Biman B Mandal

List of Publications by Year
in descending order

159 papers	9,098 citations	36203 51 h-index	48187 88 g-index
162 all docs	162 docs citations	162 times ranked	9296 citing authors

#	Article	IF	Citations
1	Cell proliferation and migration in silk fibroin 3D scaffolds. Biomaterials, 2009, 30, 2956-2965.	5.7	490
2	High-strength silk protein scaffolds for bone repair. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 7699-7704.	3.3	337
3	Emerging and innovative approaches for wound healing and skin regeneration: Current status and advances. Biomaterials, 2019, 216, 119267.	5.7	323
4	Silk fibroin/polyacrylamide semi-interpenetrating network hydrogels forÂcontrolled drug release. Biomaterials, 2009, 30, 2826-2836.	5.7	273
5	Silk microfiber-reinforced silk hydrogel composites for functional cartilage tissue repair. Acta Biomaterialia, 2015, 11, 27-36.	4.1	220
6	Potential of Agarose/Silk Fibroin Blended Hydrogel for in Vitro Cartilage Tissue Engineering. ACS Applied Materials & Interfaces, 2016, 8, 21236-21249.	4.0	193
7	Novel silk sericin/gelatin 3-D scaffolds and 2-D films: Fabrication and characterization for potential tissue engineering applications. Acta Biomaterialia, 2009, 5, 3007-3020.	4.1	186
8	Silk biomaterials in wound healing and skin regeneration therapeutics: From bench to bedside. Acta Biomaterialia, 2020, 103, 24-51.	4.1	183
9	Multilayered silk scaffolds for meniscus tissue engineering. Biomaterials, 2011, 32, 639-651.	5.7	181
10	3D Bioprinting Using Cross-Linker-Free Silkâ€"Gelatin Bioink for Cartilage Tissue Engineering. ACS Applied Materials & Interfaces, 2019, 11, 33684-33696.	4.0	177
11	Nonmulberry silk biopolymers. Biopolymers, 2012, 97, 455-467.	1.2	174
12	Role of non-mulberry silk fibroin in deposition and regulation of extracellular matrix towards accelerated wound healing. Acta Biomaterialia, 2017, 48, 157-174.	4.1	174
13	Helicoidal multi-lamellar features of RGD-functionalized silk biomaterials for corneal tissue engineering. Biomaterials, 2010, 31, 8953-8963.	5.7	164
14	In Situ Forming Injectable Silk Fibroin Hydrogel Promotes Skin Regeneration in Full Thickness Burn Wounds. Advanced Healthcare Materials, 2018, 7, e1801092.	3.9	156
15	Relationships between physical properties and sequence in silkworm silks. Scientific Reports, 2016, 6, 27573.	1.6	140
16	Silk fibroinâ€"keratin based 3D scaffolds as a dermal substitute for skin tissue engineering. Integrative Biology (United Kingdom), 2015, 7, 53-63.	0.6	139
17	Nonâ€Bioengineered Silk Fibroin Protein 3D Scaffolds for Potential Biotechnological and Tissue Engineering Applications. Macromolecular Bioscience, 2008, 8, 807-818.	2.1	130
18	Biomimetic, Osteoconductive Non-mulberry Silk Fiber Reinforced Tricomposite Scaffolds for Bone Tissue Engineering. ACS Applied Materials & Interfaces, 2016, 8, 30797-30810.	4.0	122

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19	Self-assembled silk sericin/poloxamer nanoparticles as nanocarriers of hydrophobic and hydrophilic drugs for targeted delivery. Nanotechnology, 2009, 20, 355101.	1.3	121
20	Osteogenic and adipogenic differentiation of rat bone marrow cells on non-mulberry and mulberry silk gland fibroin 3D scaffolds. Biomaterials, 2009, 30, 5019-5030.	5.7	115
21	A silk-based scaffold platform with tunable architecture for engineering critically-sized tissue constructs. Biomaterials, 2012, 33, 9214-9224.	5.7	114
22	Silk gland sericin protein membranes: Fabrication and characterization for potential biotechnological applications. Journal of Biotechnology, 2009, 144, 321-329.	1.9	112
