David Kaplan

List of Publications by Year
in descending order

1,051 papers	97,687 citations	197 149 h-index	429 275 g-index
1077 all docs	1077 docs citations	1077 times ranked	52661 citing authors

#	Article	IF	Citations
1	Porosity of 3D biomaterial scaffolds and osteogenesis. Biomaterials, 2005, 26, 5474-5491.	11.4	5,351
2	Silk-based biomaterials. Biomaterials, 2003, 24, 401-416.	11.4	2,981
3	Materials fabrication from Bombyx mori silk fibroin. Nature Protocols, 2011, 6, 1612-1631.	12.0	2,265
4	Silk as a biomaterial. Progress in Polymer Science, 2007, 32, 991-1007.	24.7	2,208
5	Dissolvable films of silk fibroin for ultrathin conformal bio-integrated electronics. Nature Materials, 2010, 9, 511-517.	27.5	1,501
6	New Opportunities for an Ancient Material. Science, 2010, 329, 528-531.	12.6	1,224
7	Mechanism of silk processing in insects and spiders. Nature, 2003, 424, 1057-1061.	27.8	1,214
8	A Physically Transient Form of Silicon Electronics. Science, 2012, 337, 1640-1644.	12.6	1,085
9	Electrospun silk-BMP-2 scaffolds for bone tissue engineering. Biomaterials, 2006, 27, 3115-3124.	11.4	1,056
10	Determining Beta-Sheet Crystallinity in Fibrous Proteins by Thermal Analysis and Infrared Spectroscopy. Macromolecules, 2006, 39, 6161-6170.	4.8	1,005
11	Three-dimensional aqueous-derived biomaterial scaffolds from silk fibroin. Biomaterials, 2005, 26, 2775-2785.	11.4	884
12	Stem cell-based tissue engineering with silk biomaterials. Biomaterials, 2006, 27, 6064-6082.	11.4	869
13	Porous 3-D Scaffolds from Regenerated Silk Fibroin. Biomacromolecules, 2004, 5, 718-726.	5.4	807
14	Graphene-based wireless bacteria detection on tooth enamel. Nature Communications, 2012, 3, 763.	12.8	806
15	Silk matrix for tissue engineered anterior cruciate ligaments. Biomaterials, 2002, 23, 4131-4141.	11.4	791
16	Vascularization Strategies for Tissue Engineering. Tissue Engineering - Part B: Reviews, 2009, 15, 353-370.	4.8	765
17	Functionalized silk-based biomaterials for bone formation. Journal of Biomedical Materials Research Part B, 2001, 54, 139-148.	3.1	738
18	Structure and Properties of Silk Hydrogels. Biomacromolecules, 2004, 5, 786-792.	5.4	735

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19	The inflammatory responses to silk films in vitro and in vivo. Biomaterials, 2005, 26, 147-155.	11.4	725
20	ElectrospinningBombyx moriSilk with Poly(ethylene oxide). Biomacromolecules, 2002, 3, 1233-1239.	5.4	679
21	In vivo degradation of three-dimensional silk fibroin scaffolds. Biomaterials, 2008, 29, 3415-3428.	11.4	679
22	In vitro degradation of silk fibroin. Biomaterials, 2005, 26, 3385-3393.	11.4	657
23	Human bone marrow stromal cell responses on electrospun silk fibroin mats. Biomaterials, 2004, 25, 1039-1047.	11.4	596
24	Sonication-induced gelation of silk fibroin for cell encapsulation. Biomaterials, 2008, 29, 1054-1064.	11.4	575
25	Cell differentiation by mechanical stress. FASEB Journal, 2002, 16, 1-13.	0.5	561
26	Water-Stable Silk Films with Reduced Î²-Sheet Content. Advanced Functional Materials, 2005, 15, 1241-1247.	14.9	553
27	Water-insoluble silk films with silk I structure. Acta Biomaterialia, 2010, 6, 1380-1387.	8.3	530
28	Regulation of Silk Material Structure by Temperature-Controlled Water Vapor Annealing. Biomacromolecules, 2011, 12, 1686-1696.	5.4	530
29	Macrophage responses to silk. Biomaterials, 2003, 24, 3079-3085.	11.4	504
30	Native-sized recombinant spider silk protein produced in metabolically engineered <i>Escherichia coli</i> results in a strong fiber. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 14059-14063.	7.1	485
31	Mechanisms of Silk Fibroin Solâ^'Gel Transitions. Journal of Physical Chemistry B, 2006, 110, 21630-21638.	2.6	458
32	Silk Materials â€" A Road to Sustainable High Technology. Advanced Materials, 2012, 24, 2824-2837.	21.0	456
33	Nanofibrils in nature and materials engineering. Nature Reviews Materials, 2018, 3, .	48.7	455
34	Agarose-based biomaterials for tissue engineering. Carbohydrate Polymers, 2018, 187, 66-84.	10.2	454
35	Design of biodegradable, implantable devices towards clinical translation. Nature Reviews Materials, 2020, 5, 61-81.	48.7	440
36	Controlling silk fibroin particle features for drug delivery. Biomaterials, 2010, 31, 4583-4591.	11.4	433

