

Fachuang Lu

List of Publications by Year in descending order

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93
papers

9,211
citations

44069

48
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42399

92
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95
all docs

95
docs citations

95
times ranked

6609
citing authors

#	ARTICLE	IF	CITATIONS
1	Lignins: Natural polymers from oxidative coupling of 4-hydroxyphenyl- propanoids. <i>Phytochemistry Reviews</i> , 2004, 3, 29-60.	6.5	1,282
2	Whole plant cell wall characterization using solution-state 2D NMR. <i>Nature Protocols</i> , 2012, 7, 1579-1589.	12.0	563
3	Non-degradative dissolution and acetylation of ball-milled plant cell walls: high-resolution solution-state NMR. <i>Plant Journal</i> , 2003, 35, 535-544.	5.7	330
4	Tricin, a Flavonoid Monomer in Monocot Lignification. <i>Plant Physiology</i> , 2015, 167, 1284-1295.	4.8	283
5	Derivatization Followed by Reductive Cleavage (DFRC Method), a New Method for Lignin Analysis: A Protocol for Analysis of DFRC Monomers. <i>Journal of Agricultural and Food Chemistry</i> , 1997, 45, 2590-2592.	5.2	278
6	Peroxidase-dependent cross-linking reactions of p-hydroxycinnamates in plant cell walls. <i>Phytochemistry Reviews</i> , 2004, 3, 79-96.	6.5	239
7	Differences in the chemical structure of the lignins from sugarcane bagasse and straw. <i>Biomass and Bioenergy</i> , 2015, 81, 322-338.	5.7	227
8	Lignin monomer production integrated into the γ -valerolactone sugar platform. <i>Energy and Environmental Science</i> , 2015, 8, 2657-2663.	30.8	212
9	Effects of Coumarate 3-Hydroxylase Down-regulation on Lignin Structure. <i>Journal of Biological Chemistry</i> , 2006, 281, 8843-8853.	3.4	209
10	Elucidation of new structures in lignins of CAD- and COMT-deficient plants by NMR. <i>Phytochemistry</i> , 2001, 57, 993-1003.	2.9	195
11	Detection and Determination of p-Coumaroylated Units in Lignins. <i>Journal of Agricultural and Food Chemistry</i> , 1999, 47, 1988-1992.	5.2	181
12	A new <i>Arabidopsis thaliana</i> mutant deficient in the expression of O-methyltransferase impacts lignins and sinapoyl esters. <i>Plant Molecular Biology</i> , 2003, 51, 973-989.	3.9	181
13	Profiling of Oligolignols Reveals Monolignol Coupling Conditions in Lignifying Poplar Xylem. <i>Plant Physiology</i> , 2004, 136, 3537-3549.	4.8	180
14	DFRC Method for Lignin Analysis. 1. New Method for β -Aryl Ether Cleavage: A Lignin Model Studies. <i>Journal of Agricultural and Food Chemistry</i> , 1997, 45, 4655-4660.	5.2	177
15	Coumaroyl-CoA:monolignol transferase (PMT) acts specifically in the lignin biosynthetic pathway in <i>Brychiodium distachyon</i> . <i>Plant Journal</i> , 2014, 77, 713-726.	5.7	175
16	Next-generation ammonia pretreatment enhances cellulosic biofuel production. <i>Energy and Environmental Science</i> , 2016, 9, 1215-1223.	30.8	169
17	Monolignol ferulate conjugates are naturally incorporated into plant lignins. <i>Science Advances</i> , 2016, 2, e1600393.	10.3	147
18	NMR analysis of lignins in CAD-deficient plants. Part 1. Incorporation of hydroxycinnamaldehydes and hydroxybenzaldehydes into lignins. <i>Organic and Biomolecular Chemistry</i> , 2003, 1, 268-281.	2.8	145

