Hoon Kim

List of Publications by Year in Descending Order

85 papers	8,451 citations	46 h-index	91 g-index
91 ext. papers	9,979 ext. citations	7.8 avg, IF	5.9 L-index

#	Paper	IF	Citations
85	Density functional theory study on the coupling and reactions of diferuloylputrescine as a lignin monomer.. *Phytochemistry*, **2022**, 197, 113122	4	
84	Exogenous chalcone synthase expression in developing poplar xylem incorporates naringenin into lignins. *Plant Physiology*, **2021**,	6.6	3
83	Incorporation of catechyl monomers into lignins: lignification from the non-phenolic end via Diels□Alder cycloaddition?. *Green Chemistry*, **2021**, 23, 8995-9013	10	1
82	Flavonoids naringenin chalcone, naringenin, dihydrotricin, and tricin are lignin monomers in papyrus. *Plant Physiology*, **2021**,	6.6	6
81	Radical Coupling Reactions of Hydroxystilbene Glucosides and Coniferyl Alcohol: A Density Functional Theory Study. *Frontiers in Plant Science*, **2021**, 12, 642848	6.2	3
80	Lignin Monomers Derived from the Flavonoid and Hydroxystilbene Biosynthetic Pathways **2021**, 177-206		3
79	Pith-specific lignification in Nicotiana attenuata as a defense against a stem-boring herbivore. *New Phytologist*, **2021**, 232, 332-344	9.8	3
78	Rewired phenolic metabolism and improved saccharification efficiency of a Zea mays cinnamyl alcohol dehydrogenase 2 (zmcad2) mutant. *Plant Journal*, **2021**, 105, 1240-1257	6.9	4
77	Maize specialized metabolome networks reveal organ-preferential mixed glycosides. *Computational and Structural Biotechnology Journal*, **2021**, 19, 1127-1144	6.8	6
76	CRISPR-Cas9 editing of CAFFEOYL SHIKIMATE ESTERASE 1 and 2 shows their importance and partial redundancy in lignification in Populus tremula □P. alba. *Plant Biotechnology Journal*, **2021**, 19, 2221-2234	11.6	6
75	Mechanistic Study of Diaryl Ether Bond Cleavage during Palladium-Catalyzed Lignin Hydrogenolysis. *ChemSusChem*, **2020**, 13, 4487-4494	8.3	20
74	Lignin Monomers from beyond the Canonical Monolignol Biosynthetic Pathway: Another Brick in the Wall. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 4997-5012	8.3	73
73	A Century-Old Mystery Unveiled: Sekizaisou is a Natural Lignin Mutant. *Plant Physiology*, **2020**, 182, 1821-1828	6.8	4
72	Monolignol Benzoates Incorporate into the Lignin of Transgenic Populus trichocarpa Depleted in C3H and C4H. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 3644-3654	8.3	19
71	Coupling and Reactions of Lignols and New Lignin Monomers: A Density Functional Theory Study. *ACS Sustainable Chemistry and Engineering*, **2020**, 8, 11033-11045	8.3	9
70	Involvement of CesA4, CesA7-A/B and CesA8-A/B in secondary wall formation in Populus trichocarpa wood. *Tree Physiology*, **2020**, 40, 73-89	4.2	14
69	COSY catalyses trans-cis isomerization and lactonization in the biosynthesis of coumarins. *Nature Plants*, **2019**, 5, 1066-1075	11.5	24

