Xiao-Wen Shi

List of Publications by Year
in descending order

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		53751	82499
124	6,055	45	72
papers	citations	h-index	g-index

124	124	124	7056
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Emerging chitin and chitosan nanofibrous materials for biomedical applications. Nanoscale, 2014, 6, 9477-9493.	2.8	305
2	Applications of chitin and chitosan nanofibers in bone regenerative engineering. Carbohydrate Polymers, 2020, 230, 115658.	5.1	213
3	Controlled Co-delivery of Growth Factors through Layer-by-Layer Assembly of Coreâ€“Shell Nanofibers for Improving Bone Regeneration. ACS Nano, 2019, 13, 6372-6382.	7.3	188
4	Preparation, characterization and antimicrobial activity of chitosan/layered silicate nanocomposites. Polymer, 2006, 47, 6738-6744.	1.8	178
5	Highly cost-effective and high-strength hydrogels as dye adsorbents from natural polymers: chitosan and cellulose. Polymer Chemistry, 2017, 8, 2913-2921.	1.9	165
6	Facile preparation of robust and biocompatible chitin aerogels. Journal of Materials Chemistry, 2012, 22, 5801.	6.7	163
7	Peroxymonosulfate activation for pollutants degradation by Fe-N-codoped carbonaceous catalyst: Structure-dependent performance and mechanism insight. Chemical Engineering Journal, 2019, 369, 542-552.	6.6	159
8	Chitin derived nitrogen-doped porous carbons with ultrahigh specific surface area and tailored hierarchical porosity for high performance supercapacitors. Journal of Bioresources and Bioproducts, 2021, 6, 142-151.	11.8	154
9	A dynamic and self-crosslinked polysaccharide hydrogel with autonomous self-healing ability. Soft Matter, 2015, 11, 3971-3976.	1.2	147
10	High strength films with gas-barrier fabricated from chitin solution dissolved at low temperature. Journal of Materials Chemistry A, 2013, 1, 1867-1874.	5.2	144
11	N-doped hierarchically porous carbon for highly efficient metal-free catalytic activation of peroxymonosulfate in water: A non-radical mechanism. Chemosphere, 2019, 216, 545-555.	4.2	133
12	Electroaddressing of Cell Populations by Coâ€Ðeposition with Calcium Alginate Hydrogels. Advanced Functional Materials, 2009, 19, 2074-2080.	7.8	115
13	Biomimetic Approach to Confer Redox Activity to Thin Chitosan Films. Advanced Functional Materials, 2010, 20, 2683-2694.	7.8	109
14	A study of chitosan hydrogel with embedded mesoporous silica nanoparticles loaded by ibuprofen as a dual stimuli-responsive drug release system for surface coating of titanium implants. Colloids and Surfaces B: Biointerfaces, 2014, 123, 657-663.	2.5	102
15	Recyclable Saccharomyces cerevisiae loaded nanofibrous mats with sandwich structure constructing via bio-electrospraying for heavy metal removal. Journal of Hazardous Materials, 2017, 324, 365-372.	6.5	95
16	Trichloroacetic acid-modulated synthesis of polyoxometalate@UiO-66 for selective adsorption of cationic dyes. Journal of Colloid and Interface Science, 2018, 516, 274-283.	5.0	88
17	Chitosan to Connect Biology to Electronics: Fabricating the Bio-Device Interface and Communicating Across This Interface. Polymers, 2015, 7, 1-46.	2.0	87
18	Pectin/lysozyme bilayers layer-by-layer deposited cellulose nanofibrous mats for antibacterial application. Carbohydrate Polymers, 2015, 117, 687-693.	5.1	86

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19	Enhanced physical and biological properties of silk fibroin nanofibers by layer-by-layer deposition of chitosan and rectorite. Journal of Colloid and Interface Science, 2018, 523, 208-216.	5.0	75
