Shiyan Chen

List of Publications by Year
in descending order

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80 papers	4,796 citations	71061 41 h-index	98753 67 g-index
81 all docs	81 docs citations	81 times ranked	5590 citing authors

#	Article	IF	Citations
1	Functionalized bacterial cellulose derivatives and nanocomposites. Carbohydrate Polymers, 2014, 101, 1043-1060.	5.1	354
2	Flexible Electrically Conductive Nanocomposite Membrane Based on Bacterial Cellulose and Polyaniline. Journal of Physical Chemistry B, 2011, 115, 8453-8457.	1.2	294
3	Adsorption of Cu(II) and Pb(II) onto diethylenetriamine-bacterial cellulose. Carbohydrate Polymers, 2009, 75, 110-114.	5.1	254
4	Carboxymethylated-bacterial cellulose for copper and lead ion removal. Journal of Hazardous Materials, 2009, 161, 1355-1359.	6.5	236
5	In situ synthesis of silver chloride nanoparticles into bacterial cellulose membranes. Materials Science and Engineering C, 2009, 29, 1216-1219.	3.8	149
6	In situ synthesis of CdS nanoparticles on bacterial cellulose nanofibers. Carbohydrate Polymers, 2009, 76, 509-512.	5.1	145
7	Macrofibers with High Mechanical Performance Based on Aligned Bacterial Cellulose Nanofibers. ACS Applied Materials & Interfaces, 2017, 9, 20330-20339.	4.0	145
8	Silver Nanowireâ€“Bacterial Cellulose Composite Fiber-Based Sensor for Highly Sensitive Detection of Pressure and Proximity. ACS Nano, 2020, 14, 15428-15439.	7.3	130
9	Biosynthesis of bacterial cellulose/multi-walled carbon nanotubes in agitated culture. Carbohydrate Polymers, 2008, 74, 659-665.	5.1	127
10	Solvent-free acetylation of bacterial cellulose under moderate conditions. Carbohydrate Polymers, 2011, 83, 1575-1581.	5.1	114
11	Structural and functional evaluation of oxygenating keratin/silk fibroin scaffold and initial assessment of their potential for urethral tissue engineering. Biomaterials, 2016, 84, 99-110.	5.7	98
12	Formaldehyde sensors based on nanofibrous polyethyleneimine/bacterial cellulose membranes coated quartz crystal microbalance. Sensors and Actuators B: Chemical, 2011, 157, 554-559.	4.0	91
13	3D printing of biomimetic vasculature for tissue regeneration. Materials Horizons, 2019, 6, 1197-1206.	6.4	88
14	Improving the mechanical properties of cellulose diacetate fibers via using an ionic liquid as processing solvent. RSC Advances, 2016, 6, 1-7.	1.7	87
15	Polypyrrole@TEMPO-oxidized bacterial cellulose/reduced graphene oxide macrofibers for flexible all-solid-state supercapacitors. Chemical Engineering Journal, 2019, 368, 1022-1032.	6.6	83
16	Facile synthesis of ZnO nanoparticles based on bacterial cellulose. Materials Science and Engineering B: Solid-State Materials for Advanced Technology, 2010, 170, 88-92.	1.7	79
17	Mechanically robust reduced graphene oxide/bacterial cellulose film obtained via biosynthesis for flexible supercapacitor. Chemical Engineering Journal, 2019, 360, 829-837.	6.6	71
18	Polyol mediated synthesis of ZnO nanoparticles templated by bacterial cellulose. Carbohydrate Polymers, 2013, 92, 1953-1959.	5.1	70