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19	Mass Spectrometry-Based Fragmentation as an Identification Tool in Lignomics. <i>Analytical Chemistry</i> , 2010, 82, 8095-8105.	6.5	140
20	Identification of Grass-specific Enzyme That Acylates Monolignols with p-Coumarate. <i>Journal of Biological Chemistry</i> , 2012, 287, 8347-8355.	3.4	140
21	Are Lignins Optically Active?. <i>Journal of Agricultural and Food Chemistry</i> , 1999, 47, 2991-2996.	5.2	132
22	The DFRC Method for Lignin Analysis. 2. Monomers from Isolated Lignins. <i>Journal of Agricultural and Food Chemistry</i> , 1998, 46, 547-552.	5.2	131
23	Tricin Lignins: occurrence and quantitation of tricin in relation to phylogeny. <i>Plant Journal</i> , 2016, 88, 1046-1057.	5.7	118
24	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> , 2009, 89, 122-129.	3.5	116
25	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> , 2008, 53, 368-379.	5.7	114
26	Coniferyl Ferulate Incorporation into Lignin Enhances the Alkaline Delignification and Enzymatic Degradation of Cell Walls. <i>Biomacromolecules</i> , 2008, 9, 2510-2516.	5.4	114
27	Engineering traditional monolignols out of lignin by concomitant up-regulation of F5H1 and down-regulation of COMT in Arabidopsis. <i>Plant Journal</i> , 2010, 64, 885-897.	5.7	114
28	NMR Studies on the Occurrence of Spirodienone Structures in Lignins. <i>Journal of Wood Chemistry and Technology</i> , 2006, 26, 65-79.	1.7	112
29	NMR Evidence for Benzodioxane Structures Resulting from Incorporation of 5-Hydroxyconiferyl Alcohol into Lignins of O-Methyltransferase-Deficient Poplars. <i>Journal of Agricultural and Food Chemistry</i> , 2001, 49, 86-91.	5.2	109
30	Lignins and Ferulate-Coniferyl Alcohol Cross-Coupling Products in Cereal Grains. <i>Journal of Agricultural and Food Chemistry</i> , 2004, 52, 6496-6502.	5.2	108
31	Sinapate Dehydrodimers and Sinapate-Ferulate Heterodimers in Cereal Dietary Fiber. <i>Journal of Agricultural and Food Chemistry</i> , 2003, 51, 1427-1434.	5.2	99
32	Naturally p-Hydroxybenzoylated Lignins in Palms. <i>Bioenergy Research</i> , 2015, 8, 934-952.	3.9	99
33	Syringyl lignin production in conifers: Proof of concept in a Pine tracheary element system. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 6218-6223.	7.1	98
34	The DFRC Method for Lignin Analysis. 6. A Simple Modification for Identifying Natural Acetates on Lignins. <i>Journal of Agricultural and Food Chemistry</i> , 1998, 46, 4616-4619.	5.2	94
35	Novel tetrahydrofuran structures derived from β^5 -coupling reactions involving sinapyl acetate in Kenaf lignins. <i>Organic and Biomolecular Chemistry</i> , 2008, 6, 3681.	2.8	94
36	Grass lignin acylation: p-coumaroyl transferase activity and cell wall characteristics of C3 and C4 grasses. <i>Planta</i> , 2009, 229, 1253-1267.	3.2	94

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37	Syntheses of Lignin-Derived Thioacidolysis Monomers and Their Uses as Quantitation Standards. <i>Journal of Agricultural and Food Chemistry</i> , 2012, 60, 922-928.	5.2	92
38	Plant-derived antifungal agent poacic acid targets β -1,3-glucan. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, E1490-7.	7.1	91
39	Preliminary evidence for sinapyl acetate as a lignin monomer in kenaf. <i>Chemical Communications</i> , 2002, , 90-91.	4.1	88
40	Phenolic Profiling of Caffeic Acid O-Methyltransferase-Deficient Poplar Reveals Novel Benzodioxane Oligolignols. <i>Plant Physiology</i> , 2004, 136, 4023-4036.	4.8	86
41	Preparation and relevance of a cross-coupling product between sinapyl alcohol and sinapyl p-hydroxybenzoate. <i>Organic and Biomolecular Chemistry</i> , 2004, 2, 2888.	2.8	83
42	Identification of the Structure and Origin of Thioacidolysis Marker Compounds for Cinnamyl Alcohol Dehydrogenase Deficiency in Angiosperms. <i>Journal of Biological Chemistry</i> , 2002, 277, 47412-47419.	3.4	80
43	Identification of 4- and 5-Units in Softwood Lignins via Definitive Lignin Models and NMR. <i>Biomacromolecules</i> , 2016, 17, 1909-1920.	5.4	77
44	Identifying new lignin bioengineering targets: 1. Monolignol-substitute impacts on lignin formation and cell wall fermentability. <i>BMC Plant Biology</i> , 2010, 10, 114.	3.6	75
45	Catalytic Alkaline Oxidation of Lignin and its Model Compounds: a Pathway to Aromatic Biochemicals. <i>Bioenergy Research</i> , 2014, 7, 78-86.	3.9	75
46	Isolation and characterization of new lignin streams derived from extractive-ammonia (EA) pretreatment. <i>Green Chemistry</i> , 2016, 18, 4205-4215.	9.0	68
47	Maize Tricin-Oligolignol Metabolites and their Implications for Monocot Lignification. <i>Plant Physiology</i> , 2016, 171, pp.02012.2016.	4.8	55
48	Sequencing around 5-Hydroxyconiferyl Alcohol-Derived Units in Caffeic Acid O-Methyltransferase-Deficient Poplar Lignins. <i>Plant Physiology</i> , 2010, 153, 569-579.	4.8	52
49	Understanding the Physicochemical Characteristics and the Improved Enzymatic Saccharification of Corn Stover Pretreated with Aqueous and Gaseous Ammonia. <i>Bioenergy Research</i> , 2016, 9, 67-76.	3.9	48
50	Engineering monolignol p-coumarate conjugates into Poplar and Arabidopsis lignins. <i>Plant Physiology</i> , 2015, 169, pp.00815.2015.	4.8	47
51	The DFRC Method for Lignin Analysis. 4. Lignin Dimers Isolated from DFRC-Degraded Loblolly Pine Wood. <i>Journal of Agricultural and Food Chemistry</i> , 1998, 46, 553-560.	5.2	46
52	A facile spectroscopic method for measuring lignin content in lignocellulosic biomass. <i>Green Chemistry</i> , 2021, 23, 5106-5112.	9.0	46
53	Isochroman lignin trimers from DFRC-degraded Pinus taeda. Part 5 in the series "The DFRC Method for Lignin Analysis". Previous paper: Peng, J., Lu, F., & Ralph, J. (1998). "Part 4. Lignin Dimers Isolated from DFRC-Degraded Loblolly Pine Wood". <i>J. Agric. Food Chem.</i> , 46, 553-560.1. <i>Phytochemistry</i> , 1999, 50, 659-666.	2.9	45
54	Phenylcoumaran Benzylic Ether Reductase Prevents Accumulation of Compounds Formed under Oxidative Conditions in Poplar Xylem. <i>Plant Cell</i> , 2014, 26, 3775-3791.	6.6	43

