Chuan-Fu Liu

List of Publications by Year
in descending order

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110 papers	4,355 citations	109137 35 h-index	123241 61 g-index
112 all docs	112 docs citations	112 times ranked	5187 citing authors

#	Article	IF	Citations
1	A Supercompressible, Elastic, and Bendable Carbon Aerogel with Ultrasensitive Detection Limits for Compression Strain, Pressure, and Bending Angle. Advanced Materials, 2018, 30, e1706705.	11.1	255
2	An ultralight, elastic, cost-effective, and highly recyclable superabsorbent from microfibrillated cellulose fibers for oil spillage cleanup. Journal of Materials Chemistry A, 2015, 3, 8772-8781.	5.2	186
3	Fractionation of Bagasse into Cellulose, Hemicelluloses, and Lignin with Ionic Liquid Treatment Followed by Alkaline Extraction. Journal of Agricultural and Food Chemistry, 2011, 59, 8691-8701.	2.4	178
4	Physicochemical characterization of cellulose from perennial ryegrass leaves (Lolium perenne). Carbohydrate Research, 2006, 341, 2677-2687.	1.1	154
5	A carbon aerogel with super mechanical and sensing performances for wearable piezoresistive sensors. Journal of Materials Chemistry A, 2019, 7, 8092-8100.	5.2	146
6	Ultrasound-assisted dissolution of cellulose in ionic liquid. Carbohydrate Polymers, 2011, 86, 672-677.	5.1	143
7	A mechanically strong and sensitive CNT/rGOâ€“CNF carbon aerogel for piezoresistive sensors. Journal of Materials Chemistry A, 2018, 6, 23550-23559.	5.2	133
8	Acetylation of wheat straw hemicelluloses in ionic liquid using iodine as a catalyst. Carbohydrate Polymers, 2007, 70, 406-414.	5.1	127
9	Isolation and Characterization of Cellulose Obtained from Ultrasonic Irradiated Sugarcane Bagasse. Journal of Agricultural and Food Chemistry, 2006, 54, 5742-5748.	2.4	116
10	Homogeneous modification of sugarcane bagasse cellulose with succinic anhydride using a ionic liquid as reaction medium. Carbohydrate Research, 2007, 342, 919-926.	1.1	112
11	Xylan-based temperature/pH sensitive hydrogels for drug controlled release. Carbohydrate Polymers, 2016, 151, 189-197.	5.1	107
12	Preparation of sugarcane bagasse cellulosic phthalate using an ionic liquid as reaction medium. Carbohydrate Polymers, 2007, 68, 17-25.	5.1	105
13	Self-Biotemplate Preparation of Hierarchical Porous Carbon with Rational Mesopore Ratio and High Oxygen Content for an Ultrahigh Energy-Density Supercapacitor. ACS Sustainable Chemistry and Engineering, 2018, 6, 7138-7150.	3.2	95
14	A feasible process for furfural production from the pre-hydrolysis liquor of corncob via biochar catalysts in a new biphasic system. Bioresource Technology, 2016, 216, 754-760.	4.8	92
15	Comparative study of water-soluble and alkali-soluble hemicelluloses from perennial ryegrass leaves (Lolium peree). Carbohydrate Polymers, 2007, 67, 56-65.	5.1	83
16	Synthesis and characterization of novel cationic SCB hemicelluloses with a low degree of substitution. Carbohydrate Polymers, 2007, 67, 347-357.	5.1	78
17	Graphene Oxide Encapsulating Liquid Metal to Toughen Hydrogel. Advanced Functional Materials, 2021, 31, 2106761.	7.8	72
18	Chemical modification of ultrasound-pretreated sugarcane bagasse with maleic anhydride. Industrial Crops and Products, 2007, 26, 212-219.	2.5	71

