Hoon Kim

List of Publications by Year
in descending order

88 papers	11,117 citations	41323 49 h-index	49868 87 g-index
91 all docs	91 docs citations	91 times ranked	8690 citing authors

#	Article	IF	Citations
1	Lignins: Natural polymers from oxidative coupling of 4-hydroxyphenyl- propanoids. Phytochemistry Reviews, 2004, 3, 29-60.	3.1	1,282
2	Formaldehyde stabilization facilitates lignin monomer production during biomass depolymerization. Science, 2016, 354, 329-333.	6.0	944
3	Solution-state 2D NMR of ball-milled plant cell wall gels in DMSO-d6/pyridine-d5. Organic and Biomolecular Chemistry, 2010, 8, 576-591.	1.5	565
4	Whole plant cell wall characterization using solution-state 2D NMR. Nature Protocols, 2012, 7, 1579-1589.	5.5	563
5	Chemoselective Metal-Free Aerobic Alcohol Oxidation in Lignin. Journal of the American Chemical Society, 2013, 135, 6415-6418.	6.6	547
6	Caffeoyl Shikimate Esterase (CSE) Is an Enzyme in the Lignin Biosynthetic Pathway in Arabidopsis. Science, 2013, 341, 1103-1106.	6.0	432
7	Downregulation of Cinnamoyl-Coenzyme A Reductase in Poplar: Multiple-Level Phenotyping Reveals Effects on Cell Wall Polymer Metabolism and Structure. Plant Cell, 2007, 19, 3669-3691.	3.1	352
8	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, 10848-10853.	3.3	329
9	Solution-state 2D NMR of Ball-milled Plant Cell Wall Gels in DMSO-d 6. Bioenergy Research, 2008, 1, 56-66.	2.2	266
10	Lignin Composition and Structure in Young versus AdultEucalyptus globulusPlants. Plant Physiology, 2011, 155, 667-682.	2.3	263
11	Peroxidase-dependent cross-linking reactions of p-hydroxycinnamates in plant cell walls. Phytochemistry Reviews, 2004, 3, 79-96.	3.1	239
12	Effects of Coumarate 3-Hydroxylase Down-regulation on Lignin Structure. Journal of Biological Chemistry, 2006, 281, 8843-8853.	1.6	209
13	Elucidation of new structures in lignins of CAD- and COMT-deficient plants by NMR. Phytochemistry, 2001, 57, 993-1003.	1.4	195
14	An â€œideal ligninâ€•facilitates full biomass utilization. Science Advances, 2018, 4, eaau2968.	4.7	184
15	Lignin Monomers from beyond the Canonical Monolignol Biosynthetic Pathway: Another Brick in the Wall. ACS Sustainable Chemistry and Engineering, 2020, 8, 4997-5012.	3.2	184
16	Profiling of Oligolignols Reveals Monolignol Coupling Conditions in Lignifying Poplar Xylem. Plant Physiology, 2004, 136, 3537-3549.	2.3	180
17	Suppression of 4-Coumarate-CoA Ligase in the Coniferous Gymnosperm Pinus radiata Â Â. Plant Physiology, 2009, 149, 370-383.	2.3	166
18	Mass Spectrometry-Based Sequencing of Lignin Oligomers. Plant Physiology, 2010, 153, 1464-1478.	2.3	166