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55	The structure-antioxidant activity relationship of dehydrodiferulates. <i>Food Chemistry</i> , 2018, 269, 480-485.	8.2	43
56	The flying spider-monkey tree fern genome provides insights into fern evolution and arborescence. <i>Nature Plants</i> , 2022, 8, 500-512.	9.3	42
57	Lignin-Derived Thioacidolysis Dimers: Reevaluation, New Products, Authentication, and Quantification. <i>ChemSusChem</i> , 2017, 10, 830-835.	6.8	41
58	Solution-State NMR of Lignocellulosic Biomass. <i>Journal of Biobased Materials and Bioenergy</i> , 2011, 5, 169-180.	0.3	41
59	Revealing the structure-activity relationship between lignin and anti-UV radiation. <i>Industrial Crops and Products</i> , 2021, 174, 114212.	5.2	39
60	Arylpropane-1,3-diols in Lignins from Normal and CAD-Deficient Pines. <i>Organic Letters</i> , 1999, 1, 323-326.	4.6	36
61	Application of new expansion pretreatment method on agricultural waste. Part I: Influence of pretreatment on the properties of lignin. <i>Industrial Crops and Products</i> , 2013, 50, 887-895.	5.2	36
62	Facile Synthesis of 4-Hydroxycinnamylp-Coumarates. <i>Journal of Agricultural and Food Chemistry</i> , 1998, 46, 2911-2913.	5.2	33
63	Lignin. , 2010, , 169-207.		33
64	Synthesis and Characterization of New 5-Linked Pinoresinol Lignin Models. <i>Chemistry - A European Journal</i> , 2012, 18, 16402-16410.	3.3	33
65	Determination of the Structure and Catalytic Mechanism of <i>Sorghum bicolor</i> Caffeic Acid O-Methyltransferase and the Structural Impact of Three brown midrib12 Mutations. <i>Plant Physiology</i> , 2014, 165, 1440-1456.	4.8	33
66	Elucidating Tricin-Lignin Structures: Assigning Correlations in HSQC Spectra of Monocot Lignins. <i>Polymers</i> , 2018, 10, 916.	4.5	30
67	Ferulate-coniferyl alcohol cross-coupled products formed by radical coupling reactions. <i>Planta</i> , 2009, 229, 1099-1108.	3.2	29
68	Degradation of lignin aryl ether units in <i>Arabidopsis thaliana</i> expressing <i>LigD</i> , <i>LigF</i> and <i>LigG</i> from <i>Sphingomonas paucimobilis</i> SYK6. <i>Plant Biotechnology Journal</i> , 2017, 15, 581-593.	8.3	29
69	The DFRC Method for Lignin Analysis. Part 3. NMR Studies. <i>Journal of Wood Chemistry and Technology</i> , 1998, 18, 219-233.	1.7	27
70	Highly Selective Syntheses of Coniferyl and Sinapyl Alcohols. <i>Journal of Agricultural and Food Chemistry</i> , 1998, 46, 1794-1796.	5.2	25
71	Molecular and Biochemical Basis for Stress-Induced Accumulation of Free and Bound p-Coumaraldehyde in Cucumber. <i>Plant Physiology</i> , 2011, 157, 1056-1066.	4.8	23
72	The DFRC Method for Lignin Analysis. 7. Behavior of Cinnamyl End Groups. <i>Journal of Agricultural and Food Chemistry</i> , 1999, 47, 1981-1987.	5.2	22