20	Antibacterial hydrogel coating by electrophoretic co-deposition of chitosan/alkynyl chitosan. Carbohydrate Polymers, 2013, 98, 1547-1552.	5.1	74
21	Electrochemically stimulated drug release from dual stimuli responsive chitin hydrogel. Journal of Materials Chemistry B, 2013, 1, 1729.	2.9	74
22	Bio-inspired redox-cycling antimicrobial film for sustained generation of reactive oxygen species. Biomaterials, 2018, 162, 109-122.	5.7	72
23	Construction of horizontal stratum landform-like composite foams and their methyl orange adsorption capacity. Applied Surface Science, 2017, 397, 133-143.	3.1	70
24	Electrochemical writing on edible polysaccharide films for intelligent food packaging. Carbohydrate Polymers, 2018, 186, 236-242.	5.1	69
25	Layer-by-layer immobilization of quaternized carboxymethyl chitosan/organic rectorite and alginate onto nanofibrous mats and their antibacterial application. Carbohydrate Polymers, 2015, 121, 428-435.	5.1	68
26	Chitosan/tannic acid bilayers layer-by-layer deposited cellulose nanofibrous mats for antibacterial application. International Journal of Biological Macromolecules, 2019, 139, 191-198.	3.6	68
27	Coding for hydrogel organization through signal guided self-assembly. Soft Matter, 2014, 10, 465-469.	1.2	66
28	Fabrication of cellulose nanofibers from waste brown algae and their potential application as milk thickeners. Food Hydrocolloids, 2018, 79, 473-481.	5.6	66
29	Layer-by-layer immobilization of amphoteric carboxymethyl chitosan onto biocompatible silk fibroin nanofibrous mats. Carbohydrate Polymers, 2019, 210, 9-16.	5.1	66
30	Incorporating platelet-rich plasma into coaxial electrospun nanofibers for bone tissue engineering. International Journal of Pharmaceutics, 2018, 547, 656-666.	2.6	64
31	Acrylic acid-grafted pre-plasma nanofibers for efficient removal of oil pollution from aquatic environment. Journal of Hazardous Materials, 2019, 371, 165-174.	6.5	64
32	Homogeneous synthesis and characterization of quaternized chitin in NaOH/urea aqueous solution. Carbohydrate Polymers, 2012, 87, 422-426.	5.1	63
33	Chitosan-rectorite nanospheres embedded aminated polyacrylonitrile nanofibers via shoulder-to-shoulder electrospinning and electrospraying for enhanced heavy metal removal. Applied Surface Science, 2018, 437, 294-303.	3.1	63
34	Core-shell Prussian blue analogues@ poly(m-phenylenediamine) as efficient peroxymonosulfate activators for degradation of Rhodamine B with reduced metal leaching. Journal of Colloid and Interface Science, 2019, 534, 586-594.	5.0	63
35	Construction of cellulose nanofibers/quaternized chitin/organic rectorite composites and their application as wound dressing materials. Biomaterials Science, 2019, 7, 2571-2581.	2.6	62
36	Flexible Polysaccharide Hydrogel with pHâ€Regulated Recovery of Selfâ€Healing and Mechanical Properties. Macromolecular Materials and Engineering, 2017, 302, 1700221.	1.7	59

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37	Incorporating chitin derived glucosamine sulfate into nanofibers via coaxial electrospinning for cartilage regeneration. Carbohydrate Polymers, 2020, 229, 115544.	5.1	53
38	Injectable drug-loaded polysaccharide hybrid hydrogels for hemostasis. RSC Advances, 2019, 9, 36858-36866.	1.7	52
39	Chitin-based fast responsive pH sensitive microspheres for controlled drug release. Carbohydrate Polymers, 2014, 102, 413-418.	5.1	51
40	Controllable immobilization of naringinase on electrospun cellulose acetate nanofibers and their application to juice debittering. International Journal of Biological Macromolecules, 2017, 98, 630-636.	3.6	50
