Maria J PeÃ±a

List of Publications by Year
in descending order

43 papers	3,537 citations	185998 28 h-index	253896 43 g-index
45 all docs	45 docs citations	45 times ranked	3830 citing authors

#	Article	IF	Citations
1	Human gut Bacteroidetes can utilize yeast mannan through a selfish mechanism. Nature, 2015, 517, 165-169.	13.7	427
2	Arabidopsis irregular xylem8 and irregular xylem9: Implications for the Complexity of Glucuronoxylan Biosynthesis. Plant Cell, 2007, 19, 549-563.	3.1	396
3	Arabidopsis Fragile Fiber8, Which Encodes a Putative Glucuronyltransferase, Is Essential for Normal Secondary Wall Synthesis. Plant Cell, 2005, 17, 3390-3408.	3.1	301
4	Structural analysis of xyloglucans in the primary cell walls of plants in the subclass Asteridae. Carbohydrate Research, 2005, 340, 1826-1840.	1.1	200
5	Two <scp>A</scp>rabidopsis proteins synthesize acetylated xylan <i>inÂvitro</i>. Plant Journal, 2014, 80, 197-206.	2.8	192
6	4- <i>O</i> -methylation of glucuronic acid in <i>Arabidopsis</i> glucuronoxylan is catalyzed by a domain of unknown function family 579 protein. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 14253-14258.	3.3	164
7	Moss and liverwort xyloglucans contain galacturonic acid and are structurally distinct from the xyloglucans synthesized by hornworts and vascular plants*. Glycobiology, 2008, 18, 891-904.	1.3	134
8	Loss of Highly Branched Arabinans and Debranching of Rhamnogalacturonan I Accompany Loss of Firm Texture and Cell Separation during Prolonged Storage of Apple. Plant Physiology, 2004, 135, 1305-1313.	2.3	131
9	The Galactose Residues of Xyloglucan Are Essential to Maintain Mechanical Strength of the Primary Cell Walls in Arabidopsis during Growth. Plant Physiology, 2004, 134, 443-451.	2.3	113
10	A Galacturonic Acidâ€“Containing Xyloglucan Is Involved in <i>Arabidopsis</i> Root Hair Tip Growth. Plant Cell, 2012, 24, 4511-4524.	3.1	106
11	AXY8 Encodes an Î±-Fucosidase, Underscoring the Importance of Apoplastic Metabolism on the Fine Structure of <i>Arabidopsis</i> Cell Wall Polysaccharides. Plant Cell, 2011, 23, 4025-4040.	3.1	102
12	Gene regulatory networks for lignin biosynthesis in switchgrass <i>(Panicum virgatum</i>). Plant Biotechnology Journal, 2019, 17, 580-593.	4.1	96
13	Galactose-Depleted Xyloglucan Is Dysfunctional and Leads to Dwarfism in Arabidopsis. Plant Physiology, 2015, 167, 1296-1306.	2.3	90
14	Changes in Dehydrodiferulic Acids and Peroxidase Activity against Ferulic Acid Associated with Cell Walls during Growth of Pinus pinaster Hypocotyl. Plant Physiology, 1996, 111, 941-946.	2.3	89
15	Designer biomass for next-generation biorefineries: leveraging recent insights into xylan structure and biosynthesis. Biotechnology for Biofuels, 2017, 10, 286.	6.2	88
16	The Structure and Function of an Arabinan-specific Î±-1,2-Arabinofuranosidase Identified from Screening the Activities of Bacterial GH43 Glycoside Hydrolases. Journal of Biological Chemistry, 2011, 286, 15483-15495.	1.6	85
17	Structural diversity of xylans in the cell walls of monocots. Planta, 2016, 244, 589-606.	1.6	83
18	Introducing endo-xylanase activity into an exo-acting arabinofuranosidase that targets side chains. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 6537-6542.	3.3	78

