Sunkyu Park

List of Publications by Year
in descending order

109 papers	7,779 citations	71102 41 h-index	51608 86 g-index
110 all docs	110 docs citations	110 times ranked	9687 citing authors

#	ARTICLE	IF	CITATIONS
1	Cellulose crystallinity index: measurement techniques and their impact on interpreting cellulase performance. Biotechnology for Biofuels, 2010, 3, 10.	6.2	2,335
2	Adsorption isotherm, kinetic modeling and mechanism of tetracycline on Pinus taeda-derived activated biochar. Bioresource Technology, 2018, 259, 24-31.	9.6	401
3	Adsorption of selected endocrine disrupting compounds and pharmaceuticals on activated biochars. Journal of Hazardous Materials, 2013, 263, 702-710.	12.4	294
4	Measuring the crystallinity index of cellulose by solid state 13C nuclear magnetic resonance. Cellulose, 2009, 16, 641-647.	4.9	207
5	Changes in pore size distribution during the drying of cellulose fibers as measured by differential scanning calorimetry. Carbohydrate Polymers, 2006, 66, 97-103.	10.2	199
6	The effect of torrefaction on the chemistry of fast-pyrolysis bio-oil. Bioresource Technology, 2012, 111, 439-446.	9.6	183
7	The effect of delignification of forest biomass on enzymatic hydrolysis. Bioresource Technology, 2011, 102, 9083-9089.	9.6	177
8	Lignin-Based Electrospun Nanofibers Reinforced with Cellulose Nanocrystals. Biomacromolecules, 2012, 13, 918-926.	5.4	171
9	Transformation of lignocellulosic biomass during torrefaction. Journal of Analytical and Applied Pyrolysis, 2013, 100, 199-206.	5.5	168
10	Solvent fractionation of renewable woody feedstocks: Organosolv generation of biorefinery process streams for the production of biobased chemicals. Biomass and Bioenergy, 2011, 35, 4197-4208.	5.7	149
11	Effect of Lignin Chemistry on the Enzymatic Hydrolysis of Woody Biomass. ChemSusChem, 2014, 7, 1942-1950.	6.8	139
12	Activated carbon from biochar: Influence of its physicochemical properties on the sorption characteristics of phenanthrene. Bioresource Technology, 2013, 149, 383-389.	9.6	138
13	Biomass pretreatments capable of enabling lignin valorization in a biorefinery process. Current Opinion in Biotechnology, 2016, 38, 39-46.	6.6	106
14	Selective Detection of Crystalline Cellulose in Plant Cell Walls with Sum-Frequency-Generation (SFG) Vibration Spectroscopy. Biomacromolecules, 2011, 12, 2434-2439.	5.4	98
15	Toward Understanding of Bio-Oil Aging: Accelerated Aging of Bio-Oil Fractions. ACS Sustainable Chemistry and Engineering, 2014, 2, 2011-2018.	6.7	89
16	Catalytic Pyrolysis of Torrefied Biomass for Hydrocarbons Production. Energy & Fuels, 2012, 26, 7347-7353.	5.1	87
17	A highly efficient dilute alkali deacetylation and mechanical (disc) refining process for the conversion of renewable biomass to lower cost sugars. Biotechnology for Biofuels, 2014, 7, 98.	6.2	78
18	Co-pyrolysis of biomass and plastic waste over zeolite- and sodium-based catalysts for enhanced yields of hydrocarbon products. Waste Management, 2020, 102, 909-918.	7.4	78

