

David L Kaplan

List of Publications by Year in descending order

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1,148
papers

107,314
citations

143

157
h-index

483

270
g-index

1165
all docs

1165
docs citations

1165
times ranked

59323
citing authors

#	ARTICLE	IF	CITATIONS
1	Silk-based biomaterials. <i>Biomaterials</i> , 2003, 24, 401-416.	5.7	2,981
2	Materials fabrication from <i>Bombyx mori</i> silk fibroin. <i>Nature Protocols</i> , 2011, 6, 1612-1631.	5.5	2,265
3	Silk as a biomaterial. <i>Progress in Polymer Science</i> , 2007, 32, 991-1007.	11.8	2,208
4	Dissolvable films of silk fibroin for ultrathin conformal bio-integrated electronics. <i>Nature Materials</i> , 2010, 9, 511-517.	13.3	1,501
5	New Opportunities for an Ancient Material. <i>Science</i> , 2010, 329, 528-531.	6.0	1,224
6	Mechanism of silk processing in insects and spiders. <i>Nature</i> , 2003, 424, 1057-1061.	13.7	1,214
7	A Physically Transient Form of Silicon Electronics. <i>Science</i> , 2012, 337, 1640-1644.	6.0	1,085
8	Electrospun silk-BMP-2 scaffolds for bone tissue engineering. <i>Biomaterials</i> , 2006, 27, 3115-3124.	5.7	1,056
9	Three-dimensional aqueous-derived biomaterial scaffolds from silk fibroin. <i>Biomaterials</i> , 2005, 26, 2775-2785.	5.7	884
10	Stem cell-based tissue engineering with silk biomaterials. <i>Biomaterials</i> , 2006, 27, 6064-6082.	5.7	869
11	Porous 3-D Scaffolds from Regenerated Silk Fibroin. <i>Biomacromolecules</i> , 2004, 5, 718-726.	2.6	807
12	Graphene-based wireless bacteria detection on tooth enamel. <i>Nature Communications</i> , 2012, 3, 763.	5.8	806
13	Silk matrix for tissue engineered anterior cruciate ligaments. <i>Biomaterials</i> , 2002, 23, 4131-4141.	5.7	791
14	Vascularization Strategies for Tissue Engineering. <i>Tissue Engineering - Part B: Reviews</i> , 2009, 15, 353-370.	2.5	765
15	Functionalized silk-based biomaterials for bone formation. <i>Journal of Biomedical Materials Research Part B</i> , 2001, 54, 139-148.	3.0	738
16	Structure and Properties of Silk Hydrogels. <i>Biomacromolecules</i> , 2004, 5, 786-792.	2.6	735
17	The inflammatory responses to silk films in vitro and in vivo. <i>Biomaterials</i> , 2005, 26, 147-155.	5.7	725
18	Electrospinning <i>Bombyx mori</i> Silk with Poly(ethylene oxide). <i>Biomacromolecules</i> , 2002, 3, 1233-1239.	2.6	679