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19	Identification of an algal xylan synthase indicates that there is functional orthology between algal and plant cell wall biosynthesis. New Phytologist, 2018, 218, 1049-1060.	3.5	67
20	The ability of land plants to synthesize glucuronoxylans predates the evolution of tracheophytes. Glycobiology, 2012, 22, 439-451.	1.3	63
21	Structural, mutagenic and <i>inÂsilico</i> studies of xyloglucan fucosylation in <i>Arabidopsis thaliana</i> suggest a waterâ€mediated mechanism. Plant Journal, 2017, 91, 931-949.	2.8	53
22	Biochemical and Genetic Analysis Identify CSLD3 as a beta-1,4-Glucan Synthase That Functions during Plant Cell Wall Synthesis. Plant Cell, 2020, 32, 1749-1767.	3.1	49
23	Development of a thermophilic coculture for corn fiber conversion to ethanol. Nature Communications, 2020, 11, 1937.	5.8	45
24	Methods for Structural Characterization of the Products of Cellulose- and Xyloglucan-Hydrolyzing Enzymes. Methods in Enzymology, 2012, 510, 121-139.	0.4	43
25	Changes in the abundance of cell wall apiogalacturonan and xylogalacturonan and conservation of rhamnogalacturonan II structure during the diversification of the Lemnoideae. Planta, 2018, 247, 953-971.	1.6	36
26	The cell wall stiffening mechanism inPinus pinaster Aiton: regulation by apoplastic levels of ascorbate and hydrogen peroxide. Journal of the Science of Food and Agriculture, 1999, 79, 416-420.	1.7	33
27	Role of Apoplastic Ascorbate and Hydrogen Peroxide in the Control of Cell Growth in Pine Hypocotyls. Plant and Cell Physiology, 2004, 45, 530-534.	1.5	33
28	Molecular Mechanism of Polysaccharide Acetylation by the Arabidopsis Xylan <i>O</i>-acetyltransferase XOAT1. Plant Cell, 2020, 32, 2367-2382.	3.1	32
29	Loss of function of folylpolyglutamate synthetase 1 reduces lignin content and improves cell wall digestibility in Arabidopsis. Biotechnology for Biofuels, 2015, 8, 224.	6.2	27
30	Nanocellulose-Based Sustainable Dyeing of Cotton Textiles with Minimized Water Pollution. ACS Omega, 2020, 5, 9196-9203.	1.6	23
31	Downregulation of a UDP-Arabinomutase Gene in Switchgrass (Panicum virgatum L.) Results in Increased Cell Wall Lignin While Reducing Arabinose-Glycans. Frontiers in Plant Science, 2016, 7, 1580.	1.7	20
32	Locating Methyl-Etherified and Methyl-Esterified Uronic Acids in the Plant Cell Wall Pectic Polysaccharide Rhamnogalacturonan II. SLAS Technology, 2020, 25, 329-344.	1.0	19
33	A xyloglucan from persimmon fruit cell walls. Phytochemistry, 1998, 48, 607-610.	1.4	18
34	Xyloglucan, galactomannan, glucuronoxylan, and rhamnogalacturonan I do not have identical structures in soybean root and root hair cell walls. Planta, 2015, 242, 1123-1138.	1.6	16
35	Protocols for isolating and characterizing polysaccharides from plant cell walls: a case study using rhamnogalacturonan-II. Biotechnology for Biofuels, 2021, 14, 142.	6.2	14
36	Structural Characterization of the Heteroxylans from Poplar and Switchgrass. , 2012, 908, 215-228.		13

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37	Enzymatic Synthesis of Xylan Microparticles with Tunable Morphologies. ACS Materials Au, 2022, 2, 440-452.	2.6	9
38	AtFUT4 and AtFUT6 Are Arabinofuranose-Specific Fucosyltransferases. Frontiers in Plant Science, 2021, 12, 589518.	1.7	8
39	Analytical Techniques for Determining the Role of Domain of Unknown Function 579 Proteins in the Synthesis of O-Methylated Plant Polysaccharides. SLAS Technology, 2020, 25, 345-355.	1.0	7
40	Heterologous expression of plant glycosyltransferases for biochemistry and structural biology. Methods in Cell Biology, 2020, 160, 145-165.	0.5	7
41	Mechanism and Reaction Energy Landscape for Apiose Cross-Linking by Boric Acid in Rhamnogalacturonan II. Journal of Physical Chemistry B, 2020, 124, 10117-10125.	1.2	5
42	Autolysis Promotes the Extension Capacity of Zea mays Coleoptile Cell Walls in Response to Acid pH Solutions. Plant and Cell Physiology, 1999, 40, 565-570.	1.5	4
43	Sequential extraction of dehydrodiferulates shows heterogeneity in their degree of association withZea mays coleoptile cell walls. Phytochemical Analysis, 1998, 9, 141-144.	1.2	1