68	Radical coupling reactions of piceatannol and monolignols: A density functional theory study. *Phytochemistry*, **2019**, 164, 12-23	4	11
67	Hydroxystilbene Glucosides Are Incorporated into Norway Spruce Bark Lignin. *Plant Physiology*, **2019**, 180, 1310-1321	6.6	26
66	Structural features of alternative lignin monomers associated with improved digestibility of artificially lignified maize cell walls. *Plant Science*, **2019**, 287, 110070	5.3	10
65	CAD1 and CCR2 protein complex formation in monolignol biosynthesis in Populus trichocarpa. *New Phytologist*, **2019**, 222, 244-260	9.8	20
64	Improving wood properties for wood utilization through multi-omics integration in lignin biosynthesis. *Nature Communications*, **2018**, 9, 1579	17.4	96
63	Structural Characterization of Lignin from Maize (Zea mays L.) Fibers: Evidence for Diferuloylputrescine Incorporated into the Lignin Polymer in Maize Kernels. *Journal of Agricultural and Food Chemistry*, **2018**, 66, 4402-4413	5.7	27
62	Selective Oxidation of Lignin Model Compounds. *ChemSusChem*, **2018**, 11, 2045-2050	8.3	26
61	Cell Wall Characteristics of a Maize Mutant Selected for Decreased Ferulates. *American Journal of Plant Sciences*, **2018**, 09, 446-466	0.5	4
60	Enzymatic Depolymerization of Lignin with Release of Syringyl, Guaiacyl, and Tricin Units. *Applied and Environmental Microbiology*, **2018**, 84,	4.8	30
59	Variability in Lignin Composition and Structure in Cell Walls of Different Parts of Macaba (Acrocomia aculeata) Palm Fruit. *Journal of Agricultural and Food Chemistry*, **2018**, 66, 138-153	5.7	42
58	An "ideal lignin" facilitates full biomass utilization. *Science Advances*, **2018**, 4, eaau2968	14.3	108
57	Structural Characterization of Lignins from Willow Bark and Wood. *Journal of Agricultural and Food Chemistry*, **2018**, 66, 7294-7300	5.7	38
56	Hydroxystilbenes Are Monomers in Palm Fruit Endocarp Lignins. *Plant Physiology*, **2017**, 174, 2072-2082	6.6	61
55	The Enzyme Activity and Substrate Specificity of Two Major Cinnamyl Alcohol Dehydrogenases in Sorghum (), SbCAD2 and SbCAD4. *Plant Physiology*, **2017**, 174, 2128-2145	6.6	22
54	Natural acetylation impacts carbohydrate recovery during deconstruction of wood. *Biotechnology for Biofuels*, **2017**, 10, 48	7.8	25
53	Altering carbon allocation in hybrid poplar (Populus alba grandidentata) impacts cell wall growth and development. *Plant Biotechnology Journal*, **2017**, 15, 865-878	11.6	13
52	Characterization and Elimination of Undesirable Protein Residues in Plant Cell Wall Materials for Enhancing Lignin Analysis by Solution-State Nuclear Magnetic Resonance Spectroscopy. *Biomacromolecules*, **2017**, 18, 4184-4195	6.9	60
51	Different Routes for Conifer- and Sinapaldehyde and Higher Saccharification upon Deficiency in the Dehydrogenase CAD1. *Plant Physiology*, **2017**, 175, 1018-1039	6.6	60