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37	Silk implants for the healing of critical size bone defects. Bone, 2005, 37, 688-698.	2.9	416
38	In vitro cartilage tissue engineering with 3D porous aqueous-derived silk scaffolds and mesenchymal stem cells. Biomaterials, 2005, 26, 7082-7094.	11.4	412
39	Biomedical applications of chemically-modified silk fibroin. Journal of Materials Chemistry, 2009, 19, 6443.	6.7	411
40	Role of Membrane Potential in the Regulation of Cell Proliferation and Differentiation. Stem Cell Reviews and Reports, 2009, 5, 231-246.	5.6	388
41	Cartilage tissue engineering with silk scaffolds and human articular chondrocytes. Biomaterials, 2006, 27, 4434-4442.	11.4	386
42	Electrospun silk biomaterial scaffolds for regenerative medicine. Advanced Drug Delivery Reviews, 2009, 61, 988-1006.	13.7	385
43	Silk nanospheres and microspheres from silk/pva blend films for drug delivery. Biomaterials, 2010, 31, 1025-1035.	11.4	372
44	Silk film biomaterials for cornea tissue engineering. Biomaterials, 2009, 30, 1299-1308.	11.4	362
45	InÂvivo bioresponses to silk proteins. Biomaterials, 2015, 71, 145-157.	11.4	357
46	Highly Tunable Elastomeric Silk Biomaterials. Advanced Functional Materials, 2014, 24, 4615-4624.	14.9	338
47	High-strength silk protein scaffolds for bone repair. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 7699-7704.	7.1	337
48	Silkâ€Based Conformal, Adhesive, Edible Food Sensors. Advanced Materials, 2012, 24, 1067-1072.	21.0	335
49	Overview of Silk Fibroin Use in Wound Dressings. Trends in Biotechnology, 2018, 36, 907-922.	9.3	330
50	Silk fibroin as an organic polymer for controlled drug delivery. Journal of Controlled Release, 2006, 111, 219-227.	9.9	328
51	Silk-based delivery systems of bioactive molecules. Advanced Drug Delivery Reviews, 2010, 62, 1497-1508.	13.7	324
52	Silkworm silk-based materials and devices generated using bio-nanotechnology. Chemical Society Reviews, 2018, 47, 6486-6504.	38.1	324
53	Silk fibroin/hydroxyapatite composites for bone tissue engineering. Biotechnology Advances, 2018, 36, 68-91.	11.7	320
54	Engineering bone-like tissuein vitro using human bone marrow stem cells and silk scaffolds. Journal of Biomedical Materials Research Part B, 2004, 71A, 25-34.	3.1	319

