Rosalyn D Abbott

List of Publications by Year in Descending Order

225 papers	31,516 citations	81 h-index	176 g-index
233 ext. papers	35,033 ext. citations	9.7 avg, IF	7.43 L-index

#	Paper	IF	Citations
225	Bioengineered models of Parkinson's disease using patient-derived dopaminergic neurons exhibit distinct biological profiles in a 3D microenvironment.. *Cellular and Molecular Life Sciences*, **2022**, 79, 78	10.3	0
224	Bioreactors and microphysiological systems for adipose-based pharmacologic screening **2022**, 121-146		
223	Perspectives on scaling production of adipose tissue for food applications.. *Biomaterials*, **2021**, 280, 121273	15.6	5
222	Fiber-Based Biopolymer Processing as a Route toward Sustainability. *Advanced Materials*, **2021**, e2105196	24	10
221	Recent Advances in 3D Printing with Protein-Based Inks. *Progress in Polymer Science*, **2021**, 115, 101375-101375	29.5	20
220	Sugar Functionalization of Silks with Pathway-Controlled Substitution and Properties. *Advanced Biology*, **2021**, 5, e2100388		4
219	The Materiobiology of Silk: Exploring the Biophysical Influence of Silk Biomaterials on Directing Cellular Behaviors. *Frontiers in Bioengineering and Biotechnology*, **2021**, 9, 697981	5.8	0
218	Silk Fibroin as a Green Material. *ACS Biomaterials Science and Engineering*, **2021**, 7, 3530-3544	5.5	12
217	Protein composites from silkworm cocoons as versatile biomaterials. *Acta Biomaterialia*, **2021**, 121, 180-192	10.8	7
216	Aligned Silk Sponge Fabrication and Perfusion Culture for Scalable Proximal Tubule Tissue Engineering. *ACS Applied Materials & Interfaces*, **2021**, 13, 10768-10777	9.5	5
215	Injectable Desferrioxamine-Laden Silk Nanofiber Hydrogels for Accelerating Diabetic Wound Healing. *ACS Biomaterials Science and Engineering*, **2021**, 7, 1147-1158	5.5	8
214	Therapeutic Ultrasound Triggered Silk Fibroin Scaffold Degradation. *Advanced Healthcare Materials*, **2021**, 10, e2100048	10.1	8
213	Functionalized 3D-printed silk-hydroxyapatite scaffolds for enhanced bone regeneration with innervation and vascularization. *Biomaterials*, **2021**, 276, 120995	15.6	17
212	Radially Aligned Porous Silk Fibroin Scaffolds as Functional Templates for Engineering Human Biomimetic Hepatic Lobules.. *ACS Applied Materials & Interfaces*, **2021**,	9.5	2
211	Assessing the compatibility of primary human hepatocyte culture within porous silk sponges.. *RSC Advances*, **2020**, 10, 37662-37674	3.7	6
210	A 3D human brain-like tissue model of herpes-induced Alzheimer's disease. *Science Advances*, **2020**, 6, eaay8828	14.3	90
209	Soft Tissue Engineering **2020**, 1399-1414		2

208	Human Adipose Derived Cells in Two- and Three-Dimensional Cultures: Functional Validation of an In Vitro Fat Construct. *Stem Cells International*, **2020**, 2020, 4242130	5	9
207	Fat-On-A-Chip Models for Research and Discovery in Obesity and Its Metabolic Comorbidities. *Tissue Engineering - Part B: Reviews*, **2020**, 26, 586-595	7.9	9
206	Flexible Water-Absorbing Silk-Fibroin Biomaterial Sponges with Unique Pore Structure for Tissue Engineering. *ACS Biomaterials Science and Engineering*, **2020**, 6, 1641-1649	5.5	11
205	Bi-layered Tubular Microfiber Scaffolds as Functional Templates for Engineering Human Intestinal Smooth Muscle Tissue. *Advanced Functional Materials*, **2020**, 30, 2000543	15.6	12
