Huiyang Bian

List of Publications by Year
in descending order

94 papers	4,742 citations	87843 38 h-index	106281 65 g-index
94 all docs	94 docs citations	94 times ranked	4617 citing authors

#	Article	IF	Citations
1	Rapid and near-complete dissolution of wood lignin at â‰80Â°C by a recyclable acid hydrotrope. Science Advances, 2017, 3, e1701735.	4.7	276
2	Nanocellulose as green dispersant for two-dimensional energy materials. Nano Energy, 2015, 13, 346-354.	8.2	270
3	Integrated production of lignin containing cellulose nanocrystals (LCNC) and nanofibrils (LCNF) using an easily recyclable di-carboxylic acid. Carbohydrate Polymers, 2017, 167, 167-176.	5.1	184
4	Biomass-Derived Carbon Heterostructures Enable Environmentally Adaptive Wideband Electromagnetic Wave Absorbers. Nano-Micro Letters, 2022, 14, 11.	14.4	169
5	Shape memory aerogels from nanocellulose and polyethyleneimine as a novel adsorbent for removal of Cu(II) and Pb(II). Carbohydrate Polymers, 2018, 196, 376-384.	5.1	159
6	Producing wood-based nanomaterials by rapid fractionation of wood at 80 Â°C using a recyclable acid hydrotrope. Green Chemistry, 2017, 19, 3370-3379.	4.6	158
7	Lignin-Containing Cellulose Nanofibril-Reinforced Polyvinyl Alcohol Hydrogels. ACS Sustainable Chemistry and Engineering, 2018, 6, 4821-4828.	3.2	155
8	Superflexible Wood. ACS Applied Materials & Interfaces, 2017, 9, 23520-23527.	4.0	141
9	Clear Wood toward High-Performance Building Materials. ACS Nano, 2019, 13, 9993-10001.	7.3	138
10	Strong transparent magnetic nanopaper prepared by immobilization of Fe3O4 nanoparticles in a nanofibrillated cellulose network. Journal of Materials Chemistry A, 2013, 1, 15278.	5.2	104
11	Procuring the nano-scale lignin in prehydrolyzate as ingredient to prepare cellulose nanofibril composite film with multiple functions. Cellulose, 2020, 27, 9355-9370.	2.4	101
12	Hybridizing wood cellulose and graphene oxide toward high-performance fibers. NPG Asia Materials, 2015, 7, e150-e150.	3.8	95
13	Highly Conductive Microfiber of Graphene Oxide Templated Carbonization of Nanofibrillated Cellulose. Advanced Functional Materials, 2014, 24, 7366-7372.	7.8	94
14	Nanocellulose/Gelatin Composite Cryogels for Controlled Drug Release. ACS Sustainable Chemistry and Engineering, 2019, 7, 6381-6389.	3.2	94
15	Recyclable and Reusable Maleic Acid for Efficient Production of Cellulose Nanofibrils with Stable Performance. ACS Sustainable Chemistry and Engineering, 2019, 7, 20022-20031.	3.2	86
16	Contribution of lignin to the surface structure and physical performance of cellulose nanofibrils film. Cellulose, 2018, 25, 1309-1318.	2.4	85
17	Lignocellulosic nanofibrils produced using wheat straw and their pulping solid residue: From agricultural waste to cellulose nanomaterials. Waste Management, 2019, 91, 1-8.	3.7	85
18	Natural Cellulose Nanofibers As Sustainable Enhancers in Construction Cement. PLoS ONE, 2016, 11, e0168422.	1.1	79

