Xiao Hu

List of Publications by Year
in descending order

119 papers	9,501 citations	43973 48 h-index	37111 96 g-index
120 all docs	120 docs citations	120 times ranked	8784 citing authors

#	Article	IF	Citations
1	Determining Beta-Sheet Crystallinity in Fibrous Proteins by Thermal Analysis and Infrared Spectroscopy. Macromolecules, 2006, 39, 6161-6170.	2.2	1,005
2	Water-insoluble silk films with silk I structure. Acta Biomaterialia, 2010, 6, 1380-1387.	4.1	530
3	Regulation of Silk Material Structure by Temperature-Controlled Water Vapor Annealing. Biomacromolecules, 2011, 12, 1686-1696.	2.6	530
4	Controlling silk fibroin particle features for drug delivery. Biomaterials, 2010, 31, 4583-4591.	5.7	433
5	Silk nanospheres and microspheres from silk/pva blend films for drug delivery. Biomaterials, 2010, 31, 1025-1035.	5.7	372
6	Effect of processing on silkâ€based biomaterials: Reproducibility and biocompatibility. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2011, 99B, 89-101.	1.6	281
7	Dynamic Proteinâ^'Water Relationships during Î²-Sheet Formation. Macromolecules, 2008, 41, 3939-3948.	2.2	257
8	Protein-based composite materials. Materials Today, 2012, 15, 208-215.	8.3	247
9	Tunable Self-Assembly of Genetically Engineered Silkâ€"Elastin-like Protein Polymers. Biomacromolecules, 2011, 12, 3844-3850.	2.6	199
10	BN Nanosheet/Polymer Films with Highly Anisotropic Thermal Conductivity for Thermal Management Applications. ACS Applied Materials & Interfaces, 2017, 9, 43163-43170.	4.0	190
11	The influence of elasticity and surface roughness on myogenic and osteogenic-differentiation of cells on silk-elastin biomaterials. Biomaterials, 2011, 32, 8979-8989.	5.7	188
12	Silk coatings on PLGA and alginate microspheres for protein delivery. Biomaterials, 2007, 28, 4161-4169.	5.7	181
13	Stabilization of Enzymes in Silk Films. Biomacromolecules, 2009, 10, 1032-1042.	2.6	174
14	Effect of water on the thermal properties of silk fibroin. Thermochimica Acta, 2007, 461, 137-144.	1.2	168
15	Biomaterials from Ultrasonication-Induced Silk Fibroinâ^'Hyaluronic Acid Hydrogels. Biomacromolecules, 2010, 11, 3178-3188.	2.6	168
16	Nanolayer biomaterial coatings of silk fibroin for controlled release. Journal of Controlled Release, 2007, 121, 190-199.	4.8	164
17	Tunable Silk: Using Microfluidics to Fabricate Silk Fibers with Controllable Properties. Biomacromolecules, 2011, 12, 1504-1511.	2.6	154
18	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.	3.3	148