41	Electro-molecular Assembly: Electrical Writing of Information into an Erasable Polysaccharide Medium. ACS Applied Materials & Interfaces, 2016, 8, 19780-19786.	4.0	49
42	Janus Fibrous Mats Based Suspended Type Evaporator for Salt Resistant Solar Desalination and Salt Recovery. Small, 2022, 18, e2107156.	5.2	48
43	Compartmentalized Multilayer Hydrogel Formation Using a Stimulus-Responsive Self-Assembling Polysaccharide. ACS Applied Materials & Interfaces, 2014, 6, 2948-2957.	4.0	47
44	Chitosan-Coated Wires: Conferring Electrical Properties to Chitosan Fibers. Biomacromolecules, 2009, 10, 858-864.	2.6	46
45	Cooperative performance of chitin whisker and rectorite fillers on chitosan films. Carbohydrate Polymers, 2011, 85, 747-752.	5.1	46
46	Electrochemical deposition to construct a nature inspired multilayer chitosan/layered double hydroxides hybrid gel for stimuli responsive release of protein. Journal of Materials Chemistry B, 2015, 3, 7577-7584.	2.9	46
47	Electrical Programming of Soft Matter: Using Temporally Varying Electrical Inputs To Spatially Control Self Assembly. Biomacromolecules, 2018, 19, 364-373.	2.6	46
48	Electroassembly of Chitin Nanoparticles to Construct Freestanding Hydrogels and High Porous Aerogels for Wound Healing. ACS Applied Materials & Interfaces, 2019, 11, 34766-34776.	4.0	46
49	Synthesis of polyimide-modified carbon nanotubes as catalyst for organic pollutant degradation via production of singlet oxygen with peroxymonosulfate without light irradiation. Journal of Hazardous Materials, 2020, 382, 120993.	6.5	45
50	Recent advances in chitosan-based self-healing materials. Research on Chemical Intermediates, 2018, 44, 4827-4840.	1.3	44
51	An implantable and versatile piezoresistive sensor for the monitoring of humanâ€“machine interface interactions and the dynamical process of nerve repair. Nanoscale, 2019, 11, 21103-21118.	2.8	44
52	Reagentless Protein Assembly Triggered by Localized Electrical Signals. Advanced Materials, 2009, 21, 984-988.	11.1	43
53	Electrobiofabrication: electrically based fabrication with biologically derived materials. Biofabrication, 2019, 11, 032002.	3.7	43
54	Antimicrobial application of nanofibrous mats self-assembled with chitosan and epigallocatechin gallate. Colloids and Surfaces B: Biointerfaces, 2016, 145, 643-652.	2.5	42

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55	Chitosan-rectorite nanospheres immobilized on polystyrene fibrous mats via alternate electrospinning/electrospraying techniques for copper ions adsorption. Applied Surface Science, 2017, 426, 545-553.	3.1	42
56	Incorporation of lysozyme-rectorite composites into chitosan films for antibacterial properties enhancement. International Journal of Biological Macromolecules, 2017, 102, 789-795.	3.6	41
57	Remote controlled drug release from multi-functional Fe3O4/GO/Chitosan microspheres fabricated by an electrospray method. Colloids and Surfaces B: Biointerfaces, 2017, 151, 354-362.	2.5	40
58	Adsorption of natural composite sandwich-like nanofibrous mats for heavy metals in aquatic environment. Journal of Colloid and Interface Science, 2019, 539, 533-544.	5.0	40
59	Adsorption of chromium (VI) on a novel quaternized chitosan resin. Journal of Applied Polymer Science, 2003, 90, 505-510.	1.3	39
60	Redox Is a Global Biodevice Information Processing Modality. Proceedings of the IEEE, 2019, 107, 1402-1424.	16.4	37
61	Inâ€Film Bioprocessing and Immunoanalysis with Electroaddressable Stimuliâ€Responsive Polysaccharides. Advanced Functional Materials, 2010, 20, 1645-1652.	7.8	36