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19	Preparation and characterization of new quaternized carboxymethyl chitosan/rectorite nanocomposite. Composites Science and Technology, 2010, 70, 1161-1167.	3.8	70
20	Homogeneous Modification of Cellulose in Ionic Liquid with Succinic Anhydride Using N-Bromosuccinimide as a Catalyst. Journal of Agricultural and Food Chemistry, 2009, 57, 1814-1820.	2.4	67
21	Superelastic Carbon Aerogel with Ultrahigh and Wide-Range Linear Sensitivity. ACS Applied Materials & Interfaces, 2018, 10, 40641-40650.	4.0	64
22	Production of xylooligosaccharides by microwave-induced, organic acid-catalyzed hydrolysis of different xylan-type hemicelluloses: Optimization by response surface methodology. Carbohydrate Polymers, 2017, 157, 214-225.	5.1	60
23	Preparation and Characterization of Phthalated Cellulose Derivatives in Room-Temperature Ionic Liquid without Catalysts. Journal of Agricultural and Food Chemistry, 2007, 55, 2399-2406.	2.4	55
24	Structural variations of lignin macromolecule from different growth years of Triploid of Populus tomentosa Carr.. International Journal of Biological Macromolecules, 2017, 101, 747-757.	3.6	54
25	Preparation and Characterization of Regenerated Cellulose Film from a Solution in Lithium Bromide Molten Salt Hydrate. Polymers, 2018, 10, 614.	2.0	54
26	Preparation and characterization of double crosslinked hydrogel films from carboxymethylchitosan and carboxymethylcellulose. Carbohydrate Polymers, 2014, 110, 113-120.	5.1	51
27	A super-resilient and highly sensitive graphene oxide/cellulose-derived carbon aerogel. Journal of Materials Chemistry A, 2020, 8, 18376-18384.	5.2	49
28	Approach to Renewable Lignocellulosic Biomass Film Directly from Bagasse. ACS Sustainable Chemistry and Engineering, 2014, 2, 1164-1168.	3.2	48
29	Amination of biorefinery technical lignins using Mannich reaction synergy with subcritical ethanol depolymerization. International Journal of Biological Macromolecules, 2018, 107, 426-435.	3.6	45
30	Preparation and characterization of cellulose laurate ester by catalyzed transesterification. Carbohydrate Polymers, 2017, 168, 247-254.	5.1	44
31	SO42â˜/Sn-MMT Solid Acid Catalyst for Xylose and Xylan Conversion into Furfural in the Biphasic System. Catalysts, 2017, 7, 118.	1.6	43
32	Functional packaging films originating from hemicelluloses laurate by direct transesterification in ionic liquid. Carbohydrate Polymers, 2020, 229, 115336.	5.1	43
33	Graphene Oxide/Polyacrylamide/Aluminum Ion Crossâ€Linked Carboxymethyl Hemicellulose Nanocomposite Hydrogels with Very Tough and Elastic Properties. Chemistry - an Asian Journal, 2016, 11, 1697-1704.	1.7	42
34	Homogeneous Transesterification of Sugar Cane Bagasse toward Sustainable Plastics. ACS Sustainable Chemistry and Engineering, 2017, 5, 360-366.	3.2	40
35	A sandwich-like chitosan-based antibacterial nanocomposite film with reduced graphene oxide immobilized silver nanoparticles. Carbohydrate Polymers, 2021, 260, 117835.	5.1	39
36	Direct conversion of cellulose into sorbitol catalyzed by a bifunctional catalyst. Bioresource Technology, 2019, 274, 190-197.	4.8	37

