

David Kaplan

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

896

papers

77,885

citations

137

h-index

251

g-index

1,077

ext. papers

88,002

ext. citations

9.1

avg, IF

8.41

L-index

#	Paper	IF	Citations
896	Porosity of 3D biomaterial scaffolds and osteogenesis. <i>Biomaterials</i> , 2005 , 26, 5474-91	15.6	4445
895	Silk-based biomaterials. <i>Biomaterials</i> , 2003 , 24, 401-16	15.6	2621
894	Silk as a Biomaterial. <i>Progress in Polymer Science</i> , 2007 , 32, 991-1007	29.6	1842
893	Materials fabrication from Bombyx mori silk fibroin. <i>Nature Protocols</i> , 2011 , 6, 1612-31	18.8	1752
892	Dissolvable films of silk fibroin for ultrathin conformal bio-integrated electronics. <i>Nature Materials</i> , 2010 , 9, 511-7	27	1239
891	Mechanism of silk processing in insects and spiders. <i>Nature</i> , 2003 , 424, 1057-61	50.4	1064
890	New opportunities for an ancient material. <i>Science</i> , 2010 , 329, 528-31	33.3	1016
889	Electrospun silk-BMP-2 scaffolds for bone tissue engineering. <i>Biomaterials</i> , 2006 , 27, 3115-24	15.6	980
888	A physically transient form of silicon electronics. <i>Science</i> , 2012 , 337, 1640-4	33.3	862
887	Determining Beta-Sheet Crystallinity in Fibrous Proteins by Thermal Analysis and Infrared Spectroscopy. <i>Macromolecules</i> , 2006 , 39, 6161-6170	5.5	829
886	Three-dimensional aqueous-derived biomaterial scaffolds from silk fibroin. <i>Biomaterials</i> , 2005 , 26, 2775-85.6	15.6	793
885	Stem cell-based tissue engineering with silk biomaterials. <i>Biomaterials</i> , 2006 , 27, 6064-82	15.6	785
884	Porous 3-D scaffolds from regenerated silk fibroin. <i>Biomacromolecules</i> , 2004 , 5, 718-26	6.9	730
883	Silk matrix for tissue engineered anterior cruciate ligaments. <i>Biomaterials</i> , 2002 , 23, 4131-41	15.6	726
882	Functionalized silk-based biomaterials for bone formation. <i>Journal of Biomedical Materials Research Part B</i> , 2001 , 54, 139-48		662
881	Graphene-based wireless bacteria detection on tooth enamel. <i>Nature Communications</i> , 2012 , 3, 763	17.4	657
880	Vascularization strategies for tissue engineering. <i>Tissue Engineering - Part B: Reviews</i> , 2009 , 15, 353-70	7.9	642

