

David Kaplan

List of Publications by Year in Descending Order

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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	Nerve Growth Factor-Laden Anisotropic Silk Nanofiber Hydrogels to Regulate Neuronal/Astroglial Differentiation for Scarless Spinal Cord Repair.. <i>ACS Applied Materials & Interfaces</i> , 2022 ,	9.5	4
895	Bioengineered models of Parkinson's disease using patient-derived dopaminergic neurons exhibit distinct biological profiles in a 3D microenvironment.. <i>Cellular and Molecular Life Sciences</i> , 2022 , 79, 78	10.3	0
894	Photoacoustic Carbon Nanotubes Embedded Silk Scaffolds for Neural Stimulation and Regeneration.. <i>ACS Nano</i> , 2022 ,	16.7	4
893	Acute multidrug delivery via a wearable bioreactor facilitates long-term limb regeneration and functional recovery in adult .. <i>Science Advances</i> , 2022 , 8, eabj2164	14.3	2
892	Protein-amylose/amylopectin molecular interactions during high-moisture extruded texturization toward plant-based meat substitutes applications. <i>Food Hydrocolloids</i> , 2022 , 127, 107559	10.6	1
891	ColGen: An end-to-end deep learning model to predict thermal stability of de novo collagen sequences. <i>Journal of the Mechanical Behavior of Biomedical Materials</i> , 2022 , 125, 104921	4.1	1
890	Sustainable Antibacterial and Anti-Inflammatory Silk Suture with Surface Modification of Combined-Therapy Drugs for Surgical Site Infection.. <i>ACS Applied Materials & Interfaces</i> , 2022 ,	9.5	1
889	Anisotropic silk nanofiber layers as regulators of angiogenesis for optimized bone regeneration. <i>Materials Today Bio</i> , 2022 , 100283	9.9	1
888	3D porous scaffolds from wheat glutenin for cultured meat applications.. <i>Biomaterials</i> , 2022 , 285, 121543	35.6	5
887	Simple and effective serum-free medium for sustained expansion of bovine satellite cells for cell cultured meat. <i>Communications Biology</i> , 2022 , 5,	6.7	4
886	Intraarticularly injectable silk hydrogel microspheres with enhanced mechanical and structural stability to attenuate osteoarthritis. <i>Biomaterials</i> , 2022 , 286, 121611	15.6	2
885	Biomimetic Design for Bio-Matrix Interfaces and Regenerative Organs. <i>Tissue Engineering - Part B: Reviews</i> , 2021 , 27, 411-429	7.9	1
884	Toughening Wet-Spun Silk Fibers by Silk Nanofiber Templating.. <i>Macromolecular Rapid Communications</i> , 2021 , e2100891	4.8	5
883	Genetic inhibition of RIPK3 ameliorates functional outcome in controlled cortical impact independent of necroptosis. <i>Cell Death and Disease</i> , 2021 , 12, 1064	9.8	1
882	Perspectives on scaling production of adipose tissue for food applications.. <i>Biomaterials</i> , 2021 , 280, 121273	35.6	5
881	Fiber-Based Biopolymer Processing as a Route toward Sustainability. <i>Advanced Materials</i> , 2021 , e2105194	16.4	10
880	Cell-specific activation of RIPK1 and MLKL after intracerebral hemorrhage in mice. <i>Journal of Cerebral Blood Flow and Metabolism</i> , 2021 , 41, 1623-1633	7.3	7