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37	Homogeneous modification of sugarcane bagasse with maleic anhydride in 1-butyl-3-methylimidazolium chloride without any catalysts. Industrial Crops and Products, 2013, 46, 380-385.	2.5	35
38	Per-O-acetylation of Cellulose in Dimethyl Sulfoxide with Catalyzed Transesterification. Journal of Agricultural and Food Chemistry, 2014, 62, 3446-3452.	2.4	35
39	Fabrication of a highly elastic nanocomposite hydrogel by surface modification of cellulose nanocrystals. RSC Advances, 2015, 5, 13878-13885.	1.7	35
40	Assessment of integrated process based on autohydrolysis and robust delignification process for enzymatic saccharification of bamboo. Bioresource Technology, 2017, 244, 717-725.	4.8	35
41	Linking Renewable Cellulose Nanocrystal into Lightweight and Highly Elastic Carbon Aerogel. ACS Sustainable Chemistry and Engineering, 2020, 8, 11921-11929.	3.2	33
42	Construction of sugarcane bagasse-derived porous and flexible carbon nanofibers by electrospinning for supercapacitors. Industrial Crops and Products, 2021, 170, 113700.	2.5	33
43	A foldable composite electrode with excellent electrochemical performance using microfibrillated cellulose fibers as a framework. Journal of Materials Chemistry A, 2018, 6, 20338-20346.	5.2	31
44	Fractional and structural characterization of hemicelluloses from perennial ryegrass (Lolium) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 462 T	1.1	30
45	Influence of urea and glycerol on functional properties of biodegradable PVA/xylan composite films. Cellulose, 2014, 21, 495-505.	2.4	30
46	Fractional isolation and characterization of lignin and hemicelluloses from Triploid of Populus tomentosa Carr.. Industrial Crops and Products, 2010, 31, 357-362.	2.5	29
47	Isolation and Characterization of Lignins from Eucalyptus tereticornis (12ABL). Journal of Agricultural and Food Chemistry, 2010, 58, 11287-11293.	2.4	29
48	Ring-Opening Graft Polymerization of Propylene Carbonate onto Xylan in an Ionic Liquid. Molecules, 2015, 20, 6033-6047.	1.7	29
49	Direct preparation of green and renewable aerogel materials from crude bagasse. Cellulose, 2016, 23, 1325-1334.	2.4	29
50	A new and highly efficient conservation treatment for deacidification and strengthening of aging paper by in-situ quaternization. Carbohydrate Polymers, 2019, 209, 250-257.	5.1	29
51	Synthesis of cationic hemicellulosic derivatives with a low degree of substitution in dimethyl sulfoxide media. Journal of Applied Polymer Science, 2008, 109, 2711-2717.	1.3	28
52	Extraction, Purification, and Characterization of Lignin Fractions from Sugarcane Bagasse. BioResources, 2013, 8, .	0.5	27
53	Preparation, characterization of carboxylated bamboo fibers and their adsorption for lead(II) ions in aqueous solution. Cellulose, 2013, 20, 2091-2100.	2.4	25
54	Green approach to produce xylo-oligosaccharides and glucose by mechanical-hydrothermal pretreatment. Bioresource Technology, 2022, 344, 126298.	4.8	25

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55	Development of functional chitosan-based composite films incorporated with hemicelluloses: Effect on physicochemical properties. Carbohydrate Polymers, 2020, 246, 116489.	5.1	24
56	Acetylation of Microcrystalline Cellulose by Transesterification in AmimCl/DMSO Cosolvent System. Molecules, 2017, 22, 1419.	1.7	23
57	Structural Changes of Bagasse dusring the Homogeneous Esterification with Maleic Anhydride in Ionic Liquid 1-Allyl-3-methylimidazolium Chloride. Polymers, 2018, 10, 433.	2.0	23
58	Quaternized chitosan-assisted in situ synthesized CuS/cellulose nanofibers conductive paper for flexible electrode. Nano Research, 2021, 14, 2390.	5.8	23
59	Salt-template assisted synthesis of cornstalk derived hierarchical porous carbon with excellent supercapacitance. Industrial Crops and Products, 2020, 154, 112666.	2.5	23
60	Efficient base-free oxidation of monosaccharide into sugar acid under mild conditions using hierarchical porous carbon supported gold catalysts. Green Chemistry, 2020, 22, 2588-2597.	4.6	23
61	Single-layered graphene quantum dots with self-passivated layer from xylan for visual detection of trace chromium(VI). Chemical Engineering Journal, 2022, 435, 131833.	6.6	23
62	Per-O-acylation of xylan at room temperature in dimethylsulfoxide/N-methylimidazole. Cellulose, 2016, 23, 2863-2876.	2.4	22
63	Green and Controllable Synthesis of Auâ€“Ag Bimetal Nanoparticles by Xylan for Surface-Enhanced Raman Scattering. ACS Sustainable Chemistry and Engineering, 2019, 7, 15154-15162.	3.2	22
64	Co-production of functional xylo-oligosaccharides and fermentable sugars from corn stover through fast and facile ball mill-assisted alkaline peroxide pretreatment. Bioresource Technology, 2021, 337, 125327.	4.8	21
65	Homogeneous ring opening graft polymerization of É›-caprolactone onto xylan in dual polar aprotic solvents. Carbohydrate Polymers, 2015, 117, 701-709.	5.1	19
66	Characterization of Xylan-‹i›graft‹/i›-Polycaprolactone Copolymers Prepared in Ionic Liquid. Industrial & Engineering Chemistry Research, 2015, 54, 6282-6290.	1.8	19
67	Synergistic effects of graft polymerization and polymer blending on the flexibility of xylan-based films. Carbohydrate Polymers, 2018, 181, 1128-1135.	5.1	18
68	Production of Xylooligosaccharide, Nanolignin, and Nanocellulose through a Fractionation Strategy of Corncob for Biomass Valorization. Industrial & Engineering Chemistry Research, 2020, 59, 17429-17439.	1.8	18
69	Monitoring the Crystalline Structure of Sugar Cane Bagasse in Aqueous Ionic Liquids. ACS Sustainable Chemistry and Engineering, 2017, 5, 7278-7283.	3.2	17
70	Synthesis of Thermoplastic Xylan-Lactide Copolymer with Amidine-Mediated Organocatalyst in Ionic Liquid. Scientific Reports, 2017, 7, 551.	1.6	16
71	A Feasible Way to Produce Carbon Nanofiber by Electrospinning from Sugarcane Bagasse. Polymers, 2019, 11, 1968.	2.0	16
72	Cellulose. , 2010, , 131-167.		15