50	Silencing Affects Lignification and Improves Saccharification in Poplar. *Plant Physiology*, **2017**, 175, 1040-1057	6.6	63
49	Highly Decorated Lignins in Leaf Tissues of the Canary Island Date Palm. *Plant Physiology*, **2017**, 175, 1058-1067	6.6	27
48	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
47	Formaldehyde stabilization facilitates lignin monomer production during biomass depolymerization. *Science*, **2016**, 354, 329-333	33.3	651
46	An essential role of caffeoyl shikimate esterase in monolignol biosynthesis in Medicago truncatula. *Plant Journal*, **2016**, 86, 363-75	6.9	69
45	Enhancing digestibility and ethanol yield of Populus wood via expression of an engineered monolignol 4-O-methyltransferase. *Nature Communications*, **2016**, 7, 11989	17.4	44
44	Small glycosylated lignin oligomers are stored in Arabidopsis leaf vacuoles. *Plant Cell*, **2015**, 27, 695-710	11.6	62
43	Naturally p-Hydroxybenzoylated Lignins in Palms. *Bioenergy Research*, **2015**, 8, 934-952	3.1	69
42	Stereochemical features of glutathione-dependent enzymes in the Sphingobium sp. strain SYK-6 β-aryl etherase pathway. *Journal of Biological Chemistry*, **2014**, 289, 8656-67	5.4	46
41	A gel-state 2D-NMR method for plant cell wall profiling and analysis: a model study with the amorphous cellulose and xylan from ball-milled cotton linters. *RSC Advances*, **2014**, 4, 7549-7560	3.7	83
40	Mutation of the inducible ARABIDOPSIS THALIANA CYTOCHROME P450 REDUCTASE2 alters lignin composition and improves saccharification. *Plant Physiology*, **2014**, 166, 1956-71	6.6	47
39	Phenylcoumaran benzylic ether reductase prevents accumulation of compounds formed under oxidative conditions in poplar xylem. *Plant Cell*, **2014**, 26, 3775-91	11.6	30
38	Plant cell wall profiling by fast maximum likelihood reconstruction (FMLR) and region-of-interest (ROI) segmentation of solution-state 2D 1H-13C NMR spectra. *Biotechnology for Biofuels*, **2013**, 6, 45	7.8	18
37	Two-Dimensional NMR Evidence for Cleavage of Lignin and Xylan Substituents in Wheat Straw Through Hydrothermal Pretreatment and Enzymatic Hydrolysis. *Bioenergy Research*, **2013**, 6, 211-221	3.1	63
36	Ptr-miR397a is a negative regulator of laccase genes affecting lignin content in Populus trichocarpa. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 10848-53	11.5	246
35	Caffeoyl shikimate esterase (CSE) is an enzyme in the lignin biosynthetic pathway in Arabidopsis. *Science*, **2013**, 341, 1103-6	33.3	310
34	Chemoselective metal-free aerobic alcohol oxidation in lignin. *Journal of the American Chemical Society*, **2013**, 135, 6415-8	16.4	460
33	Breeding with rare defective alleles (BRDA): a natural Populus nigra HCT mutant with modified lignin as a case study. *New Phytologist*, **2013**, 198, 765-776	9.8	73

32	Preparation of monolignol □acetate, □p-hydroxycinnamate, and □p-hydroxybenzoate conjugates: selective deacylation of phenolic acetates with hydrazine acetate. *RSC Advances*, **2013**, 3, 21964	3.7	13
31	Loss of function of cinnamyl alcohol dehydrogenase 1 leads to unconventional lignin and a temperature-sensitive growth defect in Medicago truncatula. *Proceedings of the National Academy of Sciences of the United States of America*, **2013**, 110, 13660-5	11.5	94
30	Whole plant cell wall characterization using solution-state 2D NMR. *Nature Protocols*, **2012**, 7, 1579-89	18.8	434
29	An engineered monolignol 4-o-methyltransferase depresses lignin biosynthesis and confers novel metabolic capability in Arabidopsis. *Plant Cell*, **2012**, 24, 3135-52	11.6	80
28	Identification of grass-specific enzyme that acylates monolignols with p-coumarate. *Journal of Biological Chemistry*, **2012**, 287, 8347-55	5.4	107
27	The DUF579 domain containing proteins IRX15 and IRX15-L affect xylan synthesis in Arabidopsis. *Plant Journal*, **2011**, 66, 387-400	6.9	106
26	Lignin composition and structure in young versus adult Eucalyptus globulus plants. *Plant Physiology* , **2011**, 155, 667-82	6.6	212
25	Engineering traditional monolignols out of lignin by concomitant up-regulation of F5H1 and down-regulation of COMT in Arabidopsis. *Plant Journal*, **2010**, 64, 885-97	6.9	99
24	Mass spectrometry-based sequencing of lignin oligomers. *Plant Physiology*, **2010**, 153, 1464-78	6.6	143
23	Solution-state 2D NMR of ball-milled plant cell wall gels in DMSO-d(6)/pyridine-d(5). *Organic and Biomolecular Chemistry*, **2010**, 8, 576-91	3.9	473
22	Mass spectrometry-based fragmentation as an identification tool in lignomics. *Analytical Chemistry*, **2010**, 82, 8095-105	7.8	123
21	Identifying new lignin bioengineering targets: 1. Monolignol-substitute impacts on lignin formation and cell wall fermentability. *BMC Plant Biology*, **2010**, 10, 114	5.3	67
20	Suppression of 4-coumarate-CoA ligase in the coniferous gymnosperm Pinus radiata. *Plant Physiology*, **2009**, 149, 370-83	6.6	140
19	Cell wall fermentation kinetics are impacted more by lignin content and ferulate cross-linking than by lignin composition. *Journal of the Science of Food and Agriculture*, **2009**, 89, 122-129	4.3	102
18	Grass lignin acylation: p-coumaroyl transferase activity and cell wall characteristics of C3 and C4 grasses. *Planta*, **2009**, 229, 1253-67	4.7	78
17	Peroxidase-catalyzed oligomerization of ferulic acid esters. *Journal of Agricultural and Food Chemistry*, **2008**, 56, 10368-75	5.7	24
16	Identification of the structure and origin of a thioacidolysis marker compound for ferulic acid incorporation into angiosperm lignins (and an indicator for cinnamoyl CoA reductase deficiency). *Plant Journal*, **2008**, 53, 368-79	6.9	102
15	Solution-state 2D NMR of Ball-milled Plant Cell Wall Gels in DMSO-d 6. *Bioenergy Research*, **2008**, 1, 56-66	9.1	218