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19	Cellulose polymorphism study with sum-frequency-generation (SFG) vibration spectroscopy: identification of exocyclic CH2OH conformation and chain orientation. Cellulose, 2013, 20, 991-1000.	4.9	76
20	Interfacial Properties of Lignin-Based Electrospun Nanofibers and Films Reinforced with Cellulose Nanocrystals. ACS Applied Materials & Interfaces, 2012, 4, 6849-6856.	8.0	74
21	Comparison of different mechanical refining technologies on the enzymatic digestibility of low severity acid pretreated corn stover. Bioresource Technology, 2013, 147, 401-408.	9.6	70
22	Quantification of crystalline cellulose in lignocellulosic biomass using sum frequency generation (SFG) vibration spectroscopy and comparison with other analytical methods. Carbohydrate Polymers, 2012, 89, 802-809.	10.2	69
23	Furfural production from biomass pretreatment hydrolysate using vapor-releasing reactor system. Bioresource Technology, 2018, 252, 165-171.	9.6	69
24	Enhancement in enzymatic hydrolysis by mechanical refining for pretreated hardwood lignocellulosics. Bioresource Technology, 2013, 147, 353-360.	9.6	67
25	Thermal and Storage Stability of Bio-Oil from Pyrolysis of Torrefied Wood. Energy & Fuels, 2015, 29, 5117-5126.	5.1	66
26	Structural Characterization of Loblolly Pine Derived Biochar by X-ray Diffraction and Electron Energy Loss Spectroscopy. ACS Sustainable Chemistry and Engineering, 2018, 6, 2621-2629.	6.7	65
27	Progressive structural changes of Avicel, bleached softwood and bacterial cellulose during enzymatic hydrolysis. Scientific Reports, 2015, 5, 15102.	3.3	64
28	Thermogravimetric investigation on the degradation properties and combustion performance of bio-oils. Bioresource Technology, 2014, 152, 267-274.	9.6	63
29	Improved ethanol yield and reduced Minimum Ethanol Selling Price (MESP) by modifying low severity for Biofuels, 2012, 5, 60.	6.2	60
30	Strategies to achieve high-solids enzymatic hydrolysis of dilute-acid pretreated corn stover. Bioresource Technology, 2015, 187, 43-48.	9.6	59
31	Removal of furan and phenolic compounds from simulated biomass hydrolysates by batch adsorption and continuous fixed-bed column adsorption methods. Bioresource Technology, 2016, 216, 661-668.	9.6	54
32	The influence of lignin content and structure on hemicellulose alkaline extraction for non-wood and hardwood lignocellulosic biomass. Cellulose, 2019, 26, 3219-3230.	4.9	53
33	Hard to remove water in cellulose fibers characterized by high resolution thermogravimetric analysis - methods development. Cellulose, 2006, 13, 23-30.	4.9	51
34	Engineering biorefinery residues from loblolly pine for supercapacitor applications. Carbon, 2017, 120, 304-312.	10.3	51
35	Reduction of Enzyme Dosage by Oxygen Delignification and Mechanical Refining for Enzymatic Hydrolysis of Green Liquor-Pretreated Hardwood. Applied Biochemistry and Biotechnology, 2011, 165, 832-844.	2.9	50
36	Autohydrolysis Pretreatment of Waste Wheat Straw for Cellulosic Ethanol Production in a Co-located Straw Pulp Mill. Applied Biochemistry and Biotechnology, 2015, 175, 1193-1210.	2.9	50