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73	Construction of functional composite films originating from hemicellulose reinforced with poly(vinyl alcohol) and nano-ZnO. Cellulose, 2020, 27, 1341-1355.	2.4	15
74	Ammonia-assisted hydrothermal carbon material with schiff base structures synthesized from factory waste hemicelluloses for Cr(VI) adsorption. Journal of Environmental Chemical Engineering, 2021, 9, 106187.	3.3	15
75	Dual-Component System Dimethyl Sulfoxide/LiCl as a Solvent and Catalyst for Homogeneous Ring-Opening Grafted Polymerization of Îµ-Caprolactone onto Xylan. Journal of Agricultural and Food Chemistry, 2014, 62, 682-690.	2.4	14
76	Structural characterization of residual lignins isolated with cyanamideâ€activated hydrogen peroxide from various organosolvs pretreated wheat straw. Journal of Applied Polymer Science, 2008, 109, 555-564.	1.3	13
77	Synthesis and Characterization of Xylan Grafted with Polyethylene Glycol in Ionic Liquid and Their Use as Moistureâ€Absorption/Retention Biomaterials. Macromolecular Materials and Engineering, 2016, 301, 287-295.	1.7	13
78	Homogeneous esterification mechanism of bagasse modified with phthalic anhydride in ionic liquid. Part 2: Reactive behavior of hemicelluloses. Carbohydrate Polymers, 2017, 157, 1365-1373.	5.1	13
79	Click chemistry to synthesize exfoliated xylan-g-quaternized chitosan/montmorillonite nanocomposites for retention and drainage-aid. Carbohydrate Polymers, 2019, 224, 115197.	5.1	12
80	One-step construction of Co₂P nanoparticles encapsulated in N, P co-doped biomass-based porous carbon as bifunctional efficient electrocatalysts for overall water splitting. Sustainable Energy and Fuels, 2021, 5, 2477-2485.	2.5	12
81	Facial Synthesis of Adsorbent from Hemicelluloses for Cr(VI) Adsorption. Molecules, 2021, 26, 1443.	1.7	11
82	Preparation of CMC/HEC Crosslinked Hydrogels for Drug Delivery. BioResources, 2015, 10, .	0.5	10
83	Esterification Mechanism of Bagasse Modified with Glutaric Anhydride in 1-Allyl-3-methylimidazolium Chloride. Materials, 2017, 10, 966.	1.3	10
84	Mechanocatalytic Solvent-Free Esterification of Sugarcane Bagasse. Polymers, 2018, 10, 282.	2.0	10
85	Structural Features of Lignin Fractionated From Industrial Furfural Residue Using Alkaline Cooking Technology and Its Antioxidant Performance. Frontiers in Energy Research, 2020, 8, .	1.2	10
86	Biomass-based protic ionic liquid derived N, P, co-doped porous carbon-coated CoP nanocrystals for efficient hydrogen evolution reaction. Journal of Materials Science, 2021, 56, 18188-18199.	1.7	10
87	Synthesis and Characteristic of Xylan-grafted-polyacrylamide and Application for Improving Pulp Properties. Materials, 2017, 10, 971.	1.3	9
88	Hemicellulose-Based Hydrogels and Their Potential Application. Gels Horizons: From Science To Smart Materials, 2018, , 87-127.	0.3	9
89	Fabrication of Pd NPs-supported porous carbon by integrating the reducing reactivity and carbon-rich network of lignin. Scientific Reports, 2019, 9, 7300.	1.6	9
90	Enhancing the Mechanical Performance of Reduced Graphene Oxide Aerogel with Cellulose Nanofibers. ChemNanoMat, 2021, 7, 950-957.	1.5	9

