Zhiguo Wang

List of Publications by Year
in descending order

71	2,255	186209 28	233338 45
papers	citations	h-index	g-index

72	72	72	2169
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	3D porous chitin sponge with high absorbency, rapid shape recovery, and excellent antibacterial activities for noncompressible wound. Chemical Engineering Journal, 2020, 388, 124169.	6.6	114
2	Dissolution of Beech and Spruce Milled Woods in LiCl/DMSO. Journal of Agricultural and Food Chemistry, 2009, 57, 6167-6170.	2.4	100
3	Robust Self-Standing Chitin Nanofiber/Nanowhisker Hydrogels with Designed Surface Charges and Ultralow Mass Content via Gas Phase Coagulation. Biomacromolecules, 2016, 17, 3773-3781.	2.6	96
4	Cellulose gel and aerogel from LiCl/DMSO solution. Cellulose, 2012, 19, 393-399.	2.4	91
5	Preparation of 3D printable micro/nanocellulose-polylactic acid (MNC/PLA) composite wire rods with high MNC constitution. Industrial Crops and Products, 2017, 109, 889-896.	2.5	87
6	High-purity lignin isolated from poplar wood meal through dissolving treatment with deep eutectic solvents. Royal Society Open Science, 2019, 6, 181757.	1.1	85
7	Esterification of cellulose using carboxylic acid-based deep eutectic solvents to produce high-yield cellulose nanofibers. Carbohydrate Polymers, 2021, 251, 117018.	5.1	84
8	Shrimp Shell-Inspired Antifouling Chitin Nanofibrous Membrane for Efficient Oil/Water Emulsion Separation with In Situ Removal of Heavy Metal Ions. ACS Sustainable Chemistry and Engineering, 2019, 7, 2064-2072.	3.2	73
9	Cellulose Nanofibers Prepared Using the TEMPO/Laccase/O₂ System. Biomacromolecules, 2017, 18, 288-294.	2.6	71
10	Lignin-Directed Control of Silver Nanoparticles with Tunable Size in Porous Lignocellulose Hydrogels and Their Application in Catalytic Reduction. ACS Sustainable Chemistry and Engineering, 2020, 8, 12655-12663.	3.2	69
11	Preparation of Zinc Oxide-Starch Nanocomposite and Its Application on Coating. Nanoscale Research Letters, 2016, 11, 200.	3.1	68
12	High Axial Ratio Nanochitins for Ultrastrong and Shape-Recoverable Hydrogels and Cryogels via Ice Templating. ACS Nano, 2019, 13, 2927-2935.	7.3	68
13	Preparation of High-Strength Sustainable Lignocellulose Gels and Their Applications for Antiultraviolet Weathering and Dye Removal. ACS Sustainable Chemistry and Engineering, 2019, 7, 2998-3009.	3.2	60
14	Macro-/nanoporous Al-doped ZnO/cellulose composites based on tunable cellulose fiber sizes for enhancing photocatalytic properties. Carbohydrate Polymers, 2020, 250, 116873.	5.1	57
15	Ampholytic Chitosan/Alginate Composite Nanofibrous Membranes with Super Anti-Crude Oil-Fouling Behavior and Multifunctional Oil/Water Separation Properties. ACS Sustainable Chemistry and Engineering, 2019, 7, 15463-15470.	3.2	55
16	Rapid dissolution of cellulose in an AlCl₃/ZnCl₂ aqueous system at room temperature and its versatile adaptability in functional materials. Green Chemistry, 2022, 24, 885-897.	4.6	54
17	Construction of Agâ€“ZnO/cellulose nanocomposites via tunable cellulose size for improving photocatalytic performance. Journal of Cleaner Production, 2021, 288, 125089.	4.6	47
18	Dissolution of Lignocelluloses with a High Lignin Content in a N-Methylmorpholine-N-oxide Monohydrate Solvent System via Simple Glycerol-Swelling and Mechanical Pretreatments. Journal of Agricultural and Food Chemistry, 2017, 65, 9587-9594.	2.4	42

