

Brigitte Chabbert

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104
papers

4,895
citations

38
h-index

67
g-index

105
ext. papers

5,367
ext. citations

5.5
avg, IF

5.21
L-index

#	Paper	IF	Citations
104	Manipulation of lignin quality by downregulation of cinnamyl alcohol dehydrogenase. <i>Plant Journal</i> , 1994 , 6, 339-350	6.9	297
103	Brown-midrib maize (bm1)--a mutation affecting the cinnamyl alcohol dehydrogenase gene. <i>Plant Journal</i> , 1998 , 14, 545-53	6.9	228
102	Altered lignin composition in transgenic tobacco expressing O-methyltransferase sequences in sense and antisense orientation. <i>Plant Journal</i> , 1995 , 8, 465-477	6.9	228
101	Lignification in transgenic poplars with extremely reduced caffeic acid O-methyltransferase activity. <i>Plant Physiology</i> , 2000 , 123, 1363-74	6.6	177
100	Down-regulation of cinnamyl alcohol dehydrogenase in transgenic alfalfa (<i>Medicago sativa</i> L.) and the effect on lignin composition and digestibility. <i>Plant Molecular Biology</i> , 1999 , 39, 437-47	4.6	176
99	A novel lignin in poplar trees with a reduced caffeic acid/5-hydroxyferulic acid O-methyltransferase activity. <i>Plant Journal</i> , 1995 , 8, 855-864	6.9	176
98	Understanding the structural and chemical changes of plant biomass following steam explosion pretreatment. <i>Biotechnology for Biofuels</i> , 2017 , 10, 36	7.8	150
97	In situ analysis of lignins in transgenic tobacco reveals a differential impact of individual transformations on the spatial patterns of lignin deposition at the cellular and subcellular levels. <i>Plant Journal</i> , 2001 , 28, 271-82	6.9	146
96	Lignification in the flax stem: evidence for an unusual lignin in bast fibers. <i>Planta</i> , 2005 , 222, 234-45	4.7	124
95	Genetic and molecular basis of grass cell wall biosynthesis and degradability. II. Lessons from brown-midrib mutants. <i>Comptes Rendus - Biologies</i> , 2004 , 327, 847-60	1.4	120
94	Impact and efficiency of GH10 and GH11 thermostable endoxylanases on wheat bran and alkali-extractable arabinoxylans. <i>Carbohydrate Research</i> , 2004 , 339, 2529-40	2.9	115
93	Natural organic UV-absorbent coatings based on cellulose and lignin: designed effects on spectroscopic properties. <i>Biomacromolecules</i> , 2012 , 13, 4081-8	6.9	110
92	Differential accumulation of monolignol-derived compounds in elicited flax (<i>Linum usitatissimum</i>) cell suspension cultures. <i>Planta</i> , 2006 , 223, 975-89	4.7	109
91	Structure and chemical composition of bast fibers isolated from developing hemp stem. <i>Journal of Agricultural and Food Chemistry</i> , 2005 , 53, 8279-89	5.7	106
90	Lignification and tension wood. <i>Comptes Rendus - Biologies</i> , 2004 , 327, 889-901	1.4	105
89	Plant Fiber Formation: State of the Art, Recent and Expected Progress, and Open Questions. <i>Critical Reviews in Plant Sciences</i> , 2012 , 31, 201-228	5.6	100
88	Can the Biochemical Features and Histology of Wheat Residues Explain their Decomposition in Soil?. <i>Plant and Soil</i> , 2006 , 281, 291-307	4.2	96