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19	Protein Polymer-Based Nanoparticles: Fabrication and Medical Applications. International Journal of Molecular Sciences, 2018, 19, 1717.	1.8	146
20	Beating the Heat - Fast Scanning Melts Silk Beta Sheet Crystals. Scientific Reports, 2013, 3, 1130.	1.6	143
21	Biomaterials derived from silkâ€“tropoelastin protein systems. Biomaterials, 2010, 31, 8121-8131.	5.7	141
22	Mechanism of resilin elasticity. Nature Communications, 2012, 3, 1003.	5.8	140
23	Super-compatible functional boron nitride nanosheets/polymer films with excellent mechanical properties and ultra-high thermal conductivity for thermal management. Journal of Materials Chemistry C, 2018, 6, 1363-1369.	2.7	133
24	Stabilization and Release of Enzymes from Silk Films. Macromolecular Bioscience, 2010, 10, 359-368.	2.1	127
25	Protein-Based Fiber Materials in Medicine: A Review. Nanomaterials, 2018, 8, 457.	1.9	125
26	Expression, Cross-Linking, and Characterization of Recombinant Chitin Binding Resilin. Biomacromolecules, 2009, 10, 3227-3234.	2.6	118
27	Proteinâ€“Polysaccharide Composite Materials: Fabrication and Applications. Polymers, 2020, 12, 464.	2.0	111
28	Protein-Based Drug-Delivery Materials. Materials, 2017, 10, 517.	1.3	108
29	Recombinant exon-encoded resilins for elastomeric biomaterials. Biomaterials, 2011, 32, 9231-9243.	5.7	90
30	Aligned silk-based 3-D architectures for contact guidance in tissue engineering. Acta Biomaterialia, 2012, 8, 1530-1542.	4.1	89
31	Salt-Leached Silk Scaffolds with Tunable Mechanical Properties. Biomacromolecules, 2012, 13, 3723-3729.	2.6	88
32	Tissue Regeneration: A Silk Road. Journal of Functional Biomaterials, 2016, 7, 22.	1.8	88
33	Protein-Based Bioelectronics. ACS Biomaterials Science and Engineering, 2016, 2, 1211-1223.	2.6	87
34	Recent Progress in Biopolymer-Based Hydrogel Materials for Biomedical Applications. International Journal of Molecular Sciences, 2022, 23, 1415.	1.8	82
35	Green Process to Prepare Silk Fibroin/Gelatin Biomaterial Scaffolds. Macromolecular Bioscience, 2010, 10, 289-298.	2.1	77
36	Impact of processing parameters on the haemocompatibility of Bombyx mori silk films. Biomaterials, 2012, 33, 1017-1023.	5.7	74

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37	Effect of Silk Protein Processing on Drug Delivery from Silk Films. Macromolecular Bioscience, 2013, 13, 311-320.	2.1	74
38	Structure and Biodegradation Mechanism of Milled Bombyx mori Silk Particles. Biomacromolecules, 2012, 13, 2503-2512.	2.6	70
39	Combinatorial Library of Lipidoids for In Vitro DNA Delivery. Bioconjugate Chemistry, 2012, 23, 135-140.	1.8	69
40	Microphase Separation Controlled Î²-Sheet Crystallization Kinetics in Fibrous Proteins. Macromolecules, 2009, 42, 2079-2087.	2.2	64
41	Development of Adhesive and Conductive Resilin-Based Hydrogels for Wearable Sensors. Biomacromolecules, 2019, 20, 3283-3293.	2.6	64
42	Flexibility Regeneration of Silk Fibroin in Vitro. Biomacromolecules, 2012, 13, 2148-2153.	2.6	63
43	Impact of ionic liquid type on the structure, morphology and properties of silk-cellulose biocomposite materials. International Journal of Biological Macromolecules, 2018, 108, 333-341.	3.6	61
44	<scp>I</scp>mpact of Sterilization on the Enzymatic Degradation and Mechanical Properties of Silk Biomaterials. Macromolecular Bioscience, 2014, 14, 257-269.	2.1	59
45	Mechanical Considerations for Electrospun Nanofibers in Tendon and Ligament Repair. Advanced Healthcare Materials, 2018, 7, e1701277.	3.9	57
46	Silk Fibroin Processing and Thrombogenic Responses. Journal of Biomaterials Science, Polymer Edition, 2009, 20, 1875-1897.	1.9	54
47	Filmâ€Based Implants for Supporting Neuronâ€"Electrode Integrated Interfaces for The Brain. Advanced Functional Materials, 2014, 24, 1938-1948.	7.8	52
48	Single Honeybee Silk Protein Mimics Properties of Multi-Protein Silk. PLoS ONE, 2011, 6, e16489.	1.1	52
49	Recombinant reflectinâ€based optical materials. Journal of Polymer Science, Part B: Polymer Physics, 2013, 51, 254-264.	2.4	51
50	Recent Advances in Electrospun Sustainable Composites for Biomedical, Environmental, Energy, and Packaging Applications. International Journal of Molecular Sciences, 2020, 21, 4019.	1.8	51
51	Tunable green graphene-silk biomaterials: Mechanism of protein-based nanocomposites. Materials Science and Engineering C, 2017, 79, 728-739.	3.8	50
52	Heat Capacity of Spider Silk-Like Block Copolymers. Macromolecules, 2011, 44, 5299-5309.	2.2	49
53	Chargeâ€Tunable Autoclaved Silkâ€Tropoelastin Protein Alloys That Control Neuron Cell Responses. Advanced Functional Materials, 2013, 23, 3875-3884.	7.8	49
54	Heat Capacity of Silk Fibroin Based on the Vibrational Motion of Poly(amino acid)s in the Presence and Absence of Water. Macromolecules, 2008, 41, 4786-4793.	2.2	46

