Xiang-Yang Liu

List of Publications by Year in Descending Order

108 papers	4,040 citations	37 h-index	61 g-index
111 ext. papers	4,926 ext. citations	10.9 avg, IF	5.92 L-index

#	Paper	IF	Citations
108	From Mesoscopic Functionalization of Silk Fibroin to Smart Fiber Devices for Textile Electronics and Photonics. *Advanced Science*, **2021**, e2103981	13.6	7
107	Meso-Reconstruction of Silk Fibroin based on Molecular and Nano-Templates for Electronic Skin in Medical Applications. *Advanced Functional Materials*, **2021**, 31, 2100150	15.6	14
106	Biomimetic Salinity Power Generation Based on Silk Fibroin Ion-Exchange Membranes. *ACS Nano*, **2021**, 15, 5649-5660	16.7	5
105	New Silk Road: From Mesoscopic Reconstruction/Functionalization to Flexible Meso-Electronics/Photonics Based on Cocoon Silk Materials. *Advanced Materials*, **2021**, e2005910	24	11
104	Wearable hydration and pH sensor based on protein film for healthcare monitoring. *Chemical Papers*, **2021**, 75, 4927	1.9	5
103	All-in-one fibrous capacitive humidity sensor for human breath monitoring. *Textile Reseach Journal*, **2021**, 91, 398-405	1.7	6
102	Enhanced mechanical performance of biocompatible silk fibroin films through mesoscopic construction of hierarchical structures. *Textile Reseach Journal*, **2021**, 91, 1146-1154	1.7	1
101	Silk Nanococoons: Bio-Nanoreactors for Enzymatic Catalytic Reactions and Applications to Alcohol Intoxication. *Small Science*, **2021**, 1, 2000049		5
100	Smart power system of biocompatible and flexible micro-supercapacitor. *Applied Physics Letters*, **2021**, 118, 073902	3.4	1
99	Array Integration and Far-Field Detection of Biocompatible Wireless LC Pressure Sensors.. *Small Methods*, **2021**, 5, e2001055	12.8	3
98	A capacitive humidity sensor based on all-protein embedded with gold nanoparticles @ carbon composite for human respiration detection. *Nanotechnology*, **2021**, 32, 19LT01	3.4	5
97	Stretchable, Stable, and Degradable Silk Fibroin Enabled by Mesoscopic Doping for Finger Motion Triggered Color/Transmittance Adjustment. *ACS Nano*, **2021**,	16.7	9
96	A simple route to fiber-shaped heterojunctioned nanocomposites for knittable high-performance supercapacitors. *Journal of Materials Chemistry A*, **2020**, 8, 11589-11597	13	10
95	From Molecular Reconstruction of Mesoscopic Functional Conductive Silk Fibrous Materials to Remote Respiration Monitoring. *Small*, **2020**, 16, e2000203	11	26
94	Tailoring the Meso-Structure of Gold Nanoparticles in Keratin-Based Activated Carbon Toward High-Performance Flexible Sensor. *Nano-Micro Letters*, **2020**, 12, 117	19.5	13
93	Graphene decorated carbonized cellulose fabric for physiological signal monitoring and energy harvesting. *Journal of Materials Chemistry A*, **2020**, 8, 12665-12673	13	34
92	Fibrous inductance strain sensors for passive inductance textile sensing. *Materials Today Physics*, **2020**, 15, 100243	8	11