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19	Improving wood properties for wood utilization through multi-omics integration in lignin biosynthesis. Nature Communications, 2018, 9, 1579.	5.8	162
20	NMR analysis of lignins in CAD-deficient plants. Part 1. Incorporation of hydroxycinnamaldehydes and hydroxybenzaldehydes into lignins. Organic and Biomolecular Chemistry, 2003, 1, 268-281.	1.5	145
21	Mass Spectrometry-Based Fragmentation as an Identification Tool in Lignomics. Analytical Chemistry, 2010, 82, 8095-8105.	3.2	140
22	Identification of Grass-specific Enzyme That Acylates Monolignols with p-Coumarate. Journal of Biological Chemistry, 2012, 287, 8347-8355.	1.6	140
23	The DUF579 domain containing proteins IRX15 and IRX15â€Ł affect xylan synthesis in Arabidopsis. Plant Journal, 2011, 66, 387-400.	2.8	120
24	Cell wall fermentation kinetics are impacted more by lignin content and ferulate crossâ€linking than by lignin composition. Journal of the Science of Food and Agriculture, 2009, 89, 122-129.	1.7	116
25	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, 13660-13665.	3.3	115
26	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, 368-379.	2.8	114
27	Engineering traditional monolignols out of lignin by concomitant up-regulation of F5H1 and down-regulation of COMT in Arabidopsis. Plant Journal, 2010, 64, 885-897.	2.8	114
28	An essential role of caffeoyl shikimate esterase in monolignol biosynthesis in Medicago truncatula. Plant Journal, 2016, 86, 363-375.	2.8	111
29	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.	1.7	100
30	Sinapate Dehydrodimers and Sinapateâ€'Ferulate Heterodimers in Cereal Dietary Fiber. Journal of Agricultural and Food Chemistry, 2003, 51, 1427-1434.	2.4	99
31	Naturally p-Hydroxybenzoylated Lignins in Palms. Bioenergy Research, 2015, 8, 934-952.	2.2	99
32	Different Routes for Conifer- and Sinapaldehyde and Higher Saccharification upon Deficiency in the Dehydrogenase CAD1. Plant Physiology, 2017, 175, 1018-1039.	2.3	99
33	Grass lignin acylation: p-coumaroyl transferase activity and cell wall characteristics of C3 and C4 grasses. Planta, 2009, 229, 1253-1267.	1.6	94
34	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.	2.6	94
35	An Engineered Monolignol 4-O-Methyltransferase Depresses Lignin Biosynthesis and Confers Novel Metabolic Capability in Arabidopsis. Plant Cell, 2012, 24, 3135-3152.	3.1	92
36	Breeding with rare defective alleles (BRDA): a natural <scp>P</scp>opulus nigra <scp>HCT</scp> mutant with modified lignin as a case study. New Phytologist, 2013, 198, 765-776.	3.5	92

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37	Small Glycosylated Lignin Oligomers Are Stored in Arabidopsis Leaf Vacuoles. Plant Cell, 2015, 27, 695-710.	3.1	90
38	Hydroxystilbenes Are Monomers in Palm Fruit Endocarp Lignins. Plant Physiology, 2017, 174, 2072-2082.	2.3	90
39	Silencing CAFFEOYL SHIKIMATE ESTERASE Affects Lignification and Improves Saccharification in Poplar. Plant Physiology, 2017, 175, 1040-1057.	2.3	90
40	Signatures of cinnamyl alcohol dehydrogenase deficiency in poplar lignins. Phytochemistry, 2004, 65, 313-321.	1.4	85
41	Identification of the Structure and Origin of Thioacidolysis Marker Compounds for Cinnamyl Alcohol Dehydrogenase Deficiency in Angiosperms. Journal of Biological Chemistry, 2002, 277, 47412-47419.	1.6	80
42	Identifying new lignin bioengineering targets: 1. Monolignol-substitute impacts on lignin formation and cell wall fermentability. BMC Plant Biology, 2010, 10, 114.	1.6	75
43	Variability in Lignin Composition and Structure in Cell Walls of Different Parts of MacaÃºba (Acrocomia aculeata) Palm Fruit. Journal of Agricultural and Food Chemistry, 2018, 66, 138-153.	2.4	70
44	Cross-Coupling of Hydroxycinnamyl Aldehydes into Lignins. Organic Letters, 2000, 2, 2197-2200.	2.4	69
45	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.	2.2	68
46	COSY catalyses transâ€“cis isomerization and lactonization in the biosynthesis of coumarins. Nature Plants, 2019, 5, 1066-1075.	4.7	64
47	Mutation of the Inducible ARABIDOPSIS THALIANA CYTOCHROME P450 REDUCTASE2 Alters Lignin Composition and Improves Saccharification Â Â. Plant Physiology, 2014, 166, 1956-1971.	2.3	63
48	Enhancing digestibility and ethanol yield of Populus wood via expression of an engineered monolignol 4-O-methyltransferase. Nature Communications, 2016, 7, 11989.	5.8	61
49	Stereochemical Features of Glutathione-dependent Enzymes in the Sphingobium sp. Strain SYK-6 Î²-Aryl Etherase Pathway. Journal of Biological Chemistry, 2014, 289, 8656-8667.	1.6	58
50	Structural Characterization of Lignins from Willow Bark and Wood. Journal of Agricultural and Food Chemistry, 2018, 66, 7294-7300.	2.4	50
51	Understanding the Physicochemical Characteristics and the Improved Enzymatic Saccharification of Corn Stover Pretreated with Aqueous and Gaseous Ammonia. Bioenergy Research, 2016, 9, 67-76.	2.2	48
52	Phenylcoumaran Benzylic Ether Reductase Prevents Accumulation of Compounds Formed under Oxidative Conditions in Poplar Xylem. Plant Cell, 2014, 26, 3775-3791.	3.1	43
53	Hydroxystilbene Glucosides Are Incorporated into Norway Spruce Bark Lignin. Plant Physiology, 2019, 180, 1310-1321.	2.3	43
54	<scp>CAD</scp>1 and <scp>CCR</scp>2 protein complex formation in monolignol biosynthesis in Populus trichocarpa. New Phytologist, 2019, 222, 244-260.	3.5	43

