries for nitinol stenting. Medical and Biological Engineering and Computing, 2011, 49, 1279-1288.	1.6	28
120	The Composition of Engineered Cartilage at the Time of Implantation Determines the Likelihood of Regenerating Tissue with a Normal Collagen Architecture. Tissue Engineering - Part A, 2013, 19, 824-833.	1.6	28
121	Simple Radical Polymerization of Poly(Alginateâ€Graftâ€<i>N</i>â€Isopropylacrylamide) Injectable Thermoresponsive Hydrogel with the Potential for Localized and Sustained Delivery of Stem Cells and Bioactive Molecules. Macromolecular Bioscience, 2017, 17, 1700118.	2.1	28
122	Electrospinning of highly porous yet mechanically functional microfibrillar scaffolds at the human scale for ligament and tendon tissue engineering. Biomedical Materials (Bristol), 2019, 14, 035016.	1.7	28
123	The role of calcium signalling in the chondrogenic response of mesenchymal stem cells to hydrostatic pressure. , 2014, 28, 358-371.		28
124	The changing role of the superficial region in determining the dynamic compressive properties of articular cartilage during postnatal development. Osteoarthritis and Cartilage, 2015, 23, 975-984.	0.6	26
125	Solid-State Phase Transformation and Self-Assembly of Amorphous Nanoparticles into Higher-Order Mineral Structures. Journal of the American Chemical Society, 2020, 142, 12811-12825.	6.6	26
126	Bilayered extracellular matrix derived scaffolds with anisotropic pore architecture guide tissue organization during osteochondral defect repair. Acta Biomaterialia, 2022, 143, 266-281.	4.1	26

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127	Engineering Tissues That Mimic the Zonal Nature of Articular Cartilage Using Decellularized Cartilage Explants Seeded with Adult Stem Cells. ACS Biomaterials Science and Engineering, 2017, 3, 1933-1943.	2.6	25
128	Stimulation of osteoblasts using rest periods during bioreactor culture on collagen-glycosaminoglycan scaffolds. Journal of Materials Science: Materials in Medicine, 2010, 21, 2325-2330.	1.7	24
129	Comparison of the vulnerability risk for positive versus negative atheroma plaque morphology. Journal of Biomechanics, 2013, 46, 1248-1254.	0.9	24
130	Printing New Bones: From Print-and-Implant Devices to Bioprinted Bone Organ Precursors. Trends in Molecular Medicine, 2021, 27, 700-711.	3.5	24
131	Methacrylated Cartilage ECM-Based Hydrogels as Injectables and Bioinks for Cartilage Tissue Engineering. Biomolecules, 2022, 12, 216.	1.8	24
132	Exploring the roles of integrin binding and cytoskeletal reorganization during mesenchymal stem cell mechanotransduction in soft and stiff hydrogels subjected to dynamic compression. Journal of the Mechanical Behavior of Biomedical Materials, 2014, 38, 174-182.	1.5	23
133	Combining Freshly Isolated Chondroprogenitor Cells from the Infrapatellar Fat Pad with a Growth Factor Delivery Hydrogel as a Putative Single Stage Therapy for Articular Cartilage Repair. Tissue Engineering - Part A, 2014, 20, 930-939.	1.6	23
134	A computational model to explore the role of angiogenic impairment on endochondral ossification during fracture healing. Biomechanics and Modeling in Mechanobiology, 2016, 15, 1279-1294.	1.4	23
135	Bioinks for bioprinting functional meniscus and articular cartilage. Journal of 3D Printing in Medicine, 2017, 1, 269-290.	1.0	23
136	Prediction of fibre architecture and adaptation in diseased carotid bifurcations. Biomechanics and Modeling in Mechanobiology, 2011, 10, 831-843.	1.4	22
137	A Developmental Engineering-Based Approach to Bone Repair: Endochondral Priming Enhances Vascularization and New Bone Formation in a Critical Size Defect. Frontiers in Bioengineering and Biotechnology, 2020, 8, 230.	2.0	22
138	Direct UV-Triggered Thiolâ€“ene Cross-Linking of Electrospun Polyester Fibers from Unsaturated Poly(macrolactone)s and Their Drug Loading by Solvent Swelling. Biomacromolecules, 2017, 18, 4292-4298.	2.6	21
139	Stereovision for anatomical 3D acquisition and modelling. Computer Methods in Biomechanics and Biomedical Engineering, 2009, 12, 25-26.	0.9	20