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73	Low Temperature Soda-Oxygen Pulping of Bagasse. <i>Molecules</i> , 2016, 21, 85.	3.8	22
74	Structural Modifications of Sugarcane Bagasse Lignins during Wet-Storage and Soda-Oxygen Pulping. <i>ACS Sustainable Chemistry and Engineering</i> , 2016, 4, 5311-5318.	6.7	19
75	Preparation of monolignol β -acetate, β -p-hydroxycinnamate, and β -p-hydroxybenzoate conjugates: selective deacylation of phenolic acetates with hydrazine acetate. <i>RSC Advances</i> , 2013, 3, 21964.	3.6	17
76	Synthesis and emulsifying properties of long-chain succinic acid esters of glucuronoxylans. <i>Cellulose</i> , 2019, 26, 3713-3724.	4.9	17
77	Rapid Syntheses of Dehydrodiferulates via Biomimetic Radical Coupling Reactions of Ethyl Ferulate. <i>Journal of Agricultural and Food Chemistry</i> , 2012, 60, 8272-8277.	5.2	16
78	A Highly Diastereoselective Oxidant Contributes to Ligninolysis by the White Rot Basidiomycete <i>Ceriporiopsis subvermispora</i> . <i>Applied and Environmental Microbiology</i> , 2014, 80, 7536-7544.	3.1	14
79	Structural features of alternative lignin monomers associated with improved digestibility of artificially lignified maize cell walls. <i>Plant Science</i> , 2019, 287, 110070.	3.6	14
80	Manipulation of Lignin Monomer Composition Combined with the Introduction of Monolignol Conjugate Biosynthesis Leads to Synergistic Changes in Lignin Structure. <i>Plant and Cell Physiology</i> , 2022, 63, 744-754.	3.1	12
81	Amino- ϵ -functionalized glucuronoxylan as an efficient bio-based emulsifier. <i>Cellulose</i> , 2021, 28, 3677-3689.	4.9	10
82	New Products Generated from the Transformations of Ferulic Acid Dilactone. <i>Biomolecules</i> , 2020, 10, 175.	4.0	8
83	Scaled-up production of poacic acid, a plant-derived antifungal agent. <i>Industrial Crops and Products</i> , 2017, 103, 240-243.	5.2	6
84	Ferulate-sinapyl alcohol cross-coupling reaction improves the understanding of grass cell wall lignification. <i>Industrial Crops and Products</i> , 2021, 168, 113587.	5.2	6
85	Incorporation of catechyl monomers into lignins: lignification from the non-phenolic end via Diels-Alder cycloaddition?. <i>Green Chemistry</i> , 2021, 23, 8995-9013.	9.0	6
86	Fabrication of Novel Cellulose-Based Antibacterial Film Loaded with Poacic Acid against <i>Staphylococcus Aureus</i> . <i>Journal of Polymers and the Environment</i> , 2021, 29, 745-754.	5.0	5
87	BEL1-like Homeodomain Protein BLH6a Is a Negative Regulator of CALD5H2 in Sinapyl Alcohol Monolignol Biosynthesis in Poplar. <i>Frontiers in Plant Science</i> , 2021, 12, 695223.	3.6	5
88	High-throughput platform for yeast morphological profiling predicts the targets of bioactive compounds. <i>Npj Systems Biology and Applications</i> , 2022, 8, 3.	3.0	5
89	Flexible Method for Conjugation of Phenolic Lignin Model Compounds to Carrier Proteins. <i>Journal of Agricultural and Food Chemistry</i> , 2016, 64, 7782-7788.	5.2	3
90	Synthesis of hydroxycinnamoyl shikimates and their role in monolignol biosynthesis. <i>Holzforschung</i> , 2022, 76, 133-144.	1.9	3

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91	Efficient Synthesis of Pinoresinol, an Important Lignin Dimeric Model Compound. <i>Frontiers in Energy Research</i> , 2021, 9, .	2.3	2
92	Isolation, Characterization, and Depolymerization of <i>l</i> -Cysteine Substituted <i>Eucalyptus</i> Lignin. <i>Global Challenges</i> , 2022, 6, 2100130.	3.6	2
93	A tailored fast thioacidolysis method incorporating multi-reaction monitoring mode of GC-MS for higher sensitivity on lignin monomer quantification. <i>Holzforschung</i> , 2022, .	1.9	0