Wenwen Huang

List of Publications by Year
in descending order

43 papers	2,552 citations	218381 26 h-index	276539 41 g-index
43 all docs	43 docs citations	43 times ranked	3206 citing authors

#	Article	IF	Citations
1	Silkworm silk-based materials and devices generated using bio-nanotechnology. Chemical Society Reviews, 2018, 47, 6486-6504.	18.7	324
2	Design and function of biomimetic multilayer water purification membranes. Science Advances, 2017, 3, e1601939.	4.7	221
3	Polymorphic regenerated silk fibers assembled through bioinspired spinning. Nature Communications, 2017, 8, 1387.	5.8	208
4	Recombinant Spidroins Fully Replicate Primary Mechanical Properties of Natural Spider Silk. Biomacromolecules, 2018, 19, 3853-3860.	2.6	159
5	Rapid printing of bio-inspired 3D tissue constructs for skin regeneration. Biomaterials, 2020, 258, 120287.	5.7	149
6	Lyophilized Silk Sponges: A Versatile Biomaterial Platform for Soft Tissue Engineering. ACS Biomaterials Science and Engineering, 2015, 1, 260-270.	2.6	146
7	Predictive modelling-based design and experiments for synthesis and spinning of bioinspired silk fibres. Nature Communications, 2015, 6, 6892.	5.8	118
8	Silk-elastin-like protein biomaterials for the controlled delivery of therapeutics. Expert Opinion on Drug Delivery, 2015, 12, 779-791.	2.4	104
9	Design of Multistimuli Responsive Hydrogels Using Integrated Modeling and Genetically Engineered Silkâ€"Elastinâ€Like Proteins. Advanced Functional Materials, 2016, 26, 4113-4123.	7.8	83
10	3D freeform printing of silk fibroin. Acta Biomaterialia, 2018, 71, 379-387.	4.1	83
11	Nanocomposites of poly(vinylidene fluoride) with multiwalled carbon nanotubes. Journal of Applied Polymer Science, 2010, 115, 3238-3248.	1.3	64
12	Tuning Chemical and Physical Cross-Links in Silk Electrogels for Morphological Analysis and Mechanical Reinforcement. Biomacromolecules, 2013, 14, 2629-2635.	2.6	63
13	Stimuli-responsive composite biopolymer actuators with selective spatial deformation behavior. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 14602-14608.	3.3	63
14	High Throughput Screening of Dynamic Silkâ€Elastinâ€Like Protein Biomaterials. Advanced Functional Materials, 2014, 24, 4303-4310.	7.8	59
15	Multiscale design and synthesis of biomimetic gradient protein/biosilica composites for interfacial tissue engineering. Biomaterials, 2017, 145, 44-55.	5.7	51
16	Heat Capacity of Spider Silk-Like Block Copolymers. Macromolecules, 2011, 44, 5299-5309.	2.2	49
17	Chargeâ€Tunable Autoclaved Silkâ€Tropoelastin Protein Alloys That Control Neuron Cell Responses. Advanced Functional Materials, 2013, 23, 3875-3884.	7.8	49
18	Computational smart polymer design based on elastin protein mutability. Biomaterials, 2017, 127, 49-60.	5.7	49