879	The inflammatory responses to silk films in vitro and in vivo. <i>Biomaterials</i> , 2005 , 26, 147-55	15.6	636
878	Structure and properties of silk hydrogels. <i>Biomacromolecules</i> , 2004 , 5, 786-92	6.9	632
877	Electrospinning Bombyx mori silk with poly(ethylene oxide). <i>Biomacromolecules</i> , 2002 , 3, 1233-9	6.9	623
876	In vitro degradation of silk fibroin. <i>Biomaterials</i> , 2005 , 26, 3385-93	15.6	577
875	In vivo degradation of three-dimensional silk fibroin scaffolds. <i>Biomaterials</i> , 2008 , 29, 3415-28	15.6	573
874	Human bone marrow stromal cell responses on electrospun silk fibroin mats. <i>Biomaterials</i> , 2004 , 25, 1039-47	15.6	537
873	Cell differentiation by mechanical stress. <i>FASEB Journal</i> , 2002 , 16, 270-2	0.9	506
872	Sonication-induced gelation of silk fibroin for cell encapsulation. <i>Biomaterials</i> , 2008 , 29, 1054-64	15.6	492
871	Water-Stable Silk Films with Reduced Sheet Content. <i>Advanced Functional Materials</i> , 2005 , 15, 1241-1247	15.6	487
870	Water-insoluble silk films with silk I structure. <i>Acta Biomaterialia</i> , 2010 , 6, 1380-7	10.8	450
869	Macrophage responses to silk. <i>Biomaterials</i> , 2003 , 24, 3079-85	15.6	445
868	Regulation of silk material structure by temperature-controlled water vapor annealing. <i>Biomacromolecules</i> , 2011 , 12, 1686-96	6.9	434
867	Mechanisms of silk fibroin sol-gel transitions. <i>Journal of Physical Chemistry B</i> , 2006 , 110, 21630-8	3.4	396
866	Native-sized recombinant spider silk protein produced in metabolically engineered Escherichia coli results in a strong fiber. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2010 , 107, 14059-63	11.5	392
865	Silk materials--a road to sustainable high technology. <i>Advanced Materials</i> , 2012 , 24, 2824-37	24	380
864	In vitro cartilage tissue engineering with 3D porous aqueous-derived silk scaffolds and mesenchymal stem cells. <i>Biomaterials</i> , 2005 , 26, 7082-94	15.6	376
863	Silk implants for the healing of critical size bone defects. <i>Bone</i> , 2005 , 37, 688-98	4.7	371
862	Controlling silk fibroin particle features for drug delivery. <i>Biomaterials</i> , 2010 , 31, 4583-91	15.6	356

861	Cartilage tissue engineering with silk scaffolds and human articular chondrocytes. <i>Biomaterials</i> , 2006 , 27, 4434-42	15.6	356
860	Electrospun silk biomaterial scaffolds for regenerative medicine. <i>Advanced Drug Delivery Reviews</i> , 2009 , 61, 988-1006	18.5	335
859	Silk film biomaterials for cornea tissue engineering. <i>Biomaterials</i> , 2009 , 30, 1299-308	15.6	329
858	Silk nanospheres and microspheres from silk/pva blend films for drug delivery. <i>Biomaterials</i> , 2010 , 31, 1025-35	15.6	321
857	Role of membrane potential in the regulation of cell proliferation and differentiation. <i>Stem Cell Reviews and Reports</i> , 2009 , 5, 231-46	6.4	315
856	Biomedical applications of chemically-modified silk fibroin. <i>Journal of Materials Chemistry</i> , 2009 , 19, 6443-6450	314	
855	Nanofibrils in nature and materials engineering. <i>Nature Reviews Materials</i> , 2018 , 3,	73.3	304
854	Silk fibroin as an organic polymer for controlled drug delivery. <i>Journal of Controlled Release</i> , 2006 , 111, 219-27	11.7	293
853	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, 7699-704	11.5	288
852	Silk-based delivery systems of bioactive molecules. <i>Advanced Drug Delivery Reviews</i> , 2010 , 62, 1497-508	18.5	282
851	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 , 71, 25-34		277
850	Agarose-based biomaterials for tissue engineering. <i>Carbohydrate Polymers</i> , 2018 , 187, 66-84	10.3	276
849	Human bone marrow stromal cell and ligament fibroblast responses on RGD-modified silk fibers. <i>Journal of Biomedical Materials Research Part B</i> , 2003 , 67, 559-70		274
848	Vortex-induced injectable silk fibroin hydrogels. <i>Biophysical Journal</i> , 2009 , 97, 2044-50	2.9	271
847	In vivo bioresponses to silk proteins. <i>Biomaterials</i> , 2015 , 71, 145-157	15.6	269
846	Silk-based conformal, adhesive, edible food sensors. <i>Advanced Materials</i> , 2012 , 24, 1067-72	24	266
845	Highly tunable elastomeric silk biomaterials. <i>Advanced Functional Materials</i> , 2014 , 24, 4615-4624	15.6	265
844	Mechanical Properties of Electrospun Silk Fibers. <i>Macromolecules</i> , 2004 , 37, 6856-6864	5.5	263

