Scott J Hollister

List of Publications by Year
in descending order

186	19,544	10986	11052
papers	citations	71 h-index	137 g-index

193	193	193	17168
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Porous scaffold design for tissue engineering. Nature Materials, 2005, 4, 518-524.	27.5	3,370
2	Bone tissue engineering using polycaprolactone scaffolds fabricated via selective laser sintering. Biomaterials, 2005, 26, 4817-4827.	11.4	1,354
3	Indirect solid free form fabrication of local and global porous, biomimetic and composite 3D polymer-ceramic scaffolds. Biomaterials, 2003, 24, 181-194.	11.4	629
4	Optimal design and fabrication of scaffolds to mimic tissue properties and satisfy biological constraints. Biomaterials, 2002, 23, 4095-4103.	11.4	624
5	Bioresorbable Airway Splint Created with a Three-Dimensional Printer. New England Journal of Medicine, 2013, 368, 2043-2045.	27.0	514
6	Mechanical and in vivo performance of hydroxyapatite implants with controlled architectures. Biomaterials, 2002, 23, 1283-1293.	11.4	495
7	A comparison of homogenization and standard mechanics analyses for periodic porous composites. Computational Mechanics, 1992, 10, 73-95.	4.0	409
8	Mitigation of tracheobronchomalacia with 3D-printed personalized medical devices in pediatric patients. Science Translational Medicine, 2015, 7, 285ra64.	12.4	372
9	Scaffold Design and Manufacturing: From Concept to Clinic. Advanced Materials, 2009, 21, 3330-3342.	21.0	349
10	A novel method for biomaterial scaffold internal architecture design to match bone elastic properties with desired porosity. Journal of Biomechanics, 2004, 37, 623-636.	2.1	335
11	Craniofacial Tissue Engineering by Stem Cells. Journal of Dental Research, 2006, 85, 966-979.	5.2	308
12	A homogenization sampling procedure for calculating trabecular bone effective stiffness and tissue level stress. Journal of Biomechanics, 1994, 27, 433-444.	2.1	300
13	Framework for optimal design of porous scaffold microstructure by computational simulation of bone regeneration. Biomaterials, 2006, 27, 3964-3972.	11.4	278
14	Engineering craniofacial scaffolds. Orthodontics and Craniofacial Research, 2005, 8, 162-173.	2.8	257
15	Homogenization theory and digital imaging: A basis for studying the mechanics and design principles of bone tissue. Biotechnology and Bioengineering, 1994, 43, 586-596.	3.3	221
16	3D-printed Bioresorbable Scaffold for Periodontal Repair. Journal of Dental Research, 2015, 94, 153S-157S.	5.2	221
17	The pore size of polycaprolactone scaffolds has limited influence on bone regeneration in an in vivo model. Journal of Biomedical Materials Research - Part A, 2010, 92A, 359-368.	4.0	212
18	Hydroxyapatite implants with designed internal architecture. Journal of Materials Science: Materials in Medicine, 2001, 12, 471-478.	3.6	207

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19	Tissue engineering bone-ligament complexes using fiber-guiding scaffolds. Biomaterials, 2012, 33, 137-145.	11.4	207
20	An image-based approach for designing and manufacturing craniofacial scaffolds. International Journal of Oral and Maxillofacial Surgery, 2000, 29, 67-71.	1.5	198
21	Engineered Osteochondral Grafts Using Biphasic Composite Solid Free-Form Fabricated Scaffolds. Tissue Engineering, 2004, 10, 1376-1385.	4.6	194
22	Regulatory Considerations in the Design and Manufacturing of Implantable 3Dâ€Printed Medical Devices. Clinical and Translational Science, 2015, 8, 594-600.	3.1	192
23	Nondestructive micro-computed tomography for biological imaging and quantification of scaffoldâ€“bone interaction in vivo. Biomaterials, 2007, 28, 2479-2490.	11.4	186