23	A novel method for dissolution and stabilization of nonâ€mulberry silk gland protein fibroin using anionic surfactant sodium dodecyl sulfate. Biotechnology and Bioengineering, 2008, 99, 1482-1489.	1.7	105
24	Silk fibroin/gelatin multilayered films as a model system for controlled drug release. European Journal of Pharmaceutical Sciences, 2009, 37, 160-171.	1.9	105
25	Nanoparticle-Based Hybrid Scaffolds for Deciphering the Role of Multimodal Cues in Cardiac Tissue Engineering. ACS Nano, 2019, 13, 12525-12539.	7.3	101
26	Potential of silk sericin based nanofibrous mats for wound dressing applications. Materials Science and Engineering C, 2018, 90, 420-432.	3.8	97
27	Antioxidant potential of mulberry and non-mulberry silk sericin and its implications in biomedicine. Free Radical Biology and Medicine, 2017, 108, 803-818.	1.3	96
28	Insight into Silk-Based Biomaterials: From Physicochemical Attributes to Recent Biomedical Applications. ACS Applied Bio Materials, 2019, 2, 5460-5491.	2.3	93
29	Nonâ€bioengineered silk gland fibroin protein: Characterization and evaluation of matrices for potential tissue engineering applications. Biotechnology and Bioengineering, 2008, 100, 1237-1250.	1.7	92
30	Tissue Engineered Skin and Wound Healing: Current Strategies and Future Directions. Current Pharmaceutical Design, 2017, 23, 3455-3482.	0.9	91
31	Mimicking Hierarchical Complexity of the Osteochondral Interface Using Electrospun Silkâ€“Bioactive Glass Composites. ACS Applied Materials & Interfaces, 2017, 9, 8000-8013.	4.0	89
32	Functionalized <scp>PVA</scp> â€“silk blended nanofibrous mats promote diabetic wound healing via regulation of extracellular matrix and tissue remodelling. Journal of Tissue Engineering and Regenerative Medicine, 2018, 12, e1559-e1570.	1.3	85
33	Intervertebral Disk Tissue Engineering Using Biphasic Silk Composite Scaffolds. Tissue Engineering - Part A, 2012, 18, 447-458.	1.6	84
34	Immunomodulatory injectable silk hydrogels maintaining functional islets and promoting anti-inflammatory M2 macrophage polarization. Biomaterials, 2018, 187, 1-17.	5.7	82
35	Tissue-Engineered Cartilage: The Crossroads of Biomaterials, Cells and Stimulating Factors. Macromolecular Bioscience, 2015, 15, 153-182.	2.1	81
36	Mimicking Form and Function of Native Small Diameter Vascular Conduits Using Mulberry and Non-mulberry Patterned Silk Films. ACS Applied Materials & Interfaces, 2016, 8, 15874-15888.	4.0	78

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37	Injectable hydrogels: a new paradigm for osteochondral tissue engineering. Journal of Materials Chemistry B, 2018, 6, 5499-5529.	2.9	78
38	Biospinning by silkworms: Silk fiber matrices for tissue engineering applications. Acta Biomaterialia, 2010, 6, 360-371.	4.1	71
39	High performance luminescent thermosetting waterborne hyperbranched polyurethane/carbon quantum dot nanocomposite with inÂvitro cytocompatibility. Composites Science and Technology, 2015, 118, 39-46.	3.8	69
40	Non-mulberry silk sericin/poly (vinyl alcohol) hydrogel matrices for potential biotechnological applications. International Journal of Biological Macromolecules, 2011, 49, 125-133.	3.6	68
41	3D Printed Cartilageâ€Like Tissue Constructs with Spatially Controlled Mechanical Properties. Advanced Functional Materials, 2019, 29, 1906330.	7.8	66
42	Calcium alginate beads embedded in silk fibroin as 3D dual drug releasing scaffolds. Biomaterials, 2009, 30, 5170-5177.	5.7	64