843	Biocompatible Silk Printed Optical Waveguides. <i>Advanced Materials</i> , 2009 , 21, 2411-2415	24	260
842	Bone morphogenetic protein-2 decorated silk fibroin films induce osteogenic differentiation of human bone marrow stromal cells. <i>Journal of Biomedical Materials Research Part B</i> , 2004 , 71, 528-37		258
841	Silk microspheres for encapsulation and controlled release. <i>Journal of Controlled Release</i> , 2007 , 117, 360-70	11.7	251
840	Natural protective glue protein, sericin bioengineered by silkworms: Potential for biomedical and biotechnological applications. <i>Progress in Polymer Science</i> , 2008 , 33, 998-1012	29.6	250
839	Bioactive silk protein biomaterial systems for optical devices. <i>Biomacromolecules</i> , 2008 , 9, 1214-20	6.9	248
838	Bone tissue engineering with premineralized silk scaffolds. <i>Bone</i> , 2008 , 42, 1226-34	4.7	245
837	Spider silks and their applications. <i>Trends in Biotechnology</i> , 2008 , 26, 244-51	15.1	238
836	Mechanical and thermal properties of dragline silk from the spider <i>Nephila clavipes</i> . <i>Polymers for Advanced Technologies</i> , 1994 , 5, 401-410	3.2	234
835	Tissue engineering and developmental biology: going biomimetic. <i>Tissue Engineering</i> , 2006 , 12, 3265-83		233
834	Construction, cloning, and expression of synthetic genes encoding spider dragline silk. <i>Biochemistry</i> , 1995 , 34, 10879-85	3.2	232
833	Effect of processing on silk-based biomaterials: reproducibility and biocompatibility. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2011 , 99, 89-101	3.5	227
832	Silk fibroin microtubes for blood vessel engineering. <i>Biomaterials</i> , 2007 , 28, 5271-9	15.6	226
831	Conformational transitions in model silk peptides. <i>Biophysical Journal</i> , 2000 , 78, 2690-701	2.9	226
830	Silk fibroin/hydroxyapatite composites for bone tissue engineering. <i>Biotechnology Advances</i> , 2018 , 36, 68-91	17.8	224
829	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, 17385-9	11.5	223
828	Advanced tools for tissue engineering: scaffolds, bioreactors, and signaling. <i>Tissue Engineering</i> , 2006 , 12, 3285-305		223
827	Role of adult mesenchymal stem cells in bone tissue engineering applications: current status and future prospects. <i>Tissue Engineering</i> , 2005 , 11, 787-802		222
826	Silk-based electrospun tubular scaffolds for tissue-engineered vascular grafts. <i>Journal of Biomaterials Science, Polymer Edition</i> , 2008 , 19, 653-64	3.5	220

825	Mapping domain structures in silks from insects and spiders related to protein assembly. <i>Journal of Molecular Biology</i> , 2004 , 335, 27-40	6.5	220
824	Silk-based biomaterials for sustained drug delivery. <i>Journal of Controlled Release</i> , 2014 , 190, 381-97	11.7	219
823	Direct-Write Assembly of Microperiodic Silk Fibroin Scaffolds for Tissue Engineering Applications. <i>Advanced Functional Materials</i> , 2008 , 18, 1883-1889	15.6	219
822	Functionalized silk biomaterials for wound healing. <i>Advanced Healthcare Materials</i> , 2013 , 2, 206-17	10.1	216
821	. <i>Macromolecules</i> , 2008 , 41, 3939-3948	5.5	215
820	Degradation mechanism and control of silk fibroin. <i>Biomacromolecules</i> , 2011 , 12, 1080-6	6.9	214
819	The use of injectable sonication-induced silk hydrogel for VEGF(165) and BMP-2 delivery for elevation of the maxillary sinus floor. <i>Biomaterials</i> , 2011 , 32, 9415-24	15.6	213
818	Nucleation and growth of mineralized bone matrix on silk-hydroxyapatite composite scaffolds. <i>Biomaterials</i> , 2011 , 32, 2812-20	15.6	211
817	Silicon electronics on silk as a path to bioresorbable, implantable devices. <i>Applied Physics Letters</i> , 2009 , 95, 133701	3.4	211
816	Silk fibroin biomaterials for controlled release drug delivery. <i>Expert Opinion on Drug Delivery</i> , 2011 , 8, 797-811	8	208
815	Modification of silk fibroin using diazonium coupling chemistry and the effects on hMSC proliferation and differentiation. <i>Biomaterials</i> , 2008 , 29, 2829-38	15.6	207
814	Silkworm silk-based materials and devices generated using bio-nanotechnology. <i>Chemical Society Reviews</i> , 2018 , 47, 6486-6504	58.5	206
813	Bioengineered functional brain-like cortical tissue. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 13811-6	11.5	203
812	Biomaterial films of Bombyx mori silk fibroin with poly(ethylene oxide). <i>Biomacromolecules</i> , 2004 , 5, 711-7	6.9	202
811	Natural and Genetically Engineered Proteins for Tissue Engineering. <i>Progress in Polymer Science</i> , 2012 , 37, 1-17	29.6	199
810	Overview of Silk Fibroin Use in Wound Dressings. <i>Trends in Biotechnology</i> , 2018 , 36, 907-922	15.1	198
809	All-water-based electron-beam lithography using silk as a resist. <i>Nature Nanotechnology</i> , 2014 , 9, 306-10	28.7	195
808	Fabrication of Silk Microneedles for Controlled-Release Drug Delivery. <i>Advanced Functional Materials</i> , 2012 , 22, 330-335	15.6	195