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37	Effect of cellulolytic enzyme binding on lignin isolated from alkali and acid pretreated switchgrass on enzymatic hydrolysis. 3 Biotech, 2020, 10, 1.	2.2	50
38	Monitoring Meso-Scale Ordering of Cellulose in Intact Plant Cell Walls Using Sum Frequency Generation Spectroscopy. Plant Physiology, 2013, 163, 907-913.	4.8	49
39	Use of mechanical refining to improve the production of low-cost sugars from lignocellulosic biomass. Bioresource Technology, 2016, 199, 59-67.	9.6	47
40	Soluble Lignin Recovered from Biorefinery Pretreatment Hydrolyzate Characterized by Ligninâ€"Carbohydrate Complexes. ACS Sustainable Chemistry and Engineering, 2017, 5, 10763-10771.	6.7	46
41	Surface and pore structure modification of cellulose fibers through cellulase treatment. Journal of Applied Polymer Science, 2007, 103, 3833-3839.	2.6	44
42	Ni/HZSM-5 catalyst preparation by deposition-precipitation. Part 2. Catalytic hydrodeoxygenation reactions of lignin model compounds in organic and aqueous systems. Applied Catalysis A: General, 2018, 562, 294-309.	4.3	43
43	Studies of the heat of vaporization of water associated with cellulose fibers characterized by thermal analysis. Cellulose, 2007, 14, 195-204.	4.9	42
44	Catalytic Pyrolysis of Raw and Thermally Treated Cellulose Using Different Acidic Zeolites. Bioenergy Research, 2014, 7, 867-875.	3.9	42
45	Improving Sugar Yields and Reducing Enzyme Loadings in the Deacetylation and Mechanical Refining (DMR) Process through Multistage Disk and Szego Refining and Corresponding Techno-Economic Analysis. ACS Sustainable Chemistry and Engineering, 2016, 4, 324-333.	6.7	40
46	Effects of Plant Cell Wall Matrix Polysaccharides on Bacterial Cellulose Structure Studied with Vibrational Sum Frequency Generation Spectroscopy and X-ray Diffraction. Biomacromolecules, 2014, 15, 2718-2724.	5.4	39
47	Effect of mechanical disruption on the effectiveness of three reactors used for dilute acid pretreatment of corn stover Part 1: chemical and physical substrate analysis. Biotechnology for Biofuels, 2014, 7, 57.	6.2	39
48	Evaluation of the factors affecting avicel reactivity using multiâ€stage enzymatic hydrolysis. Biotechnology and Bioengineering, 2012, 109, 1131-1139.	3.3	37
49	Permeation of polyelectrolytes and other solutes into the pore spaces of water-swollen cellulose: A review. BioResources, 2009, 4, 1222-1262.	1.0	36
50	Toward an understanding of the increase in enzymatic hydrolysis by mechanical refining. Biotechnology for Biofuels, 2018, 11, 289.	6.2	36
51	Blended Feedstocks for Thermochemical Conversion: Biomass Characterization and Bio-Oil Production From Switchgrass-Pine Residues Blends. Frontiers in Energy Research, 2018, 6, .	2.3	35
52	Xylooligosaccharides as prebiotics from biomass autohydrolyzate. LWT - Food Science and Technology, 2019, 111, 703-710.	5.2	34
53	Techno-Economic Analysis of decentralized preprocessing systems for fast pyrolysis biorefineries with blended feedstocks in the southeastern United States. Renewable and Sustainable Energy Reviews, 2021, 143, 110881.	16.4	34
54	Enzymatic Hydrolysis of Recovered Office Printing Paper with Low Enzyme Dosages to Produce Fermentable Sugars. Applied Biochemistry and Biotechnology, 2012, 166, 1121-1136.	2.9	33

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55	Effects of Delignification on Crystalline Cellulose in Lignocellulose Biomass Characterized by Vibrational Sum Frequency Generation Spectroscopy and X-ray Diffraction. Bioenergy Research, 2015, 8, 1750-1758.	3.9	33
56	Effect of blending ratio of loblolly pine wood and bark on the properties of pyrolysis bio-oils. Fuel Processing Technology, 2017, 167, 43-49.	7.2	31
57	Vibrational sum-frequency-generation (SFG) spectroscopy study of the structural assembly of cellulose microfibrils in reaction woods. Cellulose, 2014, 21, 2219-2231.	4.9	30
58	Involvement of CesA4, CesA7-A/B and CesA8-A/B in secondary wall formation in Populus trichocarpa wood. Tree Physiology, 2020, 40, 73-89.	3.1	30
59	Engineered biochar from pine wood: Characterization and potential application for removal of sulfamethoxazole in water. Environmental Engineering Research, 2019, 24, 608-617.	2.5	30
60	Technoâ€economic analysis of sugar production from lignocellulosic biomass with utilization of hemicellulose and lignin for highâ€value coâ€products. Biofuels, Bioproducts and Biorefining, 2021, 15, 404-415.	3.7	29
61	Economic evaluation of the conversion of industrial paper sludge to ethanol. Energy Economics, 2014, 44, 281-290.	12.1	27
62	Correlations of Apparent Cellulose Crystallinity Determined by XRD, NMR, IR, Raman, and SFG Methods. Advances in Polymer Science, 2015, , 115-131.	0.8	27
63	A simple method for producing bio-based anode materials for lithium-ion batteries. Green Chemistry, 2020, 22, 7093-7108.	9.0	27
64	Techno-economic analysis of producing xylo-oligosaccharides and cellulose microfibers from lignocellulosic biomass. Bioresource Technology, 2021, 340, 125726.	9.6	27
65	Identification of free radicals in pyrolysis oil and their impact on bio-oil stability. RSC Advances, 2014, 4, 29840-29846.	3.6	26
66	Graphitization Behavior of Loblolly Pine Wood Investigated by <i>in Situ</i> High Temperature X-ray Diffraction. ACS Sustainable Chemistry and Engineering, 2018, 6, 9113-9119.	6.7	26
67	Comparison of lab, pilot, and industrial scale low consistency mechanical refining for improvements in enzymatic digestibility of pretreated hardwood. Bioresource Technology, 2014, 167, 514-520.	9.6	25
68	Life Cycle Analysis of Decentralized Preprocessing Systems for Fast Pyrolysis Biorefineries with Blended Feedstocks in the Southeastern United States. Energy Technology, 2020, 8, 1900850.	3.8	25
69	Prospects for bioenergy with carbon capture & storage (BECCS) in the United States pulp and paper industry. Energy and Environmental Science, 2020, 13, 2243-2261.	30.8	25
70	Delignification of Lignocellulosic Biomass and Its Effect on Subsequent Enzymatic Hydrolysis. BioResources, 2015, 10, .	1.0	23
71	Integrated conversion, financial, and risk modeling of cellulosic ethanol from woody and nonâ€woody biomass via dilute acid preâ€treatment. Biofuels, Bioproducts and Biorefining, 2014, 8, 755-769.	3.7	19
72	Lignocentric analysis of a carbohydrate-producing lignocellulosic biorefinery process. Bioresource Technology, 2017, 241, 857-867.	9.6	19