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19	Highly stable and sensitive humidity sensors based on quartz crystal microbalance coated with bacterial cellulose membrane. Sensors and Actuators B: Chemical, 2011, 159, 301-306.	4.0	69
20	A 3D-printable TEMPO-oxidized bacterial cellulose/alginate hydrogel with enhanced stability via nanoclay incorporation. Carbohydrate Polymers, 2020, 238, 116207.	5.1	69
21	Facilely green synthesis of silver nanoparticles into bacterial cellulose. Cellulose, 2015, 22, 373-383.	2.4	68
22	Color-tunable luminescent macrofibers based on CdTe QDs-loaded bacterial cellulose nanofibers for pH and glucose sensing. Sensors and Actuators B: Chemical, 2018, 254, 110-119.	4.0	68
23	Zn2+-loaded TOBC nanofiber-reinforced biomimetic calcium alginate hydrogel for antibacterial wound dressing. International Journal of Biological Macromolecules, 2020, 143, 235-242.	3.6	67
24	TEMPO-oxidized bacterial cellulose nanofibers-supported gold nanoparticles with superior catalytic properties. Carbohydrate Polymers, 2017, 160, 34-42.	5.1	65
25	Facile fabrication of flexible magnetic nanohybrid membrane with amphiphobic surface based on bacterial cellulose. Carbohydrate Polymers, 2011, 86, 1760-1767.	5.1	63
26	Flexible luminescent CdSe/bacterial cellulose nanocomoposite membranes. Carbohydrate Polymers, 2012, 88, 173-178.	5.1	63
27	Preparation and properties of photochromic bacterial cellulose nanofibrous membranes. Cellulose, 2011, 18, 655-661.	2.4	60
28	Bacterial Cellulose-Based Biomimetic Nanofibrous Scaffold with Muscle Cells for Hollow Organ Tissue Engineering. ACS Biomaterials Science and Engineering, 2016, 2, 19-29.	2.6	60
29	Flexible conductive polypyrrole nanocomposite membranes based on bacterial cellulose with amphiphobicity. Carbohydrate Polymers, 2015, 117, 230-235.	5.1	57
30	Scalable, self-cleaning and self-floating bi-layered bacterial cellulose biofoam for efficient solar evaporator with photocatalytic purification. Desalination, 2021, 500, 114899.	4.0	57
31	Hierarchical core-sheath polypyrrole@carbon nanotube/bacterial cellulose macrofibers with high electrochemical performance for all-solid-state supercapacitors. Electrochimica Acta, 2018, 283, 1578-1588.	2.6	54
32	TEMPO-Oxidized Bacterial Cellulose Nanofibers/Graphene Oxide Fibers for Osmotic Energy Conversion. ACS Applied Materials & Interfaces, 2021, 13, 22416-22425.	4.0	54
33	Oppositely charged aligned bacterial cellulose biofilm with nanofluidic channels for osmotic energy harvesting. Nano Energy, 2021, 80, 105554.	8.2	52
34	Synthesis of flexible magnetic nanohybrid based on bacterial cellulose under ultrasonic irradiation. Materials Science and Engineering C, 2013, 33, 2407-2412.	3.8	50
35	In situ fabrication of a microporous bacterial cellulose/potato starch composite scaffold with enhanced cell compatibility. Cellulose, 2014, 21, 1823-1835.	2.4	50
36	A smart bilayered scaffold supporting keratinocytes and muscle cells in micro/nano-scale for urethral reconstruction. Theranostics, 2018, 8, 3153-3163.	4.6	50

