Chang Geun Yoo

List of Publications by Citations

105 papers	2,997 citations	30 h-index	51 g-index
110 ext. papers	4,149 ext. citations	7 avg, IF	6 L-index

#	Paper	IF	Citations
105	The critical role of lignin in lignocellulosic biomass conversion and recent pretreatment strategies: A comprehensive review. *Bioresource Technology*, **2020**, 301, 122784	11	209
104	Cellulose–Hemicellulose and Cellulose–Lignin Interactions during Fast Pyrolysis. *ACS Sustainable Chemistry and Engineering*, **2015**, 3, 293-301	8.3	182
103	Ionic liquids: Promising green solvents for lignocellulosic biomass utilization. *Current Opinion in Green and Sustainable Chemistry*, **2017**, 5, 5-11	7.9	181
102	Recent advancements of plant-based natural fiber–reinforced composites and their applications. *Composites Part B: Engineering*, **2020**, 200, 108254	10	114
101	Effects of organosolv and ammonia pretreatments on lignin properties and its inhibition for enzymatic hydrolysis. *Green Chemistry*, **2017**, 19, 2006-2016	10	111
100	Sugar release and growth of biofuel crops are improved by downregulation of pectin biosynthesis. *Nature Biotechnology*, **2018**, 36, 249-257	44.5	93
99	Observation of Potential Contaminants in Processed Biomass Using Fourier Transform Infrared Spectroscopy. *Applied Sciences (Switzerland)*, **2020**, 10, 4345	2.6	92
98	An uncondensed lignin depolymerized in the solid state and isolated from lignocellulosic biomass: a mechanistic study. *Green Chemistry*, **2018**, 20, 4224-4235	10	85
97	Pretreatment of corn stover using low-moisture anhydrous ammonia (LMAA) process. *Bioresource Technology*, **2011**, 102, 10028-34	11	80
96	An In-Depth Understanding of Biomass Recalcitrance Using Natural Poplar Variants as the Feedstock. *ChemSusChem*, **2017**, 10, 139-150	8.3	79
95	Synergistic maximization of the carbohydrate output and lignin processability by combinatorial pretreatment. *Green Chemistry*, **2017**, 19, 4939-4955	10	76
94	Biomimetic Fenton-catalyzed lignin depolymerization to high-value aromatics and dicarboxylic acids. *ChemSusChem*, **2015**, 8, 861-71	8.3	75
93	Review of NMR Characterization of Pyrolysis Oils. *Energy & Fuels*, **2016**, 30, 6863-6880	4.1	67
92	The occurrence of tricin and its derivatives in plants. *Green Chemistry*, **2016**, 18, 1439-1454	10	58
91	Effects of the advanced organosolv pretreatment strategies on structural properties of woody biomass. *Industrial Crops and Products*, **2020**, 146, 112144	5.9	57
90	Significance of Lignin S/G Ratio in Biomass Recalcitrance of Populus trichocarpa Variants for Bioethanol Production. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 2162-2168	8.3	56
89	Defined tetra-allelic gene disruption of the 4-coumarate:coenzyme A ligase 1 (Pv4CL1) gene by CRISPR/Cas9 in switchgrass results in lignin reduction and improved sugar release. *Biotechnology for Biofuels*, **2017**, 10, 284	7.8	53

88	Conversion and removal strategies for microplastics in wastewater treatment plants and landfills. *Chemical Engineering Journal*, **2021**, 406, 126715	14.7	53
87	Insights of biomass recalcitrance in natural Populus trichocarpa variants for biomass conversion. *Green Chemistry*, **2017**, 19, 5467-5478	10	51
86	Elucidating Structural Characteristics of Biomass using Solution-State 2 D NMR with a Mixture of Deuterated Dimethylsulfoxide and Hexamethylphosphoramide. *ChemSusChem*, **2016**, 9, 1090-5	8.3	48
85	Integration of renewable deep eutectic solvents with engineered biomass to achieve a closed-loop biorefinery. *Proceedings of the National Academy of Sciences of the United States of America*, **2019**, 116, 13816-13824	11.5	47