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73	Impacts of feedstock properties on the process economics of fastâ€pyrolysis biorefineries. Biofuels, Bioproducts and Biorefining, 2018, 12, 442-452.	3.7	19
74	Understanding the Impacts of Biomass Blending on the Uncertainty of Hydrolyzed Sugar Yield from a Stochastic Perspective. ACS Sustainable Chemistry and Engineering, 2018, 6, 10851-10860.	6.7	18
75	Testing of anisole and methyl acetate as additives to diesel and biodiesel fuels in a compression ignition engine. Fuel, 2019, 246, 79-92.	6.4	18
76	Enhanced carbon dioxide removal from coupled direct air captureâ€“bioenergy systems. Sustainable Energy and Fuels, 2019, 3, 3135-3146.	4.9	17
77	Technoâ€economic analysis of hemicellulose extraction from different types of lignocellulosic feedstocks and strategies for cost optimization. Biofuels, Bioproducts and Biorefining, 2020, 14, 225-241.	3.7	17
78	Fast pyrolysis of lignin-coated radiata pine. Journal of Analytical and Applied Pyrolysis, 2015, 115, 203-213.	5.5	16
79	Thermal Depolymerization of Biomass with Emphasis on Gasifier Design and Best Method for Catalytic Hot Gas Conditioning. BioResources, 2018, 13, 4630-4727.	1.0	16
80	Correlation between solubility parameters and recovery of phenolic compounds from fast pyrolysis bio-oil by diesel extraction. Carbon Resources Conversion, 2018, 1, 238-244.	5.9	15
81	Impacts of uncertain feedstock quality on the economic feasibility of fast pyrolysis biorefineries with blended feedstocks and decentralized preprocessing sites in the Southeastern United States. GCB Bioenergy, 2020, 12, 1014-1029.	5.6	15
82	Quantification of bound and free enzymes during enzymatic hydrolysis and their reactivities on cellulose and lignocellulose. Bioresource Technology, 2013, 147, 369-377.	9.6	14
83	Dynamic life-cycle carbon analysis for fast pyrolysis biofuel produced from pine residues: implications of carbon temporal effects. Biotechnology for Biofuels, 2021, 14, 191.	6.2	14
84	Tracing Sweetgum Lignin's Molecular Properties through Biorefinery Processing. ChemSusChem, 2020, 13, 4613-4623.	6.8	14
85	Catalytic Conversion of Biomass Hydrolysate into 5-Hydroxymethylfurfural. Industrial & Engineering Chemistry Research, 2017, 56, 14447-14453.	3.7	12
86	Permeation of a cationic polyelectrolyte into meso-porous silica. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2010, 364, 1-6.	4.7	11
87	Permeation of a cationic polyelectrolyte into mesoporous silica. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2011, 381, 1-6.	4.7	11
88	Effect of Mechanical Refining Energy on the Enzymatic Digestibility of Lignocellulosic Biomass. Industrial & Engineering Chemistry Research, 2018, 57, 14648-14655.	3.7	11
89	Alkaline extraction and characterization of residual hemicellulose in dissolving pulp. Cellulose, 2019, 26, 1323-1333.	4.9	11
90	Structure and thermomechanical properties of stretched cellulose films. Journal of Applied Polymer Science, 2013, 128, 181-187.	2.6	10