91	Fabrication of durable hierarchical superhydrophobic fabrics with Sichuan pepper-like structures via graft precipitation polymerization. *Applied Surface Science*, **2020**, 529, 147017	6.7	14
90	Stretchable and Heat-Resistant Protein-Based Electronic Skin for Human Thermoregulation. *Advanced Functional Materials*, **2020**, 30, 1910547	15.6	53
89	Stretchable, Biocompatible, and Multifunctional Silk Fibroin-Based Hydrogels toward Wearable Strain/Pressure Sensors and Triboelectric Nanogenerators. *ACS Applied Materials & Interfaces*, **2020**, 12, 6442-6450	9.5	147
88	Hot-Electron-Activated Peroxidase-Mimicking Activity of Ultrathin Pd Nanozymes. *Nanoscale Research Letters*, **2020**, 15, 162	5	4
87	Transparent, stretchable and degradable protein electronic skin for biomechanical energy scavenging and wireless sensing. *Biosensors and Bioelectronics*, **2020**, 169, 112567	11.8	28
86	Effect of size and crystalline phase of TiO nanotubes on cell behaviors: A high throughput study using gradient TiO nanotubes. *Bioactive Materials*, **2020**, 5, 1062-1070	16.7	21
85	Programing Performance of Silk Fibroin Superstrong Scaffolds by Mesoscopic Regulation among Hierarchical Structures. *Biomacromolecules*, **2020**, 21, 4169-4179	6.9	8
84	Flexible and Insoluble Artificial Synapses Based on Chemical Cross-Linked Wool Keratin. *Advanced Functional Materials*, **2020**, 30, 2002882	15.6	25
83	Synergistic effect of crystalline phase on protein adsorption and cell behaviors on TiO2 nanotubes. *Applied Nanoscience (Switzerland)*, **2020**, 10, 3245-3257	3.3	3
82	Another look at the role of trapped air in cell adhesion on superhydrophobic materials. *Applied Nanoscience (Switzerland)*, **2020**, 10, 243-251	3.3	
81	Crafting NiCo2O4@Co9S8 nanotrees on carbon cloth as flexible pressure sensors for effectively monitoring human motion. *Applied Nanoscience (Switzerland)*, **2020**, 10, 861-867	3.3	5
80	Interplay between Light and Functionalized Silk Fibroin and Applications. *IScience*, **2020**, 23, 101035	6.1	19
79	Hierarchical Structure of Silk Materials Versus Mechanical Performance and Mesoscopic Engineering Principles. *Small*, **2019**, 15, e1903948	11	48
78	Full-Textile Wireless Flexible Humidity Sensor for Human Physiological Monitoring. *Advanced Functional Materials*, **2019**, 29, 1904549	15.6	98
77	A Biodegradable and Stretchable Protein-Based Sensor as Artificial Electronic Skin for Human Motion Detection. *Small*, **2019**, 15, e1805084	11	89
76	Pulsed electrochemical deposition of porous WO3 on silver networks for highly flexible electrochromic devices. *Journal of Materials Chemistry C*, **2019**, 7, 1966-1973	7.1	17
75	Transient bioelectrical devices inspired by a silkworm moth breaking out of its cocoon.. *RSC Advances*, **2019**, 9, 14254-14259	3.7	4
74	Flexible, controllable and angle-independent photoelectrochromic display enabled by smart sunlight management. *Nano Energy*, **2019**, 63, 103830	17.1	9