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19	Synthesis of lignocellulose-based composite hydrogel as a novel biosorbent for Cu2+ removal. Cellulose, 2018, 25, 7315-7328.	2.4	42
20	Contribution of hemicellulose to cellulose nanofiber-based nanocomposite films with enhanced strength, flexibility and UV-blocking properties. Cellulose, 2019, 26, 6023-6034.	2.4	42
21	Contribution of lignin to the microstructure and physical performance of three-dimensional lignocellulose hydrogels. Cellulose, 2019, 26, 2375-2388.	2.4	38
22	Cellulose controlled zinc oxide nanoparticles with adjustable morphology and their photocatalytic performances. Carbohydrate Polymers, 2021, 259, 117752.	5.1	36
23	Strong water-resistant, UV-blocking cellulose/glucomannan/lignin composite films inspired by natural LCC bonds. Carbohydrate Polymers, 2022, 281, 119083.	5.1	36
24	Adsorption of Reactive Blue 19 from aqueous solution by chitin nanofiber-/nanowhisker-based hydrogels. RSC Advances, 2018, 8, 15804-15812.	1.7	35
25	Investigation of Pretreatment Methods for Improving TEMPO-Mediated Oxidation and Nanofibrillation Efficiency of Î±-Chitin. ACS Sustainable Chemistry and Engineering, 2019, 7, 19463-19473.	3.2	33
26	A Facile Approach for the Preparation of Nano-size Zinc Oxide in Water/Glycerol with Extremely Concentrated Zinc Sources. Nanoscale Research Letters, 2018, 13, 202.	3.1	32
27	Preparation and Hydrogel Properties of pH-Sensitive Amphoteric Chitin Nanocrystals. Journal of Agricultural and Food Chemistry, 2018, 66, 11372-11379.	2.4	31
28	Preparation of nanocellulose/filter paper (NC/FP) composite membranes for high-performance filtration. Cellulose, 2019, 26, 1183-1194.	2.4	30
29	Preparation of Natural Multicompatible Silk Nanofibers by Green Deep Eutectic Solvent Treatment. ACS Sustainable Chemistry and Engineering, 2020, 8, 4499-4510.	3.2	30
30	DDA (degree of deacetylation) and pH-dependent antibacterial properties of chitin nanofibers against Escherichia coli. Cellulose, 2019, 26, 2279-2290.	2.4	29
31	Preparation of ZnOâ€“cellulose nanocomposites by different cellulose solution systems with a colloid mill. Cellulose, 2016, 23, 3703-3715.	2.4	26
32	Preparation of Silk Nanowhisker-Composited Amphoteric Cellulose/Chitin Nanofiber Membranes. Biomacromolecules, 2020, 21, 1625-1635.	2.6	26
33	Contribution of lignin in esterified lignocellulose nanofibers (LCNFs) prepared by deep eutectic solvent treatment to the interface compatibility of LCNF/PLA composites. Industrial Crops and Products, 2021, 166, 113460.	2.5	26
34	Dissolution of Ethylenediamine Pretreated Pulp with High Lignin Content in LiCl/DMSO without Milling. Journal of Wood Chemistry and Technology, 2010, 30, 219-229.	0.9	24
35	Effect of lignin on the performance of biodegradable cellulose aerogels made from wheat straw pulp-LiCl/DMSO solution. Cellulose, 2020, 27, 879-894.	2.4	23
36	Effects of LiCl/DMSO dissolution and enzymatic hydrolysis on the chemical composition and lignin structure of rice straw. Biomass and Bioenergy, 2014, 71, 357-362.	2.9	22

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37	Reinforced chitosan beads by chitin nanofibers for the immobilization of Î²-glucosidase. RSC Advances, 2015, 5, 93331-93336.	1.7	21
38	Effect of complete dissolution in LiCl/DMSO on the isolation and characteristics of lignin from wheat straw internode. Industrial Crops and Products, 2015, 74, 703-711.	2.5	20
39	The utilization of soybean straw III: Isolation and characterization of lignin from soybean straw. Biomass and Bioenergy, 2016, 94, 12-20.	2.9	20
40	Lignocellulose nanofiber/polylactic acid (LCNF/PLA) composite with internal lignin for enhanced performance as 3D printable filament. Industrial Crops and Products, 2022, 178, 114590.	2.5	20
41	Characterization of lignocellulose aerogels fabricated using a LiCl/DMSO solution. Industrial Crops and Products, 2019, 131, 293-300.	2.5	19
42	Salt-Induced Colloidal Destabilization, Separation, Drying, and Redispersion in Aqueous Phase of Cationic and Anionic Nanochitins. Journal of Agricultural and Food Chemistry, 2018, 66, 9189-9198.	2.4	17
43	One-step recovery of noble metal ions from oil/water emulsions by chitin nanofibrous membrane for further recycling utilization. Carbohydrate Polymers, 2019, 223, 115064.	5.1	16
44	Preparation of antibacterial self-reinforced zinc oxideâ€“cellulose composite by the synthesis of ZnO in partially dissolved cellulose. Cellulose, 2016, 23, 3199-3208.	2.4	15
45	High-yield preparation of cellulose nanofiber by small quantity acid assisted milling in glycerol. Cellulose, 2019, 26, 3735-3745.	2.4	15
46	The Utilization of Soybean Straw. I. Fiber Morphology and Chemical Characteristics. BioResources, 2015, 10, .	0.5	14
47	Analysis of Lignin Aromatic Structure in Wood Fractions Based on IR Spectroscopy. Journal of Wood Chemistry and Technology, 2016, 36, 377-382.	0.9	13
48	Self-Reinforced Grease-Resistant Sheets Produced by Paper Treatment with Zinc Chloride Solution. BioResources, 2015, 10, .	0.5	12
49	Strengthened cellulosic gels by the chemical gelation of cellulose via crosslinking with TEOS. Cellulose, 2019, 26, 9819-9829.	2.4	12
50	Porous cellulose gel-regulated flower-like ZnO-Cu nanoparticles for enhancing interfacial catalysis activity and recyclability in environmental catalysis. Applied Surface Science, 2022, 597, 153737.	3.1	12
51	Facile fabrication of multiscale ZnO/cellulose composite membrane towards enhancing photocatalytic and mechanical properties. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2022, 636, 128156.	2.3	11
52	Botryoidal nanolignin channel stabilized ultrasmall PdNP incorporating with filter membrane for enhanced removal of Cr(VI) via synergetic filtration and catalysis. Separation and Purification Technology, 2022, 296, 121409.	3.9	11
53	Fractionation and Characterization of Wood Cell Wall Components ofFagus crenataBlume Using LiCl/DMSO Solvent System. Journal of Wood Chemistry and Technology, 2013, 33, 188-196.	0.9	10
54	Versatile protonic acid mediated preparation of partially deacetylated chitin nanofibers/nanowhiskers and their assembling of nano-structured hydro- and aero-gels. Cellulose, 2017, 24, 5443-5454.	2.4	10