43	Recombinant Spider Silk Functionalized Silkworm Silk Matrices as Potential Bioactive Wound Dressings and Skin Grafts. ACS Applied Materials & Interfaces, 2018, 10, 23560-23572.	4.0	64
44	Bioresorbable silk grafts for small diameter vascular tissue engineering applications: In vitro and in vivo functional analysis. Acta Biomaterialia, 2020, 105, 146-158.	4.1	64
45	Silk-Fibrin/Hyaluronic Acid Composite Gels for Nucleus Pulposus Tissue Regeneration. Tissue Engineering - Part A, 2011, 17, 2999-3009.	1.6	63
46	Silk-based multilayered angle-ply annulus fibrosus construct to recapitulate form and function of the intervertebral disc. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 477-482.	3.3	63
47	Functional DNA Based Hydrogels: Development, Properties and Biological Applications. ACS Biomaterials Science and Engineering, 2020, 6, 6021-6035.	2.6	61
48	Potential of silk fibroin/chondrocyte constructs of muga silkworm Antheraea assamensis for cartilage tissue engineering. Journal of Materials Chemistry B, 2016, 4, 3670-3684.	2.9	58
49	Injectable Carbon Nanotube Impregnated Silk Based Multifunctional Hydrogel for Localized Targeted and On-Demand Anticancer Drug Delivery. ACS Biomaterials Science and Engineering, 2019, 5, 2365-2381.	2.6	57
50	A Heartâ€Breast Cancerâ€onâ€aâ€Chip Platform for Disease Modeling and Monitoring of Cardiotoxicity Induced by Cancer Chemotherapy. Small, 2021, 17, e2004258.	5.2	57
51	Functional hepatocyte clusters on bioactive blend silk matrices towards generating bioartificial liver constructs. Acta Biomaterialia, 2018, 67, 167-182.	4.1	56
52	Silk-microfluidics for advanced biotechnological applications: A progressive review. Biotechnology Advances, 2016, 34, 845-858.	6.0	55
53	High performance bio-based hyperbranched polyurethane/carbon dot-silver nanocomposite: a rapid self-expandable stent. Biofabrication, 2016, 8, 045013.	3.7	54
54	Silk: A Promising Biomaterial Opening New Vistas Towards Affordable Healthcare Solutions. Journal of the Indian Institute of Science, 2019, 99, 445-487.	0.9	54

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55	Tissueâ€Engineered Vascular Grafts: Emerging Trends and Technologies. Advanced Functional Materials, 2021, 31, 2100027.	7.8	54
56	Design, Synthesis, Characterization, and Antiproliferative Activity of Organoplatinum Compounds Bearing a 1,2,3-Triazole Ring. ACS Omega, 2019, 4, 835-841.	1.6	53
57	A renewable resource based carbon dot decorated hydroxyapatite nanohybrid and its fabrication with waterborne hyperbranched polyurethane for bone tissue engineering. RSC Advances, 2016, 6, 26066-26076.	1.7	52
58	3D Printing/Bioprinting Based Tailoring of <i>in Vitro</i> Tissue Models: Recent Advances and Challenges. ACS Applied Bio Materials, 2019, 2, 1385-1405.	2.3	52
59	Laminar Silk Scaffolds for Aligned Tissue Fabrication. Macromolecular Bioscience, 2013, 13, 48-58.	2.1	51
60	Comprehensive Review on Silk at Nanoscale for Regenerative Medicine and Allied Applications. ACS Biomaterials Science and Engineering, 2019, 5, 2054-2078.	2.6	51
61	Stem Cell-Based Meniscus Tissue Engineering. Tissue Engineering - Part A, 2011, 17, 2749-2761.	1.6	50
62	An in situ prepared photo-luminescent transparent biocompatible hyperbranched epoxy/carbon dot nanocomposite. RSC Advances, 2015, 5, 74692-74704.	1.7	49
63	Multifunctional Cell Instructive Silkâ€Bioactive Glass Composite Reinforced Scaffolds Toward Osteoinductive, Proangiogenic, and Resorbable Bone Grafts. Advanced Healthcare Materials, 2018, 7, e1701418.	3.9	49