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55	Vortex-Induced Injectable Silk Fibroin Hydrogels. Biophysical Journal, 2009, 97, 2044-2050.	0.5	317
56	Natural protective glue protein, sericin bioengineered by silkworms: Potential for biomedical and biotechnological applications. Progress in Polymer Science, 2008, 33, 998-1012.	24.7	316
57	Scientific, sustainability and regulatory challenges of cultured meat. Nature Food, 2020, 1, 403-415.	14.0	315
58	Biopolymer nanofibrils: Structure, modeling, preparation, and applications. Progress in Polymer Science, 2018, 85, 1-56.	24.7	312
59	Human bone marrow stromal cell and ligament fibroblast responses on RGD-modified silk fibers. Journal of Biomedical Materials Research Part B, 2003, 67A, 559-570.	3.1	311
60	Biocompatible Silk Printed Optical Waveguides. Advanced Materials, 2009, 21, 2411-2415.	21.0	308
61	A new route for silk. Nature Photonics, 2008, 2, 641-643.	31.4	306
62	Mechanical Properties of Electrospun Silk Fibers. Macromolecules, 2004, 37, 6856-6864.	4.8	297
63	Spider silks and their applications. Trends in Biotechnology, 2008, 26, 244-251.	9.3	291
64	Silk-based biomaterials for sustained drug delivery. Journal of Controlled Release, 2014, 190, 381-397.	9.9	283
65	Bone morphogenetic protein-2 decorated silk fibroin films induce osteogenic differentiation of human bone marrow stromal cells. Journal of Biomedical Materials Research Part B, 2004, 71A, 528-537.	3.1	282
66	Bioactive Silk Protein Biomaterial Systems for Optical Devices. Biomacromolecules, 2008, 9, 1214-1220.	5.4	281
67	Effect of processing on silkâ€based biomaterials: Reproducibility and biocompatibility. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2011, 99B, 89-101.	3.4	281
68	Silk-based resorbable electronic devices for remotely controlled therapy and in vivo infection abatement. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17385-17389.	7.1	281
69	Silk microspheres for encapsulation and controlled release. Journal of Controlled Release, 2007, 117, 360-370.	9.9	276
70	Tissue Engineering and Developmental Biology: Going Biomimetic. Tissue Engineering, 2006, 12, 3265-3283.	4.6	273
71	Construction, Cloning, and Expression of Synthetic Genes Encoding Spider Dragline Silk. Biochemistry, 1995, 34, 10879-10885.	2.5	272
72	Bone tissue engineering with premineralized silk scaffolds. Bone, 2008, 42, 1226-1234.	2.9	270

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73	Mechanical and thermal properties of dragline silk from the spider Nephila clavipes. Polymers for Advanced Technologies, 1994, 5, 401-410.	3.2	269
74	Functionalized Silk Biomaterials for Wound Healing. Advanced Healthcare Materials, 2013, 2, 206-217.	7.6	264
75	Directâ€Write Assembly of Microperiodic Silk Fibroin Scaffolds for Tissue Engineering Applications. Advanced Functional Materials, 2008, 18, 1883-1889.	14.9	261
76	Degradation Mechanism and Control of Silk Fibroin. Biomacromolecules, 2011, 12, 1080-1086.	5.4	260
77	Plant-based and cell-based approaches to meat production. Nature Communications, 2020, 11, 6276.	12.8	260
78	Dynamic Proteinâ˘'Water Relationships during Î²-Sheet Formation. Macromolecules, 2008, 41, 3939-3948.	4.8	257
79	Advanced Tools for Tissue Engineering: Scaffolds, Bioreactors, and Signaling. Tissue Engineering, 2006, 12, 3285-3305.	4.6	255
80	The use of injectable sonication-induced silk hydrogel for VEGF165 and BMP-2 delivery for elevation of the maxillary sinus floor. Biomaterials, 2011, 32, 9415-9424.	11.4	255
81	Bioengineered functional brain-like cortical tissue. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 13811-13816.	7.1	255
82	Silk fibroin biomaterials for controlled release drug delivery. Expert Opinion on Drug Delivery, 2011, 8, 797-811.	5.0	248
83	Silk fibroin microtubes for blood vessel engineering. Biomaterials, 2007, 28, 5271-5279.	11.4	246
84	Silk-based electrospun tubular scaffolds for tissue-engineered vascular grafts. Journal of Biomaterials Science, Polymer Edition, 2008, 19, 653-664.	3.5	245
85	Silicon electronics on silk as a path to bioresorbable, implantable devices. Applied Physics Letters, 2009, 95, 133701.	3.3	245
86	Fabrication of Silk Microneedles for Controlledâ€Release Drug Delivery. Advanced Functional Materials, 2012, 22, 330-335.	14.9	245
87	All-water-based electron-beam lithography using silk as a resist. Nature Nanotechnology, 2014, 9, 306-310.	31.5	245
88	Conformational Transitions in Model Silk Peptides. Biophysical Journal, 2000, 78, 2690-2701.	0.5	244
89	Modification of silk fibroin using diazonium coupling chemistry and the effects on hMSC proliferation and differentiation. Biomaterials, 2008, 29, 2829-2838.	11.4	243
90	Role of Adult Mesenchymal Stem Cells in Bone Tissue Engineering Applications: Current Status and Future Prospects. Tissue Engineering, 2005, 11, 787-802.	4.6	240

