

Sivakumar Pattathil

List of Publications by Year in Descending Order

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

57
papers

3,367
citations

31
h-index

58
g-index

58
ext. papers

4,000
ext. citations

9
avg, IF

4.81
L-index

#	Paper	IF	Citations
57	Understanding the structure and composition of recalcitrant oligosaccharides in hydrolysate using high-throughput biotin-based glycome profiling and mass spectrometry.. <i>Scientific Reports</i> , 2022 , 12, 2521	4.9	
56	cell wall composition determines disease resistance specificity and fitness. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021 , 118,	11.5	17
55	ARABIDOPSIS DEHISCENCE ZONE POLYGALACTURONASE 1 (ADPG1) releases latent defense signals in stems with reduced lignin content. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020 , 117, 3281-3290	11.5	29
54	Isolation and Glycomic Analysis of Trans-Golgi Network Vesicles in Plants. <i>Methods in Molecular Biology</i> , 2020 , 2177, 153-167	1.4	
53	Compensatory Guaiacyl Lignin Biosynthesis at the Expense of Syringyl Lignin in -Knockout Poplar. <i>Plant Physiology</i> , 2020 , 183, 123-136	6.6	16
52	Glycome and Proteome Components of Golgi Membranes Are Common between Two Angiosperms with Distinct Cell-Wall Structures. <i>Plant Cell</i> , 2019 , 31, 1094-1112	11.6	23
51	A Hybrid Approach Enabling Large-Scale Glycomic Analysis of Post-Golgi Vesicles Reveals a Transport Route for Polysaccharides. <i>Plant Cell</i> , 2019 , 31, 627-644	11.6	12
50	Elicitors and defense gene induction in plants with altered lignin compositions. <i>New Phytologist</i> , 2018 , 219, 1235-1251	9.8	34
49	Xylan epitope profiling: an enhanced approach to study organ development-dependent changes in xylan structure, biosynthesis, and deposition in plant cell walls. <i>Biotechnology for Biofuels</i> , 2017 , 10, 245	7.8	20
48	Cell wall-associated transition metals improve alkaline-oxidative pretreatment in diverse hardwoods. <i>Green Chemistry</i> , 2016 , 18, 1405-1415	10	16
47	Biological lignocellulose solubilization: comparative evaluation of biocatalysts and enhancement via cotreatment. <i>Biotechnology for Biofuels</i> , 2016 , 9, 8	7.8	63
46	Physical and chemical differences between one-stage and two-stage hydrothermal pretreated hardwood substrates for use in cellulosic ethanol production. <i>Biotechnology for Biofuels</i> , 2016 , 9, 30	7.8	10
45	Next-generation ammonia pretreatment enhances cellulosic biofuel production. <i>Energy and Environmental Science</i> , 2016 , 9, 1215-1223	35.4	141
44	Immunolocalization of cell wall carbohydrate epitopes in seaweeds: presence of land plant epitopes in <i>Fucus vesiculosus</i> L. (Phaeophyceae). <i>Planta</i> , 2016 , 243, 337-54	4.7	11
43	Cell Wall Ultrastructure of Stem Wood, Roots, and Needles of a Conifer Varies in Response to Moisture Availability. <i>Frontiers in Plant Science</i> , 2016 , 7, 882	6.2	9
42	Galactose-depleted xyloglucan is dysfunctional and leads to dwarfism in Arabidopsis. <i>Plant Physiology</i> , 2015 , 167, 1296-306	6.6	55
41	Downregulation of GAUT12 in <i>Populus deltoides</i> by RNA silencing results in reduced recalcitrance, increased growth and reduced xylan and pectin in a woody biofuel feedstock. <i>Biotechnology for Biofuels</i> , 2015 , 8, 41	7.8	86

