Sivakumar Pattathil

List of Publications by Year
in descending order

56 papers	4,353 citations	136740 32 h-index	174990 52 g-index
58 all docs	58 docs citations	58 times ranked	5384 citing authors

#	Article	IF	Citations
1	An <i>Arabidopsis</i> Cell Wall Proteoglycan Consists of Pectin and Arabinoxylan Covalently Linked to an Arabinogalactan Protein. Plant Cell, 2013, 25, 270-287.	3.1	409
2	A Comprehensive Toolkit of Plant Cell Wall Glycan-Directed Monoclonal Antibodies Â Â. Plant Physiology, 2010, 153, 514-525.	2.3	353
3	Efficient biomass pretreatment using ionic liquids derived from lignin and hemicellulose. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, E3587-95.	3.3	285
4	Investigating plant cell wall components that affect biomass recalcitrance in poplar and switchgrass. Energy and Environmental Science, 2013, 6, 898.	15.6	220
5	Composition and Structure of Sugarcane Cell Wall Polysaccharides: Implications for Second-Generation Bioethanol Production. Bioenergy Research, 2013, 6, 564-579.	2.2	216
6	Arabidopsis Gâ€protein interactome reveals connections to cell wall carbohydrates and morphogenesis. Molecular Systems Biology, 2011, 7, 532.	3.2	191
7	Next-generation ammonia pretreatment enhances cellulosic biofuel production. Energy and Environmental Science, 2016, 9, 1215-1223.	15.6	169
8	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
9	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.	3.9	126
10	Immunological Approaches to Plant Cell Wall and Biomass Characterization: Glycome Profiling. , 2012, 908, 61-72.		118
11	Enhanced characteristics of genetically modified switchgrass (Panicum virgatum L.) for high biofuel production. Biotechnology for Biofuels, 2013, 6, 71.	6.2	118
12	Loss of function of cinnamyl alcohol dehydrogenase 1 leads to unconventional lignin and a temperature-sensitive growth defect in <i>Medicago truncatula</i>. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 13660-13665.	3.3	115
13	Application of monoclonal antibodies to investigate plant cell wall deconstruction for biofuels production. Energy and Environmental Science, 2011, 4, 4332.	15.6	107
14	Mutations in Multiple <i>XXT</i> Genes of Arabidopsis Reveal the Complexity of Xyloglucan Biosynthesis Â Â. Plant Physiology, 2012, 159, 1367-1384.	2.3	97
15	Galactose-Depleted Xyloglucan Is Dysfunctional and Leads to Dwarfism in Arabidopsis. Plant Physiology, 2015, 167, 1296-1306.	2.3	90
16	<i>Arabidopsis</i>cell wall composition determines disease resistance specificity and fitness. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	88
17	How cell wall complexity influences saccharification efficiency in<i>Miscanthus sinensis</i>. Journal of Experimental Botany, 2015, 66, 4351-4365.	2.4	82
18	Biological lignocellulose solubilization: comparative evaluation of biocatalysts and enhancement via cotreatment. Biotechnology for Biofuels, 2016, 9, 8.	6.2	78

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19	Carbohydrate and lignin are simultaneously solubilized from unpretreated switchgrass by microbial action at high temperature. Energy and Environmental Science, 2013, 6, 2186.	15.6	75
20	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
21	ARABIDOPSIS DEHISCENCE ZONE POLYGALACTURONASE 1 (ADPG1) releases latent defense signals in stems with reduced lignin content. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 3281-3290.	3.3	64
22	Molecular Analysis of a Family of Arabidopsis Genes Related to Galacturonosyltransferases Â Â. Plant Physiology, 2011, 155, 1791-1805.	2.3	63
23	The ability of land plants to synthesize glucuronoxylans predates the evolution of tracheophytes. Glycobiology, 2012, 22, 439-451.	1.3	63
24	Biosynthesis of UDP-xylose: characterization of membrane-bound AtUxs2. Planta, 2005, 221, 538-548.	1.6	61
25	Elicitors and defense gene induction in plants with altered lignin compositions. New Phytologist, 2018, 219, 1235-1251.	3.5	61
26	Insights into plant cell wall structure, architecture, and integrity using glycome profiling of native and AFEX^{TM}-pre-treated biomass. Journal of Experimental Botany, 2015, 66, 4279-4294.	2.4	57
27	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
28	Cotton Fiber Cell Walls of Gossypium hirsutum and Gossypium barbadense Have Differences Related to Loosely-Bound Xyloglucan. PLoS ONE, 2013, 8, e56315.	1.1	51
29	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.	1.7	50
30	Biochemical and physiological characterization of fut4 and fut6 mutants defective in arabinogalactan-protein fucosylation in Arabidopsis. Journal of Experimental Botany, 2013, 64, 5537-5551.	2.4	49
31	Activation of <i>miR165b</i> represses <i>At<scp>HB</scp>15</i> expression and induces pith secondary wall development in <scp>A</scp>rabidopsis. Plant Journal, 2015, 83, 388-400.	2.8	46
32	Immunological Approaches to Plant Cell Wall and Biomass Characterization: Immunolocalization of Glycan Epitopes. , 2012, 908, 73-82.		45
33	Coupling alkaline pre-extraction with alkaline-oxidative post-treatment of corn stover to enhance enzymatic hydrolysis and fermentability. Biotechnology for Biofuels, 2014, 7, 48.	6.2	45
34	Agave proves to be a low recalcitrant lignocellulosic feedstock for biofuels production on semi-arid lands. Biotechnology for Biofuels, 2014, 7, 50.	6.2	42
35	Compensatory Guaiacyl Lignin Biosynthesis at the Expense of Syringyl Lignin in <i>4CL1</i>-Knockout Poplar. Plant Physiology, 2020, 183, 123-136.	2.3	36
36	Glycome and Proteome Components of Golgi Membranes Are Common between Two Angiosperms with Distinct Cell-Wall Structures. Plant Cell, 2019, 31, 1094-1112.	3.1	35

