Qiang Lu

List of Publications by Year
in descending order

103 papers	6,141 citations	66315 42 h-index	71651 76 g-index
105 all docs	105 docs citations	105 times ranked	5931 citing authors

#	Article	IF	Citations
1	Water-insoluble silk films with silk I structure. Acta Biomaterialia, 2010, 6, 1380-1387.	4.1	530
2	Silk nanospheres and microspheres from silk/pva blend films for drug delivery. Biomaterials, 2010, 31, 1025-1035.	5.7	372
3	Degradation Mechanism and Control of Silk Fibroin. Biomacromolecules, 2011, 12, 1080-1086.	2.6	260
4	Insoluble and Flexible Silk Films Containing Glycerol. Biomacromolecules, 2010, 11, 143-150.	2.6	187
5	Silk Self-Assembly Mechanisms and Control From Thermodynamics to Kinetics. Biomacromolecules, 2012, 13, 826-832.	2.6	180
6	Stabilization of Enzymes in Silk Films. Biomacromolecules, 2009, 10, 1032-1042.	2.6	174
7	Injectable and pH-Responsive Silk Nanofiber Hydrogels for Sustained Anticancer Drug Delivery. ACS Applied Materials & Interfaces, 2016, 8, 17118-17126.	4.0	172
8	Electrogelation for Protein Adhesives. Advanced Materials, 2010, 22, 711-715.	11.1	168
9	Biomaterials from Ultrasonication-Induced Silk Fibroinâ^'Hyaluronic Acid Hydrogels. Biomacromolecules, 2010, 11, 3178-3188.	2.6	168
10	Silk fibroin electrogelation mechanisms. Acta Biomaterialia, 2011, 7, 2394-2400.	4.1	128
11	Stabilization and Release of Enzymes from Silk Films. Macromolecular Bioscience, 2010, 10, 359-368.	2.1	127
12	Mechanisms and Control of Silk-Based Electrospinning. Biomacromolecules, 2012, 13, 798-804.	2.6	119
13	Reversible Hydrogelâ€"Solution System of Silk with High Beta-Sheet Content. Biomacromolecules, 2014, 15, 3044-3051.	2.6	110
14	Nanofibrous architecture of silk fibroin scaffolds prepared with a mild self-assembly process. Biomaterials, 2011, 32, 1059-1067.	5.7	108
15	Regeneration of high-quality silk fibroin fiber by wet spinning from CaCl 2 â€"formic acid solvent. Acta Biomaterialia, 2015, 12, 139-145.	4.1	100
16	Controllable transition of silk fibroin nanostructures: An insight into in vitro silk self-assembly process. Acta Biomaterialia, 2013, 9, 7806-7813.	4.1	99
17	Nanoscale Silkâ€"Hydroxyapatite Hydrogels for Injectable Bone Biomaterials. ACS Applied Materials & Interfaces, 2017, 9, 16913-16921.	4.0	99
18	Silk dissolution and regeneration at the nanofibril scale. Journal of Materials Chemistry B, 2014, 2, 3879.	2.9	98