73	A facile method to prepare a wearable pressure sensor based on fabric electrodes for human motion monitoring. *Textile Reseach Journal*, **2019**, 89, 5144-5152	1.7	17
72	Silk Composite Electronic Textile Sensor for High Space Precision 2D Combo Temperature-Pressure Sensing. *Small*, **2019**, 15, e1901558	11	100
71	Using Wool Keratin as a Basic Resist Material to Fabricate Precise Protein Patterns. *Advanced Materials*, **2019**, 31, e1900870	24	39
70	Can the pathway of stepwise nucleation be predicted and controlled?. *Physical Chemistry Chemical Physics*, **2019**, 21, 7398-7405	3.6	4
69	Silk Fluorescence Collimator for Ultrasensitive Humidity Sensing and Light-Harvesting in Semitransparent Dye-Sensitized Solar Cells. *Small*, **2019**, 15, e1804171	11	10
68	All-Textile Electronic Skin Enabled by Highly Elastic Spacer Fabric and Conductive Fibers. *ACS Applied Materials & Interfaces*, **2019**, 11, 33336-33346	9.5	44
67	An efficient disposable and flexible electrochemical sensor based on a novel and stable metal carbon composite derived from cocoon silk. *Biosensors and Bioelectronics*, **2019**, 142, 111595	11.8	14
66	Silk Flexible Electronics: From Bombyx mori Silk Ag Nanoclusters Hybrid Materials to Mesoscopic Memristors and Synaptic Emulators. *Advanced Functional Materials*, **2019**, 29, 1904777	15.6	41
65	Primary and Secondary Mesoscopic Hybrid Materials of Au Nanoparticles@Silk Fibroin and Applications. *ACS Applied Materials & Interfaces*, **2019**, 11, 30125-30136	9.5	11
64	A Novel Facile and Green Synthesis Protocol to Prepare High Strength Regenerated Silk Fibroin/SiO2 Composite Fiber. *Fibers and Polymers*, **2019**, 20, 2222-2226	2	8
63	Synthesis of hierarchical lamellar Co3O4□CoMoO4 heterostructures for lithium-ion batteries. *Journal of Materials Chemistry A*, **2019**, 7, 26884-26892	13	18
62	Rational Design of Silver Gradient for Studying Size Effect of Silver Nanoparticles on Contact Killing. *ACS Biomaterials Science and Engineering*, **2019**, 5, 425-431	5.5	20
61	Seeded Mineralization Leads to Hierarchical CaCO Thin Coatings on Fibers for Oil/Water Separation Applications. *Langmuir*, **2018**, 34, 2942-2951	4	22
60	Controllable and large-scale fabrication of rectangular CuS network films for indium tin oxide-and Pt-free flexible dye-sensitized solar cells. *Solar Energy Materials and Solar Cells*, **2018**, 179, 297-304	6.4	22
59	High-Throughput Screening of Rat Mesenchymal Stem Cell Behavior on Gradient TiO Nanotubes. *ACS Biomaterials Science and Engineering*, **2018**, 4, 2804-2814	5.5	19
58	Flexible fiber-shaped liquid/quasi-solid-state quantum dot-sensitized solar cells based on different metal sulfide counter electrodes. *Applied Physics Letters*, **2018**, 113, 043901	3.4	9
57	Correlations of crystal shape and lateral orientation in bioinspired CaCO3 mineralization. *CrystEngComm*, **2018**, 20, 5241-5248	3.3	4
56	Ultrathin AuAg Nanofilms from Ice-Templated Assembly of AuAg Nanowires. *Advanced Materials Interfaces*, **2018**, 5, 1800256	4.6	5

55	Control of ice nucleation: freezing and antifreeze strategies. *Chemical Society Reviews*, **2018**, 47, 7116-7139	39.5	113
54	Aqueous supercapacitors based on carbonized silk electrodes.. *RSC Advances*, **2018**, 8, 22146-22153	3.7	13
53	Memristor with Ag-Cluster-Doped TiO2 Films as Artificial Synapse for Neuroinspired Computing. *Advanced Functional Materials*, **2018**, 28, 1705320	15.6	221
52	Needle-Leaf-Like Cu2Mo6S8 Films for Highly Efficient Visible-Light Photocatalysis. *Particle and Particle Systems Characterization*, **2018**, 35, 1700302	3.1	6
51	Rational design of coralloid Co9S8/CuS hierarchical architectures for quantum dot-sensitized solar cells. *Journal of Materials Chemistry C*, **2018**, 6, 11384-11391	7.1	7
50	Controllable and large-scale fabrication of flexible ITO-free electrochromic devices by crackle pattern technology. *Journal of Materials Chemistry A*, **2018**, 6, 19584-19589	13	18
49	Polycomponent Electrocatalysts for I-Mediated Dye-Sensitized Solar Cells **2018**, 323-348		1
48	Chemical Decoration of Perovskites by Nickel Oxide Doping for Efficient and Stable Perovskite Solar Cells. *ACS Applied Materials & Interfaces*, **2018**, 10, 36841-36850	9.5	9
47	Data analysis between controllable variables and the performance of CuS crackle based electrode. *Data in Brief*, **2018**, 17, 1331-1335	1.2	1
46	Ultraflexible, stretchable and fast-switching electrochromic devices with enhanced cycling stability.. *RSC Advances*, **2018**, 8, 18690-18697	3.7	18
45	Highly flexible, transparent and conducting CuS-nanosheet networks for flexible quantum-dot solar cells. *Nanoscale*, **2017**, 9, 3826-3833	7.7	26
44	Recent advances in quantum dot-sensitized solar cells: insights into photoanodes, sensitizers, electrolytes and counter electrodes. *Sustainable Energy and Fuels*, **2017**, 1, 1217-1231	5.8	86
43	Meso-Functionalization of Silk Fibroin by Upconversion Fluorescence and Near Infrared In Vivo Biosensing. *Advanced Functional Materials*, **2017**, 27, 1700628	15.6	39
42	Design of Heterogeneous Nuclei Composed of Uniaxial Cellulose Nanocrystal Assemblies for Epitaxial Growth of Poly(ε-caprolactone). *Macromolecules*, **2017**, 50, 3355-3364	5.5	8
41	Mesoscopic-Functionalization of Silk Fibroin with Gold Nanoclusters Mediated by Keratin and Bioinspired Silk Synapse. *Small*, **2017**, 13, 1702390	11	58
40	Aluminum ion electrolyte for enhanced electrochromism of polyaniline **2017**,		2
39	Polyfluorenylacetylene for near-infrared laser protection: polymer synthesis, optical limiting mechanism and relationship between molecular structure and properties. *RSC Advances*, **2017**, 7, 53785-53796	3.7	1
38	Transparent conducting oxide- and Pt-free flexible photo-rechargeable electric energy storage systems. *RSC Advances*, **2017**, 7, 52988-52994	3.7	17