64	A three-dimensional printed silk-based biomimetic tri-layered meniscus for potential patient-specific implantation. Biofabrication, 2020, 12, 015003.	3.7	49
65	Non-mulberry silk gland fibroin protein 3-D scaffold for enhanced differentiation of human mesenchymal stem cells into osteocytes. Acta Biomaterialia, 2009, 5, 2579-2590.	4.1	48
66	Implication of Silk Film RGD Availability and Surface Roughness on Cytoskeletal Organization and Proliferation of Primary Rat Bone Marrow Cells. Tissue Engineering - Part A, 2010, 16, 2391-2403.	1.6	48
67	Annulus fibrosus tissue engineering using lamellar silk scaffolds. Journal of Tissue Engineering and Regenerative Medicine, 2012, 6, s24-s33.	1.3	48
68	Silk sericin induced pro-oxidative stress leads to apoptosis in human cancer cells. Food and Chemical Toxicology, 2019, 123, 275-287.	1.8	45
69	Chondroprotective and osteogenic effects of silk-based bioinks in developing 3D bioprinted osteochondral interface. Bioprinting, 2020, 17, e00067.	2.9	44
70	Nonmulberry Silk Based Ink for Fabricating Mechanically Robust Cardiac Patches and Endothelialized Myocardiumâ€onâ€aâ€Chip Application. Advanced Functional Materials, 2020, 30, 1907436.	7.8	42
71	Cross-linked silk sericinâ€“gelatin 2D and 3D matrices for prospective tissue engineering applications. RSC Advances, 2016, 6, 105125-105136.	1.7	41
72	Engineering Microsphere-Loaded Non-mulberry Silk-Based 3D Bioprinted Vascularized Cardiac Patches with Oxygen-Releasing and Immunomodulatory Potential. ACS Applied Materials & Interfaces, 2021, 13, 50744-50759.	4.0	39

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73	<scp>3D</scp> bioprinting of <scp>photoâ€crosslinkable</scp> silk methacrylate (<scp>SilMA</scp>)â€polyethylene glycol diacrylate (<scp>PEGDA</scp>) bioink for cartilage tissue engineering. Journal of Biomedical Materials Research - Part A, 2022, 110, 884-898.	2.1	39
74	Photo-Electro Active Nanocomposite Silk Hydrogel for Spatiotemporal Controlled Release of Chemotherapeutics: An In Vivo Approach toward Suppressing Solid Tumor Growth. ACS Applied Materials & Interfaces, 2020, 12, 27905-27916.	4.0	38
75	Mimicking Native Liver Lobule Microarchitecture In Vitro with Parenchymal and Non-parenchymal Cells Using 3D Bioprinting for Drug Toxicity and Drug Screening Applications. ACS Applied Materials & Interfaces, 2022, 14, 10167-10186.	4.0	38
76	Sustainable starch modified polyol based tough, biocompatible, hyperbranched polyurethane with a shape memory attribute. New Journal of Chemistry, 2016, 40, 5152-5163.	1.4	37
77	Novel polyvinyl alcohol-bioglass 45S5 based composite nanofibrous membranes as bone scaffolds. Materials Science and Engineering C, 2016, 69, 1167-1174.	3.8	36
78	3D functional scaffolds for skin tissue engineering. , 2018, , 345-365.		36
79	Exploring Gelation and Physicochemical Behavior of in Situ Bioresponsive Silk Hydrogels for Disc Degeneration Therapy. ACS Biomaterials Science and Engineering, 2019, 5, 870-886.	2.6	36
80	Silkâ€"Silk Interactions between Silkworm Fibroin and Recombinant Spider Silk Fusion Proteins Enable the Construction of Bioactive Materials. ACS Applied Materials & Interfaces, 2017, 9, 31634-31644.	4.0	35
81	Protective Activity of Silk Sericin against UV Radiation-Induced Skin Damage by Downregulating Oxidative Stress. ACS Applied Bio Materials, 2018, 1, 2120-2132.	2.3	35
82	Immuno-Informed 3D Silk Biomaterials for Tailoring Biological Responses. ACS Applied Materials & Interfaces, 2016, 8, 29310-29322.	4.0	34