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19	In vivo degradation of three-dimensional silk fibroin scaffolds. <i>Biomaterials</i> , 2008, 29, 3415-3428.	5.7	679
20	In vitro degradation of silk fibroin. <i>Biomaterials</i> , 2005, 26, 3385-3393.	5.7	657
21	Human bone marrow stromal cell responses on electrospun silk fibroin mats. <i>Biomaterials</i> , 2004, 25, 1039-1047.	5.7	596
22	Ultra-sensitive vibrational spectroscopy of protein monolayers with plasmonic nanoantenna arrays. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 19227-19232.	3.3	593
23	Cationic polymers and their therapeutic potential. <i>Chemical Society Reviews</i> , 2012, 41, 7147.	18.7	588
24	Sonication-induced gelation of silk fibroin for cell encapsulation. <i>Biomaterials</i> , 2008, 29, 1054-1064.	5.7	575
25	Cell differentiation by mechanical stress. <i>FASEB Journal</i> , 2002, 16, 1-13.	0.2	561
26	Waterproof AlInGaP optoelectronics on stretchable substrates with applications in biomedicine and Robotics. <i>Nature Materials</i> , 2010, 9, 929-937.	13.3	557
27	Water-insoluble silk films with silk I structure. <i>Acta Biomaterialia</i> , 2010, 6, 1380-1387.	4.1	530
28	Regulation of Silk Material Structure by Temperature-Controlled Water Vapor Annealing. <i>Biomacromolecules</i> , 2011, 12, 1686-1696.	2.6	530
29	Macrophage responses to silk. <i>Biomaterials</i> , 2003, 24, 3079-3085.	5.7	504
30	Native-sized recombinant spider silk protein produced in metabolically engineered <i>Escherichia coli</i> results in a strong fiber. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010, 107, 14059-14063.	3.3	485
31	Mechanisms of Silk Fibroin Sol-Gel Transitions. <i>Journal of Physical Chemistry B</i> , 2006, 110, 21630-21638.	1.2	458
32	Silk Materials – A Road to Sustainable High Technology. <i>Advanced Materials</i> , 2012, 24, 2824-2837.	11.1	456
33	Nanofibrils in nature and materials engineering. <i>Nature Reviews Materials</i> , 2018, 3, .	23.3	455
34	Villification: How the Gut Gets Its Villi. <i>Science</i> , 2013, 342, 212-218.	6.0	454
35	Agarose-based biomaterials for tissue engineering. <i>Carbohydrate Polymers</i> , 2018, 187, 66-84.	5.1	454
36	Design of biodegradable, implantable devices towards clinical translation. <i>Nature Reviews Materials</i> , 2020, 5, 61-81.	23.3	440

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37	Controlling silk fibroin particle features for drug delivery. <i>Biomaterials</i> , 2010, 31, 4583-4591.	5.7	433
38	In vitro cartilage tissue engineering with 3D porous aqueous-derived silk scaffolds and mesenchymal stem cells. <i>Biomaterials</i> , 2005, 26, 7082-7094.	5.7	412
39	Biomedical applications of chemically-modified silk fibroin. <i>Journal of Materials Chemistry</i> , 2009, 19, 6443.	6.7	411
40	Role of Membrane Potential in the Regulation of Cell Proliferation and Differentiation. <i>Stem Cell Reviews and Reports</i> , 2009, 5, 231-246.	5.6	388
41	Cartilage tissue engineering with silk scaffolds and human articular chondrocytes. <i>Biomaterials</i> , 2006, 27, 4434-4442.	5.7	386
42	Growth factor gradients via microsphere delivery in biopolymer scaffolds for osteochondral tissue engineering. <i>Journal of Controlled Release</i> , 2009, 134, 81-90.	4.8	385
43	Electrospun silk biomaterial scaffolds for regenerative medicine. <i>Advanced Drug Delivery Reviews</i> , 2009, 61, 988-1006.	6.6	385
44	Silk nanospheres and microspheres from silk/pva blend films for drug delivery. <i>Biomaterials</i> , 2010, 31, 1025-1035.	5.7	372
45	Silk film biomaterials for cornea tissue engineering. <i>Biomaterials</i> , 2009, 30, 1299-1308.	5.7	362
46	In vivo bioresponses to silk proteins. <i>Biomaterials</i> , 2015, 71, 145-157.	5.7	357
47	Engineering adipose-like tissue in vitro and in vivo utilizing human bone marrow and adipose-derived mesenchymal stem cells with silk fibroin 3D scaffolds. <i>Biomaterials</i> , 2007, 28, 5280-5290.	5.7	340
48	Highly Tunable Elastomeric Silk Biomaterials. <i>Advanced Functional Materials</i> , 2014, 24, 4615-4624.	7.8	338
49	High-strength silk protein scaffolds for bone repair. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 7699-7704.	3.3	337
50	Control of in vitro tissue-engineered bone-like structures using human mesenchymal stem cells and porous silk scaffolds. <i>Biomaterials</i> , 2007, 28, 1152-1162.	5.7	335
51	Silk-Based Conformal, Adhesive, Edible Food Sensors. <i>Advanced Materials</i> , 2012, 24, 1067-1072.	11.1	335
52	Overview of Silk Fibroin Use in Wound Dressings. <i>Trends in Biotechnology</i> , 2018, 36, 907-922.	4.9	330
53	Silk-based delivery systems of bioactive molecules. <i>Advanced Drug Delivery Reviews</i> , 2010, 62, 1497-1508.	6.6	324
54	Silkworm silk-based materials and devices generated using bio-nanotechnology. <i>Chemical Society Reviews</i> , 2018, 47, 6486-6504.	18.7	324