140	The application of plastic compression to modulate fibrin hydrogel mechanical properties. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 16, 66-72.	1.5	20
141	An endochondral ossification approach to early stage bone repair: Use of tissueâ€engineered hypertrophic cartilage constructs as primordial templates for weightâ€bearing bone repair. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, e2147-e2150.	1.3	20
142	Development and characterization of carbohydrate-based thermosensitive hydrogels for cartilage tissue engineering. European Polymer Journal, 2020, 129, 109637.	2.6	20
143	The Influence of Fiber Orientation on the Equilibrium Properties of Neutral and Charged Biphasic Tissues. Journal of Biomechanical Engineering, 2010, 132, 114506.	0.6	19
144	RALA complexed Î±-TCP nanoparticle delivery to mesenchymal stem cells induces bone formation in tissue engineered constructs in vitro and in vivo. Journal of Materials Chemistry B, 2017, 5, 1753-1764.	2.9	19

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145	Development of a New Boneâ€Mimetic Surface Treatment Platform: Nanoneedle Hydroxyapatite (nnHA) Coating. Advanced Healthcare Materials, 2020, 9, e2001102.	3.9	19
146	Biofabrication of vasculature in microphysiological models of bone. Biofabrication, 2021, 13, 032004.	3.7	19
147	Hydrostatic Pressure Regulates the Volume, Aggregation and Chondrogenic Differentiation of Bone Marrow Derived Stromal Cells. Frontiers in Bioengineering and Biotechnology, 2020, 8, 619914.	2.0	19
148	A remodelling metric for angular fibre distributions and its application to diseased carotid bifurcations. Biomechanics and Modeling in Mechanobiology, 2012, 11, 869-882.	1.4	18
149	Influence of oxygen levels on chondrogenesis of porcine mesenchymal stem cells cultured in polycaprolactone scaffolds. Journal of Biomedical Materials Research - Part A, 2017, 105, 1684-1691.	2.1	18
150	Chondrogenesis of embryonic limb bud cells in micromass culture progresses rapidly to hypertrophy and is modulated by hydrostatic pressure. Cell and Tissue Research, 2017, 368, 47-59.	1.5	18
151	Controlled Nonâ€Viral Gene Delivery in Cartilage and Bone Repair: Current Strategies and Future Directions. Advanced Therapeutics, 2018, 1, 1800038.	1.6	18
152	Biofabrication of Prevascularised Hypertrophic Cartilage Microtissues for Bone Tissue Engineering. Frontiers in Bioengineering and Biotechnology, 2021, 9, 661989.	2.0	18
153	Substrate Stiffness Modulates the Crosstalk Between Mesenchymal Stem Cells and Macrophages. Journal of Biomechanical Engineering, 2021, 143, .	0.6	18
154	Tuning the Degradation Rate of Alginate-Based Bioinks for Bioprinting Functional Cartilage Tissue. Biomedicines, 2022, 10, 1621.	1.4	18
155	Engineering cartilaginous grafts using chondrocyte-laden hydrogels supported by a superficial layer of stem cells. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 1343-1353.	1.3	17
156	Mechanically induced structural changes during dynamic compression of engineered cartilaginous constructs can potentially explain increases in bulk mechanical properties. Journal of the Royal Society Interface, 2012, 9, 777-789.	1.5	16
157	Combining BMP-6, TGF-Î²3 and hydrostatic pressure stimulation enhances the functional development of cartilage tissues engineered using human infrapatellar fat pad derived stem cells. Biomaterials Science, 2013, 1, 745.	2.6	16
158	Biofabrication of soft tissue templates for engineering the boneâ€"ligament interface. Biotechnology and Bioengineering, 2017, 114, 2400-2411.	1.7	16
159	Stem cells display a donor dependent response to escalating levels of growth factor release from extracellular matrix-derived scaffolds. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 2979-2987.	1.3	16
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161	Scaffold architecture determines chondrocyte response to externally applied dynamic compression. Biomechanics and Modeling in Mechanobiology, 2013, 12, 889-899.	1.4	15
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