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37	Comparison of Arabinoxylan Structure in Bioenergy and Model Grasses. Industrial Biotechnology, 2012, 8, 222-229.	0.5	34
38	Virus-Induced Gene Silencing Offers a Functional Genomics Platform for Studying Plant Cell Wall Formation. Molecular Plant, 2010, 3, 818-833.	3.9	32
39	Xylan epitope profiling: an enhanced approach to study organ development-dependent changes in xylan structure, biosynthesis, and deposition in plant cell walls. Biotechnology for Biofuels, 2017, 10, 245.	6.2	32
40	A Hybrid Approach Enabling Large-Scale Glycomic Analysis of Post-Golgi Vesicles Reveals a Transport Route for Polysaccharides. Plant Cell, 2019, 31, 627-644.	3.1	31
41	Biological conversion assay using Clostridium phytofermentans to estimate plant feedstock quality. Biotechnology for Biofuels, 2012, 5, 5.	6.2	28
42	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
43	Immunological Approaches to Biomass Characterization and Utilization. Frontiers in Bioengineering and Biotechnology, 2015, 3, 173.	2.0	26
44	Identification of features associated with plant cell wall recalcitrance to pretreatment by alkaline hydrogen peroxide in diverse bioenergy feedstocks using glycome profiling. RSC Advances, 2014, 4, 17282-17292.	1.7	25
45	Tubulin perturbation leads to unexpected cell wall modifications and affects stomatal behaviour in<i>Populus</i>. Journal of Experimental Botany, 2015, 66, 6507-6518.	2.4	20
46	Cell wall-associated transition metals improve alkaline-oxidative pretreatment in diverse hardwoods. Green Chemistry, 2016, 18, 1405-1415.	4.6	17
47	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
48	Xylan hydrolysis in Populus trichocarpaÃ—P. deltoides and model substrates during hydrothermal pretreatment. Bioresource Technology, 2015, 179, 202-210.	4.8	16
49	Immunolocalization of cell wall carbohydrate epitopes in seaweeds: presence of land plant epitopes in Fucus vesiculosus L. (Phaeophyceae). Planta, 2016, 243, 337-354.	1.6	16
50	Changes in Cell Wall Carbohydrate Extractability Are Correlated with Reduced Recalcitrance of HCT Downregulated Alfalfa Biomass. Industrial Biotechnology, 2012, 8, 217-221.	0.5	14
51	Physical and chemical differences between one-stage and two-stage hydrothermal pretreated hardwood substrates for use in cellulosic ethanol production. Biotechnology for Biofuels, 2016, 9, 30.	6.2	14
52	Assessment of Genetic Variability of Cell Wall Degradability for the Selection of Alfalfa with Improved Saccharification Efficiency. Bioenergy Research, 2012, 5, 904-914.	2.2	13
53	Cell Wall Ultrastructure of Stem Wood, Roots, and Needles of a Conifer Varies in Response to Moisture Availability. Frontiers in Plant Science, 2016, 7, 882.	1.7	11
54	Changes in Cell Wall Properties Coincide with Overexpression of Extensin Fusion Proteins in Suspension Cultured Tobacco Cells. PLoS ONE, 2014, 9, e115906.	1.1	9

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55	Isolation and Glycomic Analysis of Trans-Golgi Network Vesicles in Plants. Methods in Molecular Biology, 2020, 2177, 153-167.	0.4	0
56	Understanding the structure and composition of recalcitrant oligosaccharides in hydrolysate using high-throughput biotin-based glycome profiling and mass spectrometry. Scientific Reports, 2022, 12, 2521.	1.6	0