807	Lyophilized silk fibroin hydrogels for the sustained local delivery of therapeutic monoclonal antibodies. <i>Biomaterials</i> , 2011 , 32, 2642-50	15.6	194
806	Mechanism of enzymatic degradation of beta-sheet crystals. <i>Biomaterials</i> , 2010 , 31, 2926-33	15.6	192
805	Silk based biomaterials to heal critical sized femur defects. <i>Bone</i> , 2006 , 39, 922-31	4.7	190
804	Design of biodegradable, implantable devices towards clinical translation. <i>Nature Reviews Materials</i> , 2020 , 5, 61-81	73.3	188
803	Evolution of Bioinks and Additive Manufacturing Technologies for 3D Bioprinting. <i>ACS Biomaterials Science and Engineering</i> , 2016 , 2, 1662-1678	5.5	187
802	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	186
801	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 , 78, 324-34	5.4	185
800	Development of silk-based scaffolds for tissue engineering of bone from human adipose-derived stem cells. <i>Acta Biomaterialia</i> , 2012 , 8, 2483-92	10.8	184
799	Biopolymer nanofibrils: structure, modeling, preparation, and applications. <i>Progress in Polymer Science</i> , 2018 , 85, 1-56	29.6	183
798	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, 9428-33	11.5	182
797	Role of pH and charge on silk protein assembly in insects and spiders. <i>Applied Physics A: Materials Science and Processing</i> , 2006 , 82, 223-233	2.6	182
796	Silk inverse opals. <i>Nature Photonics</i> , 2012 , 6, 818-823	33.9	181
795	Silk microfiber-reinforced silk hydrogel composites for functional cartilage tissue repair. <i>Acta Biomaterialia</i> , 2015 , 11, 27-36	10.8	176
794	Mandibular repair in rats with premineralized silk scaffolds and BMP-2-modified bMSCs. <i>Biomaterials</i> , 2009 , 30, 4522-32	15.6	176
793	Liquid crystallinity of natural silk secretions. <i>Nature</i> , 1991 , 349, 596-598	50.4	176
792	Enzyme-Catalyzed Ring-Opening Polymerization of [Pentadecalactone] <i>Macromolecules</i> , 1997 , 30, 2705-2711	5.5	174
791	Tunable self-assembly of genetically engineered silk--elastin-like protein polymers. <i>Biomacromolecules</i> , 2011 , 12, 3844-50	6.9	170
790	Membrane potential controls adipogenic and osteogenic differentiation of mesenchymal stem cells. <i>PLoS ONE</i> , 2008 , 3, e3737	3.7	169

