Xiao Hu

List of Publications by Citations

110 papers	7,453 citations	44 h-index	86 g-index
120 ext. papers	8,532 ext. citations	6.6 avg, IF	6.04 L-index

#	Paper	IF	Citations
110	Determining Beta-Sheet Crystallinity in Fibrous Proteins by Thermal Analysis and Infrared Spectroscopy. *Macromolecules*, **2006**, 39, 6161-6170	5.5	829
109	Water-insoluble silk films with silk I structure. *Acta Biomaterialia*, **2010**, 6, 1380-7	10.8	450
108	Regulation of silk material structure by temperature-controlled water vapor annealing. *Biomacromolecules*, **2011**, 12, 1686-96	6.9	434
107	Controlling silk fibroin particle features for drug delivery. *Biomaterials*, **2010**, 31, 4583-91	15.6	356
106	Silk nanospheres and microspheres from silk/pva blend films for drug delivery. *Biomaterials*, **2010**, 31, 1025-35	15.6	321
105	Effect of processing on silk-based biomaterials: reproducibility and biocompatibility. *Journal of Biomedical Materials Research - Part B Applied Biomaterials*, **2011**, 99, 89-101	3.5	227
104	. *Macromolecules*, **2008**, 41, 3939-3948	5.5	215
103	Protein-based composite materials. *Materials Today*, **2012**, 15, 208-215	21.8	204
102	Tunable self-assembly of genetically engineered silk--elastin-like protein polymers. *Biomacromolecules*, **2011**, 12, 3844-50	6.9	170
101	The influence of elasticity and surface roughness on myogenic and osteogenic-differentiation of cells on silk-elastin biomaterials. *Biomaterials*, **2011**, 32, 8979-89	15.6	168
100	Silk coatings on PLGA and alginate microspheres for protein delivery. *Biomaterials*, **2007**, 28, 4161-9	15.6	161
99	Nanolayer biomaterial coatings of silk fibroin for controlled release. *Journal of Controlled Release*, **2007**, 121, 190-9	11.7	150
98	BN Nanosheet/Polymer Films with Highly Anisotropic Thermal Conductivity for Thermal Management Applications. *ACS Applied Materials & Interfaces*, **2017**, 9, 43163-43170	9.5	145
97	Effect of water on the thermal properties of silk fibroin. *Thermochimica Acta*, **2007**, 461, 137-144	2.9	142
96	Biomaterials from ultrasonication-induced silk fibroin-hyaluronic acid hydrogels. *Biomacromolecules*, **2010**, 11, 3178-88	6.9	141
95	Stabilization of enzymes in silk films. *Biomacromolecules*, **2009**, 10, 1032-42	6.9	140
94	Biomaterials derived from silk-tropoelastin protein systems. *Biomaterials*, **2010**, 31, 8121-31	15.6	130

