Ewa J Mellerowicz

List of Publications by Citations

70 papers	4,500 citations	33 h-index	67 g-index
76 ext. papers	5,399 ext. citations	6.8 avg, IF	5.13 L-index

#	Paper	IF	Citations
70	Biosynthesis of cellulose-enriched tension wood in Populus: global analysis of transcripts and metabolites identifies biochemical and developmental regulators in secondary wall biosynthesis. *Plant Journal*, **2006**, 45, 144-65	6.9	306
69	A high-resolution transcript profile across the wood-forming meristem of poplar identifies potential regulators of cambial stem cell identity. *Plant Cell*, **2004**, 16, 2278-92	11.6	301
68	Unravelling cell wall formation in the woody dicot stem. *Plant Molecular Biology*, **2001**, 47, 239-274	4.6	276
67	Indole-3-acetic acid controls cambial growth in scots pine by positional signaling. *Plant Physiology*, **1998**, 117, 113-21	6.6	256
66	Poplar carbohydrate-active enzymes. Gene identification and expression analyses. *Plant Physiology*, **2006**, 140, 946-62	6.6	229
65	Xyloglucan endotransglycosylases have a function during the formation of secondary cell walls of vascular tissues. *Plant Cell*, **2002**, 14, 3073-88	11.6	180
64	Wood cell walls: biosynthesis, developmental dynamics and their implications for wood properties. *Current Opinion in Plant Biology*, **2008**, 11, 293-300	9.9	172
63	Carbohydrate-active enzymes involved in the secondary cell wall biogenesis in hybrid aspen. *Plant Physiology*, **2005**, 137, 983-97	6.6	152
62	Tensional stress generation in gelatinous fibres: a review and possible mechanism based on cell-wall structure and composition. *Journal of Experimental Botany*, **2012**, 63, 551-65	7	151
61	Xyloglucan endo-transglycosylase (XET) functions in gelatinous layers of tension wood fibers in poplar--a glimpse into the mechanism of the balancing act of trees. *Plant and Cell Physiology*, **2007**, 48, 843-55	4.9	148
60	AspWood: High-Spatial-Resolution Transcriptome Profiles Reveal Uncharacterized Modularity of Wood Formation in. *Plant Cell*, **2017**, 29, 1585-1604	11.6	119
59	Pectin methylesterase is induced in Arabidopsis upon infection and is necessary for a successful colonization by necrotrophic pathogens. *Molecular Plant-Microbe Interactions*, **2011**, 24, 432-40	3.6	110
58	Xyloglucan: the molecular muscle of trees. *Annals of Botany*, **2008**, 102, 659-65	4.1	108
57	Acetylation of woody lignocellulose: significance and regulation. *Frontiers in Plant Science*, **2013**, 4, 118	6.2	107
56	Pectin methyl esterase inhibits intrusive and symplastic cell growth in developing wood cells of Populus. *Plant Physiology*, **2008**, 146, 554-65	6.6	101
55	Plant Fiber Formation: State of the Art, Recent and Expected Progress, and Open Questions. *Critical Reviews in Plant Sciences*, **2012**, 31, 201-228	5.6	100
54	An update on the nomenclature for the cellulose synthase genes in Populus. *Trends in Plant Science*, **2009**, 14, 248-54	13.1	100