24	Biomimetic hybrid scaffolds for engineering human tooth-ligament interfaces. Biomaterials, 2010, 31, 5945-5952.	11.4	185
25	Permeability analysis of scaffolds for bone tissue engineering. Journal of Biomechanics, 2012, 45, 938-944.	2.1	178
26	Trabecular bone remodeling: An experimental model. Journal of Biomechanics, 1991, 24, 135-150.	2.1	174
27	Scaffold Translation: Barriers Between Concept and Clinic. Tissue Engineering - Part B: Reviews, 2011, 17, 459-474.	4.8	173
28	Tailoring the mechanical properties of 3Dâ€designed poly(glycerol sebacate) scaffolds for cartilage applications. Journal of Biomedical Materials Research - Part A, 2010, 94A, 9-18.	4.0	167
29	Structural and mechanical evaluations of a topology optimized titanium interbody fusion cage fabricated by selective laser melting process. Journal of Biomedical Materials Research - Part A, 2007, 83A, 272-279.	4.0	166
30	The interaction between bone marrow stromal cells and RGD-modified three-dimensional porous polycaprolactone scaffolds. Biomaterials, 2009, 30, 4063-4069.	11.4	157
31	The Accuracy of Digital Image-Based Finite Element Models. Journal of Biomechanical Engineering, 1998, 120, 289-295.	1.3	150
32	Trabecular Surface Remodeling Simulation for Cancellous Bone Using Microstructural Voxel Finite Element Models. Journal of Biomechanical Engineering, 2001, 123, 403-409.	1.3	147
33	Additive manufacturing of polymer melts for implantable medical devices and scaffolds. Biofabrication, 2017, 9, 012002.	7.1	145
34	Effect of Polycaprolactone Scaffold Permeability on Bone Regeneration In Vivo. Tissue Engineering - Part A, 2011, 17, 1831-1839.	3.1	142
35	Application of homogenization theory to the study of trabecular bone mechanics. Journal of Biomechanics, 1991, 24, 825-839.	2.1	138
36	Optimization of scaffold design for bone tissue engineering: A computational and experimental study. Medical Engineering and Physics, 2014, 36, 448-457.	1.7	127

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37	Inclusion of organ deformation in dose calculations. Medical Physics, 2003, 30, 290-295.	3.0	126
38	Osteocyte lacuna size and shape in women with and without osteoporotic fracture. Journal of Biomechanics, 2004, 37, 563-572.	2.1	124
39	A comparison of the influence of material on in vitro cartilage tissue engineering with PCL, PGS, and POC 3D scaffold architecture seeded with chondrocytes. Biomaterials, 2010, 31, 4304-4312.	11.4	117
40	Selective Laser Sintering Process Optimization for Layered Manufacturing of CAPAÂ® 6501 Polycaprolactone Bone Tissue Engineering Scaffolds. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2006, 128, 531-540.	2.2	116
41	Non-invasive monitoring of tissue scaffold degradation using ultrasound elasticity imaging. Acta Biomaterialia, 2008, 4, 783-790.	8.3	114
42	Tissue-Engineered Cartilage Constructs Using Composite Hyaluronic Acid/Collagen I Hydrogels and Designed Poly(Propylene Fumarate) Scaffolds. Tissue Engineering, 2007, 13, 537-550.	4.6	113
43	From Structure to Process, From Organ to Cell: Recent Developments of FE-Analysis in Orthopaedic Biomechanics. Journal of Biomechanical Engineering, 1993, 115, 520-527.	1.3	112
44	Controlled nucleation of hydroxyapatite on alginate scaffolds for stem cellâ€based bone tissue engineering. Journal of Biomedical Materials Research - Part A, 2010, 95A, 222-234.	4.0	112
45	Design and Structureâ€“Function Characterization of 3D Printed Synthetic Porous Biomaterials for Tissue Engineering. Advanced Healthcare Materials, 2018, 7, e1701095.	7.6	111
