Xiang-yang Liu

List of Publications by Year
in descending order

126 papers	5,695 citations	66315 42 h-index	82499 72 g-index
144 all docs	144 docs citations	144 times ranked	7015 citing authors

#	Article	IF	Citations
1	Reconstructed silk fibroin mediated smart wristband for physiological signal detection. Chemical Engineering Journal, 2022, 428, 132362.	6.6	14
2	Highly flexible and high energy density fiber supercapacitors based upon spiral silk composite membranes encapsulation. Electrochimica Acta, 2022, 404, 139611.	2.6	5
3	Fast dopamine detection based on evanescent wave detection platform. Analytica Chimica Acta, 2022, 1191, 339312.	2.6	7
4	From Mesoscopic Functionalization of Silk Fibroin to Smart Fiber Devices for Textile Electronics and Photonics. Advanced Science, 2022, 9, e2103981.	5.6	40
5	Polydopamineâ€Induced Multilevel Engineering of Regenerated Silk Fibroin Fiber for Photothermal Conversion. Small, 2022, 18, e2107196.	5.2	24
6	Biomimetic synthesis of 2D ultra-small copper sulfide nanoflakes based on reconfiguration of the keratin secondary structure for cancer theranostics in the NIR-II region. Journal of Materials Chemistry B, 2022, 10, 3152-3161.	2.9	5
7	Recent Progress of Applying Mesoscopic Functionalization Engineering Principles to Spin Advanced Regenerated Silk Fibroin Fibers. Advanced Fiber Materials, 2022, 4, 390-403.	7.9	15
8	Silk Fibroinâ€Based Flexible Organic Lightâ€Emitting Diode with High Light Extraction Efficiency. Advanced Optical Materials, 2022, 10, .	3.6	6
9	All-in-one fibrous capacitive humidity sensor for human breath monitoring. Textile Reseach Journal, 2021, 91, 398-405.	1.1	16
10	Tailoring NiCoAl layered double hydroxide nanosheets for assembly of high-performance asymmetric supercapacitors. Journal of Colloid and Interface Science, 2021, 583, 722-733.	5.0	49
11	Nearâ€Infrared Light Triggered Silk Fibroin Scaffold for Photothermal Therapy and Tissue Repair of Bone Tumors. Advanced Functional Materials, 2021, 31, 2007188.	7.8	49
12	Enhanced mechanical performance of biocompatible silk fibroin films through mesoscopic construction of hierarchical structures. Textile Reseach Journal, 2021, 91, 1146-1154.	1.1	3
13	Green Synthesis of Waterborne Polyurethane for High Damping Capacity. Macromolecular Chemistry and Physics, 2021, 222, 2000457.	1.1	10
14	Coupling of Silk Fibroin Nanofibrils Enzymatic Membrane with Ultraâ€Thin PtNPs/Graphene Film to Acquire Long and Stable Onâ€Skin Sweat Glucose and Lactate Sensing. Small Methods, 2021, 5, e2000926.	4.6	28
15	Silk Nanococoons: Bioâ€Nanoreactors for Enzymatic Catalytic Reactions and Applications to Alcohol Intoxication. Small Science, 2021, 1, 2000049.	5.8	11
16	Recent Advances in Patterning Natural Polymers: From Nanofabrication Techniques to Applications. Small Methods, 2021, 5, e2001060.	4.6	29
17	A capacitive humidity sensor based on all-protein embedded with gold nanoparticles @ carbon composite for human respiration detection. Nanotechnology, 2021, 32, 19LT01.	1.3	12
18	Mesoâ€Reconstruction of Silk Fibroin based on Molecular and Nanoâ€Templates for Electronic Skin in Medical Applications. Advanced Functional Materials, 2021, 31, 2100150.	7.8	42

#	Article	IF	Citations
19	Biomimetic Salinity Power Generation Based on Silk Fibroin Ion-Exchange Membranes. ACS Nano, 2021, 15, 5649-5660.	7.3	36
