

## List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

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

| #  | Paper  | IF   | Citations |
|----|--|------|-----------|
| 85 | Lignins: Natural polymers from oxidative coupling of 4-hydroxyphenyl- propanoids. <i>Phytochemistry Reviews</i> , <b>2004</b> , 3, 29-60   | 7.7  | 1062      |
| 84 | Formaldehyde stabilization facilitates lignin monomer production during biomass depolymerization. <i>Science</i> , <b>2016</b> , 354, 329-333  | 33.3 | 651       |
| 83 | Solution-state 2D NMR of ball-milled plant cell wall gels in DMSO-d(6)/pyridine-d(5). <i>Organic and Biomolecular Chemistry</i> , <b>2010</b> , 8, 576-91  | 3.9  | 473       |
| 82 | Chemoselective metal-free aerobic alcohol oxidation in lignin. <i>Journal of the American Chemical Society</i> , <b>2013</b> , 135, 6415-8   | 16.4 | 460       |
| 81 | Whole plant cell wall characterization using solution-state 2D NMR. <i>Nature Protocols</i> , <b>2012</b> , 7, 1579-89   | 18.8 | 434       |
| 80 | Caffeoyl shikimate esterase (CSE) is an enzyme in the lignin biosynthetic pathway in Arabidopsis. <i>Science</i> , <b>2013</b> , 341, 1103-6   | 33.3 | 310       |
| 79 | Downregulation of cinnamoyl-coenzyme A reductase in poplar: multiple-level phenotyping reveals effects on cell wall polymer metabolism and structure. <i>Plant Cell</i> , <b>2007</b> , 19, 3669-91                        | 11.6 | 280       |
| 78 | Ptr-miR397a is a negative regulator of laccase genes affecting lignin content in Populus trichocarpa. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, 10848-53 | 11.5 | 246       |
| 77 | Solution-state 2D NMR of Ball-milled Plant Cell Wall Gels in DMSO-d 6. <i>Bioenergy Research</i> , <b>2008</b> , 1, 56-66  | 6.1  | 218       |
| 76 | Lignin composition and structure in young versus adult Eucalyptus globulus plants. <i>Plant Physiology</i> , <b>2011</b> , 155, 667-82   | 6.6  | 212       |
| 75 | Peroxidase-dependent cross-linking reactions of p-hydroxycinnamates in plant cell walls. <i>Phytochemistry Reviews</i> , <b>2004</b> , 3, 79-96  | 7.7  | 209       |
| 74 | Effects of coumarate 3-hydroxylase down-regulation on lignin structure. <i>Journal of Biological Chemistry</i> , <b>2006</b> , 281, 8843-53  | 5.4  | 192       |
| 73 | Elucidation of new structures in lignins of CAD- and COMT-deficient plants by NMR. <i>Phytochemistry</i> , <b>2001</b> , 57, 993-1003  | 4    | 165       |
| 72 | Profiling of oligolignols reveals monolignol coupling conditions in lignifying poplar xylem. <i>Plant Physiology</i> , <b>2004</b> , 136, 3537-49  | 6.6  | 160       |
| 71 | Mass spectrometry-based sequencing of lignin oligomers. <i>Plant Physiology</i> , <b>2010</b> , 153, 1464-78   | 6.6  | 143       |
| 70 | Suppression of 4-coumarate-CoA ligase in the coniferous gymnosperm Pinus radiata. <i>Plant Physiology</i> , <b>2009</b> , 149, 370-83  | 6.6  | 140       |
| 69 | NMR analysis of lignins in CAD-deficient plants. Part 1. Incorporation of hydroxycinnamaldehydes and hydroxybenzaldehydes into lignins. <i>Organic and Biomolecular Chemistry</i> , <b>2003</b> , 1, 268-81                | 3.9  | 124       |

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|----|---|------|-----|