40	Tubulin perturbation leads to unexpected cell wall modifications and affects stomatal behaviour in Populus. <i>Journal of Experimental Botany</i> , 2015 , 66, 6507-18	7	16
39	How cell wall complexity influences saccharification efficiency in Miscanthus sinensis. <i>Journal of Experimental Botany</i> , 2015 , 66, 4351-65	7	58
38	Xyloglucan, galactomannan, glucuronoxylan, and rhamnogalacturonan I do not have identical structures in soybean root and root hair cell walls. <i>Planta</i> , 2015 , 242, 1123-38	4.7	13
37	Xylan hydrolysis in Populus trichocarpa [P. deltoides and model substrates during hydrothermal pretreatment. <i>Bioresource Technology</i> , 2015 , 179, 202-210	11	15
36	Loss of function of folylpolyglutamate synthetase 1 reduces lignin content and improves cell wall digestibility in Arabidopsis. <i>Biotechnology for Biofuels</i> , 2015 , 8, 224	7.8	20
35	Activation of miR165b represses AtHB15 expression and induces pith secondary wall development in Arabidopsis. <i>Plant Journal</i> , 2015 , 83, 388-400	6.9	31
34	Immunological Approaches to Biomass Characterization and Utilization. <i>Frontiers in Bioengineering and Biotechnology</i> , 2015 , 3, 173	5.8	23
33	Insights into plant cell wall structure, architecture, and integrity using glycome profiling of native and AFEX TM -pre-treated biomass. <i>Journal of Experimental Botany</i> , 2015 , 66, 4279-94	7	45
32	Aspen pectate lyase PtxtPL1-27 mobilizes matrix polysaccharides from woody tissues and improves saccharification yield. <i>Biotechnology for Biofuels</i> , 2014 , 7, 11	7.8	56
31	Efficient biomass pretreatment using ionic liquids derived from lignin and hemicellulose. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, E3587-95	11.5	239
30	Identification of features associated with plant cell wall recalcitrance to pretreatment by alkaline hydrogen peroxide in diverse bioenergy feedstocks using glycome profiling. <i>RSC Advances</i> , 2014 , 4, 17282-17292	3.7	22
29	Coupling alkaline pre-extraction with alkaline-oxidative post-treatment of corn stover to enhance enzymatic hydrolysis and fermentability. <i>Biotechnology for Biofuels</i> , 2014 , 7, 48	7.8	38
28	Agave proves to be a low recalcitrant lignocellulosic feedstock for biofuels production on semi-arid lands. <i>Biotechnology for Biofuels</i> , 2014 , 7, 50	7.8	34
27	Loss of Arabidopsis GAUT12/IRX8 causes anther indehiscence and leads to reduced G lignin associated with altered matrix polysaccharide deposition. <i>Frontiers in Plant Science</i> , 2014 , 5, 357	6.2	36
26	Deletion of a gene cluster encoding pectin degrading enzymes in Caldicellulosiruptor bescii reveals an important role for pectin in plant biomass recalcitrance. <i>Biotechnology for Biofuels</i> , 2014 , 7, 147	7.8	46
25	Changes in cell wall properties coincide with overexpression of extensin fusion proteins in suspension cultured tobacco cells. <i>PLoS ONE</i> , 2014 , 9, e115906	3.7	8
24	Enhanced characteristics of genetically modified switchgrass (Panicum virgatum L.) for high biofuel production. <i>Biotechnology for Biofuels</i> , 2013 , 6, 71	7.8	99
23	Investigating plant cell wall components that affect biomass recalcitrance in poplar and switchgrass. <i>Energy and Environmental Science</i> , 2013 , 6, 898	35.4	194