789	The influence of elasticity and surface roughness on myogenic and osteogenic-differentiation of cells on silk-elastin biomaterials. <i>Biomaterials</i> , 2011 , 32, 8979-89	15.6	168
788	Enzymatically crosslinked silk-hyaluronic acid hydrogels. <i>Biomaterials</i> , 2017 , 131, 58-67	15.6	165
787	Design and function of biomimetic multilayer water purification membranes. <i>Science Advances</i> , 2017 , 3, e1601939	14.3	161
786	Nano- and Micropatterning of Optically Transparent, Mechanically Robust, Biocompatible Silk Fibroin Films. <i>Advanced Materials</i> , 2008 , 20, 3070-3072	24	161
785	Cartilage-like tissue engineering using silk scaffolds and mesenchymal stem cells. <i>Tissue Engineering</i> , 2006 , 12, 2729-38		159
784	3D in vitro modeling of the central nervous system. <i>Progress in Neurobiology</i> , 2015 , 125, 1-25	10.9	158
783	Polymorphic regenerated silk fibers assembled through bioinspired spinning. <i>Nature Communications</i> , 2017 , 8, 1387	17.4	158
782	Silk Fibroin Microfluidic Devices. <i>Advanced Materials</i> , 2007 , 19, 2847-2850	24	158
781	Bone and cartilage tissue constructs grown using human bone marrow stromal cells, silk scaffolds and rotating bioreactors. <i>Biomaterials</i> , 2006 , 27, 6138-49	15.6	157
780	Quantitative metabolic imaging using endogenous fluorescence to detect stem cell differentiation. <i>Scientific Reports</i> , 2013 , 3, 3432	4.9	156
779	pH-dependent anticancer drug release from silk nanoparticles. <i>Advanced Healthcare Materials</i> , 2013 , 2, 1606-11	10.1	156
778	Insoluble and flexible silk films containing glycerol. <i>Biomacromolecules</i> , 2010 , 11, 143-50	6.9	155
777	Bio-microfluidics: biomaterials and biomimetic designs. <i>Advanced Materials</i> , 2010 , 22, 249-60	24	154
776	Structure-function-property-design interplay in biopolymers: spider silk. <i>Acta Biomaterialia</i> , 2014 , 10, 1612-26	10.8	151
775	Silk self-assembly mechanisms and control from thermodynamics to kinetics. <i>Biomacromolecules</i> , 2012 , 13, 826-32	6.9	150
774	Silk fibroin/chondroitin sulfate/hyaluronic acid ternary scaffolds for dermal tissue reconstruction. <i>Acta Biomaterialia</i> , 2013 , 9, 6771-82	10.8	149
773	Helicoidal multi-lamellar features of RGD-functionalized silk biomaterials for corneal tissue engineering. <i>Biomaterials</i> , 2010 , 31, 8953-63	15.6	148
772	Carbonization of a stable sheet-rich silk protein into a pseudographitic pyroprotein. <i>Nature Communications</i> , 2015 , 6, 7145	17.4	147