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91	Impact of oxidative carbonization on structure development of loblolly pine-derived biochar investigated by nuclear magnetic resonance spectroscopy and X-ray photoelectron spectroscopy. Diamond and Related Materials, 2019, 96, 140-147.	3.9	10
92	Two-stage autohydrolysis and mechanical treatment to maximize sugar recovery from sweet sorghum bagasse. Bioresource Technology, 2019, 276, 140-145.	9.6	10
93	Distinctive electrokinetic behavior of nanoporous silica particles treated with cationic polyelectrolyte. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2007, 292, 271-278.	4.7	9
94	Characterization of biofuel refinery byproduct via selective electrospray ionization tandem mass spectrometry. Fuel, 2017, 188, 190-196.	6.4	9
95	Optimization of Pilot Scale Mechanical Disk Refining for Improvements in Enzymatic Digestibility of Pretreated Hardwood Lignocellulosics. BioResources, 2017, 12, .	1.0	9
96	Decarbonizing agriculture through the conversion of animal manure to dietary protein and ammonia fertilizer. Bioresource Technology, 2020, 297, 122493.	9.6	9
97	Hydrophobic resin treatment of hydrothermal autohydrolysate for prebiotic applications. RSC Advances, 2019, 9, 31819-31827.	3.6	7
98	Key issue, challenges, and status quo of models for biofuel supply chain design. , 2020, , 273-315.		7
99	An eco-friendly approach for blending of fast-pyrolysis bio-oil in petroleum-derived fuel by controlling ash content of loblolly pine. Renewable Energy, 2021, 179, 2063-2070.	8.9	7
100	Crude oil production and classification of organic compounds on super-critical liquefaction with rice hull. Biotechnology and Bioprocess Engineering, 2013, 18, 956-964.	2.6	6
101	Mass Spectrometry Exposes Undocumented Lignin-Carbohydrate Complexes in Biorefinery Pretreatment Stream. ACS Sustainable Chemistry and Engineering, 2018, 6, 10654-10659.	6.7	6
102	Permeation of a cationic polyelectrolyte into mesoporous silica. Part 2. Effects of time and pore size on streaming potential. Colloids and Surfaces A: Physicochemical and Engineering Aspects, 2010, 364, 7-15.	4.7	4
103	A Method to Evaluate Biomass Accessibility in Wet State Based on Thermoporometry. , 2012, 908, 83-89.		3
104	CELLULOSE MICROFIBRIL-WATER INTERACTION AS CHARACTERIZED BY ISOTHERMAL THERMOGRAVIMETRIC ANALYSIS AND SCANNING ELECTRON MICROSCOPY. BioResources, 2012, 7, .	1.0	3
105	Effect of the Two-Stage Autohydrolysis of Hardwood on the Enzymatic Saccharification and Subsequent Fermentation with an Efficient Xylose-Utilizing Saccharomyces cerevisiae. BioResources, 2016, 11, .	1.0	3
106	Fiber fractionation to understand the effect of mechanical refining on fiber structure and resulting enzymatic digestibility of biomass. Biotechnology and Bioengineering, 2020, 117, 924-932.	3.3	2
107	Effects of Mechanical Refining on Anaerobic Digestion of Dairy Manure. ACS Omega, 2021, 6, 16934-16942.	3.5	2
108	Applicability of biomass autohydrolyzates as corrosion inhibiting deicing agents. RSC Advances, 2020, 10, 43282-43289.	3.6	1

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109	Influence of the calendering conditions on opacity and quantitative evaluation of the z-directional density variation by image analysis. Nordic Pulp and Paper Research Journal, 2006, 21, 211-215.	0.7	0