John W Patrick

List of Publications by Year
in descending order

81 papers	4,879 citations	109137 35 h-index	98622 67 g-index
84 all docs	84 docs citations	84 times ranked	5338 citing authors

#	Article	IF	Citations
1	A recently evolved hexose transporter variant confers resistance to multiple pathogens in wheat. Nature Genetics, 2015, 47, 1494-1498.	9.4	575
2	The Plant Vascular System: Evolution, Development and Functions^F. Journal of Integrative Plant Biology, 2013, 55, 294-388.	4.1	553
3	Molecular regulation of seed and fruit set. Trends in Plant Science, 2012, 17, 656-665.	4.3	331
4	TRANSFERCELLS: Cells Specialized for a Special Purpose. Annual Review of Plant Biology, 2003, 54, 431-454.	8.6	254
5	Metabolic engineering of sugars and simple sugar derivatives in plants. Plant Biotechnology Journal, 2013, 11, 142-156.	4.1	177
6	Review: Nutrient loading of developing seeds. Functional Plant Biology, 2007, 34, 314.	1.1	170
7	The cellular pathway of postphloem sugar transport in developing tomato fruit. Planta, 1995, 196, 434.	1.6	168
8	High invertase activity in tomato reproductive organs correlates with enhanced sucrose import into, and heat tolerance of, young fruit. Journal of Experimental Botany, 2012, 63, 1155-1166.	2.4	139
9	Sucrose transport into developing seeds of Pisum sativum L.. Plant Journal, 1999, 18, 151-161.	2.8	127
10	Seed-specific overexpression of a potato sucrose transporter increases sucrose uptake and growth rates of developing pea cotyledons. Plant Journal, 2002, 30, 165-175.	2.8	116
11	Pathway of Sugar Transport in Germinating Wheat Seeds. Plant Physiology, 2006, 141, 1255-1263.	2.3	115
12	Amino Acid Transporters Are Localized to Transfer Cells of Developing Pea Seeds. Plant Physiology, 2000, 122, 319-326.	2.3	111
13	A suite of sucrose transporters expressed in coats of developing legume seeds includes novel pH-independent facilitators. Plant Journal, 2007, 49, 750-764.	2.8	103
14	Functional Characterization and RNAi-Mediated Suppression Reveals Roles for Hexose Transporters in Sugar Accumulation by Tomato Fruit. Molecular Plant, 2010, 3, 1049-1063.	3.9	80
15	Growth Regulators Have Rapid Effects on Photosynthate Unloading from Seed Coats of <i>Phaseolus vulgaris</i> L.. Plant Physiology, 1986, 80, 635-637.	2.3	77
16	Silencing the vacuolar invertase gene <i><scp>GhVIN</scp>1</i> blocks cotton fiber initiation from the ovule epidermis, probably by suppressing a cohort of regulatory genes via sugar signaling. Plant Journal, 2014, 78, 686-696.	2.8	77
17	Three sucrose transporter genes are expressed in the developing grain of hexaploid wheat. Plant Molecular Biology, 2002, 50, 453-462.	2.0	76
18	Mechanisms of phloem unloading: shaped by cellular pathways, their conductances and sink function. Current Opinion in Plant Biology, 2018, 43, 8-15.	3.5	73