| 68 | Mass spectrometry-based fragmentation as an identification tool in lignomics. <i>Analytical Chemistry</i> , <b>2010</b> , 82, 8095-105  | 7.8  | 123 |
| 67 | An "ideal lignin" facilitates full biomass utilization. <i>Science Advances</i> , <b>2018</b> , 4, eaau2968   | 14.3 | 108 |
| 66 | Identification of grass-specific enzyme that acylates monolignols with p-coumarate. <i>Journal of Biological Chemistry</i> , <b>2012</b> , 287, 8347-55   | 5.4  | 107 |
| 65 | The DUF579 domain containing proteins IRX15 and IRX15-L affect xylan synthesis in Arabidopsis. <i>Plant Journal</i> , <b>2011</b> , 66, 387-400   | 6.9  | 106 |
| 64 | Cell wall fermentation kinetics are impacted more by lignin content and ferulate cross-linking than by lignin composition. <i>Journal of the Science of Food and Agriculture</i> , <b>2009</b> , 89, 122-129  | 4.3  | 102 |
| 63 | 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). <i>Plant Journal</i> , <b>2008</b> , 53, 368-79                                  | 6.9  | 102 |
| 62 | Engineering traditional monolignols out of lignin by concomitant up-regulation of F5H1 and down-regulation of COMT in Arabidopsis. <i>Plant Journal</i> , <b>2010</b> , 64, 885-97  | 6.9  | 99  |
| 61 | Improving wood properties for wood utilization through multi-omics integration in lignin biosynthesis. <i>Nature Communications</i> , <b>2018</b> , 9, 1579   | 17.4 | 96  |
| 60 | Loss of function of cinnamyl alcohol dehydrogenase 1 leads to unconventional lignin and a temperature-sensitive growth defect in <i>Medicago truncatula</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , <b>2013</b> , 110, 13660-5 | 11.5 | 94  |
| 59 | Sinapate dehydrodimers and sinapate-ferulate heterodimers in cereal dietary fiber. <i>Journal of Agricultural and Food Chemistry</i> , <b>2003</b> , 51, 1427-34  | 5.7  | 86  |
| 58 | 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. <i>RSC Advances</i> , <b>2014</b> , 4, 7549-7560  | 3.7  | 83  |
| 57 | An engineered monolignol 4-o-methyltransferase depresses lignin biosynthesis and confers novel metabolic capability in Arabidopsis. <i>Plant Cell</i> , <b>2012</b> , 24, 3135-52   | 11.6 | 80  |
| 56 | Grass lignin acylation: p-coumaroyl transferase activity and cell wall characteristics of C3 and C4 grasses. <i>Planta</i> , <b>2009</b> , 229, 1253-67   | 4.7  | 78  |
| 55 | Lignin Monomers from beyond the Canonical Monolignol Biosynthetic Pathway: Another Brick in the Wall. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2020</b> , 8, 4997-5012   | 8.3  | 73  |
| 54 | Breeding with rare defective alleles (BRDA): a natural <i>Populus nigra</i> HCT mutant with modified lignin as a case study. <i>New Phytologist</i> , <b>2013</b> , 198, 765-776  | 9.8  | 73  |
| 53 | Signatures of cinnamyl alcohol dehydrogenase deficiency in poplar lignins. <i>Phytochemistry</i> , <b>2004</b> , 65, 313-21   | 4    | 71  |
| 52 | Naturally p-Hydroxybenzoylated Lignins in Palms. <i>Bioenergy Research</i> , <b>2015</b> , 8, 934-952   | 3.1  | 69  |
| 51 | An essential role of caffeoyl shikimate esterase in monolignol biosynthesis in <i>Medicago truncatula</i> . <i>Plant Journal</i> , <b>2016</b> , 86, 363-75   | 6.9  | 69  |