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19	Silk Biomaterials with Vascularization Capacity. Advanced Functional Materials, 2016, 26, 421-432.	7.8	96
20	Cytocompatibility and blood compatibility of multifunctional fibroin/collagen/heparin scaffolds. Biomaterials, 2007, 28, 2306-2313.	5.7	92
21	Bilayered vascular grafts based on silk proteins. Acta Biomaterialia, 2013, 9, 8991-9003.	4.1	91
22	Salt-Leached Silk Scaffolds with Tunable Mechanical Properties. Biomacromolecules, 2012, 13, 3723-3729.	2.6	88
23	Hydrogel Assembly with Hierarchical Alignment by Balancing Electrostatic Forces. Advanced Materials Interfaces, 2016, 3, 1500687.	1.9	87
24	Silkâ€"Hydroxyapatite Nanoscale Scaffolds with Programmable Growth Factor Delivery for Bone Repair. ACS Applied Materials & Interfaces, 2016, 8, 24463-24470.	4.0	84
25	Silk scaffolds with tunable mechanical capability for cell differentiation. Acta Biomaterialia, 2015, 20, 22-31.	4.1	80
26	Green Process to Prepare Silk Fibroin/Gelatin Biomaterial Scaffolds. Macromolecular Bioscience, 2010, 10, 289-298.	2.1	77
27	Woven silk fabric-reinforced silk nanofibrous scaffolds for regenerating load-bearing soft tissues. Acta Biomaterialia, 2014, 10, 921-930.	4.1	73
28	Direct Formation of Silk Nanoparticles for Drug Delivery. ACS Biomaterials Science and Engineering, 2016, 2, 2050-2057.	2.6	67
29	Anisotropic Biomimetic Silk Scaffolds for Improved Cell Migration and Healing of Skin Wounds. ACS Applied Materials & Interfaces, 2018, 10, 44314-44323.	4.0	67
30	Gold nanoclusters as contrast agents for fluorescent and X-ray dual-modality imaging. Journal of Colloid and Interface Science, 2012, 372, 239-244.	5.0	66
31	Microphase Separation Controlled Î²-Sheet Crystallization Kinetics in Fibrous Proteins. Macromolecules, 2009, 42, 2079-2087.	2.2	64
32	Amorphous Silk Nanofiber Solutions for Fabricating Silk-Based Functional Materials. Biomacromolecules, 2016, 17, 3000-3006.	2.6	64
33	Injectable Silk Nanofiber Hydrogels for Sustained Release of Small-Molecule Drugs and Vascularization. ACS Biomaterials Science and Engineering, 2019, 5, 4077-4088.	2.6	64
34	Flexibility Regeneration of Silk Fibroin in Vitro. Biomacromolecules, 2012, 13, 2148-2153.	2.6	63
35	Silk nanofiber hydrogels with tunable modulus to regulate nerve stem cell fate. Journal of Materials Chemistry B, 2014, 2, 6590-6600.	2.9	58
36	Biomineralization of Stable and Monodisperse Vaterite Microspheres Using Silk Nanoparticles. ACS Applied Materials & Interfaces, 2015, 7, 1735-1745.	4.0	57

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37	A mild process to design silk scaffolds with reduced Î²-sheet structure and various topographies at the nanometer scale. Acta Biomaterialia, 2015, 13, 168-176.	4.1	57
38	Biomimetic Silk Scaffolds with an Amorphous Structure for Soft Tissue Engineering. ACS Applied Materials & Interfaces, 2018, 10, 9290-9300.	4.0	53
39	Hierarchical biomineralization of calcium carbonate regulated by silk microspheres. Acta Biomaterialia, 2013, 9, 6974-6980.	4.1	51
40	Injectable hydrogel systems with multiple biophysical and biochemical cues for bone regeneration. Biomaterials Science, 2020, 8, 2537-2548.	2.6	50
41	3D printing-directed auxetic Kevlar aerogel architectures with multiple functionalization options. Journal of Materials Chemistry A, 2020, 8, 14243-14253.	5.2	48
42	Microskinâ€Inspired Injectable MSCâ€Laden Hydrogels for Scarless Wound Healing with Hair Follicles. Advanced Healthcare Materials, 2020, 9, e2000041.	3.9	48
43	Silkâ€“Graphene Hybrid Hydrogels with Multiple Cues to Induce Nerve Cell Behavior. ACS Biomaterials Science and Engineering, 2019, 5, 613-622.	2.6	45
44	Injectable silk/hydroxyapatite nanocomposite hydrogels with vascularization capacity for bone regeneration. Journal of Materials Science and Technology, 2021, 63, 172-181.	5.6	44
45	Nanoscale control of silks for nanofibrous scaffold formation with an improved porous structure. Journal of Materials Chemistry B, 2014, 2, 2622-2633.	2.9	41
46	Bioactive silk hydrogels with tunable mechanical properties. Journal of Materials Chemistry B, 2018, 6, 2739-2746.	2.9	41
47	Mass Production of Biocompatible Graphene Using Silk Nanofibers. ACS Applied Materials & Interfaces, 2018, 10, 22924-22931.	4.0	40
48	Silk porous scaffolds with nanofibrous microstructures and tunable properties. Colloids and Surfaces B: Biointerfaces, 2014, 120, 28-37.	2.5	39
49	Injectable Desferrioxamine-Laden Silk Nanofiber Hydrogels for Accelerating Diabetic Wound Healing. ACS Biomaterials Science and Engineering, 2021, 7, 1147-1158.	2.6	39
50	Asiaticoside-laden silk nanofiber hydrogels to regulate inflammation and angiogenesis for scarless skin regeneration. Biomaterials Science, 2021, 9, 5227-5236.	2.6	39
51	Chemomechanics of ionically conductive ceramics for electrical energy conversion and storage. Journal of Electroceramics, 2014, 32, 3-27.	0.8	38
52	Osteoinductiveâ€nanoscaled silk/<scp>HA</scp> composite scaffolds for bone tissue engineering application. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2015, 103, 1402-1414.	1.6	38
53	Nerve Guidance Conduits with Hierarchical Anisotropic Architecture for Peripheral Nerve Regeneration. Advanced Healthcare Materials, 2021, 10, e2100427.	3.9	38
54	Preparation of three-dimensional fibroin/collagen scaffolds in various pH conditions. Journal of Materials Science: Materials in Medicine, 2008, 19, 629-634.	1.7	36