879	On-Demand Regulation of Dual Thermosensitive Protein Hydrogels.. <i>ACS Macro Letters</i> , 2021 , 10, 395-406	10.6	2
878	Integrated functional neuronal network analysis of 3D silk-collagen scaffold-based mouse cortical culture. <i>STAR Protocols</i> , 2021 , 2, 100292	1.4	1
877	On the Quantification of Model Uncertainty: A Bayesian Perspective. <i>Psychometrika</i> , 2021 , 86, 215-238	2.2	12
876	Learning and synaptic plasticity in 3D bioengineered neural tissues. <i>Neuroscience Letters</i> , 2021 , 750, 1353-1359	3.9	0
875	Recent Advances in 3D Printing with Protein-Based Inks. <i>Progress in Polymer Science</i> , 2021 , 115, 101375-101375	10.0	0
874	Natural Silk Nanofibril Aerogels with Distinctive Filtration Capacity and Heat-Retention Performance. <i>ACS Nano</i> , 2021 , 15, 8171-8183	16.7	12
873	Toward Studying Cognition in a Dish. <i>Trends in Cognitive Sciences</i> , 2021 , 25, 294-304	14	2
872	Sugar Functionalization of Silks with Pathway-Controlled Substitution and Properties. <i>Advanced Biology</i> , 2021 , 5, e2100388		4
871	Fragile-Tough Mechanical Reversion of Silk Materials via Tuning Supramolecular Assembly. <i>ACS Biomaterials Science and Engineering</i> , 2021 , 7, 2337-2345	5.5	2
870	Sustained Photosynthesis and Oxygen Generation of Microalgae-Embedded Silk Fibroin Hydrogels. <i>ACS Biomaterials Science and Engineering</i> , 2021 , 7, 2734-2744	5.5	1
869	Miniaturized 3D bone marrow tissue model to assess response to Thrombopoietin-receptor agonists in patients. <i>ELife</i> , 2021 , 10,	8.9	1
868	Rapid construction and enhanced vascularization of microtissue using a magnetic control method. <i>Biofabrication</i> , 2021 , 13,	10.5	3
867	Nerve Guidance Conduits with Hierarchical Anisotropic Architecture for Peripheral Nerve Regeneration. <i>Advanced Healthcare Materials</i> , 2021 , 10, e2100427	10.1	7
866	Bioinspired Energy Storage and Harvesting Devices. <i>Advanced Materials Technologies</i> , 2021 , 6, 2001301	6.8	3
865	Short Silk Nanoribbons Decorated by Au Nanoparticles as Substrates for Sensitive and Uniform Surface-Enhanced Raman Spectroscopy Detection. <i>ACS Applied Nano Materials</i> , 2021 , 4, 6376-6385	5.6	0
864	Porous nerve guidance conduits reinforced with braided composite structures of silk/magnesium filaments for peripheral nerve repair. <i>Acta Biomaterialia</i> , 2021 , 134, 116-130	10.8	7
863	Bayesian probabilistic forecasting with large-scale educational trend data: a case study using NAEP. <i>Large-Scale Assessments in Education</i> , 2021 , 9,	2.6	4
862	Effect of the silica nanoparticle size on the osteoinduction of biomineralized silk-silica nanocomposites. <i>Acta Biomaterialia</i> , 2021 , 120, 203-212	10.8	3

861	InVitro Models of Intestine Innate Immunity. <i>Trends in Biotechnology</i> , 2021 , 39, 274-285	15.1	1
860	Ethanol-induced coacervation in aqueous gelatin solution for constructing nanospheres and networks: Morphology, dynamics and thermal sensitivity. <i>Journal of Colloid and Interface Science</i> , 2021 , 582, 610-618	9.3	10
859	In Situ 3D Printing: Opportunities with Silk Inks. <i>Trends in Biotechnology</i> , 2021 , 39, 719-730	15.1	15
858	Protein composites from silkworm cocoons as versatile biomaterials. <i>Acta Biomaterialia</i> , 2021 , 121, 180-192	10.8	7
857	Dynamically tunable light responsive silk-elastin-like proteins. <i>Acta Biomaterialia</i> , 2021 , 121, 214-223	10.8	15
856	Spinning Regenerated Silk Fibers with Improved Toughness by Plasticizing with Low Molecular Weight Silk. <i>Biomacromolecules</i> , 2021 , 22, 788-799	6.9	4
855	On the effect of neuronal spatial subsampling in small-world networks. <i>European Journal of Neuroscience</i> , 2021 , 53, 485-498	3.5	1
854	mRNA Delivery Using Bioreducible Lipidoid Nanoparticles Facilitates Neural Differentiation of Human Mesenchymal Stem Cells. <i>Advanced Healthcare Materials</i> , 2021 , 10, e2000938	10.1	7
853	Brain organoid formation on decellularized porcine brain ECM hydrogels. <i>PLoS ONE</i> , 2021 , 16, e0245685	3.7	14
852	Injectable silk nanofiber hydrogels as stem cell carriers to accelerate wound healing. <i>Journal of Materials Chemistry B</i> , 2021 , 9, 7771-7781	7.3	2
851	Silk Reservoir Implants for Sustained Drug Delivery. <i>ACS Applied Bio Materials</i> , 2021 , 4, 869-880	4.1	2
850	Liquid-Exfoliated Mesostructured Collagen from the Bovine Achilles Tendon as Building Blocks of Collagen Membranes. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 3186-3198	9.5	7
849	Generation of Nano-pores in Silk Fibroin Films Using Silk Nanoparticles for Full-Thickness Wound Healing. <i>Biomacromolecules</i> , 2021 , 22, 546-556	6.9	7
848	Silk Hydrogels with Controllable Formation of Dityrosine, 3,4-Dihydroxyphenylalanine, and 3,4-Dihydroxyphenylalanine-Fe Complexes through Chitosan Particle-Assisted Fenton Reactions. <i>Biomacromolecules</i> , 2021 , 22, 773-787	6.9	4
847	Low-Density Silk Nanofibrous Aerogels: Fabrication and Applications in Air Filtration and Oil/Water Purification. <i>ACS Nano</i> , 2021 , 15, 1048-1058	16.7	21
846	Aligned Silk Sponge Fabrication and Perfusion Culture for Scalable Proximal Tubule Tissue Engineering. <i>ACS Applied Materials & Interfaces</i> , 2021 , 13, 10768-10777	9.5	5
845	Injectable Desferrioxamine-Laden Silk Nanofiber Hydrogels for Accelerating Diabetic Wound Healing. <i>ACS Biomaterials Science and Engineering</i> , 2021 , 7, 1147-1158	5.5	8
844	Rheological characterization, compression, and injection molding of hydroxyapatite-silk fibroin composites. <i>Biomaterials</i> , 2021 , 269, 120643	15.6	6

