Ewa J Mellerowicz

List of Publications by Year
in descending order

69 papers	5,921 citations	87723 38 h-index	95083 68 g-index
76 all docs	76 docs citations	76 times ranked	5052 citing authors

#	ARTICLE	IF	CITATIONS
1	Unravelling cell wall formation in the woody dicot stem. Plant Molecular Biology, 2001, 47, 239-274.	2.0	370
2	A High-Resolution Transcript Profile across the Wood-Forming Meristem of Poplar Identifies Potential Regulators of Cambial Stem Cell Identity[W]. Plant Cell, 2004, 16, 2278-2292.	3.1	353
3	Biosynthesis of cellulose-enriched tension wood inPopulus: global analysis of transcripts and metabolites identifies biochemical and developmental regulators in secondary wall biosynthesis. Plant Journal, 2006, 45, 144-165.	2.8	347
4	Indole-3-Acetic Acid Controls Cambial Growth in Scots Pine by Positional Signaling1. Plant Physiology, 1998, 117, 113-121.	2.3	292
5	Poplar Carbohydrate-Active Enzymes. Gene Identification and Expression Analyses. Plant Physiology, 2006, 140, 946-962.	2.3	271
6	AspWood: High-Spatial-Resolution Transcriptome Profiles Reveal Uncharacterized Modularity of Wood Formation in <i>Populus tremula</i>. Plant Cell, 2017, 29, 1585-1604.	3.1	219
7	Xyloglucan Endotransglycosylases Have a Function during the Formation of Secondary Cell Walls of Vascular Tissues. Plant Cell, 2002, 14, 3073-3088.	3.1	208
8	Wood cell walls: biosynthesis, developmental dynamics and their implications for wood properties. Current Opinion in Plant Biology, 2008, 11, 293-300.	3.5	202
9	Tensional stress generation in gelatinous fibres: a review and possible mechanism based on cell-wall structure and composition. Journal of Experimental Botany, 2012, 63, 551-565.	2.4	192
10	Carbohydrate-Active Enzymes Involved in the Secondary Cell Wall Biogenesis in Hybrid Aspen. Plant Physiology, 2005, 137, 983-997.	2.3	173
11	Xyloglucan Endo-transglycosylase (XET) Functions in Gelatinous Layers of Tension Wood Fibers in Poplarâ€"A Glimpse into the Mechanism of the Balancing Act of Trees. Plant and Cell Physiology, 2007, 48, 843-855.	1.5	168
12	Acetylation of woody lignocellulose: significance and regulation. Frontiers in Plant Science, 2013, 4, 118.	1.7	147
13	Pectin Methylesterase Is Induced in <i>Arabidopsis</i> upon Infection and Is Necessary for a Successful Colonization by Necrotrophic Pathogens. Molecular Plant-Microbe Interactions, 2011, 24, 432-440.	1.4	146
14	Plant Fiber Formation: State of the Art, Recent and Expected Progress, and Open Questions. Critical Reviews in Plant Sciences, 2012, 31, 201-228.	2.7	132
15	Mechanochemical Polarization of Contiguous Cell Walls Shapes Plant Pavement Cells. Developmental Cell, 2017, 43, 290-304.e4.	3.1	132
16	Pectin Methyl Esterase Inhibits Intrusive and Symplastic Cell Growth in Developing Wood Cells of <i>Populus</i> Â. Plant Physiology, 2008, 146, 323-324.	2.3	126
17	Xyloglucan: The Molecular Muscle of Trees. Annals of Botany, 2008, 102, 659-665.	1.4	121
18	Expansins Abundant in Secondary Xylem Belong to Subgroup A of the Î±-Expansin Gene Family. Plant Physiology, 2004, 135, 1552-1564.	2.3	116