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55	Biomaterials for the Development of Peripheral Nerve Guidance Conduits. <i>Tissue Engineering - Part B: Reviews</i> , 2012, 18, 40-50.	2.5	321
56	Silk fibroin/hydroxyapatite composites for bone tissue engineering. <i>Biotechnology Advances</i> , 2018, 36, 68-91.	6.0	320
57	Engineering bone-like tissue in vitro using human bone marrow stem cells and silk scaffolds. <i>Journal of Biomedical Materials Research Part B</i> , 2004, 71A, 25-34.	3.0	319
58	Vortex-Induced Injectable Silk Fibroin Hydrogels. <i>Biophysical Journal</i> , 2009, 97, 2044-2050.	0.2	317
59	Natural protective glue protein, sericin bioengineered by silkworms: Potential for biomedical and biotechnological applications. <i>Progress in Polymer Science</i> , 2008, 33, 998-1012.	11.8	316
60	Scientific, sustainability and regulatory challenges of cultured meat. <i>Nature Food</i> , 2020, 1, 403-415.	6.2	315
61	Tissue Engineering of Ligaments. <i>Annual Review of Biomedical Engineering</i> , 2004, 6, 131-156.	5.7	313
62	Biopolymer nanofibrils: Structure, modeling, preparation, and applications. <i>Progress in Polymer Science</i> , 2018, 85, 1-56.	11.8	312
63	Human bone marrow stromal cell and ligament fibroblast responses on RGD-modified silk fibers. <i>Journal of Biomedical Materials Research Part B</i> , 2003, 67A, 559-570.	3.0	311
64	Biocompatible Silk Printed Optical Waveguides. <i>Advanced Materials</i> , 2009, 21, 2411-2415.	11.1	308
65	A new route for silk. <i>Nature Photonics</i> , 2008, 2, 641-643.	15.6	306
66	Mechanical Properties of Electrospun Silk Fibers. <i>Macromolecules</i> , 2004, 37, 6856-6864.	2.2	297
67	Spider silks and their applications. <i>Trends in Biotechnology</i> , 2008, 26, 244-251.	4.9	291
68	In vitro evaluation of electrospun silk fibroin scaffolds for vascular cell growth. <i>Biomaterials</i> , 2008, 29, 2217-2227.	5.7	289
69	Influence of macroporous protein scaffolds on bone tissue engineering from bone marrow stem cells. <i>Biomaterials</i> , 2005, 26, 4442-4452.	5.7	283
70	Silk-based biomaterials for sustained drug delivery. <i>Journal of Controlled Release</i> , 2014, 190, 381-397.	4.8	283
71	Bioactive Silk Protein Biomaterial Systems for Optical Devices. <i>Biomacromolecules</i> , 2008, 9, 1214-1220.	2.6	281
72	Effect of processing on silk-based biomaterials: Reproducibility and biocompatibility. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2011, 99B, 89-101.	1.6	281