22	Composition and Structure of Sugarcane Cell Wall Polysaccharides: Implications for Second-Generation Bioethanol Production. <i>Bioenergy Research</i> , 2013 , 6, 564-579	3.1	171
21	Carbohydrate and lignin are simultaneously solubilized from unpretreated switchgrass by microbial action at high temperature. <i>Energy and Environmental Science</i> , 2013 , 6, 2186	35.4	66
20	An Arabidopsis cell wall proteoglycan consists of pectin and arabinoxylan covalently linked to an arabinogalactan protein. <i>Plant Cell</i> , 2013 , 25, 270-87	11.6	312
19	Biochemical and physiological characterization of fut4 and fut6 mutants defective in arabinogalactan-protein fucosylation in Arabidopsis. <i>Journal of Experimental Botany</i> , 2013 , 64, 5537-51	7	41
18	Loss of function of cinnamyl alcohol dehydrogenase 1 leads to unconventional lignin and a temperature-sensitive growth defect in <i>Medicago truncatula</i> . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 13660-5	11.5	94
17	Cotton fiber cell walls of <i>Gossypium hirsutum</i> and <i>Gossypium barbadense</i> have differences related to loosely-bound xyloglucan. <i>PLoS ONE</i> , 2013 , 8, e56315	3.7	40
16	Biological conversion assay using <i>Clostridium</i> phytofermentans to estimate plant feedstock quality. <i>Biotechnology for Biofuels</i> , 2012 , 5, 5	7.8	24
15	Assessment of Genetic Variability of Cell Wall Degradability for the Selection of Alfalfa with Improved Saccharification Efficiency. <i>Bioenergy Research</i> , 2012 , 5, 904-914	3.1	11
14	The ability of land plants to synthesize glucuronoxylans predates the evolution of tracheophytes. <i>Glycobiology</i> , 2012 , 22, 439-51	5.8	49
13	Immunological approaches to plant cell wall and biomass characterization: immunolocalization of glycan epitopes. <i>Methods in Molecular Biology</i> , 2012 , 908, 73-82	1.4	36
12	Comparison of Arabinoxylan Structure in Bioenergy and Model Grasses. <i>Industrial Biotechnology</i> , 2012 , 8, 222-229	1.3	27
11	Changes in Cell Wall Carbohydrate Extractability Are Correlated with Reduced Recalcitrance of HCT Downregulated Alfalfa Biomass. <i>Industrial Biotechnology</i> , 2012 , 8, 217-221	1.3	12
10	Immunological approaches to plant cell wall and biomass characterization: Glycome Profiling. <i>Methods in Molecular Biology</i> , 2012 , 908, 61-72	1.4	107
9	Mutations in multiple XXT genes of Arabidopsis reveal the complexity of xyloglucan biosynthesis. <i>Plant Physiology</i> , 2012 , 159, 1367-84	6.6	74
8	Arabidopsis G-protein interactome reveals connections to cell wall carbohydrates and morphogenesis. <i>Molecular Systems Biology</i> , 2011 , 7, 532	12.2	148
7	Application of monoclonal antibodies to investigate plant cell wall deconstruction for biofuels production. <i>Energy and Environmental Science</i> , 2011 , 4, 4332	35.4	97
6	Molecular analysis of a family of Arabidopsis genes related to galacturonosyltransferases. <i>Plant Physiology</i> , 2011 , 155, 1791-805	6.6	48
5	A comprehensive toolkit of plant cell wall glycan-directed monoclonal antibodies. <i>Plant Physiology</i> , 2010 , 153, 514-25	6.6	290

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| 4 | Virus-induced gene silencing offers a functional genomics platform for studying plant cell wall formation. <i>Molecular Plant</i> , 2010 , 3, 818-33 | 14.4 | 28 |
| 3 | <i>Arabidopsis thaliana</i> T-DNA mutants implicate GAUT genes in the biosynthesis of pectin and xylan in cell walls and seed testa. <i>Molecular Plant</i> , 2009 , 2, 1000-14 | 14.4 | 99 |
| 2 | Biosynthesis of UDP-xylose: characterization of membrane-bound AtUxs2. <i>Planta</i> , 2005 , 221, 538-48 | 4.7 | 56 |
| 1 | <i>Arabidopsis</i> cell wall composition determines disease resistance specificity and fitness | | 2 |