87	Effect of harvesting date on the composition and saccharification of <i>Miscanthus x giganteus</i> . <i>Bioresource Technology</i> , 2010 , 101, 8224-31	11	84
86	A Chemical and Histological Study on the Effect of (1-4)- β -Endo-xylanase Treatment on Wheat Bran. <i>Journal of Cereal Science</i> , 2002 , 36, 253-260	3.8	82
85	Combination of ammonia and xylanase pretreatments: impact on enzymatic xylan and cellulose recovery from wheat straw. <i>Bioresource Technology</i> , 2010 , 101, 6712-7	11	80
84	Arabinoxylan and hydroxycinnamate content of wheat bran in relation to endoxylanase susceptibility. <i>Journal of Cereal Science</i> , 2004 , 40, 223-230	3.8	73
83	Natural hypolignification is associated with extensive oligolignol accumulation in flax stems. <i>Plant Physiology</i> , 2012 , 158, 1893-915	6.6	71
82	Histochemistry of Lignin Deposition during Sclerenchyma Differentiation in Alfalfa Stems. <i>Annals of Botany</i> , 1996 , 78, 625-632	4.1	68
81	Structure, chemical composition, and xylanase degradation of external layers isolated from developing wheat grain. <i>Journal of Agricultural and Food Chemistry</i> , 2004 , 52, 7108-17	5.7	63
80	Caffeoyl coenzyme A O-methyltransferase down-regulation is associated with modifications in lignin and cell-wall architecture in flax secondary xylem. <i>Plant Physiology and Biochemistry</i> , 2009 , 47, 9-19	5.4	61
79	Impact of fine litter chemistry on lignocellulolytic enzyme efficiency during decomposition of maize leaf and root in soil. <i>Biogeochemistry</i> , 2014 , 117, 169-183	3.8	57
78	Impact of plant cell wall network on biodegradation in soil: Role of lignin composition and phenolic acids in roots from 16 maize genotypes. <i>Soil Biology and Biochemistry</i> , 2011 , 43, 1544-1552	7.5	53
77	Synthesis and characterization of dehydrogenation polymers in <i>Gluconacetobacter xylinus</i> cellulose and cellulose/pectin composite. <i>Journal of Agricultural and Food Chemistry</i> , 2003 , 51, 981-6	5.7	52
76	Development and validation of a flax (<i>Linum usitatissimum</i> L.) gene expression oligo microarray. <i>BMC Genomics</i> , 2010 , 11, 592	4.5	51
75	Studies of xylan interactions and cross-linking to synthetic lignins formed by bulk and end-wise polymerization: a model study of lignin carbohydrate complex formation. <i>Planta</i> , 2007 , 226, 267-81	4.7	50
74	Implications of productivity and nutrient requirements on greenhouse gas balance of annual and perennial bioenergy crops. <i>GCB Bioenergy</i> , 2014 , 6, 425-438	5.6	49
73	Concomitant changes in viscoelastic properties and amorphous polymers during the hydrothermal treatment of hardwood and softwood. <i>Journal of Agricultural and Food Chemistry</i> , 2009 , 57, 6830-7	5.7	48
72	Probing a family GH11 endo- β -1,4-xylanase inhibition mechanism by phenolic compounds: Role of functional phenolic groups. <i>Journal of Molecular Catalysis B: Enzymatic</i> , 2011 , 72, 130-138		45
71	Multimodal analysis of pretreated biomass species highlights generic markers of lignocellulose recalcitrance. <i>Biotechnology for Biofuels</i> , 2018 , 11, 52	7.8	43
70	Organosolv lignin as natural grafting additive to improve the water resistance of films using cellulose nanocrystals. <i>Chemical Engineering Journal</i> , 2015 , 264, 780-788	14.7	42