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37	Use of heparinized bacterial cellulose based scaffold for improving angiogenesis in tissue regeneration. Carbohydrate Polymers, 2018, 181, 948-956.	5.1	48
38	Kinetic and thermodynamic studies of adsorption of Cu2+ and Pb2+ onto amidoximated bacterial cellulose. Polymer Bulletin, 2009, 63, 283-297.	1.7	44
39	In vitro biodegradability of bacterial cellulose by cellulase in simulated body fluid and compatibility in vivo. Cellulose, 2016, 23, 3187-3198.	2.4	44
40	All-natural injectable hydrogel with self-healing and antibacterial properties for wound dressing. Cellulose, 2020, 27, 2637-2650.	2.4	44
41	Biomimetic mineralization synthesis of calciumâ€deficient carbonateâ€containing hydroxyapatite in a threeâ€dimensional network of bacterial cellulose. Journal of Chemical Technology and Biotechnology, 2009, 84, 285-290.	1.6	43
42	Urethra-inspired biomimetic scaffold: A therapeutic strategy to promote angiogenesis for urethral regeneration in a rabbit model. Acta Biomaterialia, 2020, 102, 247-258.	4.1	43
43	Bacterial cellulose reinforced chitosan-based hydrogel with highly efficient self-healing and enhanced antibacterial activity for wound healing. International Journal of Biological Macromolecules, 2022, 217, 77-87.	3.6	41
44	Scalable, Flexible, Durable, and Salt-Tolerant CuS/Bacterial Cellulose Gel Membranes for Efficient Interfacial Solar Evaporation. ACS Sustainable Chemistry and Engineering, 2020, 8, 9017-9026.	3.2	38
45	Porous bacterial cellulose prepared by a facile surfactant-assisted foaming method in azodicarbonamide-NaOH aqueous solution. Materials Letters, 2012, 81, 131-134.	1.3	35
46	A strategy of tailoring polymorphs and nanostructures to construct self-reinforced nonswelling high-strength bacterial cellulose hydrogels. Nanoscale, 2019, 11, 15347-15358.	2.8	35
47	Simultaneous 3D cell distribution and bioactivity enhancement of bacterial cellulose (BC) scaffold for articular cartilage tissue engineering. Cellulose, 2019, 26, 2513-2528.	2.4	35
48	Continuous and integrated PEDOT@Bacterial cellulose/CNT hybrid helical fiber with â€œreinforced cement-sandâ€•structure for self-stretchable solid supercapacitor. Chemical Engineering Journal, 2022, 427, 131904.	6.6	35
49	Hierarchically Designed Three-Dimensional Composite Structure on a Cellulose-Based Solar Steam Generator. ACS Applied Materials & Interfaces, 2022, 14, 12284-12294.	4.0	35
50	Free-standing zirconia nanofibrous membranes with robust flexibility for corrosive liquid filtration. RSC Advances, 2014, 4, 2756-2763.	1.7	34
51	Improved cell infiltration and vascularization of three-dimensional bacterial cellulose nanofibrous scaffolds by template biosynthesis. RSC Advances, 2016, 6, 42229-42239.	1.7	33
52	Top-down peeling bacterial cellulose to high strength ultrathin films and multifunctional fibers. Chemical Engineering Journal, 2020, 391, 123527.	6.6	33
53	Durable and Flexible Bio-assembled RGO-BC/BC Bilayer Electrodes for Pressure Sensing. Advanced Fiber Materials, 2021, 3, 128-137.	7.9	33
54	Bacterial cellulose/gelatin scaffold loaded with VEGF-silk fibroin nanoparticles for improving angiogenesis in tissue regeneration. Cellulose, 2017, 24, 5013-5024.	2.4	31