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19	Physical and biological regulation of neuron regenerative growth andÂnetwork formation on recombinant dragline silks. Biomaterials, 2015, 48, 137-146.	5.7	48
20	Synergistic Integration of Experimental and Simulation Approaches for the <i>de Novo</i> Design of Silk-Based Materials. Accounts of Chemical Research, 2017, 50, 866-876.	7.6	45
21	3D Printing of Silk Protein Structures by Aqueous Solventâ€Directed Molecular Assembly. Macromolecular Bioscience, 2020, 20, e1900191.	2.1	42
22	Thin Film Assembly of Spider Silk-like Block Copolymers. Langmuir, 2011, 27, 1000-1008.	1.6	39
23	Influence of Water on Protein Transitions: Morphology and Secondary Structure. Macromolecules, 2014, 47, 8107-8114.	2.2	35
24	Chemically Functionalized Silk for Human Bone Marrow-Derived Mesenchymal Stem Cells Proliferation and Differentiation. ACS Applied Materials & Interfaces, 2016, 8, 14406-14413.	4.0	35
25	Control of silicification by genetically engineered fusion proteins: Silkâ€“silica binding peptides. Acta Biomaterialia, 2015, 15, 173-180.	4.1	29
26	Effect of sequence features on assembly of spider silk block copolymers. Journal of Structural Biology, 2014, 186, 412-419.	1.3	27
27	Fabrication and Characterization of Recombinant Silkâ€Elastinâ€Likeâ€Protein (SELP) Fiber. Macromolecular Bioscience, 2018, 18, e1800265.	2.1	26
28	Smart Material Hydrogel Transfer Devices Fabricated with Stimuliâ€Responsive Silkâ€Elastinâ€Like Proteins. Advanced Healthcare Materials, 2020, 9, e2000266.	3.9	24
29	Aqueous-Based Coaxial Electrospinning of Genetically Engineered Silk Elastin Core-Shell Nanofibers. Materials, 2016, 9, 221.	1.3	23
30	Unraveling the molecular mechanisms of thermo-responsive properties of silk-elastin-like proteins by integrating multiscale modeling and experiment. Journal of Materials Chemistry B, 2018, 6, 3727-3734.	2.9	21
31	Influence of Water on Protein Transitions: Thermal Analysis. Macromolecules, 2014, 47, 8098-8106.	2.2	20
32	Modeling and Experiment Reveal Structure and Nanomechanics across the Inverse Temperature Transition in B. mori Silk-Elastin-like Protein Polymers. ACS Biomaterials Science and Engineering, 2017, 3, 2889-2899.	2.6	20
33	Biomimetic Joint Paint for Efficient Cartilage Repair by Simultaneously Regulating Cartilage Degeneration and Regeneration in Pigs. ACS Applied Materials & Interfaces, 2021, 13, 54801-54816.	4.0	17
34	Tunable crystallization, degradation, and self-assembly of recombinant protein block copolymers. Polymer, 2017, 117, 107-116.	1.8	16
35	Effect of Terminal Modification on the Molecular Assembly and Mechanical Properties of Proteinâ€Based Block Copolymers. Macromolecular Bioscience, 2017, 17, 1700095.	2.1	10
36	Thermal analysis of spider silk inspired di-block copolymers in the glass transition region by TMDSC. Journal of Thermal Analysis and Calorimetry, 2012, 109, 1193-1201.	2.0	9

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37	Influence of Solution Parameters on Phase Diagram of Recombinant Spider Silkâ€Like Block Copolymers. Macromolecular Chemistry and Physics, 2014, 215, 1230-1238.	1.1	6
38	Silk-ionomer and silk-tropoelastin hydrogels as charged three-dimensional culture platforms for the regulation of hMSC response. Journal of Tissue Engineering and Regenerative Medicine, 2017, 11, 2549-2564.	1.3	6
39	Engineering Natural and Recombinant Silks for Sustainable Biodevices. Frontiers in Chemistry, 2022, 10, .	1.8	6
40	Recursive Directional Ligation Approach for Cloning Recombinant Spider Silks. Methods in Molecular Biology, 2018, 1777, 181-192.	0.4	5
41	PVDF-based Polymer Blend Films for Fuel Cell Membranes. Materials Research Society Symposia Proceedings, 2012, 1384, 1.	0.1	1
42	Deaf and Hard of Hearing Undergraduate Interns Investigate Smart Polymeric Materials. Materials Research Society Symposia Proceedings, 2009, 1233, 1.	0.1	0
43	Morphology and Crystallinity Control of Novel Spider Silk-like Block Copolymer. Materials Research Society Symposia Proceedings, 2012, 1417, 19.	0.1	0