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73	Silk-based resorbable electronic devices for remotely controlled therapy and in vivo infection abatement. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 17385-17389.	3.3	281
74	Silk microspheres for encapsulation and controlled release. <i>Journal of Controlled Release</i> , 2007, 117, 360-370.	4.8	276
75	Construction, Cloning, and Expression of Synthetic Genes Encoding Spider Dragline Silk. <i>Biochemistry</i> , 1995, 34, 10879-10885.	1.2	272
76	Bone tissue engineering with premineralized silk scaffolds. <i>Bone</i> , 2008, 42, 1226-1234.	1.4	270
77	Mechanical and thermal properties of dragline silk from the spider <i>Nephila clavipes</i> . <i>Polymers for Advanced Technologies</i> , 1994, 5, 401-410.	1.6	269
78	Functionalized Silk Biomaterials for Wound Healing. <i>Advanced Healthcare Materials</i> , 2013, 2, 206-217.	3.9	264
79	Direct Write Assembly of Microperiodic Silk Fibroin Scaffolds for Tissue Engineering Applications. <i>Advanced Functional Materials</i> , 2008, 18, 1883-1889.	7.8	261
80	Degradation Mechanism and Control of Silk Fibroin. <i>Biomacromolecules</i> , 2011, 12, 1080-1086.	2.6	260
81	Plant-based and cell-based approaches to meat production. <i>Nature Communications</i> , 2020, 11, 6276.	5.8	260
82	The use of injectable sonication-induced silk hydrogel for VEGF165 and BMP-2 delivery for elevation of the maxillary sinus floor. <i>Biomaterials</i> , 2011, 32, 9415-9424.	5.7	255
83	Bioengineered functional brain-like cortical tissue. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 13811-13816.	3.3	255
84	Silk fibroin biomaterials for controlled release drug delivery. <i>Expert Opinion on Drug Delivery</i> , 2011, 8, 797-811.	2.4	248
85	Stem cell- and scaffold-based tissue engineering approaches to osteochondral regenerative medicine. <i>Seminars in Cell and Developmental Biology</i> , 2009, 20, 646-655.	2.3	247
86	Protein-based composite materials. <i>Materials Today</i> , 2012, 15, 208-215.	8.3	247
87	Silk fibroin microtubes for blood vessel engineering. <i>Biomaterials</i> , 2007, 28, 5271-5279.	5.7	246
88	Silk-based electrospun tubular scaffolds for tissue-engineered vascular grafts. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2008, 19, 653-664.	1.9	245
89	Silicon electronics on silk as a path to bioresorbable, implantable devices. <i>Applied Physics Letters</i> , 2009, 95, 133701.	1.5	245
90	Fabrication of Silk Microneedles for Controlled Release Drug Delivery. <i>Advanced Functional Materials</i> , 2012, 22, 330-335.	7.8	245

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91	All-water-based electron-beam lithography using silk as a resist. <i>Nature Nanotechnology</i> , 2014, 9, 306-310.	15.6	245
92	Modification of silk fibroin using diazonium coupling chemistry and the effects on hMSC proliferation and differentiation. <i>Biomaterials</i> , 2008, 29, 2829-2838.	5.7	243
93	Role of Adult Mesenchymal Stem Cells in Bone Tissue Engineering Applications: Current Status and Future Prospects. <i>Tissue Engineering</i> , 2005, 11, 787-802.	4.9	240
94	Mapping Domain Structures in Silks from Insects and Spiders Related to Protein Assembly. <i>Journal of Molecular Biology</i> , 2004, 335, 27-40.	2.0	238
95	Nucleation and growth of mineralized bone matrix on silk-hydroxyapatite composite scaffolds. <i>Biomaterials</i> , 2011, 32, 2812-2820.	5.7	238
96	Evolution of Bioprinting and Additive Manufacturing Technologies for 3D Bioprinting. <i>ACS Biomaterials Science and Engineering</i> , 2016, 2, 1662-1678.	2.6	237
97	Silk-Based Advanced Materials for Soft Electronics. <i>Accounts of Chemical Research</i> , 2019, 52, 2916-2927.	7.6	232
98	Enzymatically crosslinked silk-hyaluronic acid hydrogels. <i>Biomaterials</i> , 2017, 131, 58-67.	5.7	228
99	Mechanism of enzymatic degradation of beta-sheet crystals. <i>Biomaterials</i> , 2010, 31, 2926-2933.	5.7	227
100	Natural and genetically engineered proteins for tissue engineering. <i>Progress in Polymer Science</i> , 2012, 37, 1-17.	11.8	227
101	Synthesis and characterization of polymers produced by horseradish peroxidase in dioxane. <i>Journal of Polymer Science Part A</i> , 1991, 29, 1561-1574.	2.5	225
102	Lyophilized silk fibroin hydrogels for the sustained local delivery of therapeutic monoclonal antibodies. <i>Biomaterials</i> , 2011, 32, 2642-2650.	5.7	225
103	Biomaterial Films of Bombyx Mori Silk Fibroin with Poly(ethylene oxide). <i>Biomacromolecules</i> , 2004, 5, 711-717.	2.6	224
104	Design and function of biomimetic multilayer water purification membranes. <i>Science Advances</i> , 2017, 3, e1601939.	4.7	221
105	Silk microfiber-reinforced silk hydrogel composites for functional cartilage tissue repair. <i>Acta Biomaterialia</i> , 2015, 11, 27-36.	4.1	220
106	Silk inverse opals. <i>Nature Photonics</i> , 2012, 6, 818-823.	15.6	217
107	Quantitative metabolic imaging using endogenous fluorescence to detect stem cell differentiation. <i>Scientific Reports</i> , 2013, 3, 3432.	1.6	215
108	Adipose Tissue Engineering for Soft Tissue Regeneration. <i>Tissue Engineering - Part B: Reviews</i> , 2010, 16, 413-426.	2.5	212