62	Nitrogen doped microporous carbon nanospheres derived from chitin nanogels as attractive materials for supercapacitors. RSC Advances, 2019, 9, 10976-10982.	1.7	36
63	Chitosan and collagen layer-by-layer assembly modified oriented nanofibers and their biological properties. Carbohydrate Polymers, 2021, 254, 117438.	5.1	35
64	Ion-responsive chitosan hydrogel actuator inspired by carrotwood seed pod. Carbohydrate Polymers, 2022, 276, 118759.	5.1	34
65	Characterization and cytotoxicity study of nanofibrous mats incorporating rectorite and carbon nanotubes. RSC Advances, 2014, 4, 33355.	1.7	33
66	Preparation of magnetic and fluorescent bifunctional chitosan nanoparticles for optical determination of copper ion. Mikrochimica Acta, 2012, 178, 413-419.	2.5	32
67	Electrical signals guided entrapment and controlled release of antibiotics on titanium surface. Journal of Biomedical Materials Research - Part A, 2013, 101A, 1373-1378.	2.1	32
68	Electrodeposition of a biopolymeric hydrogel in track-etched micropores. Soft Matter, 2013, 9, 2131.	1.2	30
69	Emerging chitin nanogels/rectorite nanocomposites for safe and effective hemorrhage control. Journal of Materials Chemistry B, 2019, 7, 5096-5103.	2.9	30
70	Electrochemical synthesis of chitosan/silver nanoparticles multilayer hydrogel coating with pH-dependent controlled release capability and antibacterial property. Colloids and Surfaces B: Biointerfaces, 2021, 202, 111711.	2.5	30
71	Protein addressing on patterned microchip by coupling chitosan electrodeposition and â€˜electro-clickâ€™ chemistry. Biofabrication, 2013, 5, 041001.	3.7	29
72	Electrical Writing onto a Dynamically Responsive Polysaccharide Medium: Patterning Structure and Function into a Reconfigurable Medium. Advanced Functional Materials, 2018, 28, 1803139.	7.8	27

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73	Electrical signal guided click coating of chitosan hydrogel on conductive surface. RSC Advances, 2014, 4, 13477.	1.7	26
74	Catechol-Based Capacitor for Redox-Linked Bioelectronics. ACS Applied Electronic Materials, 2019, 1, 1337-1347.	2.0	26
75	Removal of copper(II) from an aqueous solution with copper(II)â€imprinted chitosan microspheres. Journal of Applied Polymer Science, 2013, 128, 3631-3638.	1.3	25
76	Hydrogel Patterning with Catechol Enables Networked Electron Flow. Advanced Functional Materials, 2021, 31, 2007709.	7.8	24
77	Chitosan-based recyclable composite aerogels for the photocatalytic degradation of rhodamine B. Carbohydrate Polymers, 2021, 273, 118559.	5.1	24
78	Electrochemically induced reversible formation of carboxymethyl chitin hydrogel and tunable protein release. New Journal of Chemistry, 2015, 39, 1253-1259.	1.4	23
79	Efficient incorporation of diverse components into metal organic frameworks via metal phenolic networks. Chemical Communications, 2017, 53, 10831-10834.	2.2	23
80	TiO2/rectorite-trapped cellulose composite nanofibrous mats for multiple heavy metal adsorption. International Journal of Biological Macromolecules, 2021, 183, 245-253.	3.6	23
81	Production of thick uniform-coating films containing rectorite on nanofibers through the use of an automated coating machine. Colloids and Surfaces B: Biointerfaces, 2017, 149, 271-279.	2.5	22
82	Low-temperature plasma treatment-assisted layer-by-layer self-assembly for the modification of nanofibrous mats. Journal of Colloid and Interface Science, 2019, 540, 535-543.	5.0	22
83	Electrodeposition to construct free-standing chitosan/layered double hydroxides hydro-membrane for electrically triggered protein release. Colloids and Surfaces B: Biointerfaces, 2017, 158, 474-479.	2.5	21