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55	Scalable bacterial cellulose biofilms with improved ion transport for high osmotic power generation. Nano Energy, 2021, 88, 106275.	8.2	29
56	High Sensitivity Polyurethaneâ€Based Fiber Strain Sensor with Porous Structure via Incorporation of Bacterial Cellulose Nanofibers. Advanced Electronic Materials, 2021, 7, 2001235.	2.6	27
57	Preparation of amidoximated bacterial cellulose and its adsorption mechanism for Cu²⁺ and Pb²⁺. Journal of Applied Polymer Science, 2010, 117, 8-15.	1.3	24
58	Highly Mineralized Biomimetic Polysaccharide Nanofiber Materials Using Enzymatic Mineralization. Biomacromolecules, 2020, 21, 2176-2186.	2.6	24
59	Enhanced salinity gradient energy harvesting with oppositely charged bacterial cellulose-based composite membranes. Nano Energy, 2022, 101, 107548.	8.2	24
60	Anisotropic bacterial cellulose hydrogels with tunable high mechanical performances, non-swelling and bionic nanofluidic ion transmission behavior. Nanoscale, 2021, 13, 8126-8136.	2.8	23
61	Synthesis and Non-isothermal Crystallization Behavior of PET/Surface-treated TiO 2 Nanocomposites. Journal of Macromolecular Science - Physics, 2008, 47, 1117-1129.	0.4	22
62	Patterned bacterial cellulose wound dressing for hypertrophic scar inhibition behavior. Cellulose, 2018, 25, 6705-6717.	2.4	22
63	Spinning continuous high-strength bacterial cellulose hydrogel fibers for multifunctional bioelectronic interfaces. Journal of Materials Chemistry A, 2021, 9, 12574-12583.	5.2	22
64	Crack-Based Core-Sheath Fiber Strain Sensors with an Ultralow Detection Limit and an Ultrawide Working Range. ACS Applied Materials & Interfaces, 2022, 14, 29167-29175.	4.0	22
65	Thermal behavior of cellulose diacetate melt using ionic liquids as plasticizers. RSC Advances, 2015, 5, 901-907.	1.7	21
66	High-Strength Superstretchable Helical Bacterial Cellulose Fibers with a â€œSelf-Fiber-Reinforced Structureâ€• ACS Applied Materials & Interfaces, 2021, 13, 1545-1554.	4.0	17
67	Solution-Processed and Air-Stable n-Type Organic Thin-Film Transistors Based on Thiophene-Fused Dicyanoquinonediimine (DCNQI) Deriatives. ACS Applied Materials & Interfaces, 2012, 4, 3994-4000.	4.0	16
68	ZnS/Bacterial Cellulose/Epoxy Resin (ZnS/BC/E56) Nanocomposites with Good Transparency and Flexibility. Journal of Materials Science and Technology, 2016, 32, 153-157.	5.6	16
69	An air-stable microwire radial heterojunction with high photoconductivity based on a new building block. Journal of Materials Chemistry C, 2015, 3, 5933-5939.	2.7	14
70	Color-tunable luminescent CdTe quantum dot membranes based on bacterial cellulose (BC) and application in ion detection. RSC Advances, 2015, 5, 55756-55761.	1.7	14
71	Zinc sulfide nanoparticles template by bacterial cellulose and their optical properties. Journal of Applied Polymer Science, 2014, 131, .	1.3	13
72	Self-Stretchable Fiber Liquid Sensors Made with Bacterial Cellulose/Carbon Nanotubes for Smart Diapers. ACS Applied Materials & Interfaces, 2022, 14, 21319-21329.	4.0	12

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73	Tuning the Charge Transport Property of Naphthalene Diimide Derivatives by Changing the Substituted Position of Fluorine Atom on Molecular Backbone. Chinese Journal of Chemistry, 2014, 32, 1057-1064.	2.6	9
74	Bacterial cellulose nanofiber reinforced poly(glycerol-sebacate) biomimetic matrix for 3D cell culture. Cellulose, 2021, 28, 8483-8492.	2.4	9
75	Hydrophobic, breathable cellulose nonwoven fabrics for disposable hygiene applications. Carbohydrate Polymers, 2022, 288, 119367.	5.1	9
76	A simple method for controlling the bacterial cellulose nanofiber density in 3D scaffolds and its effect on the cell behavior. Cellulose, 2019, 26, 7411-7421.	2.4	7
77	Toward continuous high-performance bacterial cellulose macrofibers by implementing grading-stretching in spinning. Carbohydrate Polymers, 2022, 282, 119133.	5.1	7
78	Hybrid scaffolds enhanced by nanofibers improve in vitro cell behavior for tissue regeneration. Cellulose, 2018, 25, 7113-7125.	2.4	6
79	Bacterial cellulose nanofiber distribution on gelatin and silk fibroin scaffolds and the cell behavior. Cellulose, 2021, 28, 91-102.	2.4	6
80	Flexible <scp>X</scp>â€ray radiation protection membrane <scp>PVA</scp>/pb(<scp>NO</scp>₃)₂ microcapsule composites supported by bacterial cellulose. Journal of Applied Polymer Science, 2016, 133, .	1.3	4