83	Hierarchically structured seamless silk scaffolds for osteochondral interface tissue engineering. Journal of Materials Chemistry B, 2018, 6, 5671-5688.	2.9	34
84	Electrospun polyvinyl alcohol-polyvinyl pyrrolidone nanofibrous membranes for interactive wound dressing application. Journal of Biomaterials Science, Polymer Edition, 2016, 27, 247-262.	1.9	33
85	Stacked silk-cell monolayers as a biomimetic three dimensional construct for cardiac tissue reconstruction. Journal of Materials Chemistry B, 2017, 5, 6325-6338.	2.9	31
86	A coumarin based visual and fluorometric probe for selective detection of Al(III), Cr(III) and Fe(III) ions through â€œturn-onâ€• response and its biological application. Journal of Photochemistry and Photobiology A: Chemistry, 2021, 417, 113340.	2.0	31
87	Patterned Silk Film Scaffolds for Aligned Lamellar Bone Tissue Engineering. Macromolecular Bioscience, 2012, 12, 1671-1679.	2.1	29
88	Fluorogenic naked-eye sensing and live-cell imaging of cyanide by a hydrazine-functionalized CAU-10 metalâ€"organic framework. CrystEngComm, 2018, 20, 4194-4201.	1.3	29
89	The inhibitory effect of silk sericin against ultraviolet-induced melanogenesis and its potential use in cosmeceutics as an anti-hyperpigmentation compound. Photochemical and Photobiological Sciences, 2019, 18, 2497-2508.	1.6	29
90	PVP - CMC hydrogel: An excellent bioinspired and biocompatible scaffold for osseointegration. Materials Science and Engineering C, 2019, 95, 440-449.	3.8	29

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91	Aggregation induced enhanced and exclusively highly Stokes shifted emission from an excited state intramolecular proton transfer exhibiting molecule. Faraday Discussions, 2017, 196, 71-90.	1.6	28
92	Localized Immunomodulatory Silk Macrocapsules for Islet-like Spheroid Formation and Sustained Insulin Production. ACS Biomaterials Science and Engineering, 2017, 3, 2443-2456.	2.6	27
93	Coordination-Driven Self-Assembly of Ionic Irregular Hexagonal Metallamacrocycles via an Organometallic Clip and Their Cytotoxicity Potency. Inorganic Chemistry, 2018, 57, 3615-3625.	1.9	27
94	Magnetic Actuator Device Assisted Modulation of Cellular Behavior and Tuning of Drug Release on Silk Platform. ACS Biomaterials Science and Engineering, 2019, 5, 92-105.	2.6	27
95	Overcoming the Dependence on Animal Models for Osteoarthritis Therapeutics â€“ The Promises and Prospects of In Vitro Models. Advanced Healthcare Materials, 2021, 10, e2100961.	3.9	27
96	Silk biomaterials for vascular tissue engineering applications. Acta Biomaterialia, 2021, 134, 79-106.	4.1	27
97	Extracellular Vesicles Enhance the Remodeling of Cell-Free Silk Vascular Scaffolds in Rat Aortae. ACS Applied Materials & Interfaces, 2020, 12, 26955-26965.	4.0	27
98	Strategic Formulation of Graphene Oxide Sheets for Flexible Monoliths and Robust Polymeric Coatings Embedded with Durable Bioinspired Wettability. ACS Applied Materials & Interfaces, 2017, 9, 42354-42365.	4.0	26
99	Silk fiber reinforcement modulates <i>in vitro</i> chondrogenesis in 3D composite scaffolds. Biomedical Materials (Bristol), 2017, 12, 045012.	1.7	25
100	Therapeutically Effective Controlled Release Formulation of Pirfenidone from Nontoxic Biocompatible Carboxymethyl Pullulan-Poly(vinyl alcohol) Interpenetrating Polymer Networks. ACS Omega, 2018, 3, 11993-12009.	1.6	25
101	Reloadable Silk-Hydrogel Hybrid Scaffolds for Sustained and Targeted Delivery of Molecules. Molecular Pharmaceutics, 2016, 13, 4066-4081.	2.3	24