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91	Mapping Domain Structures in Silks from Insects and Spiders Related to Protein Assembly. Journal of Molecular Biology, 2004, 335, 27-40.	4.2	238
92	Nucleation and growth of mineralized bone matrix on silk-hydroxyapatite composite scaffolds. Biomaterials, 2011, 32, 2812-2820.	11.4	238
93	Evolution of Bioinks and Additive Manufacturing Technologies for 3D Bioprinting. ACS Biomaterials Science and Engineering, 2016, 2, 1662-1678.	5.2	237
94	Silk-Based Advanced Materials for Soft Electronics. Accounts of Chemical Research, 2019, 52, 2916-2927.	15.6	232
95	Enzymatically crosslinked silk-hyaluronic acid hydrogels. Biomaterials, 2017, 131, 58-67.	11.4	228
96	Mechanism of enzymatic degradation of beta-sheet crystals. Biomaterials, 2010, 31, 2926-2933.	11.4	227
97	Natural and genetically engineered proteins for tissue engineering. Progress in Polymer Science, 2012, 37, 1-17.	24.7	227
98	Synthesis and characterization of polymers produced by horseradish peroxidase in dioxane. Journal of Polymer Science Part A, 1991, 29, 1561-1574.	2.3	225
99	Lyophilized silk fibroin hydrogels for the sustained local delivery of therapeutic monoclonal antibodies. Biomaterials, 2011, 32, 2642-2650.	11.4	225
100	Biomaterial Films ofBombyxMoriSilk Fibroin with Poly(ethylene oxide). Biomacromolecules, 2004, 5, 711-717.	5.4	224
101	Design and function of biomimetic multilayer water purification membranes. Science Advances, 2017, 3, e1601939.	10.3	221
102	Silk microfiber-reinforced silk hydrogel composites for functional cartilage tissue repair. Acta Biomaterialia, 2015, 11, 27-36.	8.3	220
103	Silk inverse opals. Nature Photonics, 2012, 6, 818-823.	31.4	217
104	Role of pH and charge on silk protein assembly in insects and spiders. Applied Physics A: Materials Science and Processing, 2006, 82, 223-233.	2.3	215
105	Quantitative metabolic imaging using endogenous fluorescence to detect stem cell differentiation. Scientific Reports, 2013, 3, 3432.	3.3	215
106	Silk based biomaterials to heal critical sized femur defects. Bone, 2006, 39, 922-931.	2.9	214
107	Development of silk-based scaffolds for tissue engineering of bone from human adipose-derived stem cells. Acta Biomaterialia, 2012, 8, 2483-2492.	8.3	210
108	Electrical and mechanical stimulation of cardiac cells and tissue constructs. Advanced Drug Delivery Reviews, 2016, 96, 135-155.	13.7	210