46	Differential effects of designed scaffold permeability on chondrogenesis by chondrocytes and bone marrow stromal cells. Biomaterials, 2010, 31, 279-287.	11.4	109
47	Computer Aidedâ€“Designed, 3â€Dimensionally Printed Porous Tissue Bioscaffolds for Craniofacial Soft Tissue Reconstruction. Otolaryngology - Head and Neck Surgery, 2015, 152, 57-62.	1.9	109
48	Poly(glycerol-dodecanoate), a biodegradable polyester for medical devices and tissue engineering scaffolds. Biomaterials, 2009, 30, 6479-6484.	11.4	106
49	Computed tomographyâ€based tissueâ€engineered scaffolds in craniomaxillofacial surgery. International Journal of Medical Robotics and Computer Assisted Surgery, 2007, 3, 207-216.	2.3	105
50	Computational design of tissue engineering scaffolds. Computer Methods in Applied Mechanics and Engineering, 2007, 196, 2991-2998.	6.6	99
51	Tissue engineering osteochondral implants for temporomandibular joint repair. Orthodontics and Craniofacial Research, 2005, 8, 313-319.	2.8	97
52	Topology optimization of three dimensional tissue engineering scaffold architectures for prescribed bulk modulus and diffusivity. Structural and Multidisciplinary Optimization, 2010, 42, 633-644.	3.5	96
53	Image-Based, Fiber Guiding Scaffolds: A Platform for Regenerating Tissue Interfaces. Tissue Engineering - Part C: Methods, 2014, 20, 533-542.	2.1	96
54	Integration of 3D Printed and Micropatterned Polycaprolactone Scaffolds for Guidance of Oriented Collagenous Tissue Formation In Vivo. Advanced Healthcare Materials, 2016, 5, 676-687.	7.6	95

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55	Freeform fabrication of Nylonâ€6 tissue engineering scaffolds. Rapid Prototyping Journal, 2003, 9, 43-49.	3.2	93
56	Delivery and Protection of Adenoviruses Using Biocompatible Hydrogels for Localized Gene Therapy. Molecular Therapy, 2004, 9, 130-138.	8.2	92
57	Developing consistently reproducible intervertebral disc degeneration at rat caudal spine by using needle puncture. Journal of Neurosurgery: Spine, 2009, 10, 522-530.	1.7	92
58	Stress Analysis of the Interface Between Cervical Vertebrae End Plates and the Bryan, Prestige LP, and ProDisc-C Cervical Disc Prostheses. Spine, 2009, 34, 1554-1560.	2.0	90
59	Mechanical Stimulation of Tissue Repair in the Hydraulic Bone Chamber. Journal of Bone and Mineral Research, 1997, 12, 1295-1302.	2.8	89
60	Macro-Architectures in Spinal Cord Scaffold Implants Influence Regeneration. Journal of Neurotrauma, 2008, 25, 1027-1037.	3.4	87
61	Chemically-Conjugated Bone Morphogenetic Protein-2 on Three-Dimensional Polycaprolactone Scaffolds Stimulates Osteogenic Activity in Bone Marrow Stromal Cells. Tissue Engineering - Part A, 2010, 16, 3441-3448.	3.1	87
62	Controllable mineral coatings on PCL scaffolds as carriers for growth factor release. Biomaterials, 2012, 33, 713-721.	11.4	87
63	Treatment of Severe Porcine Tracheomalacia With a 3-Dimensionally Printed, Bioresorbable, External Airway Splint. JAMA Otolaryngology - Head and Neck Surgery, 2014, 140, 66.	2.2	87
64	A Global Relationship Between Trabecular Bone Morphology and Homogenized Elastic Properties. Journal of Biomechanical Engineering, 1998, 120, 640-646.	1.3	86
65	Combined use of designed scaffolds and adenoviral gene therapy for skeletal tissue engineering. Biomaterials, 2006, 27, 1160-1166.	11.4	85
66	Design Control for Clinical Translation of 3D Printed Modular Scaffolds. Annals of Biomedical Engineering, 2015, 43, 774-786.	2.5	84