20	New Silk Road: From Mesoscopic Reconstruction/Functionalization to Flexible Mesoâ€Electronics/Photonics Based on Cocoon Silk Materials. Advanced Materials, 2021, 33, e2005910.	11.1	45
21	Stretchable, Stable, and Degradable Silk Fibroin Enabled by Mesoscopic Doping for Finger Motion Triggered Color/Transmittance Adjustment. ACS Nano, 2021, 15, 12429-12437.	7.3	42
22	Subcutaneous Energy/Signal Transmission Based on Silk Fibroin Up-Conversion Photonic Amplification. ACS Nano, 2021, 15, 9559-9567.	7.3	12
23	Flexible and disposable gold nanoparticles-N-doped carbon-modified electrochemical sensor for simultaneous detection of dopamine and uric acid. Nanotechnology, 2021, 32, 065502.	1.3	15
24	High voltage output/energy density flexible asymmetric fiber supercapacitors based on a tree-like topology. Cell Reports Physical Science, 2021, 2, 100649.	2.8	2
25	Reinforcement of Silk Microneedle Patches for Accurate Transdermal Delivery. Biomacromolecules, 2021, 22, 5319-5326.	2.6	15
26	Programing Performance of Silk Fibroin Superstrong Scaffolds by Mesoscopic Regulation among Hierarchical Structures. Biomacromolecules, 2020, 21, 4169-4179.	2.6	14
27	Flexible and Insoluble Artificial Synapses Based on Chemical Crossâ€Linked Wool Keratin. Advanced Functional Materials, 2020, 30, 2002882.	7.8	42
28	Wool Keratin Photolithography as an Eco-Friendly Route to Fabricate Protein Microarchitectures. ACS Applied Bio Materials, 2020, 3, 2891-2896.	2.3	7
29	From Molecular Reconstruction of Mesoscopic Functional Conductive Silk Fibrous Materials to Remote Respiration Monitoring. Small, 2020, 16, e2000203.	5.2	48
30	Tailoring the Meso-Structure of Gold Nanoparticles in Keratin-Based Activated Carbon Toward High-Performance Flexible Sensor. Nano-Micro Letters, 2020, 12, 117.	14.4	20
31	Graphene decorated carbonized cellulose fabric for physiological signal monitoring and energy harvesting. Journal of Materials Chemistry A, 2020, 8, 12665-12673.	5.2	68
32	Strain Sensors: Mesoâ€Reconstruction of Wool Keratin 3D â€œMolecular Springsâ€• for Tunable Ultraâ€Sensitive and Highly Recovery Strain Sensors (Small 24/2020). Small, 2020, 16, 2070136.	5.2	1
33	Stretchable and Heatâ€Resistant Proteinâ€Based Electronic Skin for Human Thermoregulation. Advanced Functional Materials, 2020, 30, 1910547.	7.8	104
34	Wettability read-out strategy for aptamer target binding based on a recognition/hydrophobic bilayer surface. Chemical Communications, 2020, 56, 6225-6228.	2.2	3
35	Research progress of protein-based memristor. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 178702.	0.2	3
36	Recent advances in silk-based wearable sensors. Wuli Xuebao/Acta Physica Sinica, 2020, 69, 178703.	0.2	6

#	Article	IF	Citations
37	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.	5.3	20
38	Recent advances in nanoparticulate biomimetic catalysts for combating bacteria and biofilms. Nanoscale, 2019, 11, 22206-22215.	2.8	43
39	Silk Flexible Electronics: From <i>Bombyx mori</i> Silk Ag Nanoclusters Hybrid Materials to Mesoscopic Memristors and Synaptic Emulators. Advanced Functional Materials, 2019, 29, 1904777.	7.8	71
40	Primary and Secondary Mesoscopic Hybrid Materials of Au Nanoparticles@Silk Fibroin and Applications. ACS Applied Materials & Interfaces, 2019, 11, 30125-30136.	4.0	18