84	Effective conversion of biomass into bromomethylfurfural, furfural, and depolymerized lignin in lithium bromide molten salt hydrate of a biphasic system. *RSC Advances*, **2017**, 7, 300-308	3.7	44
83	Consolidated bioprocessing of Populus using Clostridium (Ruminiclostridium) thermocellum: a case study on the impact of lignin composition and structure. *Biotechnology for Biofuels*, **2016**, 9, 31	7.8	44
82	Understanding the Physicochemical Characteristics and the Improved Enzymatic Saccharification of Corn Stover Pretreated with Aqueous and Gaseous Ammonia. *Bioenergy Research*, **2016**, 9, 67-76	3.1	41
81	Cooperative valorization of lignin and residual sugar to polyhydroxyalkanoate (PHA) for enhanced yield and carbon utilization in biorefineries. *Sustainable Energy and Fuels*, **2019**, 3, 2024-2037	5.8	38
80	Investigation of a Lignin-Based Deep Eutectic Solvent Using p-Hydroxybenzoic Acid for Efficient Woody Biomass Conversion. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 12542-12553	8.3	37
79	Enzymatic fractionation of SAA-pretreated barley straw for production of fuel ethanol and astaxanthin as a value-added co-product. *Applied Biochemistry and Biotechnology*, **2013**, 171, 341-51	3.2	35
78	Alkaline oxidative cracking for effective depolymerization of biorefining lignin to mono-aromatic compounds and organic acids with molecular oxygen. *Biomass and Bioenergy*, **2018**, 108, 7-14	5.3	32
77	3D printing of biomass-derived composites: application and characterization approaches.. *RSC Advances*, **2020**, 10, 21698-21723	3.7	30
76	Insights of Ethanol Organosolv Pretreatment on Lignin Properties of Broussonetia papyrifera. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 14767-14773	8.3	30
75	Isomerization of glucose to fructose catalyzed by lithium bromide in water. *Green Chemistry*, **2017**, 19, 4402-4411	10	29
74	Structural changes of lignins in natural Populus variants during different pretreatments. *Bioresource Technology*, **2020**, 295, 122240	11	28
73	Optimization of two-stage fractionation process for lignocellulosic biomass using response surface methodology (RSM). *Biomass and Bioenergy*, **2011**, 35, 4901-4909	5.3	24
72	Characteristics of Lignin Fractions from Dilute Acid Pretreated Switchgrass and Their Effect on Cellobiohydrolase from Trichoderma longibrachiatum. *Frontiers in Energy Research*, **2018**, 6,	3.8	23
71	31P NMR Chemical Shifts of Solvents and Products Impurities in Biomass Pretreatments. *ACS Sustainable Chemistry and Engineering*, **2018**, 6, 1265-1270	8.3	23

70	Downregulation of pectin biosynthesis gene leads to reduced ferulate and lignin-carbohydrate cross-linking in switchgrass. *Communications Biology*, **2019**, 2, 22	6.7	22
69	Ethanol and furfural production from corn stover using a hybrid fractionation process with zinc chloride and simultaneous saccharification and fermentation (SSF). *Process Biochemistry*, **2012**, 47, 319-326	4.8	22
68	Adsorption of cellobiohydrolases I onto lignin fractions from dilute acid pretreated Broussonetia papyrifera. *Bioresource Technology*, **2017**, 244, 957-962	11	21
67	Increasing the Carbohydrate Output of Bamboo Using a Combinatorial Pretreatment. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 7380-7393	8.3	20
66	Elucidating the Structural Changes to Populus Lignin during Consolidated Bioprocessing with Clostridium thermocellum. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 7486-7491	8.3	20
65	Solar-Driven Lignin Oxidation via Hydrogen Atom Transfer with a Dye-Sensitized TiO2 Photoanode. *ACS Energy Letters*, **2020**, 5, 777-784	20.1	20
64	Sustainable biorefinery processes using renewable deep eutectic solvents. *Current Opinion in Green and Sustainable Chemistry*, **2021**, 27, 100396	7.9	20