204	From Silk Spinning to 3D Printing: Polymer Manufacturing using Directed Hierarchical Molecular Assembly. *Advanced Healthcare Materials*, **2020**, 9, e1901552	10.1	36
203	Engineering Silk Materials: From Natural Spinning to Artificial Processing. *Applied Physics Reviews*, **2020**, 7,	17.3	30
202	A Long-Living Bioengineered Neural Tissue Platform to Study Neurodegeneration. *Macromolecular Bioscience*, **2020**, 20, e2000004	5.5	18
201	Induction of Irritation and Inflammation in a 3D Innervated Tissue Model of the Human Cornea. *ACS Biomaterials Science and Engineering*, **2020**, 6, 6886-6895	5.5	0
200	Thermoplastic moulding of regenerated silk. *Nature Materials*, **2020**, 19, 102-108	27	68
199	Bioengineered elastin- and silk-biomaterials for drug and gene delivery. *Advanced Drug Delivery Reviews*, **2020**, 160, 186-198	18.5	23
198	Functional Characterization of Three-Dimensional Cortical Cultures for In Vitro Modeling of Brain Networks. *IScience*, **2020**, 23, 101434	6.1	12
197	Matrix Deformation with Ectopic Cells Induced by Rotational Motion in Bioengineered Neural Tissues. *Annals of Biomedical Engineering*, **2020**, 48, 2192-2203	4.7	
196	Mechanisms of action, chemical characteristics, and model systems of obesogens. *BMC Biomedical Engineering*, **2020**, 2, 6	4.3	10
195	A 3D Tissue Model of Traumatic Brain Injury with Excitotoxicity That Is Inhibited by Chronic Exposure to Gabapentinoids. *Biomolecules*, **2020**, 10,	5.9	1
194	Adipose Tissue Fibrosis: Mechanisms, Models, and Importance. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	17
193	Photo-Crosslinked Silk Fibroin for 3D Printing. *Polymers*, **2020**, 12,	4.5	9
192	Silk Polymers and Nanoparticles: A Powerful Combination for the Design of Versatile Biomaterials. *Frontiers in Chemistry*, **2020**, 8, 604398	5	9
191	3D printing with silk: considerations and applications. *Connective Tissue Research*, **2020**, 61, 163-173	3.3	17

190	Injectable Silk-Based Hydrogel as an Alternative to Cervical Cerclage: A Rabbit Study. *Tissue Engineering - Part A*, **2020**, 26, 379-386	3.9	6
189	The importance of the neuro-immuno-cutaneous system on human skin equivalent design. *Cell Proliferation*, **2019**, 52, e12677	7.9	19
188	3D bioengineered tissue model of the large intestine to study inflammatory bowel disease. *Biomaterials*, **2019**, 225, 119517	15.6	31
187	3D extracellular matrix microenvironment in bioengineered tissue models of primary pediatric and adult brain tumors. *Nature Communications*, **2019**, 10, 4529	17.4	51
186	Silk-Based Therapeutics Targeting. *Journal of Functional Biomaterials*, **2019**, 10,	4.8	1
185	Bioengineered Tissue Model of Fibroblast Activation for Modeling Pulmonary Fibrosis. *ACS Biomaterials Science and Engineering*, **2019**, 5, 2417-2429	5.5	21
184	Scaffolding kidney organoids on silk. *Journal of Tissue Engineering and Regenerative Medicine*, **2019**, 13, 812-822	4.4	22
183	Microscopic considerations for optimizing silk biomaterials. *Wiley Interdisciplinary Reviews: Nanomedicine and Nanobiotechnology*, **2019**, 11, e1534	9.2	19
182	Assembly and Application of a Three-Dimensional Human Corneal Tissue Model. *Current Protocols in Toxicology / Editorial Board, Mahin D Maines (editor-in-chief) [et Al]*, **2019**, 81, e84	1	4
181	Bioengineered in vitro enteric nervous system. *Journal of Tissue Engineering and Regenerative Medicine*, **2019**, 13, 1712-1723	4.4	8