41	Hierarchical Structure of Silk Materials Versus Mechanical Performance and Mesoscopic Engineering Principles. Small, 2019, 15, e1903948.	5.2	82
42	Fullâ€‐Textile Wireless Flexible Humidity Sensor for Human Physiological Monitoring. Advanced Functional Materials, 2019, 29, 1904549.	7.8	193
43	Pulsed electrochemical deposition of porous WO₃ on silver networks for highly flexible electrochromic devices. Journal of Materials Chemistry C, 2019, 7, 1966-1973.	2.7	40
44	Silk Composite Electronic Textile Sensor for High Space Precision 2D Combo Temperatureâ€“Pressure Sensing. Small, 2019, 15, e1901558.	5.2	184
45	Using Wool Keratin as a Basic Resist Material to Fabricate Precise Protein Patterns. Advanced Materials, 2019, 31, e1900870.	11.1	54
46	Assembling Twoâ€‐Phase Enzymatic Cascade Pathways in Pickering Emulsion. ChemCatChem, 2019, 11, 1791-1791.	1.8	0
47	Fluorescence: Silk Fluorescence Collimator for Ultrasensitive Humidity Sensing and Lightâ€‐Harvesting in Semitransparent Dyeâ€‐Sensitized Solar Cells (Small 13/2019). Small, 2019, 15, 1970069.	5.2	0
48	Proteinâ€‐Based Electronics: A Biodegradable and Stretchable Proteinâ€‐Based Sensor as Artificial Electronic Skin for Human Motion Detection (Small 11/2019). Small, 2019, 15, 1970057.	5.2	2
49	A nanoneedle-based reactional wettability variation sensor array for on-site detection of metal ions with a smartphone. Journal of Colloid and Interface Science, 2019, 547, 330-338.	5.0	8
50	Assembling Twoâ€‐Phase Enzymatic Cascade Pathways in Pickering Emulsion. ChemCatChem, 2019, 11, 1878-1883.	1.8	6
51	Silk Materials: Hierarchical Structure of Silk Materials Versus Mechanical Performance and Mesoscopic Engineering Principles (Small 51/2019). Small, 2019, 15, 1970280.	5.2	1
52	Seeded Mineralization Leads to Hierarchical CaCO₃ Thin Coatings on Fibers for Oil/Water Separation Applications. Langmuir, 2018, 34, 2942-2951.	1.6	33
53	Facile Onâ€‐Site Detection Based on Reactional Wettability Variation. Advanced Materials Interfaces, 2018, 5, 1701326.	1.9	7
54	Memristors: Memristor with Agâ€‐Clusterâ€‐Doped TiO₂ Films as Artificial Synapse for Neuroinspired Computing (Adv. Funct. Mater. 1/2018). Advanced Functional Materials, 2018, 28, 1870002.	7.8	18

#	Article	IF	Citations
55	Memristor with Agâ€Clusterâ€Doped TiO₂ Films as Artificial Synapse for Neuroinspired Computing. Advanced Functional Materials, 2018, 28, 1705320.	7.8	318
56	Remote activation of nanoparticulate biomimetic activity by light triggered pH-jump. Chemical Communications, 2018, 54, 8641-8644.	2.2	15
57	Correlations of crystal shape and lateral orientation in bioinspired CaCO₃mineralization. CrystEngComm, 2018, 20, 5241-5248.	1.3	5
58	A Hydrogel of Ultrathin Pure Polyaniline Nanofibers: Oxidant-Templating Preparation and Supercapacitor Application. ACS Nano, 2018, 12, 5888-5894.	7.3	177
59	Achieving High-Performance Surface-Enhanced Raman Scattering through One-Step Thermal Treatment of Bulk MoS₂. Journal of Physical Chemistry C, 2018, 122, 14467-14473.	1.5	25
60	Mesoâ€Functionalization of Silk Fibroin by Upconversion Fluorescence and Near Infrared In Vivo Biosensing. Advanced Functional Materials, 2017, 27, 1700628.	7.8	48
61	Design of Heterogeneous Nuclei Composed of Uniaxial Cellulose Nanocrystal Assemblies for Epitaxial Growth of Poly(Îµ-caprolactone). Macromolecules, 2017, 50, 3355-3364.	2.2	10