84	Electrical Writing Induced Covalent Cross-Linking on Hydrogel for Multidimensional Structural Information Storage. ACS Applied Materials & Interfaces, 2021, 13, 36538-36547.	4.0	21
85	Facile preparation of magnetic metal organic frameworks coreâ€“shell nanoparticles for stimuli-responsive drug carrier. Nanotechnology, 2017, 28, 495601.	1.3	20
86	Spherical and rodlike inorganic nanoparticle regulated the orientation of carbon nanotubes in polymer nanofibers. Chemical Physics Letters, 2016, 650, 82-87.	1.2	19
87	Pore volume and distribution regulation of highly nanoporous titanium dioxide nanofibers and their photovoltaic properties. Journal of Colloid and Interface Science, 2017, 490, 74-83.	5.0	19
88	Toward scalable fabrication of electrochemical paper sensor without surface functionalization. Npj Flexible Electronics, 2022, 6, .	5.1	18
89	Electrodeposition to construct mechanically robust chitosan-based multi-channel conduits. Colloids and Surfaces B: Biointerfaces, 2018, 163, 412-418.	2.5	17
90	Wire templated electrodeposition of vessel-like structured chitosan hydrogel by using a pulsed electrical signal. Soft Matter, 2020, 16, 9471-9478.	1.2	17

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91	Removal of organic contaminants by starch-derived porous carbon via peroxymonosulfate activation: The role of N doping and Fe/Mn loading. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 649, 129520.	2.3	17
92	Preparation of novel magnetic and fluorescent CSâ€“Fe3O4@CdSeS nanoparticles for simultaneous removal and optical determination of trace copper ions. New Journal of Chemistry, 2014, 38, 6095-6102.	1.4	16
93	Fusing Sensor Paradigms to Acquire Chemical Information: An Integrative Role for Smart Biopolymeric Hydrogels. Advanced Healthcare Materials, 2016, 5, 2595-2616.	3.9	16
94	Rectorite-intercalated nanoparticles for improving controlled release of doxorubicin hydrochloride. International Journal of Biological Macromolecules, 2017, 101, 815-822.	3.6	16
95	Egg source natural proteins LBL modified cellulose nanofibrous mats and their cellular compatibility. Carbohydrate Polymers, 2019, 213, 329-337.	5.1	16
96	Carboxymethyl chitosan assembled piezoelectric biosensor for rapid and label-free quantification of immunoglobulin Y. Carbohydrate Polymers, 2022, 290, 119482.	5.1	16
97	Electrodeposition induced covalent cross-linking of chitosan for electrofabrication of hydrogel contact lenses. Carbohydrate Polymers, 2022, 292, 119678.	5.1	16
98	Catechol-chitosan redox capacitor for added amplification in electrochemical immunoanalysis. Colloids and Surfaces B: Biointerfaces, 2018, 169, 470-477.	2.5	15
99	Electrical cuing of chitosan's mesoscale organization. Reactive and Functional Polymers, 2020, 148, 104492.	2.0	15
100	Electrofabrication of flexible and mechanically strong tubular chitosan implants for peripheral nerve regeneration. Journal of Materials Chemistry B, 2021, 9, 5537-5546.	2.9	15
101	Pectin based composite nanofabrics incorporated with layered silicate and their cytotoxicity. International Journal of Biological Macromolecules, 2016, 93, 123-130.	3.6	14
102	Catecholâ€Based Molecular Memory Film for Redox Linked Bioelectronics. Advanced Electronic Materials, 2020, 6, 2000452.	2.6	14
103	Electrodeposition of Polysaccharide and Protein Hydrogels for Biomedical Applications. Current Medicinal Chemistry, 2020, 27, 2610-2630.	1.2	12
104	Highly sensitive formaldehyde sensors based on CuO/ZnO composite nanofibrous mats using porous cellulose acetate fibers as templates. International Journal of Biological Macromolecules, 2022, 206, 653-660.	3.6	12