180	Vascular Pedicle and Microchannels: Simple Methods Toward Effective In Vivo Vascularization of 3D Scaffolds. *Advanced Healthcare Materials*, **2019**, 8, e1901106	10.1	10
179	Functional maturation of human neural stem cells in a 3D bioengineered brain model enriched with fetal brain-derived matrix. *Scientific Reports*, **2019**, 9, 17874	4.9	24
178	Human Skin Equivalents Demonstrate Need for Neuro-Immuno-Cutaneous System. *Advanced Biology*, **2019**, 3, e1800283	3.5	10
177	Corneal pain and experimental model development. *Progress in Retinal and Eye Research*, **2019**, 71, 88-113	20.5	20
176	3D biomaterial matrix to support long term, full thickness, immuno-competent human skin equivalents with nervous system components. *Biomaterials*, **2019**, 198, 194-203	15.6	36
175	Biodegradable silk catheters for the delivery of therapeutics across anatomical repair sites. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2019**, 107, 501-510	3.5	3
174	Niclosamide rescues microcephaly in a humanized model of Zika infection using human induced neural stem cells. *Biology Open*, **2018**, 7,	2.2	24
173	Engineered cell and tissue models of pulmonary fibrosis. *Advanced Drug Delivery Reviews*, **2018**, 129, 78-94	18.5	56

172	3D Bioprinting of Self-Standing Silk-Based Bioink. *Advanced Healthcare Materials*, **2018**, 7, e1701026	10.1	140
171	3D freeform printing of silk fibroin. *Acta Biomaterialia*, **2018**, 71, 379-387	10.8	51
170	Bi-layer silk fibroin grafts support functional tissue regeneration in a porcine model of onlay esophagoplasty. *Journal of Tissue Engineering and Regenerative Medicine*, **2018**, 12, e894-e904	4.4	10
169	Variability in responses observed in human white adipose tissue models. *Journal of Tissue Engineering and Regenerative Medicine*, **2018**, 12, 840-847	4.4	14
168	Three-dimensional tissue culture model of human breast cancer for the evaluation of multidrug resistance. *Journal of Tissue Engineering and Regenerative Medicine*, **2018**, 12, 1959-1971	4.4	14
167	Bioinspired Three-Dimensional Human Neuromuscular Junction Development in Suspended Hydrogel Arrays. *Tissue Engineering - Part C: Methods*, **2018**, 24, 346-359	2.9	29
166	Human Corneal Tissue Model for Nociceptive Assessments. *Advanced Healthcare Materials*, **2018**, 7, e1800488	10.1	14
165	Modeling Diabetic Corneal Neuropathy in a 3D In Vitro Cornea System. *Scientific Reports*, **2018**, 8, 17294	4.9	10
164	Functional and Sustainable 3D Human Neural Network Models from Pluripotent Stem Cells. *ACS Biomaterials Science and Engineering*, **2018**, 4, 4278-4288	5.5	26
163	Tissue Models for Neurogenesis and Repair in 3D. *Advanced Functional Materials*, **2018**, 28, 1803822	15.6	11
162	Ivermectin Promotes Peripheral Nerve Regeneration during Wound Healing. *ACS Omega*, **2018**, 3, 12392-12402	3.9	26
161	Silkworm silk-based materials and devices generated using bio-nanotechnology. *Chemical Society Reviews*, **2018**, 47, 6486-6504	58.5	206
160	In situ ultrasound imaging of silk hydrogel degradation and neovascularization. *Journal of Tissue Engineering and Regenerative Medicine*, **2017**, 11, 822-830	4.4	19
159	A silk-based encapsulation platform for pancreatic islet transplantation improves islet function in vivo. *Journal of Tissue Engineering and Regenerative Medicine*, **2017**, 11, 887-895	4.4	40
158	Evaluation of Silk Inverse Opals for "Smart" Tissue Culture. *ACS Omega*, **2017**, 2, 470-477	3.9	12
157	Silk I and Silk II studied by fast scanning calorimetry. *Acta Biomaterialia*, **2017**, 55, 323-332	10.8	64