62	Protein-Directed Synthesis of Bifunctional Adsorbent-Catalytic Hemin-Graphene Nanosheets for Highly Efficient Removal of Dye Pollutants via Synergistic Adsorption and Degradation. ACS Applied Materials & Interfaces, 2017, 9, 684-692.	4.0	69
63	Comparative Study of Strainâ€Dependent Structural Changes of Silkworm Silks: Insight into the Structural Origin of Strainâ€Stiffening. Small, 2017, 13, 1702266.	5.2	53
64	Pressing Carbon Nanotubes Triggers Better Ion Selectivity. Journal of Physical Chemistry C, 2017, 121, 19512-19518.	1.5	3
65	Mesoscopicâ€Functionalization of Silk Fibroin with Gold Nanoclusters Mediated by Keratin and Bioinspired Silk Synapse. Small, 2017, 13, 1702390.	5.2	76
66	Smart electrochromic supercapacitors based on highly stable transparent conductive graphene/CuS network electrodes. RSC Advances, 2017, 7, 29088-29095.	1.7	35
67	â€œNanoâ€Fishnetâ€•Structure Making Silk Fibers Tougher. Advanced Functional Materials, 2016, 26, 5534-5541.	7.8	74
68	Solar Cells: Recent Development of Transparent Conducting Oxide-Free Flexible Thin-Film Solar Cells (Adv. Funct. Mater. 48/2016). Advanced Functional Materials, 2016, 26, 8854-8854.	7.8	2
69	Mechanical Properties: Programing Performance of Silk Fibroin Materials by Controlled Nucleation (Adv. Funct. Mater. 48/2016). Advanced Functional Materials, 2016, 26, 9084-9084.	7.8	1
70	Advances in Soft Functional Materials Research. Advanced Functional Materials, 2016, 26, 8807-8809.	7.8	2
71	Enzymatic manipulation of a DNA-mediated ensemble for sensitive fluorescence detection of glucose. RSC Advances, 2016, 6, 33132-33137.	1.7	2
72	Crosslinked waterborne polyurethane with high waterproof performance. Polymer Chemistry, 2016, 7, 3913-3922.	1.9	81

#	Article	IF	Citations
73	Graphical analysis of mammalian cell adhesion in vitro. Colloids and Surfaces B: Biointerfaces, 2016, 148, 211-219.	2.5	3
74	Functionalization of Silk Fibroin Materials at Mesoscale. Advanced Functional Materials, 2016, 26, 8885-8902.	7.8	70
75	Programing Performance of Silk Fibroin Materials by Controlled Nucleation. Advanced Functional Materials, 2016, 26, 8978-8990.	7.8	64
76	Recent Development of Transparent Conducting Oxideâ€Free Flexible Thinâ€Film Solar Cells. Advanced Functional Materials, 2016, 26, 8855-8884.	7.8	82
77	Programing Performance of Wool Keratin and Silk Fibroin Composite Materials by Mesoscopic Molecular Network Reconstruction. Advanced Functional Materials, 2016, 26, 9032-9043.	7.8	75
78	Design of Heterogeneous Nuclei for Lateral Crystallization via Uniaxial Assembly of Cellulose Nanocrystals. Crystal Growth and Design, 2016, 16, 4620-4626.	1.4	9
79	Elevating Biomedical Performance of ZnO/SiO₂@Amorphous Calcium Phosphate â€• Bioinspiration Making Possible the Impossible. Advanced Functional Materials, 2016, 26, 6921-6929.	7.8	13
80	Direct Growth of Microspheres on Amorphous Precursor Domains in Polymer-Controlled Crystallization of Indomethacin. Crystal Growth and Design, 2016, 16, 1428-1434.	1.4	14
81	Using Inorganic Nanomaterials to Endow Biocatalytic Systems with Unique Features. Trends in Biotechnology, 2016, 34, 303-315.	4.9	18
82	Rheological properties and formation mechanism of DC electric fields induced konjac glucomannan-tungsten gels. Carbohydrate Polymers, 2016, 142, 293-299.	5.1	30