843	Biopolymer Nanoscale Assemblies as Building Blocks for New Materials: A Review. <i>Advanced Functional Materials</i> , 2021 , 31, 2008552	15.6	19
842	Mechanical Training-Driven Structural Remodeling: A Rational Route for Outstanding Highly Hydrated Silk Materials. <i>Small</i> , 2021 , 17, e2102660	11	3
841	Mechanical Training-Driven Structural Remodeling: A Rational Route for Outstanding Highly Hydrated Silk Materials (Small 33/2021). <i>Small</i> , 2021 , 17, 2170173	11	
840	Electro-Blown Spun Silk/Graphene Nanoionotronic Skin for Multifunctional Fire Protection and Alarm. <i>Advanced Materials</i> , 2021 , 33, e2102500	24	10
839	On the prediction of neuronal microscale topology descriptors based on mesoscale recordings. <i>European Journal of Neuroscience</i> , 2021 , 54, 6147-6167	3.5	
838	Blastocyst-Inspired Hydrogels to Maintain Undifferentiation of Mouse Embryonic Stem Cells. <i>ACS Nano</i> , 2021 , 15, 14162-14173	16.7	1
837	Functionalized 3D-printed silk-hydroxyapatite scaffolds for enhanced bone regeneration with innervation and vascularization. <i>Biomaterials</i> , 2021 , 276, 120995	15.6	17
836	Axonal growth on surfaces with periodic geometrical patterns. <i>PLoS ONE</i> , 2021 , 16, e0257659	3.7	0
835	Study the lipidoid nanoparticle mediated genome editing protein delivery using 3D intestinal tissue model. <i>Bioactive Materials</i> , 2021 , 6, 3671-3677	16.7	1
834	Pressure-driven spreadable deferoxamine-laden hydrogels for vascularized skin flaps. <i>Biomaterials Science</i> , 2021 , 9, 3162-3170	7.4	2
833	Asiaticoside-laden silk nanofiber hydrogels to regulate inflammation and angiogenesis for scarless skin regeneration. <i>Biomaterials Science</i> , 2021 , 9, 5227-5236	7.4	3
832	Radially Aligned Porous Silk Fibroin Scaffolds as Functional Templates for Engineering Human Biomimetic Hepatic Lobules.. <i>ACS Applied Materials & Interfaces</i> , 2021 ,	9.5	2
831	Plant-based and cell-based approaches to meat production. <i>Nature Communications</i> , 2020 , 11, 6276	17.4	73
830	Assessing the compatibility of primary human hepatocyte culture within porous silk sponges.. <i>RSC Advances</i> , 2020 , 10, 37662-37674	3.7	6
829	A 3D human brain-like tissue model of herpes-induced Alzheimer's disease. <i>Science Advances</i> , 2020 , 6, eaay8828	14.3	90
828	Modeling Controlled Cortical Impact Injury in 3D Brain-Like Tissue Cultures. <i>Advanced Healthcare Materials</i> , 2020 , 9, e2000122	10.1	9
827	Stimuli-responsive composite biopolymer actuators with selective spatial deformation behavior. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 14602-14608	11.5	29
826	Synthesis and Characterization of Silk Ionomers for Layer-by-Layer Electrostatic Deposition on Individual Mammalian Cells. <i>Biomacromolecules</i> , 2020 , 21, 2829-2843	6.9	9