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19	Regulating lignin content to obtain excellent bamboo-derived electromagnetic wave absorber with thermal stability. Chemical Engineering Journal, 2022, 430, 133178.	6.6	73
20	High wet-strength, thermally stable and transparent TEMPO-oxidized cellulose nanofibril film via cross-linking with poly-amide epichlorohydrin resin. RSC Advances, 2017, 7, 31567-31573.	1.7	69
21	Preparing printable bacterial cellulose based gelatin gel to promote in vivo bone regeneration. Carbohydrate Polymers, 2021, 270, 118342.	5.1	69
22	Improving cellulose nanofibrillation of waste wheat straw using the combined methods of prewashing, p-toluenesulfonic acid hydrolysis, disk grinding, and endoglucanase post-treatment. Bioresource Technology, 2018, 256, 321-327.	4.8	66
23	Thermally conductive, super flexible and flame-retardant BN-OH/PVA composite film reinforced by lignin nanoparticles. Journal of Materials Chemistry C, 2019, 7, 14159-14169.	2.7	66
24	Natural lignocellulosic nanofibril film with excellent ultraviolet blocking performance and robust environment resistance. International Journal of Biological Macromolecules, 2021, 166, 1578-1585.	3.6	66
25	Lignin nanoparticles as nano-spacers for tuning the viscoelasticity of cellulose nanofibril reinforced polyvinyl alcohol-borax hydrogel. European Polymer Journal, 2018, 107, 267-274.	2.6	65
26	Effect of fiber drying on properties of lignin containing cellulose nanocrystals and nanofibrils produced through maleic acid hydrolysis. Cellulose, 2017, 24, 4205-4216.	2.4	63
27	Highly fluorescent graphene quantum dots from biorefinery waste for tri-channel sensitive detection of Fe3+ ions. Journal of Hazardous Materials, 2021, 412, 125096.	6.5	62
28	Nanocellulose/Poly(2-(dimethylamino)ethyl methacrylate)Interpenetrating polymer network hydrogels for removal of Pb(II) and Cu(II) ions. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2018, 538, 474-480.	2.3	59
29	Chitin nanofibers as versatile bio-templates of zeolitic imidazolate frameworks for N-doped hierarchically porous carbon electrodes for supercapacitor. Carbohydrate Polymers, 2021, 251, 117107.	5.1	58
30	Surface enhanced Raman scattering substrate for the detection of explosives: Construction strategy and dimensional effect. Journal of Hazardous Materials, 2020, 387, 121714.	6.5	56
31	Comparison of mixed enzymatic pretreatment and post-treatment for enhancing the cellulose nanofibrillation efficiency. Bioresource Technology, 2019, 293, 122171.	4.8	54
32	Thermally Stable Cellulose Nanocrystals toward High-Performance 2D and 3D Nanostructures. ACS Applied Materials & Interfaces, 2017, 9, 28922-28929.	4.0	53
33	On-Demand Regulation of Lignocellulosic Nanofibrils Based on Rapid Fractionation Using Acid Hydrotrope: Kinetic Study and Characterization. ACS Sustainable Chemistry and Engineering, 2020, 8, 9569-9577.	3.2	53
34	Green, efficient extraction of bamboo hemicellulose using freeze-thaw assisted alkali treatment. Bioresource Technology, 2021, 333, 125107.	4.8	50
35	Lignin containing cellulose nanofibril production from willow bark at 80â€‰Â°C using a highly recyclable acid hydrotrope. Industrial Crops and Products, 2019, 129, 15-23.	2.5	46
36	Starch-Based Flexible Coating for Food Packaging Paper with Exceptional Hydrophobicity and Antimicrobial Activity. Polymers, 2018, 10, 1260.	2.0	41

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37	Diisocyanate modifiable commercial filter paper with tunable hydrophobicity, enhanced wet tensile strength and antibacterial activity. Carbohydrate Polymers, 2020, 248, 116791.	5.1	41
38	Recyclable deep eutectic solvent coupling sodium hydroxide post-treatment for boosting woody/herbaceous biomass conversion at mild condition. Bioresource Technology, 2021, 320, 124327.	4.8	41
39	ZnO nanoparticles enhanced hydrophobicity for starch film and paper. Materials Letters, 2018, 230, 207-210.	1.3	40
40	Effect of temperature on simultaneous separation and extraction of hemicellulose using p-toluenesulfonic acid treatment at atmospheric pressure. Bioresource Technology, 2022, 348, 126793.	4.8	40
41	Effects of preparation approaches on optical properties of self-assembled cellulose nanopapers. RSC Advances, 2017, 7, 10463-10468.	1.7	38
42	Manufacture of Highly Transparent and Hazy Cellulose Nanofibril Films via Coating TEMPO-Oxidized Wood Fibers. Nanomaterials, 2019, 9, 107.	1.9	38
43	Highly transparent and thermally stable cellulose nanofibril films functionalized with colored metal ions for ultraviolet blocking activities. Carbohydrate Polymers, 2019, 213, 10-16.	5.1	37
44	Thermally-induced cellulose nanofibril films with near-complete ultraviolet-blocking and improved water resistance. Carbohydrate Polymers, 2019, 223, 115050.	5.1	35
45	Electrochemical sensing of lead(II) by differential pulse voltammetry using conductive polypyrrole nanoparticles. Mikrochimica Acta, 2020, 187, 23.	2.5	35
46	Formaldehyde-free self-polymerization of lignin-derived monomers for synthesis of renewable phenolic resin. International Journal of Biological Macromolecules, 2021, 166, 1312-1319.	3.6	34
47	Highly Efficient Lignin Depolymerization via Effective Inhibition of Condensation during Polyoxometalate-Mediated Oxidation. Energy & Fuels, 2019, 33, 6483-6490.	2.5	32
48	Benzenesulfonic acid-based hydrotropic system for achieving lignocellulose separation and utilization under mild conditions. Bioresource Technology, 2021, 337, 125379.	4.8	32
49	Tailorable cellulose II nanocrystals (CNC II) prepared in mildly acidic lithium bromide trihydrate (MALBTH). Green Chemistry, 2021, 23, 2778-2791.	4.6	31
50	An antibacterial composite film based on cellulose acetate/TiO₂ nanoparticles. New Journal of Chemistry, 2020, 44, 20751-20758.	1.4	29
51	BNNS/PVA bilayer composite film with multiple-improved properties by the synergistic actions of cellulose nanofibrils and lignin nanoparticles. International Journal of Biological Macromolecules, 2020, 157, 259-266.	3.6	29
52	Enhancing physical performance and hydrophobicity of paper-based cellulosic material via impregnation with starch and PEI-KH560. Cellulose, 2018, 25, 1365-1375.	2.4	28
53	Poplar Hot Water Extract Enhances Barrier and Antioxidant Properties of Chitosan/Bentonite Composite Film for Packaging Applications. Polymers, 2019, 11, 1614.	2.0	28
54	Water-dispersible, biocompatible and fluorescent poly(ethylene glycol)-grafted cellulose nanocrystals. International Journal of Biological Macromolecules, 2020, 153, 46-54.	3.6	28