83	Removal of organic micro-pollutants (phenol, aniline and nitrobenzene) via forward osmosis (FO) process: Evaluation of FO as an alternative method to reverse osmosis (RO). Water Research, 2016, 91, 104-114.	5.3	99
84	From Amorphous Macroporous Film to 3D Crystalline Nanorod Architecture: A New Approach to Obtain Highâ€Performance V₂O₅ Electrochromism. Advanced Materials Interfaces, 2015, 2, 1500230.	1.9	38
85	Soft Matter: From Structure to Functionality. Small, 2015, 11, 1022-1023.	5.2	0
86	Shape-controlled syntheses of rhodium nanocrystals for the enhancement of their catalytic properties. Nano Research, 2015, 8, 82-96.	5.8	84
87	Crystal Networks in Silk Fibrous Materials: From Hierarchical Structure to Ultra Performance. Small, 2015, 11, 1039-1054.	5.2	142
88	Correlation between hierarchical structure of crystal networks and macroscopic performance of mesoscopic soft materials and engineering principles. Chemical Society Reviews, 2015, 44, 7881-7915.	18.7	83
89	Electrochromic performance of WO₃films: optimization by crystal network topology modification. CrystEngComm, 2015, 17, 6583-6590.	1.3	10
90	Crystal networks in supramolecular gels: formation kinetics and mesoscopic engineering principles. CrystEngComm, 2015, 17, 7986-8010.	1.3	35

#	Article	IF	Citations
91	Structural engineering of waterborne polyurethane for high performance waterproof coatings. RSC Advances, 2015, 5, 72544-72552.	1.7	47
92	Construction of Whiteâ€Lightâ€Emitting Silk Protein Hybrid Films by Molecular Recognized Assembly among Hierarchical Structures. Advanced Functional Materials, 2014, 24, 5284-5290.	7.8	58
93	Identify kinetic features of fibers growing, branching, and bundling in microstructure engineering of crystalline fiber network. CrystEngComm, 2014, 16, 5402.	1.3	16
94	Experimental modelling of single-particle dynamic processes in crystallization by controlled colloidal assembly. Chemical Society Reviews, 2014, 43, 2324-2347.	18.7	48
95	UV-curable pressure sensitive adhesive films: effects of biocompatible plasticizers on mechanical and adhesion properties. Soft Matter, 2013, 9, 6270.	1.2	35
96	Design and engineering of silk fibroin scaffolds with biomimetic hierarchical structures. Chemical Communications, 2013, 49, 1431.	2.2	33
97	Multiple Structural Coloring of Silkâ€Fibroin Photonic Crystals and Humidityâ€Responsive Color Sensing. Advanced Functional Materials, 2013, 23, 5373-5380.	7.8	196
98	Highly efficient and stable solid-state luminescent nanohybrids: Precise architecture and enhancement mechanism. Journal of Materials Research, 2013, 28, 1061-1069.	1.2	4
99	Engineered Large Spider Eggcase Silk Protein for Strong Artificial Fibers. Advanced Materials, 2013, 25, 1216-1220.	11.1	71
100	Size invariance of fibrous networks of supramolecular soft materials during formation under critical volume confinement. Soft Matter, 2012, 8, 5187.	1.2	19
101	Controlled Colloidal Assembly: Experimental Modeling of General Crystallization and Biomimicking of Structural Color. Advanced Functional Materials, 2012, 22, 1354-1375.	7.8	41
102	Switching on Fluorescent Emission by Molecular Recognition and Aggregation Dissociation. Advanced Functional Materials, 2012, 22, 361-368.	7.8	42
103	A Convenient Organicâ€"Inorganic Hybrid Approach Toward Highly Stable Squaraine Dyes with Reduced Hâ€Aggregation. Advanced Functional Materials, 2012, 22, 345-352.	7.8	73
