Fachuang Lu

List of Publications by Citations

90 papers	7,435 citations	46 h-index	86 g-index
95 ext. papers	8,433 ext. citations	6.6 avg, IF	5.7 L-index

#	Paper	IF	Citations
90	Lignins: Natural polymers from oxidative coupling of 4-hydroxyphenyl- propanoids. *Phytochemistry Reviews*, **2004**, 3, 29-60	7.7	1062
89	Whole plant cell wall characterization using solution-state 2D NMR. *Nature Protocols*, **2012**, 7, 1579-89	18.8	434
88	Non-degradative dissolution and acetylation of ball-milled plant cell walls: high-resolution solution-state NMR. *Plant Journal*, **2003**, 35, 535-44	6.9	302
87	Derivatization Followed by Reductive Cleavage (DFRC Method), a New Method for Lignin Analysis: Protocol for Analysis of DFRC Monomers. *Journal of Agricultural and Food Chemistry*, **1997**, 45, 2590-2592	5.7	251
86	Peroxidase-dependent cross-linking reactions of p-hydroxycinnamates in plant cell walls. *Phytochemistry Reviews*, **2004**, 3, 79-96	7.7	209
85	Tricin, a flavonoid monomer in monocot lignification. *Plant Physiology*, **2015**, 167, 1284-95	6.6	203
84	Effects of coumarate 3-hydroxylase down-regulation on lignin structure. *Journal of Biological Chemistry*, **2006**, 281, 8843-53	5.4	192
83	Lignin monomer production integrated into the valerolactone sugar platform. *Energy and Environmental Science*, **2015**, 8, 2657-2663	35.4	174
82	Elucidation of new structures in lignins of CAD- and COMT-deficient plants by NMR. *Phytochemistry*, **2001**, 57, 993-1003	4	165
81	DFRC Method for Lignin Analysis. 1. New Method for Aryl Ether Cleavage: Lignin Model Studies. *Journal of Agricultural and Food Chemistry*, **1997**, 45, 4655-4660	5.7	162
80	Profiling of oligolignols reveals monolignol coupling conditions in lignifying poplar xylem. *Plant Physiology*, **2004**, 136, 3537-49	6.6	160
79	Differences in the chemical structure of the lignins from sugarcane bagasse and straw. *Biomass and Bioenergy*, **2015**, 81, 322-338	5.3	153
78	A new Arabidopsis thaliana mutant deficient in the expression of O-methyltransferase impacts lignins and sinapoyl esters. *Plant Molecular Biology*, **2003**, 51, 973-89	4.6	146
77	Detection and determination of p-coumaroylated units in lignins. *Journal of Agricultural and Food Chemistry*, **1999**, 47, 1988-92	5.7	145
76	Next-generation ammonia pretreatment enhances cellulosic biofuel production. *Energy and Environmental Science*, **2016**, 9, 1215-1223	35.4	141
75	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
74	Mass spectrometry-based fragmentation as an identification tool in lignomics. *Analytical Chemistry*, **2010**, 82, 8095-105	7.8	123

73	p-Coumaroyl-CoA:monolignol transferase (PMT) acts specifically in the lignin biosynthetic pathway in Brachypodium distachyon. *Plant Journal*, **2014**, 77, 713-26	6.9	118
72	The DFRC Method for Lignin Analysis. 2. Monomers from Isolated Lignins. *Journal of Agricultural and Food Chemistry*, **1998**, 46, 547-552	5.7	118
71	Are lignins optically active?. *Journal of Agricultural and Food Chemistry*, **1999**, 47, 2991-6	5.7	114
70	Identification of grass-specific enzyme that acylates monolignols with p-coumarate. *Journal of Biological Chemistry*, **2012**, 287, 8347-55	5.4	107
69	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
68	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
67	Coniferyl ferulate incorporation into lignin enhances the alkaline delignification and enzymatic degradation of cell walls. *Biomacromolecules*, **2008**, 9, 2510-6	6.9	101
66	Monolignol ferulate conjugates are naturally incorporated into plant lignins. *Science Advances*, **2016**, 2, e1600393	14.3	99
65	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
64	NMR evidence for benzodioxane structures resulting from incorporation of 5-hydroxyconiferyl alcohol into Lignins of O-methyltransferase-deficient poplars. *Journal of Agricultural and Food Chemistry*, **2001**, 49, 86-91	5.7	98
63	NMR Studies on the Occurrence of Spirodienone Structures in Lignins. *Journal of Wood Chemistry and Technology*, **2006**, 26, 65-79	2	94
62	Lignins and ferulate-coniferyl alcohol cross-coupling products in cereal grains. *Journal of Agricultural and Food Chemistry*, **2004**, 52, 6496-502	5.7	92
61	Tricin-lignins: occurrence and quantitation of tricin in relation to phylogeny. *Plant Journal*, **2016**, 88, 1046-1057	6.9	89
60	Sinapate dehydrodimers and sinapate-ferulate heterodimers in cereal dietary fiber. *Journal of Agricultural and Food Chemistry*, **2003**, 51, 1427-34	5.7	86
59	Phenolic profiling of caffeic acid O-methyltransferase-deficient poplar reveals novel benzodioxane oligolignols. *Plant Physiology*, **2004**, 136, 4023-36	6.6	81
58	Grass lignin acylation: p-coumaroyl transferase activity and cell wall characteristics of C3 and C4 grasses. *Planta*, **2009**, 229, 1253-67	4.7	78
57	The DFRC Method for Lignin Analysis. 6. A Simple Modification for Identifying Natural Acetates on Lignins. *Journal of Agricultural and Food Chemistry*, **1998**, 46, 4616-4619	5.7	78
56	Syringyl lignin production in conifers: Proof of concept in a Pine tracheary element system. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, 6218-23	11.5	74