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109	Polymorphic regenerated silk fibers assembled through bioinspired spinning. Nature Communications, 2017, 8, 1387.	12.8	208
110	Membrane Potential Controls Adipogenic and Osteogenic Differentiation of Mesenchymal Stem Cells. PLoS ONE, 2008, 3, e3737.	2.5	206
111	Structureâ€"functionâ€"propertyâ€"design interplay in biopolymers: Spider silk. Acta Biomaterialia, 2014, 10, 1612-1626.	8.3	206
112	Liquid crystallinity of natural silk secretions. Nature, 1991, 349, 596-598.	27.8	203
113	Porous silk fibroin 3-D scaffolds for delivery of bone morphogenetic protein-2in vitro andin vivo. Journal of Biomedical Materials Research - Part A, 2006, 78A, 324-334.	4.0	201
114	Tunable Self-Assembly of Genetically Engineered Silkâ€"Elastin-like Protein Polymers. Biomacromolecules, 2011, 12, 3844-3850.	5.4	199
115	3D in vitro modeling of the central nervous system. Progress in Neurobiology, 2015, 125, 1-25.	5.7	196
116	Novel nanocomposites from spider silk-silica fusion (chimeric) proteins. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 9428-9433.	7.1	194
117	Mandibular repair in rats with premineralized silk scaffolds and BMP-2-modified bMSCs. Biomaterials, 2009, 30, 4522-4532.	11.4	194
118	pHâ€Dependent Anticancer Drug Release from Silk Nanoparticles. Advanced Healthcare Materials, 2013, 2, 1606-1611.	7.6	192
119	Carbonization of a stable Î²-sheet-rich silk protein into a pseudographitic pyroprotein. Nature Communications, 2015, 6, 7145.	12.8	192
120	Silk based bioinks for soft tissue reconstruction using 3-dimensional (3D) printing with inÂvitro and inÂvivo assessments. Biomaterials, 2017, 117, 105-115.	11.4	189
121	The influence of elasticity and surface roughness on myogenic and osteogenic-differentiation of cells on silk-elastin biomaterials. Biomaterials, 2011, 32, 8979-8989.	11.4	188
122	Enzyme-Catalyzed Ring-Opening Polymerization of Ï‰-Pentadecalactoneâ€. Macromolecules, 1997, 30, 2705-2711.	4.8	187
123	Insoluble and Flexible Silk Films Containing Glycerol. Biomacromolecules, 2010, 11, 143-150.	5.4	187
124	Silk Fibroin Microfluidic Devices. Advanced Materials, 2007, 19, 2847-2850.	21.0	182
125	Cartilage-like Tissue Engineering Using Silk Scaffolds and Mesenchymal Stem Cells. Tissue Engineering, 2006, 12, 2729-2738.	4.6	181
126	Nanoâ€•and Micropatterning of Optically Transparent, Mechanically Robust, Biocompatible Silk Fibroin Films. Advanced Materials, 2008, 20, 3070-3072.	21.0	181

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127	Silk Self-Assembly Mechanisms and Control From Thermodynamics to Kinetics. Biomacromolecules, 2012, 13, 826-832.	5.4	180
128	Bioâ€microfluidics: Biomaterials and Biomimetic Designs. Advanced Materials, 2010, 22, 249-260.	21.0	178
129	3D Bioprinting of Selfâ€Standing Silkâ€Based Bioink. Advanced Healthcare Materials, 2018, 7, e1701026.	7.6	177
130	Silk fibroin/chondroitin sulfate/hyaluronic acid ternary scaffolds for dermal tissue reconstruction. Acta Biomaterialia, 2013, 9, 6771-6782.	8.3	176
131	Stabilization of Enzymes in Silk Films. Biomacromolecules, 2009, 10, 1032-1042.	5.4	174
132	Inkjet Printing of Regenerated Silk Fibroin: From Printable Forms to Printable Functions. Advanced Materials, 2015, 27, 4273-4279.	21.0	174
133	Injectable and pH-Responsive Silk Nanofiber Hydrogels for Sustained Anticancer Drug Delivery. ACS Applied Materials & Interfaces, 2016, 8, 17118-17126.	8.0	172
134	Bone and cartilage tissue constructs grown using human bone marrow stromal cells, silk scaffolds and rotating bioreactors. Biomaterials, 2006, 27, 6138-6149.	11.4	171
135	Processing methods to control silk fibroin film biomaterial features. Journal of Materials Science, 2008, 43, 6967-6985.	3.7	170
136	Effect of water on the thermal properties of silk fibroin. Thermochimica Acta, 2007, 461, 137-144.	2.7	168
137	Collagen structural hierarchy and susceptibility to degradation by ultraviolet radiation. Materials Science and Engineering C, 2008, 28, 1420-1429.	7.3	168
138	Electrogelation for Protein Adhesives. Advanced Materials, 2010, 22, 711-715.	21.0	168
139	Biomaterials from Ultrasonication-Induced Silk Fibroinâ^'Hyaluronic Acid Hydrogels. Biomacromolecules, 2010, 11, 3178-3188.	5.4	168
140	Silk Fibroin as Edible Coating for Perishable Food Preservation. Scientific Reports, 2016, 6, 25263.	3.3	168
141	Silk hydrogel for cartilage tissue engineering. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2010, 95B, 84-90.	3.4	167
142	Helicoidal multi-lamellar features of RGD-functionalized silk biomaterials for corneal tissue engineering. Biomaterials, 2010, 31, 8953-8963.	11.4	164
143	Antibioticâ€Releasing Silk Biomaterials for Infection Prevention and Treatment. Advanced Functional Materials, 2013, 23, 854-861.	14.9	164
144	Enzymatically crosslinked silk and silk-gelatin hydrogels with tunable gelation kinetics, mechanical properties and bioactivity for cell culture and encapsulation. Biomaterials, 2020, 232, 119720.	11.4	163