69	Biological variability in lignification of maize: Expression of the brown midrib bm3 mutation in three maize cultivars. <i>Journal of the Science of Food and Agriculture</i> , 1994 , 64, 349-355	4.3	41
68	ESTs from the fibre-bearing stem tissues of flax (<i>Linum usitatissimum</i> L.): expression analyses of sequences related to cell wall development. <i>Plant Biology</i> , 2005 , 7, 23-32	3.7	39
67	Biological variability in lignification of maize: Expression of the brown midrib bm2 mutation. <i>Journal of the Science of Food and Agriculture</i> , 1994 , 64, 455-460	4.3	39
66	Ectopic lignification in the flax lignified bast fiber1 mutant stem is associated with tissue-specific modifications in gene expression and cell wall composition. <i>Plant Cell</i> , 2014 , 26, 4462-82	11.6	37
65	In vitro model assemblies to study the impact of lignin-carbohydrate interactions on the enzymatic conversion of xylan. <i>Biomacromolecules</i> , 2009 , 10, 2489-98	6.9	37
64	Evidence for the involvement of activated oxygen in fungal degradation of lignocellulose. <i>Biochimie</i> , 1983 , 65, 283-9	4.6	34
63	A thermostable feruloyl-esterase from the hemicellulolytic bacterium <i>Thermobacillus xylanilyticus</i> releases phenolic acids from non-pretreated plant cell walls. <i>Applied Microbiology and Biotechnology</i> , 2011 , 90, 541-52	5.7	33
62	Soil decomposition of wheat internodes of different maturity stages: relative impact of the soluble and structural fractions. <i>Bioresource Technology</i> , 2009 , 100, 155-63	11	33
61	Characterization of arabinoxylan-dehydrogenation polymer (synthetic lignin polymer) nanoparticles. <i>Biomacromolecules</i> , 2007 , 8, 1236-45	6.9	33
60	Probing the cell wall heterogeneity of micro-dissected wheat caryopsis using both active and inactive forms of a GH11 xylanase. <i>Planta</i> , 2005 , 222, 246-57	4.7	33
59	Influence of flax fibre variety and year-to-year variability on composite properties. <i>Industrial Crops and Products</i> , 2017 , 98, 1-9	5.9	32
58	Decomposition in soil and chemical changes of maize roots with genetic variations affecting cell wall quality. <i>European Journal of Soil Science</i> , 2009 , 60, 176-185	3.4	32
57	Functional analyses of cellulose synthase genes in flax (<i>Linum usitatissimum</i>) by virus-induced gene silencing. <i>Plant Biotechnology Journal</i> , 2015 , 13, 1312-24	11.6	30
56	Fungal elicitor-mediated enhancement in phenylpropanoid and naphthodianthrone contents of <i>Hypericum perforatum</i> L. cell cultures. <i>Plant Cell, Tissue and Organ Culture</i> , 2015 , 122, 213-226	2.7	30
55	Characterisation of Lignin from Parenchyma and Sclerenchyma Cell Walls of the Maize Internode. <i>Journal of the Science of Food and Agriculture</i> , 1997 , 73, 10-16	4.3	30
54	Use of food and packaging model matrices to investigate the antioxidant properties of biorefinery grass lignins. <i>Journal of Agricultural and Food Chemistry</i> , 2015 , 63, 10022-31	5.7	29
53	PT-Flax (phenotyping and TILLinG of flax): development of a flax (<i>Linum usitatissimum</i> L.) mutant population and TILLinG platform for forward and reverse genetics. <i>BMC Plant Biology</i> , 2013 , 13, 159	5.3	29
52	Effect of reaction media concentration on the solubility and the chemical structure of lignin model compounds. <i>Phytochemistry</i> , 2007 , 68, 2118-25	4	28

51	Characterization of arabinoxylan/cellulose nanocrystals gels to investigate fluorescent probes mobility in bioinspired models of plant secondary cell wall. <i>Biomacromolecules</i> , 2012 , 13, 206-14	6.9	27
50	Structure and optical properties of plant cell wall bio-inspired materials: cellulose-lignin multilayer nanocomposites. <i>Comptes Rendus - Biologies</i> , 2011 , 334, 839-50	1.4	27
49	Mechanical, chemical and X-ray analysis of wood in the two tropical lianas <i>Bauhinia guianensis</i> and <i>Condylocarpon guianense</i> : variations during ontogeny. <i>Planta</i> , 2003 , 217, 32-40	4.7	26
48	Tracking the dynamics of hemp dew retting under controlled environmental conditions. <i>Industrial Crops and Products</i> , 2018 , 123, 55-63	5.9	26
47	Bioinspired lignocellulosic films to understand the mechanical properties of lignified plant cell walls at nanoscale. <i>Scientific Reports</i> , 2017 , 7, 44065	4.9	23
46	Xylanase-Mediated Hydrolysis of Wheat Bran: Evidence for Subcellular Heterogeneity of Cell Walls. <i>International Journal of Plant Sciences</i> , 2004 , 165, 553-563	2.6	23
45	Exploring accessibility of pretreated poplar cell walls by measuring dynamics of fluorescent probes. <i>Biotechnology for Biofuels</i> , 2017 , 10, 15	7.8	22
44	Fluorescence techniques can reveal cell wall organization and predict saccharification in pretreated wood biomass. <i>Industrial Crops and Products</i> , 2018 , 123, 84-92	5.9	22
43	Bench-scale composting of two agricultural wastes. <i>Bioresource Technology</i> , 1992 , 40, 119-124	11	22
42	Breeding silage maize with brown-midrib genes. Feeding value and biochemical characteristics. <i>Agronomy for Sustainable Development</i> , 1994 , 14, 15-25		22
41	Development of antibodies against secoisolariciresinol--application to the immunolocalization of lignans in <i>Linum usitatissimum</i> seeds. <i>Phytochemistry</i> , 2010 , 71, 1979-87	4	20
40	Synthesis, characterisation and water sorption properties of pectin-dehydrogenation polymer (lignin model compound) complex. <i>Phytochemistry</i> , 2001 , 56, 195-202	4	20
39	Overexpression of a heterologous sam gene encoding S-adenosylmethionine synthetase in flax (<i>Linum usitatissimum</i>) cells: Consequences on methylation of lignin precursors and pectins. <i>Physiologia Plantarum</i> , 2001 , 112, 223-232	4.6	19
38	Changes in Phenolics Distribution After Chemical Pretreatment and Enzymatic Conversion of <i>Miscanthus x giganteus</i> Internode. <i>Bioenergy Research</i> , 2013 , 6, 506-518	3.1	18
37	Action of lytic polysaccharide monooxygenase on plant tissue is governed by cellular type. <i>Scientific Reports</i> , 2017 , 7, 17792	4.9	18
36	Saccharification of <i>Miscanthus x giganteus</i> , incorporation of lignocellulosic by-product in cementitious matrix. <i>Comptes Rendus - Biologies</i> , 2011 , 334, 837.e1-837.e11	1.4	18
35	O-methyltransferase(s)-suppressed plants produce lower amounts of phenolic vir inducers and are less susceptible to <i>Agrobacterium tumefaciens</i> infection. <i>Planta</i> , 2010 , 232, 975-86	4.7	18
34	Non-lignified helical cell wall thickenings in root cortical cells of Aspleniaceae (Polypodiales): histology and taxonomical significance. <i>Annals of Botany</i> , 2011 , 107, 195-207	4.1	17