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55	The flying spider-monkey tree fern genome provides insights into fern evolution and arborescence. Nature Plants, 2022, 8, 500-512.	4.7	42
56	In Vitro Enzymatic Depolymerization of Lignin with Release of Syringyl, Guaiacyl, and Tricin Units. Applied and Environmental Microbiology, 2018, 84, .	1.4	41
57	Natural acetylation impacts carbohydrate recovery during deconstruction of Populus trichocarpa wood. Biotechnology for Biofuels, 2017, 10, 48.	6.2	40
58	Selective Oxidation of Lignin Model Compounds. ChemSusChem, 2018, 11, 2045-2050.	3.6	39
59	Monolignol Benzoates Incorporate into the Lignin of Transgenic Populus trichocarpa Depleted in C3H and C4H. ACS Sustainable Chemistry and Engineering, 2020, 8, 3644-3654.	3.2	39
60	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.	2.4	38
61	Arylpropane-1,3-diols in Lignins from Normal and CAD-Deficient Pines. Organic Letters, 1999, 1, 323-326.	2.4	36
62	Mechanistic Study of Diaryl Ether Bond Cleavage during Palladiumâ€Catalyzed Lignin Hydrogenolysis. ChemSusChem, 2020, 13, 4487-4494.	3.6	36
63	Simplified Preparation of Coniferyl and Sinapyl Alcohols. Journal of Agricultural and Food Chemistry, 2005, 53, 3693-3695.	2.4	35
64	Highly Decorated Lignins in Leaf Tissues of the Canary Island Date Palm Phoenix canariensis. Plant Physiology, 2017, 175, 1058-1067.	2.3	34
65	The Enzyme Activity and Substrate Specificity of Two Major Cinnamyl Alcohol Dehydrogenases in Sorghum (Sorghum bicolor), SbCAD2 and SbCAD4. Plant Physiology, 2017, 174, 2128-2145.	2.3	32
66	Involvement of CesA4, CesA7-A/B and CesA8-A/B in secondary wall formation in Populus trichocarpa wood. Tree Physiology, 2020, 40, 73-89.	1.4	30
67	Peroxidase-Catalyzed Oligomerization of Ferulic Acid Esters. Journal of Agricultural and Food Chemistry, 2008, 56, 10368-10375.	2.4	29
68	CRISPRâ€Cas9 editing of CAFFEOYL SHIKIMATE ESTERASE 1 and 2 shows their importance and partial redundancy in lignification in Populus tremula Ã— P. alba. Plant Biotechnology Journal, 2021, 19, 2221-2234.	4.1	29
69	Flavonoids naringenin chalcone, naringenin, dihydrotricin, and tricin are lignin monomers in papyrus. Plant Physiology, 2022, 188, 208-219.	2.3	28
70	Altering carbon allocation in hybrid poplar (Populus albaÂÃ—Âgrandidentata) impacts cell wall growth and development. Plant Biotechnology Journal, 2017, 15, 865-878.	4.1	24
71	A Century-Old Mystery Unveiled: Sekizaisou is a Natural Lignin Mutant. Plant Physiology, 2020, 182, 1821-1828.	2.3	24
72	Pithâ€specific lignification in Nicotiana attenuata as a defense against a stemâ€boring herbivore. New Phytologist, 2021, 232, 332-344.	3.5	23