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145	The use of silk-based devices for fracture fixation. Nature Communications, 2014, 5, 3385.	12.8	160
146	Recombinant Spidroins Fully Replicate Primary Mechanical Properties of Natural Spider Silk. Biomacromolecules, 2018, 19, 3853-3860.	5.4	159
147	A 3D human brainâ€“like tissue model of herpes-induced Alzheimerâ€™s disease. Science Advances, 2020, 6, eaay8828.	10.3	159
148	Performance enhancement of terahertz metamaterials on ultrathin substrates for sensing applications. Applied Physics Letters, 2010, 97, .	3.3	158
149	Silk Hydrogels as Soft Substrates for Neural Tissue Engineering. Advanced Functional Materials, 2013, 23, 5140-5149.	14.9	157
150	Lipase-Catalyzed Ring-Opening Polymerization of Trimethylene Carbonateâ€. Macromolecules, 1997, 30, 7735-7742.	4.8	156
151	NF-Î°B signaling is key in the wound healing processes of silk fibroin. Acta Biomaterialia, 2018, 67, 183-195.	8.3	155
152	Tunable Silk: Using Microfluidics to Fabricate Silk Fibers with Controllable Properties. Biomacromolecules, 2011, 12, 1504-1511.	5.4	154
153	Enhanced function of pancreatic islets co-encapsulated with ECM proteins and mesenchymal stromal cells in a silk hydrogel. Biomaterials, 2012, 33, 6691-6697.	11.4	154
154	Polyvinyl Alcohol/Silk Fibroin/Borax Hydrogel Ionotronics: A Highly Stretchable, Self-Healable, and Biocompatible Sensing Platform. ACS Applied Materials & Interfaces, 2019, 11, 23632-23638.	8.0	154
155	Recombinant <scp>DNA</scp> production of spider silk proteins. Microbial Biotechnology, 2013, 6, 651-663.	4.2	153
156	VEGF and BMP-2 promote bone regeneration by facilitating bone marrow stem cell homing and differentiation. , 2014, 27, 1-12.		153
157	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, 11981-11986.	7.1	148
158	Integration of Stiff Graphene and Tough Silk for the Design and Fabrication of Versatile Electronic Materials. Advanced Functional Materials, 2018, 28, 1705291.	14.9	148
159	Elasticity Maps of Living Neurons Measured by Combined Fluorescence and Atomic Force Microscopy. Biophysical Journal, 2012, 103, 868-877.	0.5	147
160	Relationships between degradability of silk scaffolds and osteogenesis. Biomaterials, 2010, 31, 6162-6172.	11.4	146
161	Corneal Tissue Engineering: Recent Advances and Future Perspectives. Tissue Engineering - Part B: Reviews, 2015, 21, 278-287.	4.8	146
162	Lyophilized Silk Sponges: A Versatile Biomaterial Platform for Soft Tissue Engineering. ACS Biomaterials Science and Engineering, 2015, 1, 260-270.	5.2	146