63	Critical review of FDM 3D printing of PLA biocomposites filled with biomass resources, characterization, biodegradability, upcycling and opportunities for biorefineries. *Applied Materials Today*, **2021**, 24, 101078	6.6	20
62	Maximum production of fermentable sugars from barley straw using optimized soaking in aqueous ammonia (SAA) pretreatment. *Applied Biochemistry and Biotechnology*, **2013**, 169, 2430-41	3.2	19
61	A mechanistic study of cellulase adsorption onto lignin. *Green Chemistry*, **2021**, 23, 333-339	10	19
60	Overexpression of a serine hydroxymethyltransferase increases biomass production and reduces recalcitrance in the bioenergy crop Populus. *Sustainable Energy and Fuels*, **2019**, 3, 195-207	5.8	18
59	A structured understanding of cellobiohydrolase I binding to poplar lignin fractions after dilute acid pretreatment. *Biotechnology for Biofuels*, **2018**, 11, 96	7.8	18
58	Study of traits and recalcitrance reduction of field-grown down-regulated switchgrass. *Biotechnology for Biofuels*, **2017**, 10, 12	7.8	18
57	Transgenic Poplar Designed for Biofuels. *Trends in Plant Science*, **2020**, 25, 881-896	13.1	17
56	Comparative evaluation of variants total sugar release and structural features following pretreatment and digestion by two distinct biological systems. *Biotechnology for Biofuels*, **2017**, 10, 292	7.8	17
55	Cellulolytic enzyme-aided extraction of hemicellulose from switchgrass and its characteristics. *Green Chemistry*, **2019**, 21, 3902-3910	10	16
54	Effect of Mobile Phase Composition on Henry's Constants of 2-Amino-3-phenyl-propanoic Acid, 2-Amino-3-(3-indolyl)-propanoic Acid, and 2-Amino-3-(4-hydroxyphenyl)-propanoic Acid in a Capcell Pak C18 Chromatography. *Journal of Chemical & Engineering Data*, **2008**, 53, 2613-2621	2.8	16
53	Pretreatment of willow using the alkaline-catalyzed sulfolane/water solution for high-purity and antioxidative lignin production. *International Journal of Biological Macromolecules*, **2020**, 159, 287-294	7.9	16

52	Understanding the influences of different pretreatments on recalcitrance of Populus natural variants. *Bioresource Technology*, **2018**, 265, 75-81	11	16
51	Overexpression of a Domain of Unknown Function 231-containing protein increases O-xylan acetylation and cellulose biosynthesis in. *Biotechnology for Biofuels*, **2017**, 10, 311	7.8	15
50	Overexpression of a Domain of Unknown Function 266-containing protein results in high cellulose content, reduced recalcitrance, and enhanced plant growth in the bioenergy crop. *Biotechnology for Biofuels*, **2017**, 10, 74	7.8	14
49	Understanding the Effects of Ethylene Glycol-Assisted Biomass Fractionation Parameters on Lignin Characteristics Using a Full Factorial Design and Computational Modeling. *ACS Omega*, **2019**, 4, 16103-16110	3.9	14
48	Two-stage fractionation of corn stover using aqueous ammonia and hot water. *Applied Biochemistry and Biotechnology*, **2011**, 164, 729-40	3.2	14
47	Catalytic Effect of Alkali and Alkaline Earth Metals in Lignin Pyrolysis: A Density Functional Theory Study. *Energy & Fuels*, **2020**, 34, 9734-9740	4.1	14
46	PdWND3A, a wood-associated NAC domain-containing protein, affects lignin biosynthesis and composition in Populus. *BMC Plant Biology*, **2019**, 19, 486	5.3	14
45	The fractionation of woody biomass under mild conditions using bifunctional phenol-4-sulfonic acid as a catalyst and lignin solvent. *Green Chemistry*, **2020**, 22, 5414-5422	10	12
44	Recent Advancements in Biological Conversion of Industrial Hemp for Biofuel and Value-Added Products. *Fermentation*, **2021**, 7, 6	4.7	12