67	Interbody Fusion Cage Design Using Integrated Global Layout and Local Microstructure Topology Optimization. Spine, 2004, 29, 1747-1754.	2.0	81
68	Poly(É›-Caprolactone) and Poly (L-Lactic-Co-Glycolic Acid) Degradable Polymer Sponges Attenuate Astrocyte Response and Lesion Growth in Acute Traumatic Brain Injury. Tissue Engineering, 2007, 13, 2515-2523.	4.6	77
69	Strategies for regeneration of the bone using porcine adult adipose-derived mesenchymal stem cells. Theriogenology, 2011, 75, 1381-1399.	2.1	75
70	Localized viral vector delivery to enhance in situ regenerative gene therapy. Gene Therapy, 2007, 14, 891-901.	4.5	73
71	Tissue Formation and Vascularization in Anatomically Shaped Human Joint Condyle Ectopicallyin Vivo. Tissue Engineering - Part A, 2009, 15, 3923-3930.	3.1	71
72	Anatomic considerations of transclavicular-transcoracoid drilling for coracoclavicular ligament reconstruction. Journal of Shoulder and Elbow Surgery, 2013, 22, 137-144.	2.6	71

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73	Scaffold engineering: a bridge to where?. Biofabrication, 2009, 1, 012001.	7.1	68
74	Technical note: Creating a four-dimensional model of the liver using finite element analysis. Medical Physics, 2002, 29, 1403-1405.	3.0	65
75	Bioresorbable scaffolds for bone tissue engineering: Optimal design, fabrication, mechanical testing and scale-size effects analysis. Medical Engineering and Physics, 2015, 37, 287-296.	1.7	63
76	3Dâ€printed, externallyâ€implanted, bioresorbable airway splints for severe tracheobronchomalacia. Laryngoscope, 2019, 129, 1763-1771.	2.0	63
77	Intradiscal injection of simvastatin retards progression of intervertebral disc degeneration induced by stab injury. Arthritis Research and Therapy, 2009, 11, R172.	3.5	62
78	Comparison of Bone Marrow Stromal Cell Behaviors on Poly(caprolactone) with or without Surface Modification: Studies on Cell Adhesion, Survival and Proliferation. Journal of Biomaterials Science, Polymer Edition, 2009, 20, 1975-1993.	3.5	62
79	Porous Biodegradable Lumbar Interbody Fusion Cage Design and Fabrication Using Integrated Global-Local Topology Optimization With Laser Sintering. Journal of Biomechanical Engineering, 2013, 135, 101013-8.	1.3	61
80	Image-Based Biomimetic Approach to Reconstruction of the Temporomandibular Joint. Cells Tissues Organs, 2001, 169, 309-321.	2.3	53
81	Functional Bone Engineering Using ex Vivo Gene Therapy and Topology-Optimized, Biodegradable Polymer Composite Scaffolds. Tissue Engineering, 2005, 11, 1589-1598.	4.6	52
82	Three-dimensional poly(1,8-octanediolâ€“co-citrate) scaffold pore shape and permeability effects on sub-cutaneous in vivo chondrogenesis using primary chondrocytes. Acta Biomaterialia, 2011, 7, 505-514.	8.3	52
83	Controlled Multiple Growth Factor Delivery from Bone Tissue Engineering Scaffolds via Designed Affinity. Tissue Engineering - Part A, 2014, 20, 2077-2087.	3.1	52
84	Manufacturing and Characterization of 3â€Ð Hydroxyapatite Bone Tissue Engineering Scaffolds. Annals of the New York Academy of Sciences, 2002, 961, 114-117.	3.8	51
85	Analysis of load sharing on uncovertebral and facet joints at the C5â€“6 level with implantation of the Bryan, Prestige LP, or ProDisc-C cervical disc prosthesis: an in vivo image-based finite element study. Neurosurgical Focus, 2010, 28, E9.	2.3	50
86	Integrating Image-Based Design and 3D Biomaterial Printing To Create Patient Specific Devices within a Design Control Framework for Clinical Translation. ACS Biomaterials Science and Engineering, 2016, 2, 1827-1836.	5.2	50
87	Antenatal Three-Dimensional Printing of Aberrant Facial Anatomy. Pediatrics, 2015, 136, e1382-e1385.	2.1	49