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109	Metamaterials on Paper as a Sensing Platform. <i>Advanced Materials</i> , 2011, 23, 3197-3201.	11.1	210
110	Development of silk-based scaffolds for tissue engineering of bone from human adipose-derived stem cells. <i>Acta Biomaterialia</i> , 2012, 8, 2483-2492.	4.1	210
111	Electrical and mechanical stimulation of cardiac cells and tissue constructs. <i>Advanced Drug Delivery Reviews</i> , 2016, 96, 135-155.	6.6	210
112	Can tissue engineering concepts advance tumor biology research?. <i>Trends in Biotechnology</i> , 2010, 28, 125-133.	4.9	208
113	Polymorphic regenerated silk fibers assembled through bioinspired spinning. <i>Nature Communications</i> , 2017, 8, 1387.	5.8	208
114	Membrane Potential Controls Adipogenic and Osteogenic Differentiation of Mesenchymal Stem Cells. <i>PLoS ONE</i> , 2008, 3, e3737.	1.1	206
115	Structure–function–property–design interplay in biopolymers: Spider silk. <i>Acta Biomaterialia</i> , 2014, 10, 1612-1626.	4.1	206
116	Epigenetic changes induced by adenosine augmentation therapy prevent epileptogenesis. <i>Journal of Clinical Investigation</i> , 2013, 123, 3552-3563.	3.9	206
117	Porous silk fibroin 3-D scaffolds for delivery of bone morphogenetic protein-2 in vitro and in vivo. <i>Journal of Biomedical Materials Research - Part A</i> , 2006, 78A, 324-334.	2.1	201
118	Tunable Self-Assembly of Genetically Engineered Silk–Elastin-like Protein Polymers. <i>Biomacromolecules</i> , 2011, 12, 3844-3850.	2.6	199
119	Enzyme-Catalyzed ϵ -Caprolactone Ring-Opening Polymerization. <i>Macromolecules</i> , 1995, 28, 73-78.	2.2	198
120	3D in vitro modeling of the central nervous system. <i>Progress in Neurobiology</i> , 2015, 125, 1-25.	2.8	196
121	Advanced Bioreactor with Controlled Application of Multi-Dimensional Strain For Tissue Engineering. <i>Journal of Biomechanical Engineering</i> , 2002, 124, 742-749.	0.6	195
122	Novel nanocomposites from spider silk-silica fusion (chimeric) proteins. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 9428-9433.	3.3	194
123	Mandibular repair in rats with premineralized silk scaffolds and BMP-2-modified bMSCs. <i>Biomaterials</i> , 2009, 30, 4522-4532.	5.7	194
124	RGD-Functionalized Bioengineered Spider Dragline Silk Biomaterial. <i>Biomacromolecules</i> , 2006, 7, 3139-3145.	2.6	193
125	pH-Dependent Anticancer Drug Release from Silk Nanoparticles. <i>Advanced Healthcare Materials</i> , 2013, 2, 1606-1611.	3.9	192
126	Carbonization of a stable β -sheet-rich silk protein into a pseudographitic pyroprotein. <i>Nature Communications</i> , 2015, 6, 7145.	5.8	192

