Debra Mohnen

List of Publications by Year
in descending order

56 papers	8,946 citations	109321 35 h-index	161849 54 g-index
60 all docs	60 docs citations	60 times ranked	8189 citing authors

#	Article	IF	Citations
1	Composition and yield of non-cellulosic and cellulosic sugars in soluble and particulate fractions during consolidated bioprocessing of poplar biomass by Clostridium thermocellum. , 2022, 15, 23.		2
2	Multiple Arabidopsis galacturonosyltransferases synthesize polymeric homogalacturonan by oligosaccharide acceptorâ€dependent or <i>de novo</i> synthesis. Plant Journal, 2022, 109, 1441-1456.	5.7	14
3	Analysis of pectin biopolymer phase states using acoustic emissions. Carbohydrate Polymers, 2020, 227, 115282.	10.2	7
4	Pectin biopolymer mechanics and microstructure associated with polysaccharide phase transitions. Journal of Biomedical Materials Research - Part A, 2020, 108, 246-253.	4.0	17
5	The Effect of Calcium on the Cohesive Strength and Flexural Properties of Low-Methoxyl Pectin Biopolymers. Molecules, 2020, 25, 75.	3.8	11
6	Pectin Synthesis and Pollen Tube Growth in Arabidopsis Involves Three GAUT1 Golgi-Anchoring Proteins: GAUT5, GAUT6, and GAUT7. Frontiers in Plant Science, 2020, 11, 585774.	3.6	21
7	Water-Dependent Blending of Pectin Films: The Mechanics of Conjoined Biopolymers. Molecules, 2020, 25, 2108.	3.8	6
8	Visualizing pectin polymer-polymer entanglement produced by interfacial water movement. Carbohydrate Polymers, 2020, 246, 116618.	10.2	14
9	Critical Review of Plant Cell Wall Matrix Polysaccharide Glycosyltransferase Activities Verified by Heterologous Protein Expression. Frontiers in Plant Science, 2019, 10, 915.	3.6	81
10	Downregulation of pectin biosynthesis gene GAUT4 leads to reduced ferulate and lignin-carbohydrate cross-linking in switchgrass. Communications Biology, 2019, 2, 22.	4.4	35
11	Multiple levers for overcoming the recalcitrance of lignocellulosic biomass. Biotechnology for Biofuels, 2019, 12, 15.	6.2	47
12	Multitrait genomeâ€wide association analysis of <i>Populus trichocarpa</i> identifies key polymorphisms controlling morphological and physiological traits. New Phytologist, 2019, 223, 293-309.	7.3	85
13	Working towards recalcitrance mechanisms: increased xylan and homogalacturonan production by overexpression of GAlactUronosylTransferase12 (GAUT12) causes increased recalcitrance and decreased growth in Populus. Biotechnology for Biofuels, 2018, 11, 9.	6.2	31
14	Sugar release and growth of biofuel crops are improved by downregulation of pectin biosynthesis. Nature Biotechnology, 2018, 36, 249-257.	17.5	136
15	A two-phase model for the non-processive biosynthesis of homogalacturonan polysaccharides by the GAUT1:GAUT7 complex. Journal of Biological Chemistry, 2018, 293, 19047-19063.	3.4	43
16	Identification of Key Enzymes for Pectin Synthesis in Seed Mucilage. Plant Physiology, 2018, 178, 1045-1064.	4.8	63
17	Comparison of four glycosyl residue composition methods for effectiveness in detecting sugars from cell walls of dicot and grass tissues. Biotechnology for Biofuels, 2017, 10, 182.	6.2	22
18	Agronomic performance of Populus deltoides trees engineered for biofuel production. Biotechnology for Biofuels, 2017, 10, 253.	6.2	22

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19	Plant glycobiology: a current snap shot!. Glycobiology, 2016, 26, 911-912.	2.5	1
20	Downregulation of GAUT12 in Populus deltoides by RNA silencing results in reduced recalcitrance, increased growth and reduced xylan and pectin in a woody biofuel feedstock. Biotechnology for Biofuels, 2015, 8, 41.	6.2	133
21	Loss of Arabidopsis GAUT12/IRX8 causes anther indehiscence and leads to reduced G lignin associated with altered matrix polysaccharide deposition. Frontiers in Plant Science, 2014, 5, 357.	3.6	50
22	Deletion of a gene cluster encoding pectin degrading enzymes in Caldicellulosiruptor bescii reveals an important role for pectin in plant biomass recalcitrance. Biotechnology for Biofuels, 2014, 7, 147.	6.2	54
23	A review of xylan and lignin biosynthesis: Foundation for studying Arabidopsis<i>irregular xylem</i>mutants with pleiotropic phenotypes. Critical Reviews in Biochemistry and Molecular Biology, 2014, 49, 212-241.	5.2	91
24	Evolving Views of Pectin Biosynthesis. Annual Review of Plant Biology, 2013, 64, 747-779.	18.7	458
25	Carbohydrate and lignin are simultaneously solubilized from unpretreated switchgrass by microbial action at high temperature. Energy and Environmental Science, 2013, 6, 2186.	30.8	75
26	GALACTURONOSYLTRANSFERASE-LIKE5 Is Involved in the Production of Arabidopsis Seed Coat Mucilage. Plant Physiology, 2013, 163, 1203-1217.	4.8	58
27	An <i>Arabidopsis</i> Cell Wall Proteoglycan Consists of Pectin and Arabinoxylan Covalently Linked to an Arabinogalactan Protein. Plant Cell, 2013, 25, 270-287.	6.6	409
28	Synthesis of the plant cell wallË˘s most complex glycan: pectin â€•surprises in glycosyltransferase processing and anchoring in the Golgi. FASEB Journal, 2012, 26, 349.3.	0.5	2
29	Plants Get Hyp to O-Glycosylation. Science, 2011, 332, 1393-1394.	12.6	10
30	Galacturonosyltransferase (GAUT)1 and GAUT7 are the core of a plant cell wall pectin biosynthetic homogalacturonan:galacturonosyltransferase complex. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 20225-20230.	7.1	183
31	Evolution and Function of the Plant Cell Wall Synthesis-Related Glycosyltransferase Family 8 Â Â. Plant Physiology, 2010, 153, 1729-1746.	4.8	120
32	A Specialized Outer Layer of the Primary Cell Wall Joins Elongating Cotton Fibers into Tissue-Like Bundles Â Â. Plant Physiology, 2009, 150, 684-699.	4.8	80
33	Arabidopsis thaliana T-DNA Mutants Implicate GAUT Genes in the Biosynthesis of Pectin and Xylan in Cell Walls and Seed Testa. Molecular Plant, 2009, 2, 1000-1014.	8.3	126
34	The structure, function, and biosynthesis of plant cell wall pectic polysaccharides. Carbohydrate Research, 2009, 344, 1879-1900.	2.3	1,255
35	Pectin structure and biosynthesis. Current Opinion in Plant Biology, 2008, 11, 266-277.	7.1	1,799
36	The Arabidopsis irregular xylem8 Mutant Is Deficient in Glucuronoxylan and Homogalacturonan, Which Are Essential for Secondary Cell Wall Integrity. Plant Cell, 2007, 19, 237-255.	6.6	251