105	Structure-, dimension-, and particle size-engineering toward highly efficient supported nanoparticulate metal catalysts. Journal of Materials Chemistry A, 2018, 6, 18561-18570.	5.2	11
106	One-step electrochemically induced counterion exchange to construct free-standing carboxylated cellulose nanofiber/metal composite hydrogels. Carbohydrate Polymers, 2021, 254, 117464.	5.1	11
107	Antifatigue Hydration-Induced Polysaccharide Hydrogel Actuators Inspired by Crab Joint Wrinkles. ACS Applied Materials & Interfaces, 2022, 14, 6251-6260.	4.0	11
108	Studies on interaction and illumination damage of CS-Fe3O4@ZnS:Mn to bovine serum albumin. Journal of Nanoparticle Research, 2013, 15, 1.	0.8	10

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109	Antimicrobial activity and cytotoxicity of nanofibrous mats immobilized with polysaccharides-rectorite based nanogels. Colloids and Surfaces B: Biointerfaces, 2015, 133, 370-377.	2.5	10
110	One-step electrodeposition of Janus chitosan coating for metallic implants with anti-corrosion properties. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 641, 128498.	2.3	10
111	A simple mechanical agitation method to fabricate chitin nanogels directly from chitin solution and subsequent surface modification. Journal of Materials Chemistry B, 2019, 7, 2226-2232.	2.9	9
112	A multifunctional dualâ€shell magnetic nanocomposite with nearâ€infrared light response for synergistic chemoâ€thermal tumor therapy. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2021, 109, 841-852.	1.6	9
113	Tubular chitosan hydrogels with a tuneable lamellar structure programmed by electrical signals. Chemical Communications, 2022, 58, 5781-5784.	2.2	9
114	Diffusion-layer-free air cathode based on ionic conductive hydrogel for microbial fuel cells. Science of the Total Environment, 2020, 743, 140836.	3.9	8
115	Antibacterial and antioxidant chitosan nanoparticles improve the preservation effect for donor kidneys in vitro. Carbohydrate Polymers, 2022, 287, 119326.	5.1	8
116	Electrical Writing to Threeâ€Dimensional Pattern Dynamic Polysaccharide Hydrogel for Programmable Shape Deformation. Macromolecular Rapid Communications, 2021, 42, e2000342.	2.0	7
117	Catechol Patterned Film Enables the Enzymatic Detection of Glucose with Cell Phone Imaging. ACS Sustainable Chemistry and Engineering, 2021, 9, 14836-14845.	3.2	7
118	System-Level Network Analysis of a Catechol Component for Redox Bioelectronics. ACS Applied Electronic Materials, 2022, 4, 2490-2501.	2.0	7
119	Hollow chitosan hydrogel tube with controllable wrinkled pattern via film-to-tube fabrication. Carbohydrate Polymers, 2022, 287, 119333.	5.1	6
120	Removal of Cu²⁺from aqueous solution by Chitosan/Rectorite nanocomposite microspheres. Desalination and Water Treatment, 2014, 52, 5883-5890.	1.0	5
121	Presence of nano-sized chitosan-layered silicate composites protects against toxicity induced by lead ions. Carbohydrate Polymers, 2017, 158, 1-10.	5.1	5
122	Hydroxypropyl Chitosan/Soy Protein Isolate Conduits Promote Peripheral Nerve Regeneration. Tissue Engineering - Part A, 2022, 28, 225-238.	1.6	5
123	One-step programmable electrofabrication of chitosan asymmetric hydrogels with 3D shape deformation. Carbohydrate Polymers, 2022, 277, 118888.	5.1	4
124	Electrical signals regulate the release of insulin from electrodeposited chitosan composite hydrogel: An in vitro and in vivo study. Journal of Biomedical Materials Research - Part B Applied Biomaterials, 2022, 110, 2464-2471.	1.6	2