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19	An update on the nomenclature for the cellulose synthase genes in Populus. Trends in Plant Science, 2009, 14, 248-254.	4.3	112
20	Xyloglucan<i>endo</i>-Transglycosylase-Mediated Xyloglucan Rearrangements in Developing Wood of Hybrid Aspen Â Â. Plant Physiology, 2011, 155, 399-413.	2.3	112
21	Xyloglucan endotransglucosylase/hydrolase (XTH) overexpression affects growth and cell wall mechanics in etiolated Arabidopsis hypocotyls. Journal of Experimental Botany, 2013, 64, 2481-2497.	2.4	108
22	KORRIGAN1 and its Aspen Homolog PttCel9A1 Decrease Cellulose Crystallinity in Arabidopsis Stems. Plant and Cell Physiology, 2009, 50, 1099-1115.	1.5	99
23	Differential stage-specific regulation of cyclin-dependent kinases during cambial dormancy in hybrid aspen. Plant Journal, 2004, 38, 603-615.	2.8	87
24	Aspen tension wood fibers contain Î²-(1â†'4)-galactans and acidic arabinogalactans retained by cellulose microfibrils in gelatinous walls. Plant Physiology, 2015, 169, pp.00690.2015.	2.3	86
25	Pectinous cell wall thickenings formation â€" A common defense strategy of plants to cope with Pb. Environmental Pollution, 2016, 214, 354-361.	3.7	86
26	Reduced Wall Acetylation Proteins Play Vital and Distinct Roles in Cell Wall <i>O</i>-Acetylation in Arabidopsis Â Â Â. Plant Physiology, 2013, 163, 1107-1117.	2.3	83
27	MAP20, a Microtubule-Associated Protein in the Secondary Cell Walls of Hybrid Aspen, Is a Target of the Cellulose Synthesis Inhibitor 2,6-Dichlorobenzonitrile Â. Plant Physiology, 2008, 148, 1283-1294.	2.3	76
28	Ectopic expression of a woodâ€abundant expansin <i>PttEXPA1</i> promotes cell expansion in primary and secondary tissues in aspen. Plant Biotechnology Journal, 2008, 6, 62-72.	4.1	73
29	Expression of fungal acetyl xylan esterase in <i>Arabidopsis thaliana</i> improves saccharification of stem lignocellulose. Plant Biotechnology Journal, 2016, 14, 387-397.	4.1	72
30	Aspen pectate lyase Ptxt PL1-27 mobilizes matrix polysaccharides from woody tissues and improves saccharification yield. Biotechnology for Biofuels, 2014, 7, 11.	6.2	71
31	Suppression of xylan endotransglycosylase <i>PtxtXyn10A</i> affects cellulose microfibril angle in secondary wall in aspen wood. New Phytologist, 2015, 205, 666-681.	3.5	66
32	Expression of a fungal glucuronoyl esterase in Populus: Effects on wood properties and saccharification efficiency. Phytochemistry, 2015, 112, 210-220.	1.4	65
33	In muro deacetylation of xylan affects lignin properties and improves saccharification of aspen wood. Biotechnology for Biofuels, 2017, 10, 98.	6.2	64
34	O-Acetylation of glucuronoxylan in Arabidopsis thaliana wild type and its change in xylan biosynthesis mutants. Glycobiology, 2014, 24, 494-506.	1.3	54
35	Ethylene signaling induces gelatinous layers with typical features of tension wood in hybrid aspen. New Phytologist, 2018, 218, 999-1014.	3.5	52
36	<i>Populus <scp>GT</scp>43</i> family members group into distinct sets required for primary and secondary wall xylan biosynthesis and include useful promoters for wood modification. Plant Biotechnology Journal, 2015, 13, 26-37.	4.1	51

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37	Downregulation of <scp>RWA</scp> genes in hybrid aspen affects xylan acetylation and wood saccharification. New Phytologist, 2017, 214, 1491-1505.	3.5	50
38	Defense Responses in Aspen with Altered Pectin Methylesterase Activity Reveal the Hormonal Inducers of Tyloses. Plant Physiology, 2017, 173, 1409-1419.	2.3	46
39	Arabidopsis <i>XTH4</i> and <i>XTH9</i> Contribute to Wood Cell Expansion and Secondary Wall Formation. Plant Physiology, 2020, 182, 1946-1965.	2.3	45
40	Downregulating aspen xylan biosynthetic <scp>GT</scp>43 genes in developing wood stimulates growth via reprograming of the transcriptome. New Phytologist, 2018, 219, 230-245.	3.5	43
41	Transcriptional induction of cell wall remodelling genes is coupled to microtubule-driven growth isotropy at the shoot apex in Arabidopsis. Development (Cambridge), 2018, 145, .	1.2	42
42	Poplar carbohydrateâ€active enzymes: wholeâ€genome annotation and functional analyses based on <scp>RNA</scp> expression data. Plant Journal, 2019, 99, 589-609.	2.8	39
43	Protein expression in tension wood formation monitored at high tissue resolution in Populus. Journal of Experimental Botany, 2017, 68, 3405-3417.	2.4	37
44	Engineering Non-cellulosic Polysaccharides of Wood for the Biorefinery. Frontiers in Plant Science, 2018, 9, 1537.	1.7	36
45	A collection of genetically engineered Populus trees reveals wood biomass traits that predict glucose yield from enzymatic hydrolysis. Scientific Reports, 2017, 7, 15798.	1.6	35
46	Feasibility of using atmospheric pressure matrix-assisted laser desorption/ionization with ion trap mass spectrometry in the analysis of acetylated xylooligosaccharides derived from hardwoods and Arabidopsis thaliana. Analytical and Bioanalytical Chemistry, 2011, 401, 2995-3009.	1.9	34
47	Microgenomic analysis reveals cell typeâ€specific gene expression patterns between ray and fusiform initials within the cambial meristem of <i>Populus</i>. New Phytologist, 2008, 180, 45-56.	3.5	33
48	Aspen SUCROSE TRANSPORTER3 Allocates Carbon into Wood Fibers. Plant Physiology, 2013, 163, 1729-1740.	2.3	33
49	Constitutive expression of a fungal glucuronoyl esterase in Arabidopsis reveals altered cell wall composition and structure. Plant Biotechnology Journal, 2012, 10, 1077-1087.	4.1	32
50	Colocalization of low-methylesterified pectins and Pb deposits in the apoplast of aspen roots exposed to lead. Environmental Pollution, 2015, 205, 315-326.	3.7	29
51	Genetic analysis of fiber dimensions and their correlation with stem diameter and solid-wood properties in Norway spruce. Tree Genetics and Genomes, 2016, 12, 1.	0.6	28
52	Sucrose synthase determines carbon allocation in developing wood and alters carbon flow at the whole tree level in aspen. New Phytologist, 2021, 229, 186-198.	3.5	25
53	Cell Wall Polymers in Reaction Wood. Springer Series in Wood Science, 2014, , 37-106.	0.8	23
54	A Real-Time Fluorogenic Assay for the Visualization of Glycoside Hydrolase Activity in Planta. Plant Physiology, 2009, 151, 1741-1750.	2.3	22