88	Designing Biodegradable Shape Memory Polymers for Tissue Repair. Advanced Functional Materials, 2020, 30, 2002014.	14.9	49
89	Mechanical and Biochemical Assessments of Three-Dimensional Poly(1,8-Octanediol-co-Citrate) Scaffold Pore Shape and Permeability Effects on In Vitro Chondrogenesis Using Primary Chondrocytes. Tissue Engineering - Part A, 2010, 16, 3759-3768.	3.1	48
90	Strut size and surface area effects on long-term in vivo degradation in computer designed poly(l-lactic acid) three-dimensional porous scaffolds. Acta Biomaterialia, 2012, 8, 2568-2577.	8.3	48

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91	Effects of designed PLLA and 50:50 PLGA scaffold architectures on bone formation in vivo. Journal of Tissue Engineering and Regenerative Medicine, 2013, 7, 99-111.	2.7	46
92	Mechanical, permeability, and degradation properties of 3D designed poly(1,8) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 707 Td (octanediol Research - Part B Applied Biomaterials, 2010, 93B, 141-149.	3.4	45
93	Evaluation of multi-scale mineralized collagenâ€“polycaprolactone composites for bone tissue engineering. Journal of the Mechanical Behavior of Biomedical Materials, 2016, 61, 318-327.	3.1	45
94	Quantitative molecular sensing in biological tissues: an approach to non-invasive optical characterization. Optics Express, 2006, 14, 6157.	3.4	44
95	Time course investigation of intervertebral disc degeneration produced by needle-stab injury of the rat caudal spine. Journal of Neurosurgery: Spine, 2011, 15, 404-413.	1.7	44
96	Experimental and computational characterization of designed and fabricated 50:50 PLGA porous scaffolds for human trabecular bone applications. Journal of Materials Science: Materials in Medicine, 2010, 21, 2371-2383.	3.6	43
97	Mechanical characterization and non-linear elastic modeling of poly(glycerol sebacate) for soft tissue engineering. Journal of the Mechanical Behavior of Biomedical Materials, 2012, 11, 3-15.	3.1	43
98	Strain Concentrations Surrounding an Ellipsoid Model of Lacunae and Osteocytes. Computer Methods in Biomechanics and Biomedical Engineering, 1997, 1, 61-68.	1.6	42
99	Threeâ€dimensional polycaprolactone scaffoldâ€conjugated bone morphogenetic proteinâ€2 promotes cartilage regeneration from primary chondrocytes in vitro and in vivo without accelerated endochondral ossification. Journal of Biomedical Materials Research - Part A, 2012, 100A, 2088-2096.	4.0	41
100	Brain cortex regeneration affected by scaffold architectures. Journal of Neurosurgery, 2008, 109, 715-722.	1.6	40
101	Bone Morphogenetic Protein-2 Adsorption onto Poly-É›-caprolactone Better Preserves Bioactivity In Vitro and Produces More Bone In Vivo than Conjugation Under Clinically Relevant Loading Scenarios. Tissue Engineering - Part C: Methods, 2015, 21, 489-498.	2.1	40
102	Biomechanical evaluation of human and porcine Auricular cartilage. Laryngoscope, 2015, 125, E262-8.	2.0	39
103	Are regional variations in bone growth related to mechanical stress and strain parameters?. Journal of Biomechanics, 1998, 31, 327-335.	2.1	38
104	The use of reactive polymer coatings to facilitate gene delivery from poly (É›-caprolactone) scaffolds. Biomaterials, 2009, 30, 5785-5792.	11.4	38
105	Inorganic coatings for optimized non-viral transfection of stem cells. Scientific Reports, 2013, 3, 1567.	3.3	38
106	<title>Digital-image-based finite element analysis for bone microstructure using conjugate gradient and Gaussian filter techniques</title>. , 1993, , .		37