102	Silk fibroin as a platform for dual sensing of vitamin B12 using photoluminescence and electrical techniques. Biosensors and Bioelectronics, 2018, 112, 18-22.	5.3	24
103	A novel reverse micellar purification strategy for histidine tagged human interferon gamma (hIFN-Î³) protein from Pichia pastoris. International Journal of Biological Macromolecules, 2018, 107, 2512-2524.	3.6	24
104	Silkworm Silk Matrices Coated with Functionalized Spider Silk Accelerate Healing of Diabetic Wounds. ACS Biomaterials Science and Engineering, 2019, 5, 3537-3548.	2.6	23
105	Surface Patterning and Innate Physicochemical Attributes of Silk Films Concomitantly Govern Vascular Cell Dynamics. ACS Biomaterials Science and Engineering, 2019, 5, 933-949.	2.6	23
106	Aggregation induced enhanced emission of 2-(2â€²-hydroxyphenyl)benzimidazole. Photochemical and Photobiological Sciences, 2016, 15, 937-948.	1.6	22
107	Synergistic Effects of Silicon/Zinc Doped Brushite and Silk Scaffolding in Augmenting the Osteogenic and Angiogenic Potential of Composite Biomimetic Bone Grafts. ACS Biomaterials Science and Engineering, 2019, 5, 1462-1475.	2.6	22
108	Mimicking Physiologically Relevant Hepatocyte Zonation Using Immunomodulatory Silk Liver Extracellular Matrix Scaffolds toward a Bioartificial Liver Platform. ACS Applied Materials & Interfaces, 2021, 13, 24401-24421.	4.0	22

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109	Metal ion dependent â€œONâ€•intramolecular charge transfer (ICT) and â€œOFFâ€•normal switching of the fluorescence: Sensing of Zn2+ by ICT emission in living cells. Sensors and Actuators B: Chemical, 2014, 202, 1154-1163.	4.0	20
110	Potential Nanomedicine Applications of Multifunctional Carbon Nanoparticles Developed Using Green Technology. ACS Sustainable Chemistry and Engineering, 2018, 6, 1235-1245.	3.2	20
111	Mesoporous Silk-Bioactive Glass Nanocomposites as Drug Eluting Multifunctional Conformal Coatings for Improving Osseointegration and Bactericidal Properties of Metal Implants. ACS Applied Materials & Interfaces, 2022, 14, 14961-14980.	4.0	19
112	Silk fibroinâ€"carbon nanoparticle composite scaffolds: a cost effective supramolecular â€˜turn offâ€™ chemiresistor for nitroaromatic explosive vapours. Journal of Materials Chemistry C, 2016, 4, 8920-8929.	2.7	18
113	Silkworm Silk Scaffolds Functionalized with Recombinant Spider Silk Containing a Fibronectin Motif Promotes Healing of Full-Thickness Burn Wounds. ACS Biomaterials Science and Engineering, 2019, 5, 4634-4645.	2.6	17
114	Inhibitory role of silk cocoon extract against elastase, hyaluronidase and UV radiation-induced matrix metalloproteinase expression in human dermal fibroblasts and keratinocytes. Photochemical and Photobiological Sciences, 2019, 18, 1259-1274.	1.6	17
115	Naked-eye detection of Pd2+ ion using a highly selective fluorescent heterocyclic probe by â€œturn-offâ€• response and in-vitro live cell imaging. Journal of Photochemistry and Photobiology A: Chemistry, 2020, 394, 112441.	2.0	17
116	Non-bioengineered silk gland fibroin micromolded matrices to study cell-surface interactions. Biomedical Microdevices, 2009, 11, 467-476.	1.4	16
117	In Vitro Culture of Human Corneal Endothelium on Non-Mulberry Silk Fibroin Films for Tissue Regeneration. Translational Vision Science and Technology, 2020, 9, 12.	1.1	16
118	Synthesis of NNN Chiral Ruthenium Complexes and Their Cytotoxicity Studies. Inorganic Chemistry, 2021, 60, 7422-7432.	1.9	16