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55	Morphology control for tunable optical properties of cellulose nanofibrils films. Cellulose, 2018, 25, 5909-5918.	2.4	26
56	Direct Valorization of Lignocellulosic Biomass into Value-Added Chemicals by Polyoxometalate Catalyzed Oxidation under Mild Conditions. Industrial & Engineering Chemistry Research, 2019, 58, 22996-23004.	1.8	26
57	Thermally Conductive and Electrical Insulation BNNS/CNF Aerogel Nano-Paper. Polymers, 2019, 11, 660.	2.0	24
58	Enhancement of Hydrotropic Fractionation of Poplar Wood using Autohydrolysis and Disk Refining Pretreatment: Morphology and Overall Chemical Characterization. Polymers, 2019, 11, 685.	2.0	23
59	Starch-Based Composite Films with Enhanced Hydrophobicity, Thermal Stability, and UV-Shielding Efficacy Induced by Lignin Nanoparticles. Biomacromolecules, 2022, 23, 829-838.	2.6	23
60	Preparation and Characterization of Self-Reinforced Antibacterial and Oil-Resistant Paper Using a NaOH/Urea/ZnO Solution. PLoS ONE, 2015, 10, e0140603.	1.1	22
61	Fluorescent cellulose nanocrystals for the detection of lead ions in complete aqueous solution. Cellulose, 2019, 26, 9553-9565.	2.4	22
62	Lignocellulosic nanofibril aerogel via gas phase coagulation and diisocyanate modification for solvent absorption. Carbohydrate Polymers, 2022, 278, 119011.	5.1	22
63	Glyoxal improved functionalization of starch with AZC enhances the hydrophobicity, strength and UV blocking capacities of co-crosslinked polymer. European Polymer Journal, 2019, 110, 385-393.	2.6	20
64	Lignin Nanoparticle-Coated Celgard Separator for High-Performance Lithiumâ€"Sulfur Batteries. Polymers, 2019, 11, 1946.	2.0	20
65	Aerogel Perfusion-Prepared h-BN/CNF Composite Film with Multiple Thermally Conductive Pathways and High Thermal Conductivity. Nanomaterials, 2019, 9, 1051.	1.9	19
66	Characterization of lignocellulose aerogels fabricated using a LiCl/DMSO solution. Industrial Crops and Products, 2019, 131, 293-300.	2.5	19
67	Enhancement of the heat conduction performance of boron nitride/cellulosic fibre insulating composites. PLoS ONE, 2018, 13, e0200842.	1.1	18
68	Cationic cellulose nano-fibers (CCNF) as versatile flocculants of wood pulp for high wet web performance. Carbohydrate Polymers, 2020, 229, 115434.	5.1	18
69	Programmable Arrays of â€œMicroâ€Bubbleâ€•Constructs via Selfâ€Encapsulation. Advanced Functional Materials, 2014, 24, 4364-4373.	7.8	17
70	Green and Low-cost Production of Thermally Stable and Carboxylated Cellulose Nanocrystals and Nanofibrils Using Highly Recyclable Dicarboxylic Acids. Journal of Visualized Experiments, 2017, , .	0.2	17
71	Resource utilization and ionization modification of waste starch from the recycling process of old corrugated cardboard paper. Journal of Environmental Management, 2020, 271, 111031.	3.8	17
72	Near-complete enzymatic hydrolysis efficiency of Miscanthus using hydrotropic fractionation at atmospheric pressure. Industrial Crops and Products, 2020, 149, 112365.	2.5	17