93	Tunable silk: using microfluidics to fabricate silk fibers with controllable properties. *Biomacromolecules*, **2011**, 12, 1504-11	6.9	129
92	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, 11981-6	11.5	125
91	Beating the heat--fast scanning melts silk beta sheet crystals. *Scientific Reports*, **2013**, 3, 1130	4.9	121
90	Stabilization and release of enzymes from silk films. *Macromolecular Bioscience*, **2010**, 10, 359-68	5.5	112
89	Mechanism of resilin elasticity. *Nature Communications*, **2012**, 3, 1003	17.4	109
88	Expression, cross-linking, and characterization of recombinant chitin binding resilin. *Biomacromolecules*, **2009**, 10, 3227-34	6.9	104
87	Protein Polymer-Based Nanoparticles: Fabrication and Medical Applications. *International Journal of Molecular Sciences*, **2018**, 19,	6.3	99
86	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	7.1	99
85	Recombinant exon-encoded resilins for elastomeric biomaterials. *Biomaterials*, **2011**, 32, 9231-43	15.6	79
84	Aligned silk-based 3-D architectures for contact guidance in tissue engineering. *Acta Biomaterialia*, **2012**, 8, 1530-42	10.8	77
83	Protein-Based Fiber Materials in Medicine: A Review. *Nanomaterials*, **2018**, 8,	5.4	76
82	Salt-leached silk scaffolds with tunable mechanical properties. *Biomacromolecules*, **2012**, 13, 3723-9	6.9	76
81	Protein-Based Drug-Delivery Materials. *Materials*, **2017**, 10,	3.5	73
80	Protein-Based Bioelectronics. *ACS Biomaterials Science and Engineering*, **2016**, 2, 1211-1223	5.5	70
79	Green process to prepare silk fibroin/gelatin biomaterial scaffolds. *Macromolecular Bioscience*, **2010** , 10, 289-98	5.5	70
78	Tissue Regeneration: A Silk Road. *Journal of Functional Biomaterials*, **2016**, 7,	4.8	67
77	Structure and biodegradation mechanism of milled Bombyx mori silk particles. *Biomacromolecules*, **2012**, 13, 2503-12	6.9	62
76	Impact of processing parameters on the haemocompatibility of Bombyx mori silk films. *Biomaterials* , **2012**, 33, 1017-23	15.6	60

75	Combinatorial library of lipidoids for in vitro DNA delivery. *Bioconjugate Chemistry*, **2012**, 23, 135-40	6.3	59
74	Microphase Separation Controlled β-Sheet Crystallization Kinetics in Fibrous Proteins. *Macromolecules*, **2009**, 42, 2079-2087	5.5	59
73	Effect of silk protein processing on drug delivery from silk films. *Macromolecular Bioscience*, **2013**, 13, 311-20	5.5	54
72	Flexibility regeneration of silk fibroin in vitro. *Biomacromolecules*, **2012**, 13, 2148-53	6.9	52
71	Single honeybee silk protein mimics properties of multi-protein silk. *PLoS ONE*, **2011**, 6, e16489	3.7	49
70	Protein-Polysaccharide Composite Materials: Fabrication and Applications. *Polymers*, **2020**, 12,	4.5	48
69	Charge-Tunable Silk-Tropoelastin Protein Alloys That Control Neuron Cell Responses. *Advanced Functional Materials*, **2013**, 23, 3875-3884	15.6	48
68	Impact of sterilization on the enzymatic degradation and mechanical properties of silk biomaterials. *Macromolecular Bioscience*, **2014**, 14, 257-69	5.5	47
67	Silk fibroin processing and thrombogenic responses. *Journal of Biomaterials Science, Polymer Edition*, **2009**, 20, 1875-97	3.5	47
66	Film-based Implants for Supporting Neuron-Electrode Integrated Interfaces for The Brain. *Advanced Functional Materials*, **2014**, 24, 1938-1948	15.6	44
65	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	7.9	44
64	Heat Capacity of Spider Silk-like Block Copolymers. *Macromolecules*, **2011**, 44, 5299-5309	5.5	43
63	Production, structure and in vitro degradation of electrospun honeybee silk nanofibers. *Acta Biomaterialia*, **2011**, 7, 3789-95	10.8	42
62	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	5.5	40
61	Development of Adhesive and Conductive Resilin-Based Hydrogels for Wearable Sensors. *Biomacromolecules*, **2019**, 20, 3283-3293	6.9	38
60	Recombinant reflectin-based optical materials. *Journal of Polymer Science, Part B: Polymer Physics*, **2013**, 51, 254-264	2.6	38
59	Tunable green graphene-silk biomaterials: Mechanism of protein-based nanocomposites. *Materials Science and Engineering C*, **2017**, 79, 728-739	8.3	36
58	Mechanical Considerations for Electrospun Nanofibers in Tendon and Ligament Repair. *Advanced Healthcare Materials*, **2018**, 7, e1701277	10.1	34