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55	Production, structure and in vitro degradation of electrospun honeybee silk nanofibers. Acta Biomaterialia, 2011, 7, 3789-3795.	4.1	46
56	Comparative thermal analysis of Eri, Mori, Muga, and Tussar silk cocoons and fibroin fibers. Journal of Thermal Analysis and Calorimetry, 2014, 116, 1337-1343.	2.0	42
57	Protein and Polysaccharide-Based Magnetic Composite Materials for Medical Applications. International Journal of Molecular Sciences, 2020, 21, 186.	1.8	40
58	Thermal Conductivity of Protein-Based Materials: A Review. Polymers, 2019, 11, 456.	2.0	38
59	Comparative Study of Ultrasonication-Induced and Naturally Self-Assembled Silk Fibroin-Wool Keratin Hydrogel Biomaterials. International Journal of Molecular Sciences, 2016, 17, 1497.	1.8	37
60	Thermal properties and phase transitions in blends of Nylon-6 with silk fibroin. Journal of Thermal Analysis and Calorimetry, 2008, 93, 201-206.	2.0	34
61	Silk fibroin-poly(lactic acid) biocomposites: Effect of protein-synthetic polymer interactions and miscibility on material properties and biological responses. Materials Science and Engineering C, 2019, 104, 109890.	3.8	34
62	Effects of Fiber Density and Strain Rate on the Mechanical Properties of Electrospun Polycaprolactone Nanofiber Mats. Frontiers in Chemistry, 2020, 8, 610.	1.8	34
63	Chemical, Thermal, Time, and Enzymatic Stability of Silk Materials with Silk I Structure. International Journal of Molecular Sciences, 2021, 22, 4136.	1.8	34
64	Mechanical and thermal property characterization of poly- l -lactide (PLLA) scaffold developed using pressure-controllable green foaming technology. Materials Science and Engineering C, 2015, 49, 612-622.	3.8	33
65	Formic Acid Regenerated Mori, Tussah, Eri, Thai, and Muga Silk Materials: Mechanism of Self-Assembly. ACS Biomaterials Science and Engineering, 2019, 5, 6361-6373.	2.6	33
66	Protein and Polysaccharide-Based Fiber Materials Generated from Ionic Liquids: A Review. Molecules, 2020, 25, 3362.	1.7	31
67	Exploring the Structural Transformation Mechanism of Chinese and Thailand Silk Fibroin Fibers and Formic-Acid Fabricated Silk Films. International Journal of Molecular Sciences, 2018, 19, 3309.	1.8	30
68	Processing Influence on Molecular Assembling and Structural Conformations in Silk Fibroin: Elucidation by Solid-State NMR. ACS Biomaterials Science and Engineering, 2016, 2, 758-767.	2.6	29
69	Rational Design and Hierarchical Assembly of a Genetically Engineered Resilinâ€"Silk Copolymer Results in Stiff Hydrogels. ACS Biomaterials Science and Engineering, 2017, 3, 1576-1585.	2.6	29
70	A Hierarchical Model To Understand the Processing of Polysaccharides/Protein-Based Films in Ionic Liquids. Biomacromolecules, 2018, 19, 3970-3982.	2.6	28
71	Concurrent collection and post-drawing of individual electrospun polymer nanofibers to enhance macromolecular alignment and mechanical properties. Polymer, 2016, 103, 243-250.	1.8	26
72	Structureâ€"property relationships of Thai silkâ€"microcrystalline cellulose biocomposite materials fabricated from ionic liquid. International Journal of Biological Macromolecules, 2017, 104, 919-928.	3.6	26