104	Volume confinement induced microstructural transitions and property enhancements of supramolecular soft materials. Soft Matter, 2011, 7, 1708-1713.	1.2	17
105	Electrically Adjustable, Super Adhesive Force of a Superhydrophobic Aligned MnO₂ Nanotube Membrane. Advanced Functional Materials, 2011, 21, 184-190.	7.8	85
106	Structural Origin of the Strainâ€Hardening of Spider Silk. Advanced Functional Materials, 2011, 21, 772-778.	7.8	229
107	Intrinsically Colored and Luminescent Silk. Advanced Materials, 2011, 23, 1463-1466.	11.1	133
108	Architecture of Supramolecular Soft Functional Materials: From Understanding to Microâ€/Nanoscale Engineering. Advanced Functional Materials, 2010, 20, 3196-3216.	7.8	154

#	Article	IF	Citations
109	Architecture of Supramolecular Soft Functional Materials: From Understanding to Microâ€/Nanoscale Engineering. Advanced Functional Materials, 2010, 20, .	7.8	3
110	Simulating â€œAtomicâ€• Processes of Crystallization via Controlled Colloidal Assembly. , 2010, , .		1
111	Unraveled mechanism in silk engineering: Fast reeling induced silk toughening. Applied Physics Letters, 2009, 95, .	1.5	48
112	A Review on Terpenes as Skin Penetration Enhancers in Transdermal Drug Delivery. Journal of Essential Oil Research, 2009, 21, 423-428.	1.3	14
113	Hydroxyapatite: Hexagonal or Monoclinic?. Crystal Growth and Design, 2009, 9, 2991-2994.	1.4	144
114	Design and architecture of low-dielectric-constant organicâ€"inorganic hybrids from octahydridosilsesquioxanes. Journal of Materials Chemistry, 2009, 19, 9038.	6.7	39
115	Electrically Directed Onâ€Chip Reversible Patterning of Twoâ€Dimensional Tunable Colloidal Structures. Advanced Functional Materials, 2008, 18, 802-809.	7.8	40
116	Nano-Architecture by Molecular Structure-Directing Agent. Chemistry of Materials, 2008, 20, 2432-2434.	3.2	9
117	From Templated Nucleation to Functional Materials Engineering. AIP Conference Proceedings, 2007, , .	0.3	3
118	Effect of Long-Range Attraction on Growth Model. Journal of Physical Chemistry C, 2007, 111, 1342-1346.	1.5	16
119	Design of Superior Spider Silk: From Nanostructure to Mechanical Properties. Biophysical Journal, 2006, 91, 4528-4535.	0.2	305
120	Resonant photoemission study of single-strand deoxyribonucleic acid. Applied Physics Letters, 2006, 89, 013902.	1.5	7
121	KINETIC STUDIES OF SPHERULITIC CRYSTALLIZATION IN THE GELATION PROCESS OF LOW MOLECULAR-MASS ORGANIC GELATOR. International Journal of Nanoscience, 2006, 05, 645-649.	0.4	4
122	Zero-sized Effect of Nano-particles and Inverse Homogeneous Nucleation. Journal of Biological Chemistry, 2004, 279, 6124-6131.	1.6	45
123	Creating New Supramolecular Materials by Architecture of Three-Dimensional Nanocrystal Fiber Networks. Journal of the American Chemical Society, 2002, 124, 15055-15063.	6.6	103
124	Determination of the Fractal Characteristic of Nanofiber-Network Formation in Supramolecular Materials. ChemPhysChem, 2002, 3, 374-377.	1.0	47
125	Effect of microgravity on Ca mineral crystallization and implications for osteoporosis in space. Applied Physics Letters, 2001, 79, 3539-3541.	1.5	19
126	Influence of nucleation nature on Ca mineral/substrate structural synergy and implications for biomineralization in microgravity. Journal of Chemical Physics, 2001, 115, 9970-9974.	1.2	4