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73	Plant cell wall profiling by fast maximum likelihood reconstruction (FMLR) and region-of-interest (ROI) segmentation of solution-state 2D 1Hâ€“13C NMR spectra. Biotechnology for Biofuels, 2013, 6, 45.	6.2	18
74	Preparation of monolignol Î³-acetate, Î³-p-hydroxycinnamate, and Î³-p-hydroxybenzoate conjugates: selective deacylation of phenolic acetates with hydrazine acetate. RSC Advances, 2013, 3, 21964.	1.7	17
75	Radical coupling reactions of piceatannol and monolignols: A density functional theory study. Phytochemistry, 2019, 164, 12-23.	1.4	17
76	Maize specialized metabolome networks reveal organ-preferential mixed glycosides. Computational and Structural Biotechnology Journal, 2021, 19, 1127-1144.	1.9	15
77	Structural features of alternative lignin monomers associated with improved digestibility of artificially lignified maize cell walls. Plant Science, 2019, 287, 110070.	1.7	14
78	Exogenous chalcone synthase expression in developing poplar xylem incorporates naringenin into lignins. Plant Physiology, 2022, 188, 984-996.	2.3	14
79	Rewired phenolic metabolism and improved saccharification efficiency of a Zea mays cinnamyl alcohol dehydrogenase 2 (zmcad2) mutant. Plant Journal, 2021, 105, 1240-1257.	2.8	13
80	Unconventional lignin monomersâ€”Extension of the lignin paradigm. Advances in Botanical Research, 2022, , 1-39.	0.5	13
81	Overexpression of the scopoletin biosynthetic pathway enhances lignocellulosic biomass processing. Science Advances, 2022, 8, .	4.7	13
82	Coupling and Reactions of Lignols and New Lignin Monomers: A Density Functional Theory Study. ACS Sustainable Chemistry and Engineering, 2020, 8, 11033-11045.	3.2	12
83	Rerouting of the lignin biosynthetic pathway by inhibition of cytosolic shikimate recycling in transgenic hybrid aspen. Plant Journal, 2022, 110, 358-376.	2.8	10
84	Radical Coupling Reactions of Hydroxystilbene Glucosides and Coniferyl Alcohol: A Density Functional Theory Study. Frontiers in Plant Science, 2021, 12, 642848.	1.7	8
85	Cell Wall Characteristics of a Maize Mutant Selected for Decreased Ferulates. American Journal of Plant Sciences, 2018, 09, 446-466.	0.3	6
86	Incorporation of catechyl monomers into lignins: lignification from the non-phenolic endviaDielsâ€“Alder cycloaddition?. Green Chemistry, 2021, 23, 8995-9013.	4.6	6
87	H-lignin can be deposited independently of CINNAMYL ALCOHOL DEHYDROGENASE C and D in Arabidopsis. Plant Physiology, 2022, 189, 2015-2028.	2.3	4
88	Density functional theory study on the coupling and reactions of diferuloylputrescine as a lignin monomer. Phytochemistry, 2022, 197, 113122.	1.4	0