55	Novel tetrahydrofuran structures derived from beta-beta-coupling reactions involving sinapyl acetate in Kenaf lignins. *Organic and Biomolecular Chemistry*, **2008**, 6, 3681-94	3.9	74
54	Plant-derived antifungal agent poacic acid targets β1,3-glucan. *Proceedings of the National Academy of Sciences of the United States of America*, **2015**, 112, E1490-7	11.5	73
53	Naturally p-Hydroxybenzoylated Lignins in Palms. *Bioenergy Research*, **2015**, 8, 934-952	3.1	69
52	Preparation and relevance of a cross-coupling product between sinapyl alcohol and sinapyl p-hydroxybenzoate. *Organic and Biomolecular Chemistry*, **2004**, 2, 2888-90	3.9	68
51	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
50	Preliminary evidence for sinapyl acetate as a lignin monomer in kenaf. *Chemical Communications*, **2002**, 90-1	5.8	67
49	Catalytic Alkaline Oxidation of Lignin and its Model Compounds: a Pathway to Aromatic Biochemicals. *Bioenergy Research*, **2014**, 7, 78-86	3.1	66
48	Syntheses of lignin-derived thioacidolysis monomers and their uses as quantitation standards. *Journal of Agricultural and Food Chemistry*, **2012**, 60, 922-8	5.7	65
47	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
46	Identification of 4-O-5-Units in Softwood Lignins via Definitive Lignin Models and NMR. *Biomacromolecules*, **2016**, 17, 1909-20	6.9	63
45	Isolation and characterization of new lignin streams derived from extractive-ammonia (EA) pretreatment. *Green Chemistry*, **2016**, 18, 4205-4215	10	57
44	Sequencing around 5-hydroxyconiferyl alcohol-derived units in caffeic acid O-methyltransferase-deficient poplar lignins. *Plant Physiology*, **2010**, 153, 569-79	6.6	44
43	Maize Tricin-Oligolignol Metabolites and Their Implications for Monocot Lignification. *Plant Physiology*, **2016**, 171, 810-20	6.6	43
42	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
41	The DFRC Method for Lignin Analysis. 4. Lignin Dimers Isolated from DFRC-Degraded Loblolly Pine Wood. *Journal of Agricultural and Food Chemistry*, **1998**, 46, 553-560	5.7	39
40	Isochroman lignin trimers from DFRC-degraded Pinus taeda. *Phytochemistry*, **1999**, 50, 659-666	4	38
39	Solution-State NMR of Lignocellulosic Biomass. *Journal of Biobased Materials and Bioenergy*, **2011**, 5, 169-180	1.4	38
38	Engineering Monolignol p-Coumarate Conjugates into Poplar and Arabidopsis Lignins. *Plant Physiology*, **2015**, 169, 2992-3001	6.6	33