156	Silk based bioinks for soft tissue reconstruction using 3-dimensional (3D) printing with in vitro and in vivo assessments. *Biomaterials*, **2017**, 117, 105-115	15.6	139
155	Fabrication of Silk Scaffolds with Nanomicroscaled Structures and Tunable Stiffness. *Biomacromolecules*, **2017**, 18, 2073-2079	6.9	26

154	Increased stem cells delivered using a silk gel/scaffold complex for enhanced bone regeneration. *Scientific Reports*, **2017**, 7, 2175	4.9	15
153	In vitro enteroid-derived three-dimensional tissue model of human small intestinal epithelium with innate immune responses. *PLoS ONE*, **2017**, 12, e0187880	3.7	58
152	Localized Immunomodulatory Silk Macrocapsules for Islet-like Spheroid Formation and Sustained Insulin Production. *ACS Biomaterials Science and Engineering*, **2017**, 3, 2443-2456	5.5	24
151	Predicting Silk Fiber Mechanical Properties through Multiscale Simulation and Protein Design. *ACS Biomaterials Science and Engineering*, **2017**, 3, 1542-1556	5.5	22
150	Implantable chemotherapy-loaded silk protein materials for neuroblastoma treatment. *International Journal of Cancer*, **2017**, 140, 726-735	7.5	30
149	Shape Memory Silk Protein Sponges for Minimally Invasive Tissue Regeneration. *Advanced Healthcare Materials*, **2017**, 6, 1600762	10.1	32
148	Development of a Three-Dimensional Adipose Tissue Model for Studying Embryonic Exposures to Obesogenic Chemicals. *Annals of Biomedical Engineering*, **2017**, 45, 1807-1818	4.7	17
147	In vitro 3D corneal tissue model with epithelium, stroma, and innervation. *Biomaterials*, **2017**, 112, 1-9	15.6	75
146	Signaling and Architectural Cues Necessary for 3D Diabetic Tissue Models **2017**, 299-320		
145	Amorphous Silk Nanofiber Solutions for Fabricating Silk-Based Functional Materials. *Biomacromolecules*, **2016**, 17, 3000-6	6.9	47
144	Expandable and Rapidly Differentiating Human Induced Neural Stem Cell Lines for Multiple Tissue Engineering Applications. *Stem Cell Reports*, **2016**, 7, 557-570	8	49
143	Dityrosine Cross-Linking in Designing Biomaterials. *ACS Biomaterials Science and Engineering*, **2016**, 2, 2108-2121	5.5	74
142	Recombinant protein blends: silk beyond natural design. *Current Opinion in Biotechnology*, **2016**, 39, 1-7	11.4	44
141	Non-invasive Assessments of Adipose Tissue Metabolism In Vitro. *Annals of Biomedical Engineering*, **2016**, 44, 725-32	4.7	4
140	Silk as a Biomaterial to Support Long-Term Three-Dimensional Tissue Cultures. *ACS Applied Materials & Interfaces*, **2016**, 8, 21861-8	9.5	69
139	Serially Transplanted Nonpericytic CD146(-) Adipose Stromal/Stem Cells in Silk Bioscaffolds Regenerate Adipose Tissue In Vivo. *Stem Cells*, **2016**, 34, 1097-111	5.8	19
138	The Use of Silk as a Scaffold for Mature, Sustainable Unilocular Adipose 3D Tissue Engineered Systems. *Advanced Healthcare Materials*, **2016**, 5, 1667-77	10.1	53
137	Engineering Biomaterials for Enhanced Tissue Regeneration. *Current Stem Cell Reports*, **2016**, 2, 140-146	1.8	22

136	Bio-functionalized silk hydrogel microfluidic systems. *Biomaterials*, **2016**, 93, 60-70	15.6	70
135	Control of silk microsphere formation using polyethylene glycol (PEG). *Acta Biomaterialia*, **2016**, 39, 156-168	10.8	44
134	Immuno-Informed 3D Silk Biomaterials for Tailoring Biological Responses. *ACS Applied Materials & Interfaces*, **2016**, 8, 29310-29322	9.5	25