771	Electrogelation for protein adhesives. <i>Advanced Materials</i> , 2010 , 22, 711-5	24	147
770	Electrical and mechanical stimulation of cardiac cells and tissue constructs. <i>Advanced Drug Delivery Reviews</i> , 2016 , 96, 135-55	18.5	145
769	Processing methods to control silk fibroin film biomaterial features. <i>Journal of Materials Science</i> , 2008 , 43, 6967-6985	4.3	144
768	Inkjet Printing of Regenerated Silk Fibroin: From Printable Forms to Printable Functions. <i>Advanced Materials</i> , 2015 , 27, 4273-9	24	143
767	Silk hydrogel for cartilage tissue engineering. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2010 , 95, 84-90	3.5	143
766	Effect of water on the thermal properties of silk fibroin. <i>Thermochimica Acta</i> , 2007 , 461, 137-144	2.9	142
765	Biomaterials from ultrasonication-induced silk fibroin-hyaluronic acid hydrogels. <i>Biomacromolecules</i> , 2010 , 11, 3178-88	6.9	141
764	3D Bioprinting of Self-Standing Silk-Based Bioink. <i>Advanced Healthcare Materials</i> , 2018 , 7, e1701026	10.1	140
763	Stabilization of enzymes in silk films. <i>Biomacromolecules</i> , 2009 , 10, 1032-42	6.9	140
762	Lipase-Catalyzed Ring-Opening Polymerization of Trimethylene Carbonate \square <i>Macromolecules</i> , 1997 , 30, 7735-7742	5.5	140
761	Silk based bioinks for soft tissue reconstruction using 3-dimensional (3D) printing with in vitro and in vivo assessments. <i>Biomaterials</i> , 2017 , 117, 105-115	15.6	139
760	Antibiotic-Releasing Silk Biomaterials for Infection Prevention and Treatment. <i>Advanced Functional Materials</i> , 2013 , 23, 854-861	15.6	137
759	Silk Hydrogels as Soft Substrates for Neural Tissue Engineering. <i>Advanced Functional Materials</i> , 2013 , 23, 5140-5149	15.6	132
758	Enhanced function of pancreatic islets co-encapsulated with ECM proteins and mesenchymal stromal cells in a silk hydrogel. <i>Biomaterials</i> , 2012 , 33, 6691-7	15.6	131
757	Biomaterials derived from silk-tropoelastin protein systems. <i>Biomaterials</i> , 2010 , 31, 8121-31	15.6	130
756	The use of silk-based devices for fracture fixation. <i>Nature Communications</i> , 2014 , 5, 3385	17.4	129
755	Tunable silk: using microfluidics to fabricate silk fibers with controllable properties. <i>Biomacromolecules</i> , 2011 , 12, 1504-11	6.9	129
754	Silk-Based Advanced Materials for Soft Electronics. <i>Accounts of Chemical Research</i> , 2019 , 52, 2916-2927	24.3	128

753	Injectable and pH-Responsive Silk Nanofiber Hydrogels for Sustained Anticancer Drug Delivery. <i>ACS Applied Materials & Interfaces</i> , 2016 , 8, 17118-26	9.5	127
752	Ethyl Glucoside as a Multifunctional Initiator for Enzyme-Catalyzed Regioselective Lactone Ring-Opening Polymerization. <i>Journal of the American Chemical Society</i> , 1998 , 120, 1363-1367	16.4	127
751	Stabilization of vaccines and antibiotics in silk and eliminating the cold chain. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012 , 109, 11981-6	11.5	125
750	VEGF and BMP-2 promote bone regeneration by facilitating bone marrow stem cell homing and differentiation. <i>European Cells and Materials</i> , 2014 , 27, 1-11; discussion 11-2	4.3	124
749	Recombinant DNA production of spider silk proteins. <i>Microbial Biotechnology</i> , 2013 , 6, 651-63	6.3	123
748	Silk polymer-based adenosine release: therapeutic potential for epilepsy. <i>Biomaterials</i> , 2008 , 29, 3609-16	5.6	123
747	Beating the heat--fast scanning melts silk beta sheet crystals. <i>Scientific Reports</i> , 2013 , 3, 1130	4.9	121
746	Lyophilized Silk Sponges: A Versatile Biomaterial Platform for Soft Tissue Engineering. <i>ACS Biomaterials Science and Engineering</i> , 2015 , 1, 260-270	5.5	120
745	Review physical and chemical aspects of stabilization of compounds in silk. <i>Biopolymers</i> , 2012 , 97, 479-98	2	120
744	Collagen Structural Hierarchy and Susceptibility to Degradation by Ultraviolet Radiation. <i>Materials Science and Engineering C</i> , 2008 , 28, 1420-1429	8.3	120
743	Performance enhancement of terahertz metamaterials on ultrathin substrates for sensing applications. <i>Applied Physics Letters</i> , 2010 , 97, 261909	3.4	119
742	Rapid nanoimprinting of silk fibroin films for biophotonic applications. <i>Advanced Materials</i> , 2010 , 22, 1746-9	24	119
741	Bone regeneration on macroporous aqueous-derived silk 3-D scaffolds. <i>Macromolecular Bioscience</i> , 2007 , 7, 643-55	5.5	118
740	Silk Fibroin as Edible Coating for Perishable Food Preservation. <i>Scientific Reports</i> , 2016 , 6, 25263	4.9	117
739	Direct-write assembly of 3D silk/hydroxyapatite scaffolds for bone co-cultures. <i>Advanced Healthcare Materials</i> , 2012 , 1, 729-35	10.1	116
738	Self-assembling doxorubicin silk hydrogels for the focal treatment of primary breast cancer. <i>Advanced Functional Materials</i> , 2013 , 23, 58-65	15.6	116
737	Liquid Exfoliated Natural Silk Nanofibrils: Applications in Optical and Electrical Devices. <i>Advanced Materials</i> , 2016 , 28, 7783-90	24	115
736	Osteoinductive silk-silica composite biomaterials for bone regeneration. <i>Biomaterials</i> , 2010 , 31, 8902-10	15.6	115