53	Expansins abundant in secondary xylem belong to subgroup A of the alpha-expansin gene family. *Plant Physiology*, **2004**, 135, 1552-64	6.6	100
52	Mechanochemical Polarization of Contiguous Cell Walls Shapes Plant Pavement Cells. *Developmental Cell*, **2017**, 43, 290-304.e4	10.2	91
51	KORRIGAN1 and its aspen homolog PttCel9A1 decrease cellulose crystallinity in Arabidopsis stems. *Plant and Cell Physiology*, **2009**, 50, 1099-115	4.9	91
50	Differential stage-specific regulation of cyclin-dependent kinases during cambial dormancy in hybrid aspen. *Plant Journal*, **2004**, 38, 603-15	6.9	82
49	Xyloglucan endo-transglycosylase-mediated xyloglucan rearrangements in developing wood of hybrid aspen. *Plant Physiology*, **2011**, 155, 399-413	6.6	80
48	Xyloglucan endotransglucosylase/hydrolase (XTH) overexpression affects growth and cell wall mechanics in etiolated Arabidopsis hypocotyls. *Journal of Experimental Botany*, **2013**, 64, 2481-97	7	70
47	MAP20, a microtubule-associated protein in the secondary cell walls of hybrid aspen, is a target of the cellulose synthesis inhibitor 2,6-dichlorobenzonitrile. *Plant Physiology*, **2008**, 148, 1283-94	6.6	64
46	Pectinous cell wall thickenings formation - A common defense strategy of plants to cope with Pb. *Environmental Pollution*, **2016**, 214, 354-361	9.3	62
45	Reduced Wall Acetylation proteins play vital and distinct roles in cell wall O-acetylation in Arabidopsis. *Plant Physiology*, **2013**, 163, 1107-17	6.6	60
44	Aspen pectate lyase PtxtPL1-27 mobilizes matrix polysaccharides from woody tissues and improves saccharification yield. *Biotechnology for Biofuels*, **2014**, 7, 11	7.8	56
43	Ectopic expression of a wood-abundant expansin PttEXPA1 promotes cell expansion in primary and secondary tissues in aspen. *Plant Biotechnology Journal*, **2008**, 6, 62-72	11.6	55
42	Aspen Tension Wood Fibers Contain Β(1---> 4)-Galactans and Acidic Arabinogalactans Retained by Cellulose Microfibrils in Gelatinous Walls. *Plant Physiology*, **2015**, 169, 2048-63	6.6	54
41	Expression of fungal acetyl xylan esterase in Arabidopsis thaliana improves saccharification of stem lignocellulose. *Plant Biotechnology Journal*, **2016**, 14, 387-97	11.6	51
40	Expression of a fungal glucuronoyl esterase in Populus: effects on wood properties and saccharification efficiency. *Phytochemistry*, **2015**, 112, 210-20	4	44
39	Suppression of xylan endotransglycosylase PtxtXyn10A affects cellulose microfibril angle in secondary wall in aspen wood. *New Phytologist*, **2015**, 205, 666-81	9.8	44
38	O-acetylation of glucuronoxylan in Arabidopsis thaliana wild type and its change in xylan biosynthesis mutants. *Glycobiology*, **2014**, 24, 494-506	5.8	36
37	Populus GT43 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	11.6	33
36	deacetylation of xylan affects lignin properties and improves saccharification of aspen wood. *Biotechnology for Biofuels*, **2017**, 10, 98	7.8	31