14	Downregulation of cinnamoyl-coenzyme A reductase in poplar: multiple-level phenotyping reveals effects on cell wall polymer metabolism and structure. *Plant Cell*, **2007**, 19, 3669-91	11.6	280
13	Effects of coumarate 3-hydroxylase down-regulation on lignin structure. *Journal of Biological Chemistry*, **2006**, 281, 8843-53	5.4	192
12	Simplified preparation of coniferyl and sinapyl alcohols. *Journal of Agricultural and Food Chemistry*, **2005**, 53, 3693-5	5.7	28
11	Profiling of oligolignols reveals monolignol coupling conditions in lignifying poplar xylem. *Plant Physiology*, **2004**, 136, 3537-49	6.6	160
10	Lignins: Natural polymers from oxidative coupling of 4-hydroxyphenyl- propanoids. *Phytochemistry Reviews*, **2004**, 3, 29-60	7.7	1062
9	Peroxidase-dependent cross-linking reactions of p-hydroxycinnamates in plant cell walls. *Phytochemistry Reviews*, **2004**, 3, 79-96	7.7	209
8	Signatures of cinnamyl alcohol dehydrogenase deficiency in poplar lignins. *Phytochemistry*, **2004**, 65, 313-21	4	71
7	NMR analysis of lignins in CAD-deficient plants. Part 1. Incorporation of hydroxycinnamaldehydes and hydroxybenzaldehydes into lignins. *Organic and Biomolecular Chemistry*, **2003**, 1, 268-81	3.9	124
6	Sinapate dehydrodimers and sinapate-ferulate heterodimers in cereal dietary fiber. *Journal of Agricultural and Food Chemistry*, **2003**, 51, 1427-34	5.7	86
5	Identification of the structure and origin of thioacidolysis marker compounds for cinnamyl alcohol dehydrogenase deficiency in angiosperms. *Journal of Biological Chemistry*, **2002**, 277, 47412-9	5.4	65
4	Elucidation of new structures in lignins of CAD- and COMT-deficient plants by NMR. *Phytochemistry*, **2001**, 57, 993-1003	4	165
3	Cross-coupling of hydroxycinnamyl aldehydes into lignins. *Organic Letters*, **2000**, 2, 2197-200	6.2	61
2	Arylpropane-1,3-diols in lignins from normal and CAD-deficient pines. *Organic Letters*, **1999**, 1, 323-6	6.2	32
1	Quinone Methides in Lignification385-420		18