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73	Biopolymer-Based Filtration Materials. ACS Omega, 2021, 6, 11804-11812.	1.6	25
74	Structureâ€"property relationships of blended polysaccharide and protein biomaterials in ionic liquid. Cellulose, 2017, 24, 1775-1789.	2.4	24
75	Dielectric Relaxation Spectroscopy of Hydrated and Dehydrated Silk Fibroin Cast from Aqueous Solution. Biomacromolecules, 2010, 11, 2766-2775.	2.6	23
76	Comparative studies of regenerated water-based Mori, Thai, Eri, Muga and Tussah silk fibroin films. Journal of Thermal Analysis and Calorimetry, 2015, 122, 1069-1076.	2.0	23
77	Biocompatible Silk/Polymer Energy Harvesters Using Stretched Poly (vinylidene) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 582 Td (f	2.0	23
78	Effects of post-draw processing on the structure and functional properties of electrospun PVDF-HFP nanofibers. Polymer, 2019, 171, 192-200.	1.8	23
79	Impact of calcium chloride concentration on structure and thermal property of Thai silk fibroin films. Journal of Thermal Analysis and Calorimetry, 2017, 130, 851-859.	2.0	21
80	Stability of Silk and Collagen Protein Materials in Space. Scientific Reports, 2013, 3, 3428.	1.6	19
81	The Impact of Composition and Morphology on Ionic Conductivity of Silk/Cellulose Bio-Composites Fabricated from Ionic Liquid and Varying Percentages of Coagulation Agents. International Journal of Molecular Sciences, 2020, 21, 4695.	1.8	19
82	Facile treatment to fine-tune cellulose crystals in cellulose-silk biocomposites through hydrogen peroxide. International Journal of Biological Macromolecules, 2020, 147, 569-575.	3.6	18
83	Morphology and ionic conductivity relationship in silk/cellulose biocomposites. Polymer International, 2019, 68, 1580-1590.	1.6	17
84	Air-jet spinning corn zein protein nanofibers for drug delivery: Effect of biomaterial structure and shape on release properties. Materials Science and Engineering C, 2021, 118, 111419.	3.8	17
85	Thermal analysis of proteinâ€"metallic ion systems. Journal of Thermal Analysis and Calorimetry, 2009, 96, 827-834.	2.0	15
86	Encapsulation of oil in silk fibroin biomaterials. Journal of Applied Polymer Science, 2014, 131, .	1.3	15
87	Spider Silk-CBD-Cellulose Nanocrystal Composites: Mechanism of Assembly. International Journal of Molecular Sciences, 2016, 17, 1573.	1.8	15
88	Ultrasound regulated flexible protein materials: Fabrication, structure and physical-biological properties. Ultrasonics Sonochemistry, 2021, 79, 105800.	3.8	15
89	Silk-Cellulose Acetate Biocomposite Materials Regenerated from Ionic Liquid. Polymers, 2021, 13, 2911.	2.0	14
90	Tunable Biodegradable Polylactideâ€"Silk Fibroin Scaffolds Fabricated by a Solvent-Free Pressure-Controllable Foaming Technology. ACS Applied Bio Materials, 2020, 3, 8795-8807.	2.3	14