57	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	8.3	29
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	4.1	29
55	Thermal properties and phase transitions in blends of Nylon-6 with silk fibroin. *Journal of Thermal Analysis and Calorimetry*, **2008**, 93, 201-206	4.1	29
54	Recent Advances in Electrospun Sustainable Composites for Biomedical, Environmental, Energy, and Packaging Applications. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	24
53	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	5.5	24
52	Structure-property relationships of Thai silk-microcrystalline cellulose biocomposite materials fabricated from ionic liquid. *International Journal of Biological Macromolecules*, **2017**, 104, 919-928	7.9	23
51	Dielectric relaxation spectroscopy of hydrated and dehydrated silk fibroin cast from aqueous solution. *Biomacromolecules*, **2010**, 11, 2766-75	6.9	22
50	Protein and Polysaccharide-Based Magnetic Composite Materials for Medical Applications. *International Journal of Molecular Sciences*, **2019**, 21,	6.3	22
49	Comparative Study of Ultrasonication-Induced and Naturally Self-Assembled Silk Fibroin-Wool Keratin Hydrogel Biomaterials. *International Journal of Molecular Sciences*, **2016**, 17,	6.3	22
48	Thermal Conductivity of Protein-Based Materials: A Review. *Polymers*, **2019**, 11,	4.5	20
47	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	8.3	19
46	A Hierarchical Model To Understand the Processing of Polysaccharides/Protein-Based Films in Ionic Liquids. *Biomacromolecules*, **2018**, 19, 3970-3982	6.9	19
45	Concurrent collection and post-drawing of individual electrospun polymer nanofibers to enhance macromolecular alignment and mechanical properties. *Polymer*, **2016**, 103, 243-250	3.9	19
44	Rational Design and Hierarchical Assembly of a Genetically Engineered Resilin-Silk Copolymer Results in Stiff Hydrogels. *ACS Biomaterials Science and Engineering*, **2017**, 3, 1576-1585	5.5	18
43	Formic Acid Regenerated Mori, Tussah, Eri, Thai, and Muga Silk Materials: Mechanism of Self-Assembly. *ACS Biomaterials Science and Engineering*, **2019**, 5, 6361-6373	5.5	18
42	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	4.1	18
41	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	4.1	17
40	Effects of post-draw processing on the structure and functional properties of electrospun PVDF-HFP nanofibers. *Polymer*, **2019**, 171, 192-200	3.9	16

39	Biocompatible Silk/Polymer Energy Harvesters Using Stretched Poly (vinylidene fluoride-co-hexafluoropropylene) (PVDF-HFP) Nanofibers. *Polymers*, **2017**, 9,	4.5	15
38	Stability of silk and collagen protein materials in space. *Scientific Reports*, **2013**, 3, 3428	4.9	15
37	Thermal analysis of protein–metallic ion systems. *Journal of Thermal Analysis and Calorimetry*, **2009**, 96, 827-834	4.1	15
36	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,	6.3	13
35	Structure–property relationships of blended polysaccharide and protein biomaterials in ionic liquid. *Cellulose*, **2017**, 24, 1775-1789	5.5	12
34	Encapsulation of oil in silk fibroin biomaterials. *Journal of Applied Polymer Science*, **2014**, 131, n/a-n/a	2.9	12
33	Protein and Polysaccharide-Based Fiber Materials Generated from Ionic Liquids: A Review. *Molecules*, **2020**, 25,	4.8	12
32	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,	6.3	11
31	Effects of Fiber Density and Strain Rate on the Mechanical Properties of Electrospun Polycaprolactone Nanofiber Mats. *Frontiers in Chemistry*, **2020**, 8, 610	5	11
30	Silk-silk blend materials. *Journal of Thermal Analysis and Calorimetry*, **2017**, 127, 915-921	4.1	10
29	Spider Silk-CBD-Cellulose Nanocrystal Composites: Mechanism of Assembly. *International Journal of Molecular Sciences*, **2016**, 17,	6.3	10
28	Facile treatment to fine-tune cellulose crystals in cellulose-silk biocomposites through hydrogen peroxide. *International Journal of Biological Macromolecules*, **2020**, 147, 569-575	7.9	9
27	Thermal and structural analysis of silk–polyvinyl acetate blends. *Journal of Thermal Analysis and Calorimetry*, **2017**, 127, 923-929	4.1	9
26	Impact of foaming air on melting and crystallization behaviors of microporous PLA scaffolds. *Journal of Thermal Analysis and Calorimetry*, **2015**, 122, 1077-1088	4.1	8
25	Exposure to CuO Nanoparticles Mediates NFκB Activation and Enhances Amyloid Precursor Protein Expression. *Biomedicines*, **2020**, 8,	4.8	7
24	Morphology and ionic conductivity relationship in silk/cellulose biocomposites. *Polymer International*, **2019**, 68, 1580-1590	3.3	7
23	Recent Progress in Biopolymer-Based Hydrogel Materials for Biomedical Applications.. *International Journal of Molecular Sciences*, **2022**, 23,	6.3	7
22	Tunable Biodegradable Polylactide-Silk Fibroin Scaffolds Fabricated by a Solvent-Free Pressure-Controllable Foaming Technology.. *ACS Applied Bio Materials*, **2020**, 3, 8795-8807	4.1	7