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|----|---|------|----|
| 50 | Identifying new lignin bioengineering targets: 1. Monolignol-substitute impacts on lignin formation and cell wall fermentability. <i>BMC Plant Biology</i> , <b>2010</b> , 10, 114  | 5.3  | 67 |
| 49 | Identification of the structure and origin of thioacidolysis marker compounds for cinnamyl alcohol dehydrogenase deficiency in angiosperms. <i>Journal of Biological Chemistry</i> , <b>2002</b> , 277, 47412-9                               | 5.4  | 65 |
| 48 | Two-Dimensional NMR Evidence for Cleavage of Lignin and Xylan Substituents in Wheat Straw Through Hydrothermal Pretreatment and Enzymatic Hydrolysis. <i>Bioenergy Research</i> , <b>2013</b> , 6, 211-221                                    | 3.1  | 63 |
| 47 | Silencing Affects Lignification and Improves Saccharification in Poplar. <i>Plant Physiology</i> , <b>2017</b> , 175, 1040-1057   | 6.5  | 63 |
| 46 | Small glycosylated lignin oligomers are stored in Arabidopsis leaf vacuoles. <i>Plant Cell</i> , <b>2015</b> , 27, 695-710  | 11.6 | 62 |
| 45 | Hydroxystilbenes Are Monomers in Palm Fruit Endocarp Lignins. <i>Plant Physiology</i> , <b>2017</b> , 174, 2072-2082  | 6.6  | 61 |
| 44 | Cross-coupling of hydroxycinnamyl aldehydes into lignins. <i>Organic Letters</i> , <b>2000</b> , 2, 2197-200  | 6.2  | 61 |
| 43 | Characterization and Elimination of Undesirable Protein Residues in Plant Cell Wall Materials for Enhancing Lignin Analysis by Solution-State Nuclear Magnetic Resonance Spectroscopy. <i>Biomacromolecules</i> , <b>2017</b> , 18, 4184-4195 | 6.9  | 60 |
| 42 | Different Routes for Conifer- and Sinapaldehyde and Higher Saccharification upon Deficiency in the Dehydrogenase CAD1. <i>Plant Physiology</i> , <b>2017</b> , 175, 1018-1039   | 6.6  | 60 |
| 41 | Mutation of the inducible ARABIDOPSIS THALIANA CYTOCHROME P450 REDUCTASE2 alters lignin composition and improves saccharification. <i>Plant Physiology</i> , <b>2014</b> , 166, 1956-71   | 6.6  | 47 |
| 40 | Stereochemical features of glutathione-dependent enzymes in the Sphingobium sp. strain SYK-6 Aryl etherase pathway. <i>Journal of Biological Chemistry</i> , <b>2014</b> , 289, 8656-67   | 5.4  | 46 |
| 39 | Enhancing digestibility and ethanol yield of Populus wood via expression of an engineered monolignol 4-O-methyltransferase. <i>Nature Communications</i> , <b>2016</b> , 7, 11989   | 17.4 | 44 |
| 38 | Variability in Lignin Composition and Structure in Cell Walls of Different Parts of MacaBa (Acrocomia aculeata) Palm Fruit. <i>Journal of Agricultural and Food Chemistry</i> , <b>2018</b> , 66, 138-153                                     | 5.7  | 42 |
| 37 | Understanding the Physicochemical Characteristics and the Improved Enzymatic Saccharification of Corn Stover Pretreated with Aqueous and Gaseous Ammonia. <i>Bioenergy Research</i> , <b>2016</b> , 9, 67-76                                  | 3.1  | 41 |
| 36 | Structural Characterization of Lignins from Willow Bark and Wood. <i>Journal of Agricultural and Food Chemistry</i> , <b>2018</b> , 66, 7294-7300   | 5.7  | 38 |
| 35 | Arylpropane-1,3-diols in lignins from normal and CAD-deficient pines. <i>Organic Letters</i> , <b>1999</b> , 1, 323-6   | 6.2  | 32 |