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163	Ultrathin Free-Standing <i>Bombyx mori</i> Silk Nanofibril Membranes. Nano Letters, 2016, 16, 3795-3800.	9.1	146
164	Functional, RFâ€Trilayer Sensors for Toothâ€Mounted, Wireless Monitoring of the Oral Cavity and Food Consumption. Advanced Materials, 2018, 30, e1703257.	21.0	146
165	Production of Curcumin-Loaded Silk Fibroin Nanoparticles for Cancer Therapy. Nanomaterials, 2018, 8, 126.	4.1	144
166	Beating the Heat - Fast Scanning Melts Silk Beta Sheet Crystals. Scientific Reports, 2013, 3, 1130.	3.3	143
167	Impact of silk biomaterial structure on proteolysis. Acta Biomaterialia, 2015, 11, 212-221.	8.3	142
168	Ethyl Glucoside as a Multifunctional Initiator for Enzyme-Catalyzed Regioselective Lactone Ring-Opening Polymerization. Journal of the American Chemical Society, 1998, 120, 1363-1367.	13.7	141
169	Biomaterials derived from silkâ€“tropoelastin protein systems. Biomaterials, 2010, 31, 8121-8131.	11.4	141
170	Clinical correlates in an experimental model of repetitive mild brain injury. Annals of Neurology, 2013, 74, 65-75.	5.3	141
171	Programmable 3D silk bone marrow niche for platelet generation ex vivo and modeling of megakaryopoiesis pathologies. Blood, 2015, 125, 2254-2264.	1.4	140
172	Rapid Nanoimprinting of Silk Fibroin Films for Biophotonic Applications. Advanced Materials, 2010, 22, 1746-1749.	21.0	139
173	Silk fibroin for skin injury repair: Where do things stand?. Advanced Drug Delivery Reviews, 2020, 153, 28-53.	13.7	139
174	Physical and chemical aspects of stabilization of compounds in silk. Biopolymers, 2012, 97, 479-498.	2.4	138
175	Thermoplastic moulding of regenerated silk. Nature Materials, 2020, 19, 102-108.	27.5	138
176	Directâ€Write Assembly of 3D Silk/Hydroxyapatite Scaffolds for Bone Coâ€Cultures. Advanced Healthcare Materials, 2012, 1, 729-735.	7.6	136
177	Sustainable Release of Vancomycin from Silk Fibroin Nanoparticles for Treating Severe Bone Infection in Rat Tibia Osteomyelitis Model. ACS Applied Materials & Interfaces, 2017, 9, 5128-5138.	8.0	135
178	Tissue engineering strategies to study cartilage development, degeneration and regeneration. Advanced Drug Delivery Reviews, 2015, 84, 107-122.	13.7	134
179	Liquid Exfoliated Natural Silk Nanofibrils: Applications in Optical and Electrical Devices. Advanced Materials, 2016, 28, 7783-7790.	21.0	134
180	Directed assembly of bio-inspired hierarchical materials with controlled nanofibrillar architectures. Nature Nanotechnology, 2017, 12, 474-480.	31.5	134

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181	Osteoinductive silkâ€“silica composite biomaterials for bone regeneration. Biomaterials, 2010, 31, 8902-8910.	11.4	133
182	Highâ€Strength, Durable Allâ€Silk Fibroin Hydrogels with Versatile Processability toward Multifunctional Applications. Advanced Functional Materials, 2018, 28, 1704757.	14.9	133
183	Bone Regeneration on Macroporous Aqueous-Derived Silk 3-D Scaffolds. Macromolecular Bioscience, 2007, 7, 643-655.	4.1	132
184	Selfâ€Assembling Doxorubicin Silk Hydrogels for the Focal Treatment of Primary Breast Cancer. Advanced Functional Materials, 2013, 23, 58-65.	14.9	132
185	Vascularization of hollow channel-modified porous silk scaffolds with endothelial cells for tissue regeneration. Biomaterials, 2015, 56, 68-77.	11.4	132
186	Photocrosslinking of Silk Fibroin Using Riboflavin for Ocular Prostheses. Advanced Materials, 2016, 28, 2417-2420.	21.0	132
187	Silk polymer-based adenosine release: Therapeutic potential for epilepsy. Biomaterials, 2008, 29, 3609-3616.	11.4	131
188	Gel spinning of silk tubes for tissue engineering. Biomaterials, 2008, 29, 4650-4657.	11.4	131
189	Robust bioengineered 3D functional human intestinal epithelium. Scientific Reports, 2015, 5, 13708.	3.3	131
190	Silkâ€Based Biomaterials in Biomedical Textiles and Fiberâ€Based Implants. Advanced Healthcare Materials, 2015, 4, 1134-1151.	7.6	130
191	Effect of Hydration on Silk Film Material Properties. Macromolecular Bioscience, 2010, 10, 393-403.	4.1	129
192	Silk fibroin electrogelation mechanisms. Acta Biomaterialia, 2011, 7, 2394-2400.	8.3	128
193	<i>In Vitro</i>3D Model for Human Vascularized Adipose Tissue. Tissue Engineering - Part A, 2009, 15, 2227-2236.	3.1	127
194	Stabilization and Release of Enzymes from Silk Films. Macromolecular Bioscience, 2010, 10, 359-368.	4.1	127
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