107	Advances in 3-Dimensional Printing in Otolaryngology. JAMA Otolaryngology - Head and Neck Surgery, 2017, 143, 178.	2.2	36
108	Stress-related molar responses to the transpalatal arch: A finite element analysis. American Journal of Orthodontics and Dentofacial Orthopedics, 1997, 112, 512-518.	1.7	35

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109	Comparison of reconstructive procedures for glenoid bone loss associated with recurrent anterior shoulder instability. Journal of Shoulder and Elbow Surgery, 2014, 23, 1113-1119.	2.6	35
110	Coâ€culture of adiposeâ€derived stem cells and chondrocytes on threeâ€dimensionally printed bioscaffolds for craniofacial cartilage engineering. Laryngoscope, 2018, 128, E251-E257.	2.0	31
111	Tissue Engineering and 3-Dimensional Modeling for Facial Reconstruction. Facial Plastic Surgery Clinics of North America, 2019, 27, 151-161.	1.5	31
112	Relative effects of wound healing and mechanical stimulus on early bone response to porous-coated implants. Journal of Orthopaedic Research, 1996, 14, 654-662.	2.3	30
113	Dual Delivery of EPO and BMP2 from a Novel Modular Poly-É›-Caprolactone Construct to Increase the Bone Formation in Prefabricated Bone Flaps. Tissue Engineering - Part C: Methods, 2015, 21, 889-897.	2.1	30
114	Do bone ingrowth processes produce a globally optimized structure?. Journal of Biomechanics, 1993, 26, 391-407.	2.1	27
115	A paradigm for the development and evaluation of novel implant topologies for bone fixation: Implant design and fabrication. Journal of Biomechanics, 2012, 45, 2241-2247.	2.1	27
116	Pore architecture effects on chondrogenic potential of patient-specific 3-dimensionally printed porous tissue bioscaffolds for auricular tissue engineering. International Journal of Pediatric Otorhinolaryngology, 2018, 114, 170-174.	1.0	27
117	Tissue-engineered heart valve prostheses: â€˜state of the heartâ€™. Regenerative Medicine, 2008, 3, 399-419.	1.7	26
118	Biomineral Coating Increases Bone Formation by Ex Vivo BMPâ€7 Gene Therapy in Rapid Prototyped Poly(‹scp›l‹/scp›â€lactic acid) (PLLA) and Poly(Îµâ€caprolactone) (PCL) Porous Scaffolds. Advanced Healthcare Materials, 2015, 4, 621-632.	7.6	26
119	Tailoring the physicochemical and shape memory properties of the biodegradable polymer poly(glycerol dodecanoate) via curing conditions. Journal of Biomedical Materials Research - Part A, 2017, 105, 1618-1623.	4.0	26
120	3D bioprinting of a trachea-mimetic cellular construct of a clinically relevant size. Biomaterials, 2021, 279, 121246.	11.4	25
121	Treatment of Severe Acquired Tracheomalacia With a Patient-Specific, 3D-Printed, Permanent Tracheal Splint. JAMA Otolaryngology - Head and Neck Surgery, 2017, 143, 523.	2.2	24
122	A Mineralized Collagen-Polycaprolactone Composite Promotes Healing of a Porcine Mandibular Defect. Tissue Engineering - Part A, 2018, 24, 943-954.	3.1	23
123	Static and dynamic fatigue behavior of topology designed and conventional 3D printed bioresorbable PCL cervical interbody fusion devices. Journal of the Mechanical Behavior of Biomedical Materials, 2015, 49, 332-342.	3.1	22
124	Auricular reconstruction from rib to 3D printing. Journal of 3D Printing in Medicine, 2018, 2, 35-41.	2.0	22
125	Wireless sensor enables longitudinal monitoring of regenerative niche mechanics during rehabilitation that enhance bone repair. Bone, 2020, 135, 115311.	2.9	21
126	Degradation properties of a biodegradable shape memory elastomer, poly(glycerol dodecanoate), for soft tissue repair. PLoS ONE, 2020, 15, e0229112.	2.5	19