119	Silk-based phyto-hydrogel formulation expedites key events of wound healing in full-thickness skin defect model. International Journal of Biological Macromolecules, 2022, 203, 623-637.	3.6	16
120	Fabrication and Mechanical Characterization of Hydrogel Infused Network Silk Scaffolds. International Journal of Molecular Sciences, 2016, 17, 1631.	1.8	15
121	Synthesis and characterization of a non-cytotoxic and biocompatible acrylamide grafted pullulan â€" Application in pH responsive controlled drug delivery. International Journal of Biological Macromolecules, 2018, 120, 753-762.	3.6	15
122	Carbon Nanotubes and Their Polymer Nanocomposites. , 2019, , 145-175.		15
123	Drug Delivery of Anticancer Drugs from Injectable 3D Porous Silk Scaffold for Prevention of Gastric Cancer Growth and Recurrence. ACS Biomaterials Science and Engineering, 2020, 6, 6195-6206.	2.6	15
124	Tissue-derived decellularized extracellular matrices toward cartilage repair and regeneration. Methods in Cell Biology, 2020, 157, 185-221.	0.5	15
125	A probe with hydrazinecarbothioamide and 1,8-naphthalimide groups for â€œturn-onâ€•fluorescence detection of Hg2+ and Ag+ ions and live-cell imaging studies. Inorganica Chimica Acta, 2022, 535, 120876.	1.2	15
126	Alkali metal-ion assisted Michael addition reaction in controlled tailoring of topography in a superhydrophobic polymeric monolith. Journal of Materials Chemistry A, 2018, 6, 17019-17031.	5.2	14

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127	Unconventional and Facile Fabrication of Chemically Reactive Silk Fibroin Sponges for Environmental Remediation. ACS Applied Materials & Interfaces, 2021, 13, 24258-24271.	4.0	14
128	Opportunities and Challenges in Exploring Indian Non-Mulberry Silk for Biomedical Applications. Proceedings of the Indian National Science Academy Part A, Physical Sciences, 2017, 83, .	0.2	14
129	3-(2-Hydroxyphenyl)imidazo[5, 1-a]isoquinoline as Cu(II) sensor, its Cu(II) complex for selective detection of CNâˆ' ion and biological compatibility. Journal of Photochemistry and Photobiology A: Chemistry, 2022, 427, 113795.	2.0	14
130	3D printing of annulus fibrosus anatomical equivalents recapitulating angle-ply architecture for intervertebral disc replacement. Applied Materials Today, 2021, 23, 101031.	2.3	13
131	Silk Fibroin Scaffold-Based 3D Co-Culture Model for Modulation of Chondrogenesis without Hypertrophy via Reciprocal Cross-talk and Paracrine Signaling. ACS Biomaterials Science and Engineering, 2019, 5, 5240-5254.	2.6	12
132	Bioactive three-dimensional silk composite in vitro tumoroid model for high throughput screening of anticancer drugs. Journal of Colloid and Interface Science, 2021, 589, 438-452.	5.0	12
133	Harnessing Multifaceted Next-Generation Technologies for Improved Skin Wound Healing. ACS Applied Bio Materials, 2021, 4, 7738-7763.	2.3	12
134	In vitro and in vivo evaluation of pirfenidone loaded acrylamide grafted pullulan-poly(vinyl alcohol) interpenetrating polymer networks. Carbohydrate Polymers, 2018, 202, 288-298.	5.1	11
135	Modulation of extracellular matrix by annulus fibrosus cells on tailored silk based angle-ply intervertebral disc construct. Materials and Design, 2018, 158, 74-87.	3.3	11
136	Silkâ€Based Bioengineered Diaphyseal Cortical Bone Unit Enclosing an Implantable Bone Marrow toward Atrophic Nonunion Grafting. Advanced Healthcare Materials, 2022, 11, e2102031.	3.9	11
137	Silk Fibroin Based Formulations as Potential Hemostatic Agents. ACS Biomaterials Science and Engineering, 2022, 8, 2654-2663.	2.6	11