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55	An efficient method for medium throughput screening of cuticular wax composition in different plant species. Metabolomics, 2016, 12, 1.	1.4	18
56	Hybrid Aspen Expressing a Carbohydrate Esterase Family 5 Acetyl Xylan Esterase Under Control of a Wood-Specific Promoter Shows Improved Saccharification. Frontiers in Plant Science, 2020, 11, 380.	1.7	18
57	Active fungal GH115 Î±-glucuronidase produced in Arabidopsis thaliana affects only the UX1-reactive glucuronate decorations on native glucuronoxylans. BMC Biotechnology, 2015, 15, 56.	1.7	17
58	QTL Mapping of Wood FT-IR Chemotypes Shows Promise for Improving Biofuel Potential in Short Rotation Coppice Willow (Salix spp.). Bioenergy Research, 2018, 11, 351-363.	2.2	15
59	Hierarchical structure of juvenile hybrid aspen xylem revealed using X-ray scattering and microtomography. Trees - Structure and Function, 2012, 26, 1793-1804.	0.9	13
60	Elongation of wood fibers combines features of diffuse and tip growth. New Phytologist, 2021, 232, 673-691.	3.5	12
61	Cell Wall Acetylation in Hybrid Aspen Affects Field Performance, Foliar Phenolic Composition and Resistance to Biological Stress Factors in a Construct-Dependent Fashion. Frontiers in Plant Science, 2020, 11, 651.	1.7	10
62	Genetic control of tracheid properties in Norway spruce wood. Scientific Reports, 2020, 10, 18089.	1.6	9
63	Genome-Wide Identification of Populus Malectin/Malectin-Like Domain-Containing Proteins and Expression Analyses Reveal Novel Candidates for Signaling and Regulation of Wood Development. Frontiers in Plant Science, 2020, 11, 588846.	1.7	8
64	Glucuronic acid in Arabidopsis thaliana xylans carries a novel pentose substituent. International Journal of Biological Macromolecules, 2015, 79, 807-812.	3.6	7
65	Method for accurate fiber length determination from increment cores for large-scale population analyses in Norway spruce. Holzforschung, 2016, 70, 829-838.	0.9	6
66	<i>PtxtPME1</i> and homogalacturonans influence xylem hydraulic properties in poplar. Physiologia Plantarum, 2018, 163, 502-515.	2.6	6
67	Saccharification Potential of Transgenic Greenhouse- and Field-Grown Aspen Engineered for Reduced Xylan Acetylation. Frontiers in Plant Science, 2021, 12, 704960.	1.7	6
68	Glycoside Hydrolase Activities in Cell Walls of Sclerenchyma Cells in the Inflorescence Stems of Arabidopsis thaliana Visualized in Situ. Plants, 2014, 3, 513-525.	1.6	2
69	Expression of Cell Wallâ€"Modifying Enzymes in Aspen for Improved Lignocellulose Processing. Methods in Molecular Biology, 2020, 2149, 145-164.	0.4	0