133	Lyophilized Silk Sponges: A Versatile Biomaterial Platform for Soft Tissue Engineering. *ACS Biomaterials Science and Engineering*, **2015**, 1, 260-270	5.5	120
132	Acellular bi-layer silk fibroin scaffolds support functional tissue regeneration in a rat model of onlay esophagoplasty. *Biomaterials*, **2015**, 53, 149-59	15.6	25
131	Strategies for improving the physiological relevance of human engineered tissues. *Trends in Biotechnology*, **2015**, 33, 401-7	15.1	60
130	Long term perfusion system supporting adipogenesis. *Methods*, **2015**, 84, 84-9	4.6	27
129	Into the groove: instructive silk-polypyrrole films with topographical guidance cues direct DRG neurite outgrowth. *Journal of Biomaterials Science, Polymer Edition*, **2015**, 26, 1327-42	3.5	24
128	Modulation of vincristine and doxorubicin binding and release from silk films. *Journal of Controlled Release*, **2015**, 220, 229-238	11.7	47
127	Polyol-Silk Bioink Formulations as Two-Part Room-Temperature Curable Materials for 3D Printing. *ACS Biomaterials Science and Engineering*, **2015**, 1, 780-788	5.5	68
126	In vivo bioresponses to silk proteins. *Biomaterials*, **2015**, 71, 145-157	15.6	269
125	In vitro bioengineered model of cortical brain tissue. *Nature Protocols*, **2015**, 10, 1362-73	18.8	71
124	Silk-Its Mysteries, How It Is Made, and How It Is Used. *ACS Biomaterials Science and Engineering*, **2015**, 1, 864-876	5.5	63
123	Regeneration of high-quality silk fibroin fiber by wet spinning from CaCl2-formic acid solvent. *Acta Biomaterialia*, **2015**, 12, 139-145	10.8	80
122	Injectable silk foams for soft tissue regeneration. *Advanced Healthcare Materials*, **2015**, 4, 452-9	10.1	48
121	Impact of silk biomaterial structure on proteolysis. *Acta Biomaterialia*, **2015**, 11, 212-21	10.8	104
120	Robust bioengineered 3D functional human intestinal epithelium. *Scientific Reports*, **2015**, 5, 13708	4.9	103
119	Rapid prototyped sutureless anastomosis device from self-curing silk bio-ink. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2015**, 103, 1333-43	3.5	12

118	Inkjet Printing of Regenerated Silk Fibroin: From Printable Forms to Printable Functions. *Advanced Materials*, **2015**, 27, 4273-9	24	143
117	Multifunctional spider silk polymers for gene delivery to human mesenchymal stem cells. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2015**, 103, 1390-401	3.5	8
116	Engineering Biomaterial-Drug Conjugates for Local and Sustained Chemotherapeutic Delivery. *Bioconjugate Chemistry*, **2015**, 26, 1212-23	6.3	23
115	Highly tunable elastomeric silk biomaterials. *Advanced Functional Materials*, **2014**, 24, 4615-4624	15.6	265
114	Inkjet printing of silk nest arrays for cell hosting. *Biomacromolecules*, **2014**, 15, 1428-35	6.9	62
113	Bioengineered functional brain-like cortical tissue. *Proceedings of the National Academy of Sciences of the United States of America*, **2014**, 111, 13811-6	11.5	203
112	Impact of sterilization on the enzymatic degradation and mechanical properties of silk biomaterials. *Macromolecular Bioscience*, **2014**, 14, 257-69	5.5	47
111	Tissue-engineered kidney disease models. *Advanced Drug Delivery Reviews*, **2014**, 69-70, 67-80	18.5	63
110	Silk-based biomaterials for sustained drug delivery. *Journal of Controlled Release*, **2014**, 190, 381-97	11.7	219
109	The use of bi-layer silk fibroin scaffolds and small intestinal submucosa matrices to support bladder tissue regeneration in a rat model of spinal cord injury. *Biomaterials*, **2014**, 35, 7452-9	15.6	43