43	Combining loss of function of and --- for lignin reduction and improved saccharification efficiency in. *Biotechnology for Biofuels*, **2019**, 12, 108	7.8	11
42	Innovative production of lignin nanoparticles using deep eutectic solvents for multifunctional nanocomposites. *International Journal of Biological Macromolecules*, **2021**, 183, 781-789	7.9	11
41	Effect of low-moisture anhydrous ammonia (LMAA) pretreatment on biomass quality and enzymatic hydrolysis for long-term storage. *Applied Biochemistry and Biotechnology*, **2014**, 174, 2639-51	3.2	10
40	Topochemical Understanding of Lignin Distribution During Hydrothermal Flowthrough Pretreatment. *ChemistrySelect*, **2018**, 3, 9348-9352	1.8	10
39	Enhancement of enzymatic hydrolysis and Klason lignin removal of corn stover using photocatalyst-assisted ammonia pretreatment. *Applied Biochemistry and Biotechnology*, **2013**, 169, 1648-58	3.2	9
38	Front-end recovery of protein from lignocellulosic biomass and its effects on chemical pretreatment and enzymatic saccharification. *Bioprocess and Biosystems Engineering*, **2013**, 36, 687-94	3.7	9
37	Tandem conversion of lignin to catechols via demethylation and catalytic hydrogenolysis. *Industrial Crops and Products*, **2021**, 159, 113095	5.9	9
36	Understanding the Changes to Biomass Surface Characteristics after Ammonia and Organosolv Pretreatments by Using Time-of-Flight Secondary-Ion Mass Spectrometry (TOF-SIMS). *ChemPlusChem*, **2017**, 82, 686-690	2.8	8
35	Cellulose hydrolysis by Clostridium thermocellum is agnostic to substrate structural properties in contrast to fungal cellulases. *Green Chemistry*, **2019**, 21, 2810-2822	10	8

34	NaOH-Aided Sulfolane Pretreatment for Effective Fractionation and Utilization of Willow (Salix matsudana cv. Zhuliu). *Industrial & Engineering Chemistry Research*, **2020**, 59, 17546-17553	3.9	8
33	Integrated Process for the Production of Lactic Acid from Lignocellulosic Biomass: From Biomass Fractionation and Characterization to Chemocatalytic Conversion with Lanthanum(III) Triflate. *Industrial & Engineering Chemistry Research*, **2020**, 59, 10832-10839	3.9	8
32	Correlations of the physicochemical properties of organosolv lignins from Broussonetia papyrifera with their antioxidant activities. *Sustainable Energy and Fuels*, **2020**, 4, 5114-5119	5.8	8
31	The effect of switchgrass plant cell wall properties on its deconstruction by thermochemical pretreatments coupled with fungal enzymatic hydrolysis or Clostridium thermocellum consolidated bioprocessing. *Green Chemistry*, **2020**, 22, 7924-7945	10	7
30	Production of fermentable sugars from corn fiber using soaking in aqueous ammonia (SAA) pretreatment and fermentation to succinic acid using Escherichia coli AFP184. *Korean Journal of Chemical Engineering*, **2016**, 33, 2863-2868	2.8	7
29	Effect of in Vivo Deuteration on Structure of Switchgrass Lignin. *ACS Sustainable Chemistry and Engineering*, **2017**, 5, 8004-8010	8.3	7
28	Comparative Analysis of Single-Cascade Five-Zone and Two-Zone SMB Systems for the Separation of a Ternary Amino Acid Mixture. *Canadian Journal of Chemical Engineering*, **2008**, 85, 874-882	2.3	6
27	Effect of Ionic Liquid on the Retention and Separation Behavior of Various Amino Acids in Reversed Phase Chromatography. *Journal of Liquid Chromatography and Related Technologies*, **2007**, 30, 2989-3006	1.3	5
26	Photocatalytic Chemoselective C□ Bond Cleavage at Room Temperature in Dye-Sensitized Photoelectrochemical Cells. *ACS Catalysis*, **2021**, 11, 3771-3781	13.1	5
25	Reversal of Elution Sequence and Selectivity Resulting from the Use of an Ionic Liquid as a Mobile Phase Modifier. *Journal of Liquid Chromatography and Related Technologies*, **2008**, 31, 1104-1122	1.3	4