35	Downregulation of RWA genes in hybrid aspen affects xylan acetylation and wood saccharification. *New Phytologist*, **2017**, 214, 1491-1505	9.8	30
34	Transcriptional induction of cell wall remodelling genes is coupled to microtubule-driven growth isotropy at the shoot apex in. *Development (Cambridge)*, **2018**, 145,	6.6	29
33	Microgenomic analysis reveals cell type-specific gene expression patterns between ray and fusiform initials within the cambial meristem of Populus. *New Phytologist*, **2008**, 180, 45-56	9.8	29
32	Constitutive expression of a fungal glucuronoyl esterase in Arabidopsis reveals altered cell wall composition and structure. *Plant Biotechnology Journal*, **2012**, 10, 1077-87	11.6	27
31	Colocalization of low-methylesterified pectins and Pb deposits in the apoplast of aspen roots exposed to lead. *Environmental Pollution*, **2015**, 205, 315-26	9.3	26
30	Ethylene signaling induces gelatinous layers with typical features of tension wood in hybrid aspen. *New Phytologist*, **2018**, 218, 999-1014	9.8	25
29	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	4.4	25
28	Aspen SUCROSE TRANSPORTER3 allocates carbon into wood fibers. *Plant Physiology*, **2013**, 163, 1729-40	6.6	22
27	Engineering Non-cellulosic Polysaccharides of Wood for the Biorefinery. *Frontiers in Plant Science*, **2018**, 9, 1537	6.2	22
26	Downregulating aspen xylan biosynthetic GT43 genes in developing wood stimulates growth via reprograming of the transcriptome. *New Phytologist*, **2018**, 219, 230-245	9.8	20
25	A real-time fluorogenic assay for the visualization of glycoside hydrolase activity in planta. *Plant Physiology*, **2009**, 151, 1741-50	6.6	20
24	Arabidopsis and Contribute to Wood Cell Expansion and Secondary Wall Formation. *Plant Physiology*, **2020**, 182, 1946-1965	6.6	20
23	A collection of genetically engineered Populus trees reveals wood biomass traits that predict glucose yield from enzymatic hydrolysis. *Scientific Reports*, **2017**, 7, 15798	4.9	19
22	Cell Wall Polymers in Reaction Wood. *Springer Series in Wood Science*, **2014**, 37-106		18
21	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	2.1	18
20	Protein expression in tension wood formation monitored at high tissue resolution in Populus. *Journal of Experimental Botany*, **2017**, 68, 3405-3417	7	16
19	Poplar carbohydrate-active enzymes: whole-genome annotation and functional analyses based on RNA expression data. *Plant Journal*, **2019**, 99, 589-609	6.9	15
18	Defense Responses in Aspen with Altered Pectin Methylesterase Activity Reveal the Hormonal Inducers of Tyloses. *Plant Physiology*, **2017**, 173, 1409-1419	6.6	13

List of Publications

17	An efficient method for medium throughput screening of cuticular wax composition in different plant species. *Metabolomics*, **2016**, 12, 1	4.7	12
16	Hierarchical structure of juvenile hybrid aspen xylem revealed using X-ray scattering and microtomography. *Trees - Structure and Function*, **2012**, 26, 1793-1804	2.6	11
15	Active fungal GH115 glucuronidase produced in Arabidopsis thaliana affects only the UX1-reactive glucuronate decorations on native glucuronoxylans. *BMC Biotechnology*, **2015**, 15, 56	3.5	10
14	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	3.1	10
13	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	6.2	8
12	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	6.2	5
11	Method for accurate fiber length determination from increment cores for large-scale population analyses in Norway spruce. *Holzforschung*, **2016**, 70, 829-838	2	5
10	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	9.8	5
9	Genetic control of tracheid properties in Norway spruce wood. *Scientific Reports*, **2020**, 10, 18089	4.9	4
8	Glucuronic acid in Arabidopsis thaliana xylans carries a novel pentose substituent. *International Journal of Biological Macromolecules*, **2015**, 79, 807-12	7.9	3
7	Genome-Wide Identification of 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	6.2	3
6	PtxtPME1 and homogalacturonans influence xylem hydraulic properties in poplar. *Physiologia Plantarum*, **2018**, 163, 502-515	4.6	3
5	Glycoside Hydrolase Activities in Cell Walls of Sclerenchyma Cells in the Inflorescence Stems of Arabidopsis thaliana Visualized in Situ. *Plants*, **2014**, 3, 513-25	4.5	2
4	Elongation of wood fibers combines features of diffuse and tip growth. *New Phytologist*, **2021**, 232, 673-681	9.8	2
3	AspWood: High-spatial-resolution transcriptome profiles reveal uncharacterized modularity of wood formation in Populus tremula		1
2	Saccharification Potential of Transgenic Greenhouse- and Field-Grown Aspen Engineered for Reduced Xylan Acetylation. *Frontiers in Plant Science*, **2021**, 12, 704960	6.2	1
1	Expression of Cell Wall-Modifying Enzymes in Aspen for Improved Lignocellulose Processing. *Methods in Molecular Biology*, **2020**, 2149, 145-164	1.4	