37	Arylpropane-1,3-diols in lignins from normal and CAD-deficient pines. *Organic Letters*, **1999**, 1, 323-6	6.2	32
36	Lignin **2010**, 169-207		31
35	Facile Synthesis of 4-Hydroxycinnamyl p-Coumarates. *Journal of Agricultural and Food Chemistry*, **1998**, 46, 2911-2913	5.7	31
34	Lignin-Derived Thioacidolysis Dimers: Reevaluation, New Products, Authentication, and Quantification. *ChemSusChem*, **2017**, 10, 830-835	8.3	30
33	Phenylcoumaran benzylic ether reductase prevents accumulation of compounds formed under oxidative conditions in poplar xylem. *Plant Cell*, **2014**, 26, 3775-91	11.6	30
32	Application of new expansion pretreatment method on agricultural waste. Part I: Influence of pretreatment on the properties of lignin. *Industrial Crops and Products*, **2013**, 50, 887-895	5.9	29
31	Synthesis and characterization of new 5-linked pinoresinol lignin models. *Chemistry - A European Journal*, **2012**, 18, 16402-10	4.8	29
30	The structure-antioxidant activity relationship of dehydrodiferulates. *Food Chemistry*, **2018**, 269, 480-485	5.5	28
29	Determination of the Structure and Catalytic Mechanism of Sorghum bicolor Caffeic Acid O-Methyltransferase and the Structural Impact of Three brown midrib12 Mutations. *Plant Physiology*, **2014**, 165, 1440-1456	6.6	26
28	Ferulate-coniferyl alcohol cross-coupled products formed by radical coupling reactions. *Planta*, **2009**, 229, 1099-108	4.7	25
27	The DFRC Method for Lignin Analysis. Part 3. NMR Studies. *Journal of Wood Chemistry and Technology*, **1998**, 18, 219-233	2	24
26	Elucidating Tricin-Lignin Structures: Assigning Correlations in HSQC Spectra of Monocot Lignins. *Polymers*, **2018**, 10,	4.5	23
25	Highly Selective Syntheses of Coniferyl and Sinapyl Alcohols. *Journal of Agricultural and Food Chemistry*, **1998**, 46, 1794-1796	5.7	21
24	Degradation of lignin β-aryl ether units in Arabidopsis thaliana expressing LigD, LigF and LigG from Sphingomonas paucimobilis SYK-6. *Plant Biotechnology Journal*, **2017**, 15, 581-593	11.6	20
23	Quinone Methides in Lignification385-420		18
22	The DFRC method for lignin analysis. 7. Behavior of cinnamyl end groups. *Journal of Agricultural and Food Chemistry*, **1999**, 47, 1981-7	5.7	17
21	Molecular and biochemical basis for stress-induced accumulation of free and bound p-coumaraldehyde in cucumber. *Plant Physiology*, **2011**, 157, 1056-66	6.6	16
20	Rapid syntheses of dehydrodiferulates via biomimetic radical coupling reactions of ethyl ferulate. *Journal of Agricultural and Food Chemistry*, **2012**, 60, 8272-7	5.7	15

19	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
18	Low Temperature Soda-Oxygen Pulping of Bagasse. *Molecules*, **2016**, 21, 85	4.8	13
17	Structural Modifications of Sugarcane Bagasse Lignins during Wet-Storage and Soda-Oxygen Pulping. *ACS Sustainable Chemistry and Engineering*, **2016**, 4, 5311-5318	8.3	12
16	A highly diastereoselective oxidant contributes to Ligninolysis by the white rot basidiomycete Ceriporiopsis subvermispora. *Applied and Environmental Microbiology*, **2014**, 80, 7536-44	4.8	11
15	Structural features of alternative lignin monomers associated with improved digestibility of artificially lignified maize cell walls. *Plant Science*, **2019**, 287, 110070	5.3	10
14	Revealing the structure-activity relationship between lignin and anti-UV radiation. *Industrial Crops and Products*, **2021**, 174, 114212	5.9	8
13	A facile spectroscopic method for measuring lignin content in lignocellulosic biomass. *Green Chemistry*, **2021**, 23, 5106-5112	10	7
12	Scaled-up production of poacic acid, a plant-derived antifungal agent. *Industrial Crops and Products*, **2017**, 103, 240-243	5.9	6
11	Synthesis and emulsifying properties of long-chain succinic acid esters of glucuronoxylans. *Cellulose* , **2019**, 26, 3713-3724	5.5	6
10	New Products Generated from the Transformations of Ferulic Acid Dilactone. *Biomolecules*, **2020**, 10,	5.9	5
9	Flexible Method for Conjugation of Phenolic Lignin Model Compounds to Carrier Proteins. *Journal of Agricultural and Food Chemistry*, **2016**, 64, 7782-7788	5.7	3
8	Ferulate-sinapyl alcohol cross-coupling reaction improves the understanding of grass cell wall lignification. *Industrial Crops and Products*, **2021**, 168, 113587	5.9	3
7	Fabrication of Novel Cellulose-Based Antibacterial Film Loaded with Poacic Acid against Staphylococcus Aureus. *Journal of Polymers and the Environment*, **2021**, 29, 745-754	4.5	2
6	Incorporation of catechyl monomers into lignins: lignification from the non-phenolic end via Diels□Alder cycloaddition?. *Green Chemistry*, **2021**, 23, 8995-9013	10	1
5	Amino-functionalized glucuronoxylan as an efficient bio-based emulsifier. *Cellulose*, **2021**, 28, 3677-3689	5.5	1
4	Synthesis of hydroxycinnamoyl shikimates and their role in monolignol biosynthesis. *Holzforschung*, **2022**, 76, 133-144	2	1
3	High-throughput platform for yeast morphological profiling predicts the targets of bioactive compounds.. *Npj Systems Biology and Applications*, **2022**, 8, 3	5	0
2	BEL1-like Homeodomain Protein BLH6a Is a Negative Regulator of in Sinapyl Alcohol Monolignol Biosynthesis in Poplar. *Frontiers in Plant Science*, **2021**, 12, 695223	6.2	0

List of Publications

1	Isolation, Characterization, and Depolymerization of l-Cysteine Substituted Lignin.. *Global Challenges*, **2022**, 6, 2100130	4.3	0