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91	Dual-Crystallizable Silk Fibroin/Poly(L-lactic Acid) Biocomposite Films: Effect of Polymer Phases on Protein Structures in Protein-Polymer Blends. International Journal of Molecular Sciences, 2021, 22, 1871.	1.8	13
92	Ultrasound-assisted fabrication of biopolymer materials: A review. International Journal of Biological Macromolecules, 2022, 209, 1613-1628.	3.6	13
93	Impact of foaming air on melting and crystallization behaviors of microporous PLA scaffolds. Journal of Thermal Analysis and Calorimetry, 2015, 122, 1077-1088.	2.0	12
94	Silk-silk blend materials. Journal of Thermal Analysis and Calorimetry, 2017, 127, 915-921.	2.0	12
95	Thermal and structural analysis of silkâ€"polyvinyl acetate blends. Journal of Thermal Analysis and Calorimetry, 2017, 127, 923-929.	2.0	12
96	Exposure to CuO Nanoparticles Mediates NFÎºB Activation and Enhances Amyloid Precursor Protein Expression. Biomedicines, 2020, 8, 45.	1.4	12
97	Tunable microphase-regulated silk fibroin/poly (lactic acid) biocomposite materials generated from ionic liquids. International Journal of Biological Macromolecules, 2022, 197, 55-67.	3.6	11
98	Protein-based flexible thermal conductive materials with continuous network structure: Fabrication, properties, and theoretical modeling. Composites Part B: Engineering, 2020, 201, 108377.	5.9	9
99	Advanced Protein Composite Materials. ACS Symposium Series, 2014, , 177-208.	0.5	8
100	Air-Jet Spun Corn Zein Nanofibers and Thin Films with Topical Drug for Medical Applications. International Journal of Molecular Sciences, 2020, 21, 5780.	1.8	8
101	Tunable High-Molecular-Weight Silk Fibroin Polypeptide Materials: Fabrication and Self-Assembly Mechanism. ACS Applied Bio Materials, 2020, 3, 3248-3259.	2.3	7
102	Protein and Polysaccharide-Based Electroactive and Conductive Materials for Biomedical Applications. Molecules, 2021, 26, 4499.	1.7	7
103	Electrospun Silk-Boron Nitride Nanofibers with Tunable Structure and Properties. Polymers, 2020, 12, 1093.	2.0	6
104	Structural and Morphological Properties of Wool Keratin and Cellulose Biocomposites Fabricated Using Ionic Liquids. ACS Materials Au, 2022, 2, 21-32.	2.6	6
105	Comparative Investigation of Thermal and Structural Behavior in Renewably Sourced Composite Films of Even-Even Nylons (610 and 1010) with Silk Fibroin. Polymers, 2018, 10, 1029.	2.0	5
106	Comparative Study of Silk-Based Magnetic Materials: Effect of Magnetic Particle Types on the Protein Structure and Biomaterial Properties. International Journal of Molecular Sciences, 2020, 21, 7583.	1.8	5
107	Air-Spun Silk-Based Micro-/Nanofibers and Thin Films for Drug Delivery. International Journal of Molecular Sciences, 2021, 22, 9588.	1.8	5
108	Bioinspired Silk Fiber Spinning System via Automated Track-Drawing. ACS Applied Bio Materials, 2021, 4, 8192-8204.	2.3	5

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109	Thermal analysis of natural fibers. , 2020, , 105-132.		4
110	Water-annealing regulated protein-based magnetic nanofiber materials: tuning silk structure and properties to enhance cell response under magnetic fields. Materials Today Chemistry, 2021, 22, 100570.	1.7	4
111	Structure and elasticity mechanism of full length resilin proteins. , 2010, , .		1
112	Unraveling the Energy Transduction Mechanism of Resilin Elasticity-A Combination of Computational and Experimental Study. Biophysical Journal, 2014, 106, 51a.	0.2	1
113	Expression, cross-linking and characterization of recombinant chitin binding resilin. , 2010, , .		0
114	Biodegradable Films and Foam of Poly(3-Hydroxybutyrate-co-3-hydroxyvalerate) Blended with Silk Fibroin. ACS Symposium Series, 2013, , 251-279.	0.5	0
115	Designing Silk-silk Protein Alloy Materials for Biomedical Applications. Journal of Visualized Experiments, 2014, , e50891.	0.2	0
116	Fabrication of Tunable Silk Materials Through Microfluidic Mixers. , 2016, , .		0
117	Fabrication and Characterization of Air-Jet-Spun Nanofibers and Thin Films from Corn Zein Protein for the Delivery of Therapeutic Molecules. , 2020, 69, .		0
118	Electrospun Silk-Cellulose Composite Nanomaterials Using Ionic Liquid Regenerated Films. , 2020, 69, .		0
119	Controlling the structure and properties of semi-crystalline cellulose/silk-fibroin biocomposites by ionic liquid type and hydrogen peroxide concentration. Carbohydrate Polymer Technologies and Applications, 2022, 3, 100193.	1.6	0