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91	Preparation and properties of epichlorohydrin-cross-linked chitosan/hydroxyethyl cellulose based CuO nanocomposite films. Cellulose, 2022, 29, 4413-4426.	2.4	9
92	Shape-Memory and Anisotropic Carbon Aerogel from Biomass and Graphene Oxide. Molecules, 2021, 26, 5715.	1.7	7
93	Engineering of sugarcane bagasse based porous carbon nanofiber-supported the CoP/Co2P heterostructure for efficient overall water splitting. Electrochimica Acta, 2022, 404, 139578.	2.6	7
94	Organic Catalysis for Ring-Opening Graft Polymerization of p-Dioxanone with Xylan in Ionic liquid. Polymers, 2017, 9, 345.	2.0	6
95	Colloidal lignin nanoparticles from acid hydrotropic fractionation for producing tough, biodegradable, and UV blocking PVA nanocomposite. Industrial Crops and Products, 2021, 168, 113584.	2.5	6
96	DISSOLUTION OF HOLOCELLULOSE IN IONIC LIQUID ASSISTED WITH BALL-MILLING PRETREATMENT AND ULTRASOUND IRRADIATION. BioResources, 2012, 7, .	0.5	5
97	Reaction Behavior of Cellulose in the Homogeneous Esterification of Bagasse Modified with Phthalic Anhydride in Ionic Liquid 1-Allyl-3-methylimidazium Chloride. International Journal of Polymer Science, 2016, 2016, 1-9.	1.2	5
98	Dissolution of less-processed wood fibers without bleaching in an ionic liquid: Effect of lignin condensation on wood component dissolution. International Journal of Biological Macromolecules, 2019, 134, 740-748.	3.6	5
99	Antimicrobial Activity of Quaternized Chitosan/Organic Rectorite Nanocomposite. Wuji Cailiao Xuebao/Journal of Inorganic Materials, 2009, 24, 1236-1242.	0.6	5
100	Rapid Dissolution of Cellulose in Ionic Liquid with Different Methods. , 2013, , .		4
101	Aldehydes-Aided Lignin-First Deconstruction Strategy for Facilitating Lignin Monomers and Fermentable Glucose Production from Poplar Wood. Energies, 2020, 13, 1113.	1.6	4
102	Highly selective oxidation of monosaccharides to sugar acids at room temperature over palladium supported on surface functionalized carbon nanotubes. Green Chemistry, 2021, 23, 7084-7092.	4.6	4
103	Emulsion templated advanced functional materials from emerging nano building blocks. Journal of Materials Chemistry A, 2021, 9, 25827-25851.	5.2	4
104	Homogeneous Esterification Mechanism of Bagasse Modified with Phthalic Anhydride in Ionic Liquid, Part 3: Structural Transformation of Lignins. BioResources, 2017, 12, .	0.5	3
105	Homogeneous Esterification of Eucalyptus with Palmitoyl Chloride at Room Temperature. BioResources, 2013, 8, .	0.5	2
106	Homogeneous Modification of Sugarcane Bagasse by Graft Copolymerization in Ionic Liquid for Oil Absorption Application. International Journal of Polymer Science, 2016, 2016, 1-7.	1.2	2
107	Homogeneous Derivatization of Sugarcane Bagasse with Myristyl Chloride at Room Temperature to Prepare Bio-based Oil Absorbents. BioResources, 2014, 10, .	0.5	1
108	Macromol. Mater. Eng. 3/2016. Macromolecular Materials and Engineering, 2016, 301, 352-352.	1.7	1

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109	Reaction Behaviors of Bagasse Modified with Phthalic Anhydride in 1â€Allylâ€3â€Methylimidazolium Chloride with Catalyst 4â€Dimethylaminopyridine. , 2017, , .		0
110	Polyoxometalate/Cellulose Nanofibrils Aerogels for Highly Efficient Oxidative Desulfurization. Molecules, 2022, 27, 2782.	1.7	0