735	Programmable 3D silk bone marrow niche for platelet generation ex vivo and modeling of megakaryopoiesis pathologies. <i>Blood</i> , 2015 , 125, 2254-64	2.2	113
734	The effect of genetically engineered spider silk-dentin matrix protein 1 chimeric protein on hydroxyapatite nucleation. <i>Biomaterials</i> , 2007 , 28, 2358-67	15.6	113
733	Gel spinning of silk tubes for tissue engineering. <i>Biomaterials</i> , 2008 , 29, 4650-7	15.6	113
732	Ultrathin Free-Standing Bombyx mori Silk Nanofibril Membranes. <i>Nano Letters</i> , 2016 , 16, 3795-800	11.5	113
731	Corneal tissue engineering: recent advances and future perspectives. <i>Tissue Engineering - Part B: Reviews</i> , 2015 , 21, 278-87	7.9	112
730	Stabilization and release of enzymes from silk films. <i>Macromolecular Bioscience</i> , 2010 , 10, 359-68	5.5	112
729	Relationships between degradability of silk scaffolds and osteogenesis. <i>Biomaterials</i> , 2010 , 31, 6162-72	15.6	112
728	Directed assembly of bio-inspired hierarchical materials with controlled nanofibrillar architectures. <i>Nature Nanotechnology</i> , 2017 , 12, 474-480	28.7	111
727	Production of Submicron Diameter Silk Fibers under Benign Processing Conditions by Two-Fluid Electrospinning. <i>Macromolecules</i> , 2006 , 39, 1102-1107	5.5	111
726	Clinical correlates in an experimental model of repetitive mild brain injury. <i>Annals of Neurology</i> , 2013 , 74, 65-75	9.4	110
725	Response of human corneal fibroblasts on silk film surface patterns. <i>Macromolecular Bioscience</i> , 2010 , 10, 664-73	5.5	110
724	Integration of stiff graphene and tough silk for the design and fabrication of versatile electronic materials. <i>Advanced Functional Materials</i> , 2018 , 28, 1705291	15.6	109
723	Evidence of a Cholesteric Liquid Crystalline Phase in Natural Silk Spinning Processes. <i>Macromolecules</i> , 1996 , 29, 5106-5110	5.5	109
722	Effect of hydration on silk film material properties. <i>Macromolecular Bioscience</i> , 2010 , 10, 393-403	5.5	108
721	Vascularization of hollow channel-modified porous silk scaffolds with endothelial cells for tissue regeneration. <i>Biomaterials</i> , 2015 , 56, 68-77	15.6	107
720	In vitro 3D model for human vascularized adipose tissue. <i>Tissue Engineering - Part A</i> , 2009 , 15, 2227-36	3.9	107
719	Hydrophobic drug-triggered self-assembly of nanoparticles from silk-elastin-like protein polymers for drug delivery. <i>Biomacromolecules</i> , 2014 , 15, 908-14	6.9	106
718	Scientific, sustainability and regulatory challenges of cultured meat. <i>Nature Food</i> , 2020 , 1, 403-415	14.4	105

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