37	Total morphosynthesis of biomimetic prismatic-type CaCO thin films. *Nature Communications*, **2017**, 8, 1398	17.4	38
36	Smart electrochromic supercapacitors based on highly stable transparent conductive graphene/CuS network electrodes. *RSC Advances*, **2017**, 7, 29088-29095	3.7	20
35	Programing Performance of Wool Keratin and Silk Fibroin Composite Materials by Mesoscopic Molecular Network Reconstruction. *Advanced Functional Materials*, **2016**, 26, 9032-9043	15.6	54
34	Design of Heterogeneous Nuclei for Lateral Crystallization via Uniaxial Assembly of Cellulose Nanocrystals. *Crystal Growth and Design*, **2016**, 16, 4620-4626	3.5	9
33	Controlled Modulation of Surface Coating and Surface Charging on Quantum Dots with Negatively Charged Gelatin for Substantial Enhancement and Reversible Switching in Photoluminescence. *Advanced Functional Materials*, **2016**, 26, 8991-8998	15.6	4
32	The textural properties and microstructure of konjac glucomannan - tungsten gels induced by DC electric fields. *Food Chemistry*, **2016**, 212, 256-63	8.5	17
31	Recent advancements in perovskite solar cells: flexibility, stability and large scale. *Journal of Materials Chemistry A*, **2016**, 4, 6755-6771	13	118
30	Nano-Fishnet Structure Making Silk Fibers Tougher. *Advanced Functional Materials*, **2016**, 26, 5534-5541	15.6	55
29	Fabrication of a uniaxial cellulose nanocrystal thin film for coassembly of single-walled carbon nanotubes. *RSC Advances*, **2016**, 6, 39396-39400	3.7	8
28	Functionalization of Silk Fibroin Materials at Mesoscale. *Advanced Functional Materials*, **2016**, 26, 8885-8902	15.6	55
27	Programing Performance of Silk Fibroin Materials by Controlled Nucleation. *Advanced Functional Materials*, **2016**, 26, 8978-8990	15.6	46
26	Recent Development of Transparent Conducting Oxide-Free Flexible Thin-Film Solar Cells. *Advanced Functional Materials*, **2016**, 26, 8855-8884	15.6	72
25	Crystal networks in silk fibrous materials: from hierarchical structure to ultra performance. *Small*, **2015**, 11, 1039-54	11	118
24	Correlation between hierarchical structure of crystal networks and macroscopic performance of mesoscopic soft materials and engineering principles. *Chemical Society Reviews*, **2015**, 44, 7881-915	58.5	66
23	In situ growth of CuS and Cu1.8S nanosheet arrays as efficient counter electrodes for quantum dot-sensitized solar cells. *Journal of Materials Chemistry A*, **2015**, 3, 9595-9600	13	108
22	Engineering of fluorescent emission of silk fibroin composite materials by material assembly. *Small*, **2015**, 11, 1205-14	11	41
21	Controlled Colloidal Assembly **2015**, 561-594		2
20	Experimental modelling of single-particle dynamic processes in crystallization by controlled colloidal assembly. *Chemical Society Reviews*, **2014**, 43, 2324-47	58.5	36