33	Supramolecular organization of heteroxylan-dehydrogenation polymers (synthetic lignin) nanoparticles. <i>Biomacromolecules</i> , 2008 , 9, 487-93	6.9	17
32	Impact of lignin on water sorption properties of bioinspired self-assemblies of lignocellulosic polymers. <i>European Polymer Journal</i> , 2015 , 64, 21-35	5.2	16
31	Tracking of enzymatic biomass deconstruction by fungal secretomes highlights markers of lignocellulose recalcitrance. <i>Biotechnology for Biofuels</i> , 2019 , 12, 76	7.8	14
30	Soil biodegradation of maize root residues: Interaction between chemical characteristics and the presence of colonizing micro-organisms. <i>Soil Biology and Biochemistry</i> , 2009 , 41, 1253-1261	7.5	14
29	Changes in hemp secondary fiber production related to technical fiber variability revealed by light microscopy and attenuated total reflectance Fourier transform infrared spectroscopy. <i>PLoS ONE</i> , 2017 , 12, e0179794	3.7	14
28	Modeling progression of fluorescent probes in bioinspired lignocellulosic assemblies. <i>Biomacromolecules</i> , 2013 , 14, 2196-205	6.9	13
27	Cell Wall Fractionation of Alfalfa Stem in Relation to Internode Development: Biochemistry Aspect. <i>Journal of Agricultural and Food Chemistry</i> , 1998 , 46, 3458-3467	5.7	12
26	Caffeoyl-coenzyme A 3-O-methyltransferase enzyme activity, protein and transcript accumulation in flax (<i>Linum usitatissimum</i>) stem during development. <i>Physiologia Plantarum</i> , 2001 , 113, 275-284	4.6	11
25	Exploring the dew retting feasibility of hemp in very contrasting European environments: Influence on the tensile mechanical properties of fibres and composites. <i>Industrial Crops and Products</i> , 2021 , 164, 113337	5.9	11
24	Laser Microdissection and Spatiotemporal Pinoresinol-Lariciresinol Reductase Gene Expression Assign the Cell Layer-Specific Accumulation of Secoisolariciresinol Diglucoside in Flaxseed Coats. <i>Frontiers in Plant Science</i> , 2016 , 7, 1743	6.2	11
23	Multimodal assessment of flax dew retting and its functional impact on fibers and natural fiber composites. <i>Industrial Crops and Products</i> , 2020 , 148, 112255	5.9	10
22	Langmuir-Blodgett Procedure to Precisely Control the Coverage of Functionalized AFM Cantilevers for SMFS Measurements: Application with Cellulose Nanocrystals. <i>Langmuir</i> , 2018 , 34, 9376-9386	4	10
21	Saccharification Performances of Miscanthus at the Pilot and Miniaturized Assay Scales: Genotype and Year Variabilities According to the Biomass Composition. <i>Frontiers in Plant Science</i> , 2017 , 8, 740	6.2	10
20	Atomic force microscopy reveals how relative humidity impacts the Young's modulus of lignocellulosic polymers and their adhesion with cellulose nanocrystals at the nanoscale. <i>International Journal of Biological Macromolecules</i> , 2020 , 147, 1064-1075	7.9	10
19	Distribution of Lignin, Hemicellulose, and Arabinogalactan Protein in Hemp Phloem Fibers. <i>Microscopy and Microanalysis</i> , 2018 , 24, 442-452	0.5	10
18	Novel surface-based methodologies for investigating GH11 xylanase-lignin derivative interactions. <i>Analyst, The</i> , 2013 , 138, 6889-99	5	9
17	Assessment of Lignin-Related Compounds in Soils and Maize Roots by Alkaline Oxidations and Thioacidolysis. <i>Soil Science Society of America Journal</i> , 2011 , 75, 542-552	2.5	9
16	Applications of molecular genetics for biosynthesis of novel lignins. <i>Polymer Degradation and Stability</i> , 1998 , 59, 47-52	4.7	8