24	Fractionation of Poplar Wood Using a Bifunctional Aromatic Acid under Mild Conditions. *ACS Sustainable Chemistry and Engineering*, **2021**, 9, 5364-5376	8.3	4
23	Opportunities and challenges for flow-through hydrothermal pretreatment in advanced biorefineries. *Bioresource Technology*, **2022**, 343, 126061	11	4
22	Measurement of Physicochemical Properties of Lignin. *ACS Symposium Series*, **2019**, 33-47	0.4	3
21	Lignin Exhibits Recalcitrance-Associated Features Following the Consolidated Bioprocessing of Populus trichocarpa Natural Variants. *ChemistrySelect*, **2017**, 2, 10642-10647	1.8	3
20	Silicon Carbide Whisker-Reinforced Ceramic Tape for High-Power Components. *International Journal of Applied Ceramic Technology*, **2014**, 11, 240-245	2	3
19	Challenges and Perspective of Recent Biomass Pretreatment Solvents. *Frontiers in Chemical Engineering*, **2021**, 3,	1	3
18	Deep Eutectic Solvent Pretreatment of Transgenic Biomass With Increased CC Lignin Monomers. *Frontiers in Plant Science*, **2019**, 10, 1774	6.2	3
17	Recent Advances in Synthesis and Application of Lignin Nanoparticles. *ACS Symposium Series*, **2021**, 273-293	0.4	3

16	Effect of lignin-blocking agent on enzyme hydrolysis of acid pretreated hemp waste.. *RSC Advances*, **2021**, 11, 22025-22033	3.7	3
15	A review on physico-chemical delignification as a pretreatment of lignocellulosic biomass for enhanced bioconversion.. *Bioresource Technology*, **2021**, 346, 126591	11	2
14	Engineered Sorghum Bagasse Enables a Sustainable Biorefinery with p-Hydroxybenzoic Acid-Based Deep Eutectic Solvent. *ChemSusChem*, **2021**, 14, 5235-5244	8.3	2
13	Opportunities and Challenges of Lignin Utilization. *ACS Symposium Series*, **2021**, 1-12	0.4	2
12	Nanoscale FTIR and Mechanical Mapping of Plant Cell Walls for Understanding Biomass Deconstruction. *ACS Sustainable Chemistry and Engineering*, **2022**, 10, 3016-3026	8.3	2
11	2D HSQC Chemical Shifts of Impurities from Biomass Pretreatment. *ChemistrySelect*, **2020**, 5, 3359-3364	1.8	1
10	Fuel Ethanol from Lignocellulosic Biomass **2015**, 1-20		1
9	Raman Spectroscopic Characterization of Photonanocatalyst Aided Alkaline Pretreated Corn Stover Biomass. *Advanced Materials Research*, **2014**, 875-877, 1576-1580	0.5	1
8	The physiochemical alteration of flax fibers structuring components after different scouring and bleaching treatments. *Industrial Crops and Products*, **2021**, 160, 113112	5.9	1
7	Rapid and efficient microwave-assisted guanidine hydrochloride deep eutectic solvent pretreatment for biological conversion of castor stalk. *Bioresource Technology*, **2022**, 343, 126022	11	1
6	A combination of deep eutectic solvent and ethanol pretreatment for synergistic delignification and enhanced enzymatic hydrolysis for biorefinary process.. *Bioresource Technology*, **2022**, 350, 126885	11	1
5	Catalytic conversion of waste corrugated cardboard into lactic acid using lanthanide triflates.. *Waste Management*, **2022**, 144, 41-48	8.6	1
4	Effective biomass fractionation and lignin stabilization using a diol DES system. *Chemical Engineering Journal*, **2022**, 136395	14.7	1
3	Ferric chloride aided peracetic acid pretreatment for effective utilization of sugarcane bagasse. *Fuel*, **2022**, 319, 123739	7.1	0
2	Ru(II) Polypyridyl-Modified TiO2 Nanoparticles for Photocatalytic C□/C□ Bond Cleavage at Room Temperature. *ACS Applied Nano Materials*, **2022**, 5, 948-956	5.6	0
1	Measuring Biomass-Derived Products in Biological Conversion and Metabolic Process. *Methods in Molecular Biology*, **2020**, 2096, 113-124	1.4	