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19	Are sucrose transporter expression profiles linked with patterns of biomass partitioning in Sorghum phenotypes?. Frontiers in Plant Science, 2013, 4, 223.	1.7	60
20	Sucrose Transporter Localization and Function in Phloem Unloading in Developing Stems. Plant Physiology, 2017, 173, 1330-1341.	2.3	60
21	Aquaporins and unloading of phloem-imported water in coats of developing bean seeds. Plant, Cell and Environment, 2007, 30, 1566-1577.	2.8	59
22	Wall ingrowth formation in transfer cells: novel examples of localized wall deposition in plant cells. Current Opinion in Plant Biology, 2008, 11, 653-661.	3.5	57
23	Tomato Ovary-to-Fruit Transition is Characterized by a Spatial Shift of mRNAs for Cell Wall Invertase and its Inhibitor with the Encoded Proteins Localized to Sieve Elements. Molecular Plant, 2015, 8, 315-328.	3.9	57
24	Hexose transporters of tomato: molecular cloning, expression analysis and functional characterization. Plant Molecular Biology, 2000, 44, 687-697.	2.0	53
25	Does Don Fisher's high-pressure manifold model account for phloem transport and resource partitioning?. Frontiers in Plant Science, 2013, 4, 184.	1.7	47
26	Intracellular sucrose communicates metabolic demand to sucrose transporters in developing pea cotyledons. Journal of Experimental Botany, 2009, 60, 71-85.	2.4	45
27	Transcriptomic and metabolomics responses to elevated cell wall invertase activity during tomato fruit set. Journal of Experimental Botany, 2017, 68, 4263-4279.	2.4	45
28	Mechanism of droughtâ€induced alterations in assimilate partitioning and transport in crops. Critical Reviews in Plant Sciences, 1988, 7, 117-137.	2.7	44
29	Intersection of transfer cells with phloem biologyâ€"broad evolutionary trends, function, and induction. Frontiers in Plant Science, 2013, 4, 221.	1.7	44
30	<i>GIGANTEA</i> is a component of a regulatory pathway determining wall ingrowth deposition in phloem parenchyma transfer cells of <i>Arabidopsis thaliana</i>. Plant Journal, 2010, 63, 651-661.	2.8	42
31	Amino acid transporter expression and localisation studies in pea (Pisum sativum). Functional Plant Biology, 2007, 34, 1019.	1.1	41
32	Reactive oxygen species form part of a regulatory pathway initiating trans-differentiation of epidermal transfer cells in Vicia faba cotyledons. Journal of Experimental Botany, 2012, 63, 3617-3629.	2.4	39
33	Role of membrane transport in phloem translocation of assimilates and water. Functional Plant Biology, 2001, 28, 697.	1.1	38
34	Early gene expression programs accompanying <i> trans</i>â€differentiation of epidermal cells of <i>Vicia faba</i> cotyledons into transfer cells. New Phytologist, 2009, 182, 863-877.	3.5	38
35	An epidermalâ€specific ethylene signal cascade regulates <i>trans</i>â€differentiation of transfer cells in <i>Vicia faba</i> cotyledons. New Phytologist, 2010, 185, 931-943.	3.5	38
36	The Dual Function of Sugar Carriers: Transport and Sugar Sensing. Plant Cell, 1999, 11, 707.	3.1	37

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37	Crop yield components â€“ photoassimilate supply- or utilisation limited-organ development?. Functional Plant Biology, 2014, 41, 893.	1.1	34
38	(Questions)n on phloem biology. 2. Mass flow, molecular hopping, distribution patterns and macromolecular signalling. Plant Science, 2011, 181, 325-330.	1.7	33
39	Nonselective Currents and Channels in Plasma Membranes of Protoplasts from Coats of Developing Seeds of Bean. Plant Physiology, 2002, 128, 388-399.	2.3	31
40	Cellular localisation and function of a sucrose transporter OsSUT1 in developing rice grains. Functional Plant Biology, 2001, 28, 1187.	1.1	30
41	Identifying and ameliorating nutrient limitations to reconstructing a forest ecosystem on mined land. Restoration Ecology, 2016, 24, 202-211.	1.4	30
42	An update on phloem transport: a simple bulk flow under complex regulation. F1000Research, 2017, 6, 2096.	0.8	30
43	Glucose and ethylene signalling pathways converge to regulate <i>trans</i>â€differentiation of epidermal transfer cells in <i>Vicia narbonensis</i> cotyledons. Plant Journal, 2011, 68, 987-998.	2.8	28
44	Increased capacity for sucrose uptake leads to earlier onset of protein accumulation in developing pea seeds. Functional Plant Biology, 2005, 32, 997.	1.1	27
45	From mouse to mouseâ€ear cress: Nanomaterials as vehicles in plant biotechnology. Exploration, 2021, 1, 9-20.	5.4	27
46	Auxin control of photoassimilate transport to and within developing grains of wheat. Functional Plant Biology, 1998, 25, 69.	1.1	27
47	Temporal and spatial expression of hexose transporters in developing tomato (Lycopersicon) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf	1.1	25
48	Turgor-dependent efflux of assimilates from coats of developing seed of Phaseolus vulgaris L.: water relations of the cells involved in efflux. Planta, 1996, 199, 25.	1.6	23
49	Transfer cells: what regulates the development of their intricate wall labyrinths?. New Phytologist, 2020, 228, 427-444.	3.5	22
50	Differential transcriptional networks associated with key phases of ingrowth wall construction in trans-differentiating epidermal transfer cells of Vicia faba cotyledons. BMC Plant Biology, 2015, 15, 103.	1.6	21
51	Proton extrusion in seed coats of Phaseolus vulgaris L.. Plant, Cell and Environment, 1985, 8, 1-6.	2.8	19
52	Integrating Sugar Metabolism With Transport: Elevation of Endogenous Cell Wall Invertase Activity Up-Regulates SlHT2 and SlSWEET12c Expression for Early Fruit Development in Tomato. Frontiers in Genetics, 2020, 11, 592596.	1.1	19
53	Sugar Retrieval by Coats of Developing Seeds of Phaseolus vulgaris L. and Vicia faba L.. Plant and Cell Physiology, 2003, 44, 163-172.	1.5	18
54	Extracellular hydrogen peroxide, produced through a respiratory burst oxidase/superoxide dismutase pathway, directs ingrowth wall formation in epidermal transfer cells of Vicia faba cotyledons. Plant Signaling and Behavior, 2012, 7, 1125-1128.	1.2	18