| 34 | Phenylcoumaran benzylic ether reductase prevents accumulation of compounds formed under oxidative conditions in poplar xylem. <i>Plant Cell</i> , <b>2014</b> , 26, 3775-91   | 11.6 | 30 |
| 33 | Enzymatic Depolymerization of Lignin with Release of Syringyl, Guaiacyl, and Tricin Units. <i>Applied and Environmental Microbiology</i> , <b>2018</b> , 84,  | 4.8  | 30 |

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|----|---|------|----|
| 32 | Simplified preparation of coniferyl and sinapyl alcohols. <i>Journal of Agricultural and Food Chemistry</i> , <b>2005</b> , 53, 3693-5  | 5.7  | 28 |
| 31 | Structural Characterization of Lignin from Maize ( <i>Zea mays</i> L.) Fibers: Evidence for Diferuloylputrescine Incorporated into the Lignin Polymer in Maize Kernels. <i>Journal of Agricultural and Food Chemistry</i> , <b>2018</b> , 66, 4402-4413 | 5.7  | 27 |
| 30 | Highly Decorated Lignins in Leaf Tissues of the Canary Island Date Palm. <i>Plant Physiology</i> , <b>2017</b> , 175, 1058-1067   | 6.6  | 27 |
| 29 | Hydroxystilbene Glucosides Are Incorporated into Norway Spruce Bark Lignin. <i>Plant Physiology</i> , <b>2019</b> , 180, 1310-1321  | 6.6  | 26 |
| 28 | Selective Oxidation of Lignin Model Compounds. <i>ChemSusChem</i> , <b>2018</b> , 11, 2045-2050   | 8.3  | 26 |
| 27 | Natural acetylation impacts carbohydrate recovery during deconstruction of wood. <i>Biotechnology for Biofuels</i> , <b>2017</b> , 10, 48   | 7.8  | 25 |
| 26 | COSY catalyses trans-cis isomerization and lactonization in the biosynthesis of coumarins. <i>Nature Plants</i> , <b>2019</b> , 5, 1066-1075  | 11.5 | 24 |
| 25 | Peroxidase-catalyzed oligomerization of ferulic acid esters. <i>Journal of Agricultural and Food Chemistry</i> , <b>2008</b> , 56, 10368-75   | 5.7  | 24 |
| 24 | The Enzyme Activity and Substrate Specificity of Two Major Cinnamyl Alcohol Dehydrogenases in Sorghum (), SbCAD2 and SbCAD4. <i>Plant Physiology</i> , <b>2017</b> , 174, 2128-2145   | 6.6  | 22 |
| 23 | Mechanistic Study of Diaryl Ether Bond Cleavage during Palladium-Catalyzed Lignin Hydrogenolysis. <i>ChemSusChem</i> , <b>2020</b> , 13, 4487-4494  | 8.3  | 20 |
| 22 | CAD1 and CCR2 protein complex formation in monolignol biosynthesis in <i>Populus trichocarpa</i> . <i>New Phytologist</i> , <b>2019</b> , 222, 244-260  | 9.8  | 20 |
| 21 | Monolignol Benzoates Incorporate into the Lignin of Transgenic <i>Populus trichocarpa</i> Depleted in C3H and C4H. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2020</b> , 8, 3644-3654  | 8.3  | 19 |
| 20 | Plant cell wall profiling by fast maximum likelihood reconstruction (FMLR) and region-of-interest (ROI) segmentation of solution-state 2D 1H-13C NMR spectra. <i>Biotechnology for Biofuels</i> , <b>2013</b> , 6, 45                                   | 7.8  | 18 |
| 19 | Quinone Methides in Lignification385-420  |      | 18 |
| 18 | Involvement of CesA4, CesA7-A/B and CesA8-A/B in secondary wall formation in <i>Populus trichocarpa</i> wood. <i>Tree Physiology</i> , <b>2020</b> , 40, 73-89  | 4.2  | 14 |
| 17 | Altering carbon allocation in hybrid poplar ( <i>Populus alba</i> × <i>grandidentata</i> ) impacts cell wall growth and development. <i>Plant Biotechnology Journal</i> , <b>2017</b> , 15, 865-878   | 11.6 | 13 |