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127	Silk based bioinks for soft tissue reconstruction using 3-dimensional (3D) printing with inÂvitro and inÂvivo assessments. <i>Biomaterials</i> , 2017, 117, 105-115.	5.7	189
128	The influence of elasticity and surface roughness on myogenic and osteogenic-differentiation of cells on silk-elastin biomaterials. <i>Biomaterials</i> , 2011, 32, 8979-8989.	5.7	188
129	Enzyme-Catalyzed Ring-Opening Polymerization of ̑-Pentadecalactone. <i>Macromolecules</i> , 1997, 30, 2705-2711.	2.2	187
130	Insoluble and Flexible Silk Films Containing Glycerol. <i>Biomacromolecules</i> , 2010, 11, 143-150.	2.6	187
131	Concise Review: Mesenchymal Stem Cell Tumor-Homing: Detection Methods in Disease Model Systems. <i>Stem Cells</i> , 2011, 29, 920-927.	1.4	185
132	Potential of 3-D tissue constructs engineered from bovine chondrocytes/silk fibroin-chitosan for inÂvitro cartilage tissue engineering. <i>Biomaterials</i> , 2011, 32, 5773-5781.	5.7	184
133	Genetic engineering of fibrous proteins: spider dragline silk and collagen. <i>Advanced Drug Delivery Reviews</i> , 2002, 54, 1131-1143.	6.6	183
134	Silk Fibroin Microfluidic Devices. <i>Advanced Materials</i> , 2007, 19, 2847-2850.	11.1	182
135	Cartilage-like Tissue Engineering Using Silk Scaffolds and Mesenchymal Stem Cells. <i>Tissue Engineering</i> , 2006, 12, 2729-2738.	4.9	181
136	Silk coatings on PLGA and alginate microspheres for protein delivery. <i>Biomaterials</i> , 2007, 28, 4161-4169.	5.7	181
137	Nano- and Micropatterning of Optically Transparent, Mechanically Robust, Biocompatible Silk Fibroin Films. <i>Advanced Materials</i> , 2008, 20, 3070-3072.	11.1	181
138	Multilayered silk scaffolds for meniscus tissue engineering. <i>Biomaterials</i> , 2011, 32, 639-651.	5.7	181
139	Silk Self-Assembly Mechanisms and Control From Thermodynamics to Kinetics. <i>Biomacromolecules</i> , 2012, 13, 826-832.	2.6	180
140	Bio- microfluidics: Biomaterials and Biomimetic Designs. <i>Advanced Materials</i> , 2010, 22, 249-260.	11.1	178
141	Human Bone Marrow-Derived MSCs Can Home to Orthotopic Breast Cancer Tumors and Promote Bone Metastasis. <i>Cancer Research</i> , 2010, 70, 10044-10050.	0.4	177
142	3D Bioprinting of Self-Standing Silk-Based Bioink. <i>Advanced Healthcare Materials</i> , 2018, 7, e1701026.	3.9	177
143	Silk fibroin/chondroitin sulfate/hyaluronic acid ternary scaffolds for dermal tissue reconstruction. <i>Acta Biomaterialia</i> , 2013, 9, 6771-6782.	4.1	176
144	Stabilization of Enzymes in Silk Films. <i>Biomacromolecules</i> , 2009, 10, 1032-1042.	2.6	174