108	Structure-function-property-design interplay in biopolymers: spider silk. *Acta Biomaterialia*, **2014**, 10, 1612-26	10.8	151
107	Corneal stromal bioequivalents secreted on patterned silk substrates. *Biomaterials*, **2014**, 35, 3744-55	15.6	86
106	Quantitative characterization of mineralized silk film remodeling during long-term osteoblast-osteoclast co-culture. *Biomaterials*, **2014**, 35, 3794-802	15.6	25
105	Purification and cytotoxicity of tag-free bioengineered spider silk proteins. *Journal of Biomedical Materials Research - Part A*, **2013**, 101, 456-64	5.4	32
104	The performance of silk scaffolds in a rat model of augmentation cystoplasty. *Biomaterials*, **2013**, 34, 4758-65	15.6	57
103	Bladder tissue regeneration using acellular bi-layer silk scaffolds in a large animal model of augmentation cystoplasty. *Biomaterials*, **2013**, 34, 8681-9	15.6	61
102	Functionalized silk biomaterials for wound healing. *Advanced Healthcare Materials*, **2013**, 2, 206-17	10.1	216
101	Bioelectric modulation of wound healing in a 3D in vitro model of tissue-engineered bone. *Biomaterials*, **2013**, 34, 6695-705	15.6	62

100	Tuning chemical and physical cross-links in silk electrogels for morphological analysis and mechanical reinforcement. *Biomacromolecules*, **2013**, 14, 2629-35	6.9	48
99	Quantitative metabolic imaging using endogenous fluorescence to detect stem cell differentiation. *Scientific Reports*, **2013**, 3, 3432	4.9	156
98	Extending human hematopoietic stem cell survival in vitro with adipocytes. *BioResearch Open Access*, **2013**, 2, 179-85	2.4	15
97	Sustained volume retention in vivo with adipocyte and lipoaspirate seeded silk scaffolds. *Biomaterials*, **2013**, 34, 2960-8	15.6	37
96	Non-invasive monitoring of cell metabolism and lipid production in 3D engineered human adipose tissues using label-free multiphoton microscopy. *Biomaterials*, **2013**, 34, 8607-16	15.6	21
95	Silk Hydrogels as Soft Substrates for Neural Tissue Engineering. *Advanced Functional Materials*, **2013**, 23, 5140-5149	15.6	132
94	Stress and matrix-responsive cytoskeletal remodeling in fibroblasts. *Journal of Cellular Physiology*, **2013**, 228, 50-7	7	24
93	Degenerative grade affects the responses of human nucleus pulposus cells to link-N, CTGF, and TGF. *Journal of Spinal Disorders and Techniques*, **2013**, 26, E86-94		19
92	Sustainable three-dimensional tissue model of human adipose tissue. *Tissue Engineering - Part C: Methods*, **2013**, 19, 745-54	2.9	51
91	Ultrasound Sonication Effects on Silk Fibroin Protein. *Macromolecular Materials and Engineering*, **2013**, 298, 1201-1208	3.9	43
90	Recombinant DNA production of spider silk proteins. *Microbial Biotechnology*, **2013**, 6, 651-63	6.3	123
89	Bioengineered 3D human kidney tissue, a platform for the determination of nephrotoxicity. *PLoS ONE*, **2013**, 8, e59219	3.7	86
88	Noninvasive metabolic imaging of engineered 3D human adipose tissue in a perfusion bioreactor. *PLoS ONE*, **2013**, 8, e55696	3.7	33
87	Long-term phenotypic characterization of human bone marrow and adipose tissue derived mesenchymal stromal cells. *Stem Cell Discovery*, **2013**, 03, 99-116	0.5	3
86	Impact of processing parameters on the haemocompatibility of Bombyx mori silk films. *Biomaterials* , **2012**, 33, 1017-23	15.6	60