825	Human Adipose Derived Cells in Two- and Three-Dimensional Cultures: Functional Validation of an In Vitro Fat Construct. <i>Stem Cells International</i> , 2020 , 2020, 4242130	5	9
824	Silk degumming time controls horseradish peroxidase-catalyzed hydrogel properties. <i>Biomaterials Science</i> , 2020 , 8, 4176-4185	7.4	16
823	Confronting Racism in Chemistry Journals. <i>ACS Applied Nano Materials</i> , 2020 , 3, 6131-6133	5.6	
822	Confronting Racism in Chemistry Journals. <i>ACS Applied Polymer Materials</i> , 2020 , 2, 2496-2498	4.3	
821	Enhancing sustained-release local therapy: Single versus dual chemotherapy for the treatment of neuroblastoma. <i>Surgery</i> , 2020 , 167, 969-977	3.6	3
820	Confronting Racism in Chemistry Journals. <i>Organometallics</i> , 2020 , 39, 2331-2333	3.8	
819	Tough Anisotropic Silk Nanofiber Hydrogels with Osteoinductive Capacity. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 2357-2367	5.5	17
818	Interferon-Gamma Stimulated Murine Macrophages : Impact of Ionic Composition and Osmolarity and Therapeutic Implications. <i>Bioelectricity</i> , 2020 , 2, 48-58	2	5
817	Injectable hydrogel systems with multiple biophysical and biochemical cues for bone regeneration. <i>Biomaterials Science</i> , 2020 , 8, 2537-2548	7.4	21
816	Innovations in 3-Dimensional Tissue Models of Human Brain Physiology and Diseases. <i>Advanced Functional Materials</i> , 2020 , 30, 1909146	15.6	19
815	Update to Our Reader, Reviewer, and Author CommunitiesApril 2020. <i>Energy & Fuels</i> , 2020 , 34, 5107-5108	4.1	
814	Flexible Water-Absorbing Silk-Fibroin Biomaterial Sponges with Unique Pore Structure for Tissue Engineering. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 1641-1649	5.5	11
813	Bi-layered Tubular Microfiber Scaffolds as Functional Templates for Engineering Human Intestinal Smooth Muscle Tissue. <i>Advanced Functional Materials</i> , 2020 , 30, 2000543	15.6	12
812	From Silk Spinning to 3D Printing: Polymer Manufacturing using Directed Hierarchical Molecular Assembly. <i>Advanced Healthcare Materials</i> , 2020 , 9, e1901552	10.1	36
811	Cervical Augmentation with an Injectable Silk-Based Gel: Biocompatibility in a Rat Model of Pregnancy. <i>Reproductive Sciences</i> , 2020 , 27, 1215-1221	3	
810	Engineering Silk Materials: From Natural Spinning to Artificial Processing. <i>Applied Physics Reviews</i> , 2020 , 7,	17.3	30
809	A Long-Living Bioengineered Neural Tissue Platform to Study Neurodegeneration. <i>Macromolecular Bioscience</i> , 2020 , 20, e2000004	5.5	18
808	Enzymatic Degradation of Silk Materials: A Review. <i>Biomacromolecules</i> , 2020 , 21, 1678-1686	6.9	45