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73	Promoting h-BN dispersion in cellulose-based composite by lignosulfonate for regulatable effectual thermal management. Materials and Design, 2022, 214, 110379.	3.3	16
74	Thermo-responsive cellulose paper via ARGET ATRP. Fibers and Polymers, 2016, 17, 495-501.	1.1	15
75	Laccase-catalyzed chitosan-monophenol copolymer as a coating on paper enhances its hydrophobicity and strength. Progress in Organic Coatings, 2021, 151, 106026.	1.9	15
76	Fluorescent CdTe-QD-encoded nanocellulose microspheres by green spraying method. Cellulose, 2018, 25, 7017-7029.	2.4	14
77	Preparation of lignocellulose/graphene composite conductive paper. Cellulose, 2018, 25, 6139-6149.	2.4	13
78	Synthetic polymers based on lignin-derived aromatic monomers for high-performance energy-storage materials. Journal of Materials Chemistry A, 2020, 8, 24065-24074.	5.2	13
79	Underwater superoleophobic all-cellulose composite papers for the separation of emulsified oil. Cellulose, 2021, 28, 4357-4370.	2.4	13
80	Improvement of Oil and Water Barrier Properties of Food Packaging Paper by Coating with Microcrystalline Wax Emulsion. Polymers, 2022, 14, 1786.	2.0	13
81	Multifunctional cellulose paper-based materials and their application in complex wastewater treatment. International Journal of Biological Macromolecules, 2022, 207, 414-423.	3.6	12
82	Highly Dispersible Cellulose Nanofibrils Produced via Mechanical Pretreatment and TEMPO-mediated Oxidation. Fibers and Polymers, 2018, 19, 2237-2244.	1.1	11
83	Valorization of Alkaline Peroxide Mechanical Pulp by Metal Chloride-Assisted Hydrotropic Pretreatment for Enzymatic Saccharification and Cellulose Nanofibrillation. Polymers, 2019, 11, 331.	2.0	10
84	Facile isolation of colloidal stable chitin nano-crystals from Metapenaeus ensis shell via solid maleic acid hydrolysis and their application for synthesis of silver nanoparticles. Cellulose, 2020, 27, 9853-9875.	2.4	10
85	Molecular Weight Distribution and Dissolution Behavior of Lignin in Alkaline Solutions. Polymers, 2021, 13, 4166.	2.0	10
86	Value-added utilization of lignin-derived aromatic oligomers as renewable charge-storage materials. Industrial Crops and Products, 2021, 171, 113848.	2.5	8
87	Facile Synthesis of Highly Hydrophobic Cellulose Nanoparticles through Post-Esterification Microfluidization. Fibers, 2018, 6, 22.	1.8	7
88	Electrochemical sensing technology for liquid biopsy of circulating tumor cells-a review. Bioelectrochemistry, 2021, 140, 107823.	2.4	7
89	Fabrication of natural cellulose microspheres via electrospraying from NaOH/Urea aqueous system. Journal of Applied Polymer Science, 2014, 131, .	1.3	6
90	Electrochemical sensing of Staphylococcus aureus based on conductive anti-fouling interface. Mikrochimica Acta, 2022, 189, 97.	2.5	6

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91	Valorization of Rice Straw via Hydrotropic Lignin Extraction and Its Characterization. Molecules, 2021, 26, 4123.	1.7	4
92	Efficient valorization of woody biomass using two-step oxidation toward multipurpose fractionation. Industrial Crops and Products, 2021, 167, 113509.	2.5	4
93	Phosphomolybdic acid-catalyzed oxidation of waste starch: a new strategy for handling the OCC pulping wastewater. Environmental Science and Pollution Research, 2022, , 1.	2.7	4
94	Mechanistic insights into morphological and chemical changes during benzenesulfonic acid pretreatment and simultaneous saccharification and fermentation process for ethanol production. Bioresource Technology, 2022, 360, 127586.	4.8	3