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55	Bioactive natural proteinâ€"hydroxyapatite nanocarriers for optimizing osteogenic differentiation of mesenchymal stem cells. Journal of Materials Chemistry B, 2016, 4, 3555-3561.	2.9	35
56	Electric field-driven building blocks for introducing multiple gradients to hydrogels. Protein and Cell, 2020, 11, 267-285.	4.8	35
57	Controlling Cell Behavior on Silk Nanofiber Hydrogels with Tunable Anisotropic Structures. ACS Biomaterials Science and Engineering, 2018, 4, 933-941.	2.6	34
58	Nerve Growth Factor-Laden Anisotropic Silk Nanofiber Hydrogels to Regulate Neuronal/Astroglial Differentiation for Scarless Spinal Cord Repair. ACS Applied Materials & Interfaces, 2022, 14, 3701-3715.	4.0	33
59	Fabrication of Silk Scaffolds with Nanomicroscaled Structures and Tunable Stiffness. Biomacromolecules, 2017, 18, 2073-2079.	2.6	31
60	Tough Anisotropic Silk Nanofiber Hydrogels with Osteoinductive Capacity. ACS Biomaterials Science and Engineering, 2020, 6, 2357-2367.	2.6	31
61	Biomineralization regulation by nanoâ€sized features in silk fibroin proteins: Synthesis of waterâ€dispersible nanoâ€hydroxyapatite. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2014, 102, 1720-1729.	1.6	30
62	Sonication Exfoliation of Defect-Free Graphene in Aqueous Silk Nanofiber Solutions. ACS Sustainable Chemistry and Engineering, 2018, 6, 12261-12267.	3.2	28
63	Silk Biomaterials for Bone Tissue Engineering. Macromolecular Bioscience, 2021, 21, e2100153.	2.1	28
64	One-step synthesis of biocompatible magnetite/silk fibroin coreâ€"shell nanoparticles. Journal of Materials Chemistry B, 2014, 2, 7394-7402.	2.9	26
65	Subtle Regulation of Scaffold Stiffness for the Optimized Control of Cell Behavior. ACS Applied Bio Materials, 2019, 2, 3108-3119.	2.3	25
66	Growth of fibroblast and vascular smooth muscle cells in fibroin/collagen scaffold. Materials Science and Engineering C, 2009, 29, 2239-2245.	3.8	23
67	Simulation of ECM with silk and chitosan nanocomposite materials. Journal of Materials Chemistry B, 2017, 5, 4789-4796.	2.9	23
68	Engineered Tough Silk Hydrogels through Assembling Î²-Sheet Rich Nanofibers Based on a Solvent Replacement Strategy. ACS Nano, 2022, 16, 10209-10218.	7.3	23
69	SERS Substrate with Silk Nanoribbons as Interlayer Template. ACS Applied Materials & Interfaces, 2019, 11, 42896-42903.	4.0	22
70	Release of water and hydrogen during outgassing of some materials. Journal of Materials Engineering and Performance, 1996, 5, 516-520.	1.2	20
71	Surface immobilization of antibody on silk fibroin through conformational transition. Acta Biomaterialia, 2011, 7, 2782-2786.	4.1	20
72	Buccal Mucosa Repair with Electrospun Silk Fibroin Matrix in a Rat Model. International Journal of Artificial Organs, 2015, 38, 105-112.	0.7	20