807	Prospects and challenges for cell-cultured fat as a novel food ingredient. <i>Trends in Food Science and Technology</i> , 2020 , 98, 53-67	15.3	26
806	Adverse effects of Alport syndrome-related Gly missense mutations on collagen type IV: Insights from molecular simulations and experiments. <i>Biomaterials</i> , 2020 , 240, 119857	15.6	11
805	Natural Nanofiber Shuttles for Transporting Hydrophobic Cargo into Aqueous Solutions. <i>Biomacromolecules</i> , 2020 , 21, 1022-1030	6.9	10
804	Optogenetically induced cellular habituation in non-neuronal cells. <i>PLoS ONE</i> , 2020 , 15, e0227230	3.7	5
803	Exploration of Biomass-Derived Activated Carbons for Use in Vanadium Redox Flow Batteries. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 9472-9482	8.3	9
802	Tunable Biodegradable Silk-Based Memory Foams with Controlled Release of Antibiotics.. <i>ACS Applied Bio Materials</i> , 2020 , 3, 2466-2472	4.1	10
801	Microskin-Inspired Injectable MSC-Laden Hydrogels for Scarless Wound Healing with Hair Follicles. <i>Advanced Healthcare Materials</i> , 2020 , 9, e2000041	10.1	26
800	Smart Material Hydrogel Transfer Devices Fabricated with Stimuli-Responsive Silk-Elastin-Like Proteins. <i>Advanced Healthcare Materials</i> , 2020 , 9, e2000266	10.1	15
799	Enzyme-Mediated Conjugation of Peptides to Silk Fibroin for Facile Hydrogel Functionalization. <i>Annals of Biomedical Engineering</i> , 2020 , 48, 1905-1915	4.7	11
798	Update to Our Reader, Reviewer, and Author CommunitiesApril 2020. <i>Organometallics</i> , 2020 , 39, 1665-1666	1.6	6
797	Induction of Irritation and Inflammation in a 3D Innervated Tissue Model of the Human Cornea. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 6886-6895	5.5	0
796	Confronting Racism in Chemistry Journals. <i>Journal of Chemical Health and Safety</i> , 2020 , 27, 198-200	1.7	
795	Electric field-driven building blocks for introducing multiple gradients to hydrogels. <i>Protein and Cell</i> , 2020 , 11, 267-285	7.2	20
794	Silk fibroin for skin injury repair: Where do things stand?. <i>Advanced Drug Delivery Reviews</i> , 2020 , 153, 28-53	18.5	62
793	Fabricating mechanically improved silk-based vascular grafts by solution control of the gel-spinning process. <i>Biomaterials</i> , 2020 , 230, 119567	15.6	24
792	Assessment of Enrichment of Human Mesenchymal Stem Cells Based on Plasma and Mitochondrial Membrane Potentials. <i>Bioelectricity</i> , 2020 , 2, 21-32	2	4
791	Transgenic PDGF-BB/sericin hydrogel supports for cell proliferation and osteogenic differentiation. <i>Biomaterials Science</i> , 2020 , 8, 657-672	7.4	11
790	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	15.6	73

789	Characterization of silk-hyaluronic acid composite hydrogels towards vitreous humor substitutes. <i>Biomaterials</i> , 2020 , 233, 119729	15.6	36
788	Facile production of natural silk nanofibers for electronic device applications. <i>Composites Science and Technology</i> , 2020 , 187, 107950	8.6	17
787	Thermoplastic moulding of regenerated silk. <i>Nature Materials</i> , 2020 , 19, 102-108	27	68
786	Silk-based encapsulation materials to enhance pancreatic cell functions 2020 , 329-337		3
785	Ductility and Porosity of Silk Fibroin Films by Blending with Glycerol/Polyethylene Glycol and Adjusting the Drying Temperature. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 1176-1185	5.5	10
784	Developing a self-organized tubulogenesis model of human renal proximal tubular epithelial cells in vitro. <i>Journal of Biomedical Materials Research - Part A</i> , 2020 , 108, 795-804	5.4	3
783	Design of biodegradable, implantable devices towards clinical translation. <i>Nature Reviews Materials</i> , 2020 , 5, 61-81	73.3	188
782	Engineering immunity for next generation HIV vaccines: The intersection of bioengineering and immunology. <i>Vaccine</i> , 2020 , 38, 187-193	4.1	4
781	Observations of 3 nm Silk Nanofibrils Exfoliated from Natural Silkworm Silk Fibers 2020 , 2, 153-160		14
780	Biotechnology and Biomaterial-Based Therapeutic Strategies for Age-Related Macular Degeneration. Part I: Biomaterials-Based Drug Delivery Devices. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020 , 8, 549089	5.8	3
779	Bioengineered elastin- and silk-biomaterials for drug and gene delivery. <i>Advanced Drug Delivery Reviews</i> , 2020 , 160, 186-198	18.5	23
778	Engineering carotenoid production in mammalian cells for nutritionally enhanced cell-cultured foods. <i>Metabolic Engineering</i> , 2020 , 62, 126-137	9.7	12
777	Functional Characterization of Three-Dimensional Cortical Cultures for In Vitro Modeling of Brain Networks. <i>iScience</i> , 2020 , 23, 101434	6.1	12
776	Hydrogel/Solid Hybrid Materials for Biomedical Applications Enabled by Surface-Embedded Radicals. <i>Advanced Functional Materials</i> , 2020 , 30, 2004599	15.6	10
775	Silk Fibroin Microneedle Patches for the Sustained Release of Levonorgestrel. <i>ACS Applied Bio Materials</i> , 2020 , 3, 5375-5382	4.1	30
774	Tuning Microcapsule Shell Thickness and Structure with Silk Fibroin and Nanoparticles for Sustained Release. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 4583-4594	5.5	2
773	Matrix Deformation with Ectopic Cells Induced by Rotational Motion in Bioengineered Neural Tissues. <i>Annals of Biomedical Engineering</i> , 2020 , 48, 2192-2203	4.7	
772	Bottom-Up Construction of Electrochemically Active Living Filters: From Graphene Oxide Mediated Formation of Bacterial Cables to 3D Assembly of Hierarchical Architectures.. <i>ACS Applied Bio Materials</i> , 2020 , 3, 7376-7381	4.1	1