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145	Inkjet Printing of Regenerated Silk Fibroin: From Printable Forms to Printable Functions. <i>Advanced Materials</i> , 2015, 27, 4273-4279.	11.1	174
146	Injectable and pH-Responsive Silk Nanofiber Hydrogels for Sustained Anticancer Drug Delivery. <i>ACS Applied Materials & Interfaces</i> , 2016, 8, 17118-17126.	4.0	172
147	Osteogenesis by human mesenchymal stem cells cultured on silk biomaterials: Comparison of adenovirus mediated gene transfer and protein delivery of BMP-2. <i>Biomaterials</i> , 2006, 27, 4993-5002.	5.7	171
148	Processing methods to control silk fibroin film biomaterial features. <i>Journal of Materials Science</i> , 2008, 43, 6967-6985.	1.7	170
149	In vitro and in vivo evaluation of differentially demineralized cancellous bone scaffolds combined with human bone marrow stromal cells for tissue engineering. <i>Biomaterials</i> , 2005, 26, 3173-3185.	5.7	169
150	Collagen structural hierarchy and susceptibility to degradation by ultraviolet radiation. <i>Materials Science and Engineering C</i> , 2008, 28, 1420-1429.	3.8	168
151	Electrogelation for Protein Adhesives. <i>Advanced Materials</i> , 2010, 22, 711-715.	11.1	168
152	Biomaterials from Ultrasonication-Induced Silk Fibroin-Hyaluronic Acid Hydrogels. <i>Biomacromolecules</i> , 2010, 11, 3178-3188.	2.6	168
153	Biomaterial Coatings by Stepwise Deposition of Silk Fibroin. <i>Langmuir</i> , 2005, 21, 11335-11341.	1.6	167
154	Silk hydrogel for cartilage tissue engineering. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2010, 95B, 84-90.	1.6	167
155	Nanolayer biomaterial coatings of silk fibroin for controlled release. <i>Journal of Controlled Release</i> , 2007, 121, 190-199.	4.8	164
156	Helicoidal multi-lamellar features of RGD-functionalized silk biomaterials for corneal tissue engineering. <i>Biomaterials</i> , 2010, 31, 8953-8963.	5.7	164
157	Antibiotic-Releasing Silk Biomaterials for Infection Prevention and Treatment. <i>Advanced Functional Materials</i> , 2013, 23, 854-861.	7.8	164
158	Enzymatically crosslinked silk and silk-gelatin hydrogels with tunable gelation kinetics, mechanical properties and bioactivity for cell culture and encapsulation. <i>Biomaterials</i> , 2020, 232, 119720.	5.7	163
159	Relationships Between Mechanical Properties and Extracellular Matrix Constituents of the Cervical Stroma During Pregnancy. <i>Seminars in Perinatology</i> , 2009, 33, 300-307.	1.1	161
160	The use of silk-based devices for fracture fixation. <i>Nature Communications</i> , 2014, 5, 3385.	5.8	160
161	Template-directed synthesis of aragonite under supramolecular hydrogen-bonded langmuir monolayers. <i>Advanced Materials</i> , 1997, 9, 124-127.	11.1	159
162	Recombinant Spidroins Fully Replicate Primary Mechanical Properties of Natural Spider Silk. <i>Biomacromolecules</i> , 2018, 19, 3853-3860.	2.6	159

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163	A 3D human brain-like tissue model of herpes-induced Alzheimer's disease. <i>Science Advances</i> , 2020, 6, eaay8828.	4.7	159
164	Performance enhancement of terahertz metamaterials on ultrathin substrates for sensing applications. <i>Applied Physics Letters</i> , 2010, 97, .	1.5	158
165	Silk Hydrogels as Soft Substrates for Neural Tissue Engineering. <i>Advanced Functional Materials</i> , 2013, 23, 5140-5149.	7.8	157
166	Lipase-Catalyzed Ring-Opening Polymerization of Trimethylene Carbonate. <i>Macromolecules</i> , 1997, 30, 7735-7742.	2.2	156
167	Protein-Based Block Copolymers. <i>Biomacromolecules</i> , 2011, 12, 269-289.	2.6	155
168	NF- κ B signaling is key in the wound healing processes of silk fibroin. <i>Acta Biomaterialia</i> , 2018, 67, 183-195.	4.1	155
169	Tunable Silk: Using Microfluidics to Fabricate Silk Fibers with Controllable Properties. <i>Biomacromolecules</i> , 2011, 12, 1504-1511.	2.6	154
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