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127	Tissue engineering of the synovial joint: The role of cell density. Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine, 2007, 221, 429-440.	1.8	17
128	Tissue Engineering of TMJ and Bone: Concept to Clinic Approach. Journal of Oral and Maxillofacial Surgery, 2008, 66, 7-8.	1.2	17
129	Computational modeling of airway instability and collapse in tracheomalacia. Respiratory Research, 2017, 18, 62.	3.6	16
130	Development of Photocrosslinked Poly(glycerol dodecanedioate)â€"A Biodegradable Shape Memory Polymer for 3Dâ€Printed Tissue Engineering Applications. Advanced Engineering Materials, 2021, 23, 2100219.	3.5	14
131	Use of Micro-Computed Tomography to Nondestructively Characterize Biomineral Coatings on Solid Freeform Fabricated Poly (L-Lactic Acid) and Poly (É›-Caprolactone) Scaffolds In Vitro and In Vivo. Tissue Engineering - Part C: Methods, 2013, 19, 507-517.	2.1	13
132	Mandibular reconstruction with a bioactive-coated cementless Ti6Al4V modular endoprosthesis in Macaca fascicularis. International Journal of Oral and Maxillofacial Surgery, 2014, 43, 758-768.	1.5	12
133	Modulating nonlinear elastic behavior of biodegradable shape memory elastomer and small intestinal submucosa(SIS) composites for soft tissue repair. Journal of the Mechanical Behavior of Biomedical Materials, 2020, 110, 103965.	3.1	12
134	Repair of critical-size porcine craniofacial bone defects using a collagenâ€"polycaprolactone composite biomaterial. Biofabrication, 2022, 14, 014102.	7.1	12
135	A paradigm for the development and evaluation of novel implant topologies for bone fixation: In vivo evaluation. Journal of Biomechanics, 2012, 45, 2651-2657.	2.1	11
136	Defining Design Targets for Tissue Engineering Scaffolds. , 2009, , 521-537.		10
137	Comparison of Scanning Acoustic Microscopy and Histology Images in Characterizing Surface Irregularities Among Engineered Human Oral Mucosal Tissues. Ultrasound in Medicine and Biology, 2011, 37, 1734-1742.	1.5	10
138	Regulatory interfaces surrounding the growing field of additive manufacturing of medical devices and biologic products. Journal of Clinical and Translational Science, 2018, 2, 301-304.	0.6	10
139	Hybrid Threeâ€Dimensionalâ€"Printed Ear Tissue Scaffold With Autologous Cartilage Mitigates Soft Tissue Complications. Laryngoscope, 2021, 131, 1008-1015.	2.0	10
140	Effective anisotropic elastic constants of bimaterial interphases: comparison between experimental and analytical techniques. Journal of Materials Science: Materials in Medicine, 1996, 7, 109-117.	3.6	9
141	Acoustic Microscopy Analyses to Determine Good vs. Failed Tissue Engineered Oral Mucosa Under Normal or Thermally Stressed Culture Conditions. Annals of Biomedical Engineering, 2011, 39, 44-52.	2.5	9
142	Computational Design, Freeform Fabrication and Testing of Nylon-6 Tissue Engineering Scaffolds. Materials Research Society Symposia Proceedings, 2002, 758, 571.	0.1	8
143	Hierarchical bioactive materials for tissue reconstruction: Integrated design and manufacturing challenges. Jom, 2011, 63, 56-65.	1.9	8
144	Characterizing Morphology and Nonlinear Elastic Properties of Normal and Thermally Stressed Engineered Oral Mucosal Tissues Using Scanning Acoustic Microscopy. Tissue Engineering - Part C: Methods, 2013, 19, 345-351.	2.1	8

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145	Future Prospects for Periodontal Bioengineering Using Growth Factors. Clinical Advances in Periodontics, 2011, 1, 88-94.	0.7	7