771	Matrigel-Free Laminin-Entactin Matrix to Induce Human Renal Proximal Tubule Structure Formation In Vitro. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 6618-6625	5.5	3
770	The effects of membrane potential and extracellular matrix composition on vascular differentiation of cardiac progenitor cells. <i>Biochemical and Biophysical Research Communications</i> , 2020 , 530, 240-245	3.4	0
769	Scientific, sustainability and regulatory challenges of cultured meat. <i>Nature Food</i> , 2020 , 1, 403-415	14.4	105
768	The Next 100 Years of Polymer Science. <i>Macromolecular Chemistry and Physics</i> , 2020 , 221, 2000216	2.6	36
767	Expanding Canonical Spider Silk Properties through a DNA Combinatorial Approach. <i>Materials</i> , 2020 , 13,	3.5	4
766	A 3D Tissue Model of Traumatic Brain Injury with Excitotoxicity That Is Inhibited by Chronic Exposure to Gabapentinoids. <i>Biomolecules</i> , 2020 , 10,	5.9	1
765	Self-Folding 3D Silk Biomaterial Rolls to Facilitate Axon and Bone Regeneration. <i>Advanced Healthcare Materials</i> , 2020 , 9, e2000530	10.1	8
764	Photo-Crosslinked Silk Fibroin for 3D Printing. <i>Polymers</i> , 2020 , 12,	4.5	9
763	Silk Polymers and Nanoparticles: A Powerful Combination for the Design of Versatile Biomaterials. <i>Frontiers in Chemistry</i> , 2020 , 8, 604398	5	9
762	Biotechnology and Biomaterial-Based Therapeutic Strategies for Age-Related Macular Degeneration. Part II: Cell and Tissue Engineering Therapies. <i>Frontiers in Bioengineering and Biotechnology</i> , 2020 , 8, 588014	5.8	5
761	Defined extracellular ionic solutions to study and manipulate the cellular resting membrane potential. <i>Biology Open</i> , 2020 , 9,	2.2	5
760	Ex vivo pregnant-like tissue model to assess injectable hydrogel for preterm birth prevention. <i>Journal of Biomedical Materials Research - Part B Applied Biomaterials</i> , 2020 , 108, 468-474	3.5	2
759	Injectable Silk-Based Hydrogel as an Alternative to Cervical Cerclage: A Rabbit Study. <i>Tissue Engineering - Part A</i> , 2020 , 26, 379-386	3.9	6
758	3D Printing of Silk Protein Structures by Aqueous Solvent-Directed Molecular Assembly. <i>Macromolecular Bioscience</i> , 2020 , 20, e1900191	5.5	22
757	Two- and Three-Dimensional Bioengineered Human Intestinal Tissue Models for Cryptosporidium. <i>Methods in Molecular Biology</i> , 2020 , 2052, 373-402	1.4	10
756	Microfluidic Silk Fibers with Aligned Hierarchical Microstructures. <i>ACS Biomaterials Science and Engineering</i> , 2020 , 6, 2847-2854	5.5	12
755	Optogenetically induced cellular habituation in non-neuronal cells 2020 , 15, e0227230		
754	Optogenetically induced cellular habituation in non-neuronal cells 2020 , 15, e0227230		