15	Model systems for the understanding of lignified plant cell wall formation. <i>Plant Biosystems</i> , 2005 , 139, 93-97	1.6	8
14	Hemp harvest time impacts on the dynamics of microbial colonization and hemp stems degradation during dew retting. <i>Industrial Crops and Products</i> , 2020 , 145, 112122	5.9	7
13	Effect of the Interplay of Composition and Environmental Humidity on the Nanomechanical Properties of Hemp Fibers. <i>ACS Sustainable Chemistry and Engineering</i> , 2020 , 8, 6381-6390	8.3	7
12	Extractibility of structural carbohydrates and lignin deposition in maturing alfalfa internodes. <i>International Journal of Biological Macromolecules</i> , 1997 , 21, 201-6	7.9	6
11	Targeted Metagenomics of Retting in Flax: The Beginning of the Quest to Harness the Secret Powers of the Microbiota. <i>Frontiers in Genetics</i> , 2020 , 11, 581664	4.5	6
10	Unveiling the impact of embedding resins on the physicochemical traits of wood cell walls with subcellular functional probing. <i>Composites Science and Technology</i> , 2021 , 201, 108485	8.6	6
9	Dual Antioxidant Properties and Organic Radical Stabilization in Cellulose Nanocomposite Films Functionalized by In Situ Polymerization of Coniferyl Alcohol. <i>Biomacromolecules</i> , 2020 , 21, 3163-3175	6.9	5
8	Influence of the polarity of the matrix on the breakage mechanisms of lignocellulosic fibers during twin-screw extrusion. <i>Polymer Composites</i> , 2020 , 41, 1106-1117	3	5
7	Real Time and Quantitative Imaging of Lignocellulosic Films Hydrolysis by Atomic Force Microscopy Reveals Lignin Recalcitrance at Nanoscale. <i>Biomacromolecules</i> , 2019 , 20, 515-527	6.9	5
6	Evaluation of Lignocellulosic Biomass Degradation by Combining Mid- and Near-Infrared Spectra by the Outer Product and Selecting Discriminant Wavenumbers Using a Genetic Algorithm. <i>Applied Spectroscopy</i> , 2015 , 69, 1303-12	3.1	2
5	Effect of lignin content on a GH11 endoxylanase acting on glucuronoarabinoxylan-lignin nanocomposites. <i>Carbohydrate Polymers</i> , 2012 , 89, 423-31	10.3	2
4	Effect of industrial processing on alfalfa cell walls. <i>Journal of the Science of Food and Agriculture</i> , 2002 , 82, 1806-1815	4.3	2
3	Classification of lignocellulosic biomass by weighted-covariance factor fuzzy C-means clustering of mid-infrared and near-infrared spectra. <i>Journal of Chemometrics</i> , 2017 , 31, e2865	1.6	1
2	Multiscale modeling of microbial degradation of outer tissues of fiber-crop stems during the dew retting process. <i>Bioresource Technology</i> , 2020 , 311, 123558	11	1
1	Impact of epiphytic and endogenous enzyme activities of senescent maize leaves and roots on the soil biodegradation process. <i>Comptes Rendus - Biologies</i> , 2011 , 334, 824-36	1.4	1