21	Biopolymer-Based Filtration Materials. *ACS Omega*, **2021**, 6, 11804-11812	3.9	7
20	Chemical, Thermal, Time, and Enzymatic Stability of Silk Materials with Silk I Structure. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	7
19	Protein-based flexible thermal conductive materials with continuous network structure: Fabrication, properties, and theoretical modeling. *Composites Part B: Engineering*, **2020**, 201, 108377	10	6
18	Tunable High-Molecular-Weight Silk Fibroin Polypeptide Materials: Fabrication and Self-Assembly Mechanism.. *ACS Applied Bio Materials*, **2020**, 3, 3248-3259	4.1	6
17	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,	4.5	5
16	Advanced Protein Composite Materials. *ACS Symposium Series*, **2014**, 177-208	0.4	4
15	Protein and Polysaccharide-Based Electroactive and Conductive Materials for Biomedical Applications. *Molecules*, **2021**, 26,	4.8	4
14	Air-Jet Spun Corn Zein Nanofibers and Thin Films with Topical Drug for Medical Applications. *International Journal of Molecular Sciences*, **2020**, 21,	6.3	3
13	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	8.3	3
12	Silk-Cellulose Acetate Biocomposite Materials Regenerated from Ionic Liquid. *Polymers*, **2021**, 13,	4.5	3
11	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,	6.3	2
10	Electrospun Silk-Boron Nitride Nanofibers with Tunable Structure and Properties. *Polymers*, **2020**, 12,	4.5	1
9	Thermal analysis of natural fibers **2020**, 105-132		1
8	Bioinspired Silk Fiber Spinning System via Automated Track-Drawing.. *ACS Applied Bio Materials*, **2021**, 4, 8192-8204	4.1	1
7	Ultrasound regulated flexible protein materials: Fabrication, structure and physical-biological properties. *Ultrasonics Sonochemistry*, **2021**, 79, 105800	8.9	1
6	Air-Spun Silk-Based Micro-/Nanofibers and Thin Films for Drug Delivery. *International Journal of Molecular Sciences*, **2021**, 22,	6.3	1
5	Tunable microphase-regulated silk fibroin/poly (lactic acid) biocomposite materials generated from ionic liquids.. *International Journal of Biological Macromolecules*, **2021**, 197, 55-67	7.9	0
4	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	6.2	0

3	Designing silk-silk protein alloy materials for biomedical applications. *Journal of Visualized Experiments*, **2014**, e50891	1.6
2	Biodegradable Films and Foam of Poly(3-Hydroxybutyrate-co-3-hydroxyvalerate) Blended with Silk Fibroin. *ACS Symposium Series*, **2013**, 251-279	0.4
1	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	1.7