753 Optogenetically induced cellular habituation in non-neuronal cells **2020**, 15, e0227230

752 Optogenetically induced cellular habituation in non-neuronal cells **2020**, 15, e0227230

751 Time-Dependent Changes in Microglia Transcriptional Networks Following Traumatic Brain Injury. *Frontiers in Cellular Neuroscience*, **2019**, 13, 307 6.1 37

750 The importance of the neuro-immuno-cutaneous system on human skin equivalent design. *Cell Proliferation*, **2019**, 52, e12677 7.9 19

749 Antimicrobial coating of spider silk to prevent bacterial attachment on silk surgical sutures. *Acta Biomaterialia*, **2019**, 99, 236-246 10.8 34

748 Silk-Based Advanced Materials for Soft Electronics. *Accounts of Chemical Research*, **2019**, 52, 2916-2927 24.3 128

747 3D bioengineered tissue model of the large intestine to study inflammatory bowel disease. *Biomaterials*, **2019**, 225, 119517 15.6 31

746 Replicating and identifying large cell neuroblastoma using high-dose intra-tumoral chemotherapy and automated digital analysis. *Journal of Pediatric Surgery*, **2019**, 54, 2595-2599 2.6 1

745 3D extracellular matrix microenvironment in bioengineered tissue models of primary pediatric and adult brain tumors. *Nature Communications*, **2019**, 10, 4529 17.4 51

744 Silk-Based Therapeutics Targeting. *Journal of Functional Biomaterials*, **2019**, 10, 4.8 1

743 Hybrid and Composite Scaffolds Based on Extracellular Matrices for Cartilage Tissue Engineering. *Tissue Engineering - Part B: Reviews*, **2019**, 25, 202-224 7.9 36

742 Melatonin-induced osteogenesis with methanol-annealed silk materials. *Journal of Bioactive and Compatible Polymers*, **2019**, 34, 291-305 2 4

741 Understanding Secondary Structures of Silk Materials via Micro- and Nano-Infrared Spectroscopies. *ACS Biomaterials Science and Engineering*, **2019**, 5, 3161-3183 5.5 25

740 On the Generalization of Habituation: How Discrete Biological Systems Respond to Repetitive Stimuli: A Novel Model of Habituation That Is Independent of Any Biological System. *BioEssays*, **2019**, 41, e1900028 4.1 4

739 Extended release formulations using silk proteins for controlled delivery of therapeutics. *Expert Opinion on Drug Delivery*, **2019**, 16, 741-756 8 31

738 Possibilities for Engineered Insect Tissue as a Food Source. *Frontiers in Sustainable Food Systems*, **2019**, 3, 4.8 9

737 Polyvinyl Alcohol/Silk Fibroin/Borax Hydrogel Ionotronics: A Highly Stretchable, Self-Healable, and Biocompatible Sensing Platform. *ACS Applied Materials & Interfaces*, **2019**, 11, 23632-23638 9.5 88

736 Structure-Chemical Modification Relationships with Silk Materials. *ACS Biomaterials Science and Engineering*, **2019**, 5, 2762-2768 5.5 9

735	Polycystin 2 regulates mitochondrial Ca signaling, bioenergetics, and dynamics through mitofusin 2. <i>Science Signaling</i> , 2019 , 12,	8.8	44
734	Microporous drug-eluting large silk particles through cryo-granulation. <i>Advanced Engineering Materials</i> , 2019 , 21, 1801242	3.5	2
733	Control of octreotide release from silk fibroin microspheres. <i>Materials Science and Engineering C</i> , 2019 , 102, 820-828	8.3	11
732	Feasibility of low field MRI and proteomics for the analysis of Tissue Engineered bone. <i>Biomedical Physics and Engineering Express</i> , 2019 , 5, 025037	1.5	
731	Film interface for drug testing for delivery to cells in culture and in the brain. <i>Acta Biomaterialia</i> , 2019 , 94, 306-319	10.8	10
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