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37	Pectin induces apoptosis in human prostate cancer cells: correlation of apoptotic function with pectin structure. Glycobiology, 2007, 17, 805-819.	2.5	201
38	Functional identification of an Arabidopsis pectin biosynthetic homogalacturonan galacturonosyltransferase. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 5236-5241.	7.1	231
39	Development of a filter assay for measuring homogalacturonan: Î±-(1,4)-Galacturonosyltransferase activity. Analytical Biochemistry, 2005, 343, 231-236.	2.4	8
40	Solid-supported enzymatic synthesis of pectic oligogalacturonides and their analysis by MALDI-TOF mass spectrometry. Carbohydrate Research, 2003, 338, 1951-1960.	2.3	23
41	Pectins: structure, biosynthesis, and oligogalacturonide-related signaling. Phytochemistry, 2001, 57, 929-967.	2.9	1,596
42	The Catalytic Site of the Pectin Biosynthetic Enzyme Î±-1,4-Galacturonosyltransferase Is Located in the Lumen of the Golgi. Plant Physiology, 2001, 127, 360-371.	4.8	129
43	Solubilization and Partial Characterization of Homogalacturonan-Methyltransferase from Microsomal Membranes of Suspension-Cultured Tobacco Cells. Plant Physiology, 1999, 121, 281-290.	4.8	36
44	Pectin biosynthesis: a solubilized Î±1,4-galacturonosyltransferase from tobacco catalyzes the transfer of galacturonic acid from UDP-galacturonic acid onto the non-reducing end of homogalacturonan. Planta, 1999, 207, 512-517.	3.2	49
45	Subcellular localization and topology of homogalacturonan methyltransferase in suspension-cultured Nicotiana tabacum cells. Planta, 1999, 209, 112-117.	3.2	39
46	Enzymatic Synthesis and Purification of [3H]Uridine Diphosphate Galacturonic Acid for Use in Studying Golgi-Localized Transporters. Analytical Biochemistry, 1999, 272, 224-231.	2.4	18
47	Solubilization and characterization of a galacturonosyltransferase that synthesizes the pectic polysaccharide homogalacturonan. Plant Journal, 1998, 13, 363-374.	5.7	72
48	Identification and Partial Characterization of the Pectin Methyltransferase â€œHomogalacturonan-Methyltransferaseâ€•from Membranes of Tobacco Cell Suspensions1. Plant Physiology, 1998, 116, 337-347.	4.8	40
49	Biological Activity of Reducing-End-Derivatized Oligogalacturonides in Tobacco Tissue Cultures1. Plant Physiology, 1998, 116, 1289-1298.	4.8	43
50	A Method for Biotin Labeling of Biologically Active Oligogalacturonides Using a Chemically Stable Hydrazide Linkage. Analytical Biochemistry, 1997, 249, 10-19.	2.4	37
51	Cell wall carbohydrates as signals in plants. Seminars in Cell Biology, 1993, 4, 93-102.	3.4	30
52	Oligosaccharinsâ€"oligosaccharides that regulate growth, development and defence responses in plants. Glycobiology, 1992, 2, 181-198.	2.5	301
53	Oligosaccharins: oligosaccharide regulatory molecules. Accounts of Chemical Research, 1992, 25, 77-83.	15.6	79
54	Oligogalacturonides are able to induce flowers to form on tobacco explants. Plant Journal, 1991, 1, 217-225.	5.7	116

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55	Oligogalacturonides are able to induce flowers to form on tobacco explants. Plant Journal, 1991, 1, 217-225.	5.7	4
56	Pectic Cell Wall Fragments Regulate Tobacco Thin-Cell-Layer Explant Morphogenesis. Plant Cell, 1989, 1, 747.	6.6	29