| 16 | Preparation of monolignol βacetate, β-hydroxycinnamate, and β-hydroxybenzoate conjugates: selective deacylation of phenolic acetates with hydrazine acetate. <i>RSC Advances</i> , <b>2013</b> , 3, 21964   | 3.7  | 13 |
| 15 | Radical coupling reactions of piceatannol and monolignols: A density functional theory study. <i>Phytochemistry</i> , <b>2019</b> , 164, 12-23  | 4    | 11 |

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|----|--|-------|----|
| 14 | Structural features of alternative lignin monomers associated with improved digestibility of artificially lignified maize cell walls. <i>Plant Science</i> , <b>2019</b> , 287, 110070                                   | 5.3   | 10 |
| 13 | Coupling and Reactions of Lignols and New Lignin Monomers: A Density Functional Theory Study. <i>ACS Sustainable Chemistry and Engineering</i> , <b>2020</b> , 8, 11033-11045  | 8.3   | 9  |
| 12 | Flavonoids naringenin chalcone, naringenin, dihydrotricin, and tricetin are lignin monomers in papyrus. <i>Plant Physiology</i> , <b>2021</b> ,  | 6.6   | 6  |
| 11 | Maize specialized metabolome networks reveal organ-preferential mixed glycosides. <i>Computational and Structural Biotechnology Journal</i> , <b>2021</b> , 19, 1127-1144  | 6.8   | 6  |
| 10 | CRISPR-Cas9 editing of CAFFEYOYL SHIKIMATE ESTERASE 1 and 2 shows their importance and partial redundancy in lignification in <i>Populus tremula</i> L. <i>Plant Biotechnology Journal</i> , <b>2021</b> , 19, 2221-2234 | 11.6  | 6  |
| 9  | A Century-Old Mystery Unveiled: Sekizaisou is a Natural Lignin Mutant. <i>Plant Physiology</i> , <b>2020</b> , 182, 182161828  | 18.28 | 4  |
| 8  | Cell Wall Characteristics of a Maize Mutant Selected for Decreased Ferulates. <i>American Journal of Plant Sciences</i> , <b>2018</b> , 09, 446-466  | 0.5   | 4  |
| 7  | Rewired phenolic metabolism and improved saccharification efficiency of a <i>Zea mays</i> cinnamyl alcohol dehydrogenase 2 (zmcd2) mutant. <i>Plant Journal</i> , <b>2021</b> , 105, 1240-1257                           | 6.9   | 4  |
| 6  | Exogenous chalcone synthase expression in developing poplar xylem incorporates naringenin into lignins. <i>Plant Physiology</i> , <b>2021</b> ,  | 6.6   | 3  |
| 5  | Radical Coupling Reactions of Hydroxystilbene Glucosides and Coniferyl Alcohol: A Density Functional Theory Study. <i>Frontiers in Plant Science</i> , <b>2021</b> , 12, 642848  | 6.2   | 3  |
| 4  | Lignin Monomers Derived from the Flavonoid and Hydroxystilbene Biosynthetic Pathways <b>2021</b> , 177-206   |       | 3  |
| 3  | Pith-specific lignification in <i>Nicotiana attenuata</i> as a defense against a stem-boring herbivore. <i>New Phytologist</i> , <b>2021</b> , 232, 332-344  | 9.8   | 3  |
| 2  | Incorporation of catechyl monomers into lignins: lignification from the non-phenolic end via Diels-Alder cycloaddition?. <i>Green Chemistry</i> , <b>2021</b> , 23, 8995-9013  | 10    | 1  |
| 1  | Density functional theory study on the coupling and reactions of diferuloylputrescine as a lignin monomer.. <i>Phytochemistry</i> , <b>2022</b> , 197, 113122  | 4     |    |