146	Subcutaneous tissue response to titanium, poly(Ïµâ€¢caprolactone), and carbonateâ€•substituted hydroxyapatiteâ€¢coated poly(Ïµâ€¢caprolactone) plates: A rabbit study. Journal of Biomedical Materials Research - Part A, 2013, 101A, 2258-2266.	4.0	7
147	Internal Structure Evaluation of Three-Dimensional Calcium Phosphate Bone Scaffolds: A Micro-Computed Tomographic Study. Journal of the American Ceramic Society, 2006, 89, 3176-3181.	3.8	6
148	High-resolution ultrasonic monitoring of cellular differentiation in an ex vivo produced oral mucosal equivalent (EVPOME). , 2009, , .		5
149	Paediatric devices that grow up. Nature Biomedical Engineering, 2017, 1, 777-778.	22.5	5
150	Evaluation of human nasal cartilage nonlinear and rate dependent mechanical properties. Journal of Biomechanics, 2020, 100, 109549.	2.1	5
151	An analysis of trabecuar bone micro-mechanics using homogenization theory with comparison to experimental results. Journal of Biomechanics, 1989, 22, 1025.	2.1	4
152	Selective Laser Sintering of Polycaprolactone Bone Tissue Engineering Scaffolds. Materials Research Society Symposia Proceedings, 2004, 845, 340.	0.1	4
153	Preclinical assessment of clinically streamlined, <scp>3Dâ€printed</scp>, biocompatible singleâ€•and twoâ€•stage tissue scaffolds for ear reconstruction. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2021, 109, 394-400.	3.4	4
154	Tissue-engineered vascularized patient-specific temporomandibular joint reconstruction in a Yucatan pig model. Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology, 2021, 132, 145-152.	0.4	4
155	Tracheal agenesis: Esophageal airway support with a 3-dimensionalâ€“printed bioresorbable splint. JTCVS Techniques, 2021, 10, 563-568.	0.4	4
156	Predicting trabecular bone strength and micro-strain using homogenization theory. Journal of Biomechanics, 1989, 22, 1014.	2.1	3
157	(i) Mechanical factors influencing the outcome of total joint replacement. Orthopaedics and Trauma, 1995, 9, 2-8.	0.3	3
158	Reverse Engineering of Geometrically Complex Automotive Structures Using X-Ray Computed Tomography and Digital Image Based Finite Element Methods. , 1998, , .		3
159	Nonlinear Elastic Scaffold Design, Modeling and Fabrication for Soft Tissue Engineering. Computational Methods in Applied Sciences (Springer), 2011, , 35-53.	0.3	3
160	Computational Design and Simulation of Tissue Engineering Scaffolds. , 2008, , 113-127.		3
161	Design and Fabrication of Bone Tissue Engineering Scaffolds. , 2004, , 167-192.		3
162	Designing a 3D Printing Based Auxetic Cardiac Patch with hiPSC-CMs for Heart Repair. Journal of Cardiovascular Development and Disease, 2021, 8, 172.	1.6	3

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163	Three dimensional elastic modulus reconstruction for non-invasive, quantitative monitoring of tissue scaffold mechanical property changes. , 2008, , .		2
164	Non-linear stress-strain measurements of ex vivo produced oral mucosal equivalent (EVPOME) compared to normal oral mucosal and skin tissue. , 2011, 2011, 286-9.		2
165	Quality Control of 3D Printed Resorbable Implants: The 3D Printed Airway Splint Example. , 2018, , 131-160.		2
166	Anatomic-Based Design, Manufacturing, and Preclinical Assessment of a Novel 3D-Printed Bioscaffold for Total Nasal Reconstruction. Facial Plastic Surgery and Aesthetic Medicine, 2020, 22, 486-488.	0.9	2
167	Evaluating Directional Dependency of Selective Laser Sintered Patient Specific Biodegradable Devices to Improve Predictive Modeling and Design Verification. Annals of Biomedical Engineering, 2021, 49, 2579-2589.	2.5	2
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