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73	Silk Nanofibers as Robust and Versatile Emulsifiers. ACS Applied Materials & Interfaces, 2017, 9, 35693-35700.	4.0	20
74	Control of Olfactory Ensheathing Cell Behaviors by Electrospun Silk Fibroin Fibers. Cell Transplantation, 2013, 22, 39-50.	1.2	19
75	Amorphous Silk Fibroin Nanofiber Hydrogels with Enhanced Mechanical Properties. Macromolecular Bioscience, 2019, 19, e1900326.	2.1	18
76	Microfluidic Silk Fibers with Aligned Hierarchical Microstructures. ACS Biomaterials Science and Engineering, 2020, 6, 2847-2854.	2.6	18
77	Structureâ€“Chemical Modification Relationships with Silk Materials. ACS Biomaterials Science and Engineering, 2019, 5, 2762-2768.	2.6	17
78	Natural Nanofiber Shuttles for Transporting Hydrophobic Cargo into Aqueous Solutions. Biomacromolecules, 2020, 21, 1022-1030.	2.6	16
79	Injectable silk nanofiber hydrogels as stem cell carriers to accelerate wound healing. Journal of Materials Chemistry B, 2021, 9, 7771-7781.	2.9	16
80	Hierarchical charge distribution controls self-assembly process of silk in vitro. Frontiers of Materials Science, 2015, 9, 382-391.	1.1	14
81	Silk-regulated hierarchical hollow magnetite/carbon nanocomposite spheroids for lithium-ion battery anodes. Nanotechnology, 2015, 26, 115603.	1.3	14
82	Injectable Silkâ€“Vaterite Composite Hydrogels with Tunable Sustained Drug Release Capacity. ACS Biomaterials Science and Engineering, 2019, 5, 6602-6609.	2.6	12
83	Calcium sulfate bone cements with nanoscaled silk fibroin as inducer. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2019, 107, 2611-2619.	1.6	12
84	Bio-inspired anisotropic polymeric heart valves exhibiting valve-like mechanical and hemodynamic behavior. Science China Materials, 2020, 63, 629-643.	3.5	12
85	Pressure-driven spreadable deferoxamine-laden hydrogels for vascularized skin flaps. Biomaterials Science, 2021, 9, 3162-3170.	2.6	12
86	Design of silkâ€“vaterite microsphere systems as drug carriers with pH-responsive release behavior. Journal of Materials Chemistry B, 2015, 3, 8314-8320.	2.9	11
87	Conductive Au nanowires regulated by silk fibroin nanofibers. Frontiers of Materials Science, 2014, 8, 102-105.	1.1	10
88	Nanoscale control of silks for regular hydroxyapatite formation. Progress in Natural Science: Materials International, 2012, 22, 115-119.	1.8	9
89	Growth factor-free salt-leached silk scaffolds for differentiating endothelial cells. Journal of Materials Chemistry B, 2018, 6, 4308-4313.	2.9	9
90	Sustained release of inhibitor from bionic scaffolds for wound healing and functional regeneration. Biomaterials Science, 2020, 8, 5647-5655.	2.6	9

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91	Exploration of sea anemone-inspired high-performance biomaterials with enhanced antioxidant activity. Bioactive Materials, 2022, 10, 504-514.	8.6	9
92	Macroporous Silk Nanofiber Cryogels with Tunable Properties. Biomacromolecules, 2022, 23, 2160-2169.	2.6	9
93	Waterâ€insoluble amorphous silk fibroin scaffolds from aqueous solutions. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2020, 108, 798-808.	1.6	8
94	Fragile-Tough Mechanical Reversion of Silk Materials via Tuning Supramolecular Assembly. ACS Biomaterials Science and Engineering, 2021, 7, 2337-2345.	2.6	8
95	Blastocyst-Inspired Hydrogels to Maintain Undifferentiation of Mouse Embryonic Stem Cells. ACS Nano, 2021, 15, 14162-14173.	7.3	8
96	Silk Nanocarrier Size Optimization for Enhanced Tumor Cell Penetration and Cytotoxicity In Vitro. ACS Biomaterials Science and Engineering, 2022, 8, 140-150.	2.6	8
97	Anisotropic silk nanofiber layers as regulators of angiogenesis for optimized bone regeneration. Materials Today Bio, 2022, 15, 100283.	2.6	7
98	A study of the initial adhesive force of cells on silk fibroin-based materials using micropipette aspiration. International Journal of Energy Production and Management, 2018, 5, 151-157.	1.9	6
99	Concentrated Conditioned Medium-Loaded Silk Nanofiber Hydrogels with Sustained Release of Bioactive Factors To Improve Skin Regeneration. ACS Applied Bio Materials, 2019, 2, 4397-4407.	2.3	6
100	Solvothermal synthesis of crystalline carbon nitrides. Science Bulletin, 2003, 48, 519.	1.7	4
101	Metal Oxide Nanomaterials with Nitrogenâ€Doped Grapheneâ€Silk Nanofiber Complexes as Templates. Particle and Particle Systems Characterization, 2016, 33, 286-292.	1.2	4
102	Short Silk Nanoribbons Decorated by Au Nanoparticles as Substrates for Sensitive and Uniform Surface-Enhanced Raman Spectroscopy Detection. ACS Applied Nano Materials, 2021, 4, 6376-6385.	2.4	4
103	MSCâ€Laden Composite Hydrogels for Inflammation and Angiogenic Regulation for Skin Flap Repair. Advanced Therapeutics, 2022, 5, .	1.6	3