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55	Cellulose laurate ester aerogel as a novel absorbing material for removing pollutants from organic wastewater. Cellulose, 2017, 24, 5069-5078.	2.4	10
56	Biomass-derived paper-based nanolignin/palladium nanoparticle composite film for catalytic reduction of hexavalent chromium. Industrial Crops and Products, 2021, 165, 113439.	2.5	10
57	Cellulose template designed porous ZnO based catalysts with different valence copper for solar photocatalytic CO2 conversion. Industrial Crops and Products, 2022, 186, 115223.	2.5	10
58	Hemicellulose Composition in Different Cell Wall Fractions Obtained using a DMSO/LiCl Wood Solvent System and Enzyme Hydrolysis. Journal of Wood Chemistry and Technology, 2016, 36, 56-62.	0.9	8
59	Physical nanochitin/microemulsion composite hydrogels for hydrophobic Nile Red release under in vitro physiological conditions. Cellulose, 2019, 26, 1221-1230.	2.4	8
60	Simple synthesis of self-assembled nacre-like materials with 3D periodic layers from nanochitin via hydrogelation and mineralization. Green Chemistry, 2022, 24, 1308-1317.	4.6	8
61	Cellulose Esterification with Octanoyl Chloride and its Application to Films and Aerogels. BioResources, 2014, 9, .	0.5	7
62	The Utilization of Soybean Straw. II. Dissolution & Regeneration of Soybean Straw in LiCl/DMSO. BioResources, 2015, 10, 2305-2317.	0.5	7
63	Fabrication of thermo-sensitive lignocellulose hydrogels with switchable hydrophilicity and hydrophobicity through an SIPN strategy. RSC Advances, 2019, 9, 29600-29608.	1.7	7
64	Facile preparation of nanochitins via acid assisted colloid milling in glycerol. Cellulose, 2020, 27, 6935-6944.	2.4	7
65	Direct fractionation of wood chips by deep eutectic solvent facilitated pulping technology and application for enzyme hydrolysis. Industrial Crops and Products, 2021, 171, 113927.	2.5	7
66	Isolation of Cellulolytic Enzyme Lignin from Rice Straw Enhanced by LiCl/DMSO Dissolution and Regeneration. BioResources, 2014, 9, .	0.5	5
67	Application of poly(lactic acid)-grafted cellulose nanofibers as both inhibitor and reinforcement for 3D-printable tough polydicyclopentadiene composites via frontal ring-opening metathesis polymerization. Industrial Crops and Products, 2022, 186, 115217.	2.5	4
68	All-weather Agâ€“ZnO/cellulose photocatalysts tailored by surface groups and aspect ratios of cellulose nanofibers. Cellulose, 2022, 29, 2289-2304.	2.4	3
69	A honeycomb-like hydrogel in-situ constructed by Streptococcus zooepidemicus and TOCN for the proliferation of bacteria. Carbohydrate Polymers, 2022, 281, 119099.	5.1	2
70	Complete Dissolution of Ball-Milled Masson Pine Using an Aqueous Sodium Hydroxide Solvent. BioResources, 2016, 11, .	0.5	1
71	Preparation and Adsorption Performance of Cellulose-graft-Polycaprolactone/Polycaprolactone Porous Material. BioResources, 2017, 12, .	0.5	1