85	Hormone-responsive 3D multicellular culture model of human breast tissue. *Biomaterials*, **2012**, 33, 3411-20	15.6	17
84	Characterization of metabolic changes associated with the functional development of 3D engineered tissues by non-invasive, dynamic measurement of individual cell redox ratios. *Biomaterials*, **2012**, 33, 5341-8	15.6	59
83	Silk-based nanocomplexes with tumor-homing peptides for tumor-specific gene delivery. *Macromolecular Bioscience*, **2012**, 12, 75-82	5.5	65

82	Regenerative potential of TGFβ + Dex and notochordal cell conditioned media on degenerated human intervertebral disc cells. *Journal of Orthopaedic Research*, **2012**, 30, 482-8	3.8	55
81	In vitro 3D full-thickness skin-equivalent tissue model using silk and collagen biomaterials. *Macromolecular Bioscience*, **2012**, 12, 1627-36	5.5	86
80	Structure and biodegradation mechanism of milled Bombyx mori silk particles. *Biomacromolecules*, **2012**, 13, 2503-12	6.9	62
79	Live free or die: stretch-induced apoptosis occurs when adaptive reorientation of annulus fibrosus cells is restricted. *Biochemical and Biophysical Research Communications*, **2012**, 421, 361-6	3.4	10
78	Silk ionomers for encapsulation and differentiation of human MSCs. *Biomaterials*, **2012**, 33, 7375-85	15.6	19
77	A silk-based scaffold platform with tunable architecture for engineering critically-sized tissue constructs. *Biomaterials*, **2012**, 33, 9214-24	15.6	101
76	High-strength silk protein scaffolds for bone repair. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 7699-704	11.5	288
75	Direct-write assembly of 3D silk/hydroxyapatite scaffolds for bone co-cultures. *Advanced Healthcare Materials*, **2012**, 1, 729-35	10.1	116
74	Stabilization of vaccines and antibiotics in silk and eliminating the cold chain. *Proceedings of the National Academy of Sciences of the United States of America*, **2012**, 109, 11981-6	11.5	125
73	Silk fibroin biomaterials for controlled release drug delivery. *Expert Opinion on Drug Delivery*, **2011**, 8, 797-811	8	208
72	Spider silk-based gene carriers for tumor cell-specific delivery. *Bioconjugate Chemistry*, **2011**, 22, 1605-10	6.3	77
71	Regulation of silk material structure by temperature-controlled water vapor annealing. *Biomacromolecules*, **2011**, 12, 1686-96	6.9	434
70	Notochordal conditioned media from tissue increases proteoglycan accumulation and promotes a healthy nucleus pulposus phenotype in human mesenchymal stem cells. *Arthritis Research and Therapy*, **2011**, 13, R81	5.7	88
69	Materials fabrication from Bombyx mori silk fibroin. *Nature Protocols*, **2011**, 6, 1612-31	18.8	1752
68	Protein-based block copolymers. *Biomacromolecules*, **2011**, 12, 269-89	6.9	146
67	Mechanical improvements to reinforced porous silk scaffolds. *Journal of Biomedical Materials Research - Part A*, **2011**, 99, 16-28	5.4	51
66	Ingrowth of human mesenchymal stem cells into porous silk particle reinforced silk composite scaffolds: An in vitro study. *Acta Biomaterialia*, **2011**, 7, 144-51	10.8	100
65	Silk fibroin electrogelation mechanisms. *Acta Biomaterialia*, **2011**, 7, 2394-400	10.8	104

64	Evaluation of gel spun silk-based biomaterials in a murine model of bladder augmentation. *Biomaterials*, **2011**, 32, 808-18	15.6	86
63	Lipolytic function of adipocyte/endothelial cocultures. *Tissue Engineering - Part A*, **2011**, 17, 1437-44	3.9	22