19	Construction of White-Light-Emitting Silk Protein Hybrid Films by Molecular Recognized Assembly among Hierarchical Structures. *Advanced Functional Materials*, **2014**, 24, 5284-5290	15.6	46
18	A generic and effective strategy for highly effective intrinsic molecular luminescence in the condensed state. *Journal of Materials Chemistry C*, **2013**, 1, 5277	7.1	7
17	Design and engineering of silk fibroin scaffolds with biomimetic hierarchical structures. *Chemical Communications*, **2013**, 49, 1431-3	5.8	27
16	Multiple Structural Coloring of Silk-Fibroin Photonic Crystals and Humidity-Responsive Color Sensing. *Advanced Functional Materials*, **2013**, 23, 5373-5380	15.6	167
15	Switching on Fluorescent Emission by Molecular Recognition and Aggregation Dissociation. *Advanced Functional Materials*, **2012**, 22, 361-368	15.6	37
14	Controlled Colloidal Assembly: Experimental Modeling of General Crystallization and Biomimicking of Structural Color. *Advanced Functional Materials*, **2012**, 22, 1354-1375	15.6	36
13	Structural Origin of the Strain-Hardening of Spider Silk. *Advanced Functional Materials*, **2011**, 21, 772-778	15.6	184
12	Intrinsically colored and luminescent silk. *Advanced Materials*, **2011**, 23, 1463-6	24	120
11	Molecular Hybrid Optical Limiting Materials from Polyhedral Oligomer Silsequioxane: Preparation and Relationship between Molecular Structure and Properties. *Macromolecules*, **2010**, 43, 2840-2845	5.5	45
10	Unraveled mechanism in silk engineering: Fast reeling induced silk toughening. *Applied Physics Letters*, **2009**, 95, 093703	3.4	43
9	Nucleation: what happens at the initial stage?. *Angewandte Chemie - International Edition*, **2009**, 48, 1308-12	11.4	99
8	Controllable Preparation and Optical Limiting Properties of POSS-Based Functional Hybrid Nanocomposites with Different Molecular Architectures. *Macromolecules*, **2009**, 42, 8969-8976	5.5	40
7	Thermally stable oxadiazole-containing polyacetylenes: Relationship between molecular structure and nonlinear optical properties. *Journal of Materials Chemistry*, **2008**, 18, 4204		28
6	Stilbene-containing polyactylenes: Molecular design, synthesis, and relationship between molecular structure and NLO properties. *Journal of Polymer Science Part A*, **2008**, 46, 4529-4541	2.5	29
5	How does a transient amorphous precursor template crystallization. *Journal of the American Chemical Society*, **2007**, 129, 13520-6	16.4	147
4	Colloidal phase transition driven by alternating electric field. *Journal of Chemical Physics*, **2006**, 124, 124906	3.6	18
3	Design of superior spider silk: from nanostructure to mechanical properties. *Biophysical Journal*, **2006**, 91, 4528-35	2.9	240
2	Zero-sized effect of nano-particles and inverse homogeneous nucleation. Principles of freezing and antifreeze. *Journal of Biological Chemistry*, **2004**, 279, 6124-31	5.4	37

1	Recent Progress of Applying Mesoscopic Functionalization Engineering Principles to Spin Advanced Regenerated Silk Fibroin Fibers. *Advanced Fiber Materials*,1	10.9	0