138	Pyrazine based Pt(II) bisâ€alkynyl organometallic complexes: Synthesis, characterization, and cytotoxic effect on A549 human lung carcinoma cells. Applied Organometallic Chemistry, 2017, 31, e3824.	1.7	10
139	Decellularized Caprine Conchal Cartilage toward Repair and Regeneration of Damaged Cartilage. ACS Applied Bio Materials, 2019, 2, 2037-2049.	2.3	10
140	Surface Modification of Decellularized Natural Cellulose Scaffolds with Organosilanes for Bone Tissue Regeneration. ACS Biomaterials Science and Engineering, 2022, 8, 2000-2015.	2.6	10
141	Native honeybee silk membrane: a potential matrix for tissue engineering and regenerative medicine. RSC Advances, 2016, 6, 54394-54403.	1.7	9
142	Rational Chemical Engineering in Natural Protein Derived Functional Interface. ACS Sustainable Chemistry and Engineering, 2019, 7, 7502-7509.	3.2	9
143	3D Bioprinted Silkâ€Based In Vitro Osteochondral Model for Osteoarthritis Therapeutics. Advanced Healthcare Materials, 2022, 11, .	3.9	9
144	Simultaneous and controlled release of two different bioactive small molecules from nature inspired single material. Journal of Materials Chemistry B, 2018, 6, 7692-7702.	2.9	8

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145	Self-Assembly of a [1 + 1] Ionic Hexagonal Macrocycle and Its Antiproliferative Activity. Frontiers in Chemistry, 2018, 6, 87.	1.8	8
146	Functionalized Silk Vascular Grafts with Decellularized Human Wharton's Jelly Improves Remodeling via Immunomodulation in Rabbit Jugular Vein. Advanced Healthcare Materials, 2021, 10, e2100750.	3.9	7
147	Fiber-Reinforced Silk Composite for Enhanced Urokinase Production Using High-Density Perfusion Culture and Bioactive Molecule Supplementation. ACS Biomaterials Science and Engineering, 2019, 5, 6137-6151.	2.6	6
148	Mimicking Native Heart Tissue Physiology and Pathology in Silk Fibroin Constructs through a Perfusionâ€Based Dynamic Mechanical Stimulation Microdevice. Advanced Healthcare Materials, 2022, 11, e2101678.	3.9	6
149	Application of 2,4,5â€tris(2â€pyridyl)imidazole as â€˜turnâ€offâ€™ fluorescence sensor for Cu(II) and Hg(II) ions and <i>in vitro</i> cell imaging. Luminescence, 2022, 37, 883-891.	1.5	6
150	Silk-based encapsulation materials to enhance pancreatic cell functions. , 2020, , 329-337.		5
151	CCL2 loaded microparticles promote acute patency in silk-based vascular grafts implanted in rat aortae. Acta Biomaterialia, 2021, 135, 126-138.	4.1	4
152	3D Printed Tissues: 3D Printed Cartilageâ€Like Tissue Constructs with Spatially Controlled Mechanical Properties (Adv. Funct. Mater. 51/2019). Advanced Functional Materials, 2019, 29, 1970350.	7.8	3
153	Myocardial Tissue Engineering: Nonmulberry Silk Based Ink for Fabricating Mechanically Robust Cardiac Patches and Endothelialized Myocardiumâ€onâ€aâ€Chip Application (Adv. Funct. Mater. 12/2020). Advanced Functional Materials, 2020, 30, 2070079.	7.8	2
154	Fabrication of Small-Diameter Tubular Grafts for Vascular Tissue Engineering Applications Using Mulberry and Non-mulberry Silk Proteins. Methods in Molecular Biology, 2022, 2375, 125-139.	0.4	2
155	Tunable and improved antiproliferative activity of Pt (II)â€based organometallics bearing alkynyls and 1,2,3â€triazole moieties. Applied Organometallic Chemistry, 0, , .	1.7	2
156	State-of-the-art strategies and future interventions in bone and cartilage repair for personalized regenerative therapy. , 2021, , 203-248.		1
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