62	Adipogenic differentiation of human adipose-derived stem cells on 3D silk scaffolds. *Methods in Molecular Biology*, **2011**, 702, 319-30	1.4	28
61	Cervical tissue engineering using silk scaffolds and human cervical cells. *Tissue Engineering - Part A*, **2010**, 16, 2101-12	3.9	51
60	Adipose tissue engineering for soft tissue regeneration. *Tissue Engineering - Part B: Reviews*, **2010**, 16, 413-26	7.9	176
59	Effects of hyperinsulinemia on lipolytic function of three-dimensional adipocyte/endothelial co-cultures. *Tissue Engineering - Part C: Methods*, **2010**, 16, 1157-65	2.9	23
58	New opportunities for an ancient material. *Science*, **2010**, 329, 528-31	33.3	1016
57	Tissue-engineered three-dimensional in vitro models for normal and diseased kidney. *Tissue Engineering - Part A*, **2010**, 16, 2821-31	3.9	75
56	Silk-based delivery systems of bioactive molecules. *Advanced Drug Delivery Reviews*, **2010**, 62, 1497-508	18.5	282
55	A complex 3D human tissue culture system based on mammary stromal cells and silk scaffolds for modeling breast morphogenesis and function. *Biomaterials*, **2010**, 31, 3920-9	15.6	101
54	Gene delivery mediated by recombinant silk proteins containing cationic and cell binding motifs. *Journal of Controlled Release*, **2010**, 146, 136-43	11.7	81
53	Role of polyalanine domains in beta-sheet formation in spider silk block copolymers. *Macromolecular Bioscience*, **2010**, 10, 49-59	5.5	64
52	Green process to prepare silk fibroin/gelatin biomaterial scaffolds. *Macromolecular Bioscience*, **2010** , 10, 289-98	5.5	70
51	Stabilization and release of enzymes from silk films. *Macromolecular Bioscience*, **2010**, 10, 359-68	5.5	112
50	Effects of enzymatic digestion on compressive properties of rat intervertebral discs. *Journal of Biomechanics*, **2010**, 43, 1067-73	2.9	34
49	Silk nanospheres and microspheres from silk/pva blend films for drug delivery. *Biomaterials*, **2010**, 31, 1025-35	15.6	321
48	Mechanism of enzymatic degradation of beta-sheet crystals. *Biomaterials*, **2010**, 31, 2926-33	15.6	192
47	Water-insoluble silk films with silk I structure. *Acta Biomaterialia*, **2010**, 6, 1380-7	10.8	450

46	Relationships between degradability of silk scaffolds and osteogenesis. *Biomaterials*, **2010**, 31, 6162-72	15.6	112
45	In vitro 3D model for human vascularized adipose tissue. *Tissue Engineering - Part A*, **2009**, 15, 2227-36	3.9	107
44	Biocompatible Silk Printed Optical Waveguides. *Advanced Materials*, **2009**, 21, 2411-2415	24	260
43	Bioengineered silk protein-based gene delivery systems. *Biomaterials*, **2009**, 30, 5775-84	15.6	103
42	Comparative chondrogenesis of human cell sources in 3D scaffolds. *Journal of Tissue Engineering and Regenerative Medicine*, **2009**, 3, 348-60	4.4	99
41	Soft tissue augmentation using silk gels: an in vitro and in vivo study. *Journal of Periodontology*, **2009**, 80, 1852-8	4.6	54
40	Vortex-induced injectable silk fibroin hydrogels. *Biophysical Journal*, **2009**, 97, 2044-50	2.9	271
39	Self-assembly of genetically engineered spider silk block copolymers. *Biomacromolecules*, **2009**, 10, 229-36	5.9	102
38	Stabilization of enzymes in silk films. *Biomacromolecules*, **2009**, 10, 1032-42	6.9	140
37	Spider silks and their applications. *Trends in Biotechnology*, **2008**, 26, 244-51	15.1	238
36	Bone tissue engineering with premineralized silk scaffolds. *Bone*, **2008**, 42, 1226-34	4.7	245
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