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55	Phloem: the integrative avenue for resource distribution, signaling, and defense. Frontiers in Plant Science, 2013, 4, 471.	1.7	18
56	Cellular pathways of source leaf phloem loading and phloem unloading in developing stems of Sorghum bicolor in relation to stem sucrose storage. Functional Plant Biology, 2015, 42, 957.	1.1	18
57	Live Long and Prosper: Roles of Sugar and Sugar Polymers in Seed Vigor. Molecular Plant, 2018, 11, 1-3.	3.9	17
58	Sucrose transport-related genes are expressed in both maternal and filial tissues of developing wheat grains. Functional Plant Biology, 2000, 27, 1009.	1.1	16
59	Fast activation of a time-dependent outward current in protoplasts derived from coats of developing Phaseolus vulgaris seeds. Planta, 2000, 211, 894-898.	1.6	15
60	Polarized and persistent Ca2+ plumes define loci for formation of wall ingrowth papillae in transfer cells. Journal of Experimental Botany, 2015, 66, 1179-1190.	2.4	15
61	Plasma Membrane Ca²⁺-Permeable Channels are Differentially Regulated by Ethylene and Hydrogen Peroxide to Generate Persistent Plumes of Elevated Cytosolic Ca²⁺During Transfer Cell<i>Trans</i>-Differentiation. Plant and Cell Physiology, 2015, 56, 1711-1720.	1.5	14
62	Pulsing Cl- channels in coat cells of developing bean seeds linked to hypo-osmotic turgor regulation. Journal of Experimental Botany, 2004, 55, 993-1001.	2.4	13
63	Uptake and regulation of resource allocation for optimal plant performance and adaptation to stress. Frontiers in Plant Science, 2013, 4, 455.	1.7	11
64	Genotypic differences in pod wall and seed growth relate to invertase activities and assimilate transport pathways in asparagus bean. Annals of Botany, 2012, 109, 1277-1284.	1.4	9
65	Genotypic differences in seed growth rates of Phaseolus vulgaris L. II. Factors contributing to cotyledon sink activity and sink size. Functional Plant Biology, 2000, 27, 119.	1.1	9
66	A Ca2+-dependent remodelled actin network directs vesicle trafficking to build wall ingrowth papillae in transfer cells. Journal of Experimental Botany, 2017, 68, 4749-4764.	2.4	8
67	The Cellular Pathway of Short-distance Transfer of Photosynthates and Potassium in the Elongating Stem of Phaseolus vulgaris L. Stem Anatomy, Solute Transport and Pool Sizes. Annals of Botany, 1994, 73, 151-160.	1.4	7
68	The Cellular Pathway of Short-distance Transfer of Photosynthates and Potassium in the Elongating Stem ofPhaseolus vulgarisL. A Physiological Assessment. Annals of Botany, 1998, 82, 337-345.	1.4	7
69	Calcium-dependent depletion zones in the cortical microtubule array coincide with sites of, but do not regulate, wall ingrowth papillae deposition in epidermal transfer cells. Journal of Experimental Botany, 2015, 66, 6021-6033.	2.4	7
70	Hexose uptake by developing cotyledons of Vicia faba: physiological evidence for transporters of differing affinities and specificities. Functional Plant Biology, 2005, 32, 987.	1.1	5
71	Assimilate Partitioning and Plant Development. Molecular Plant, 2010, 3, 941.	3.9	5
72	Transcript Profiling Identifies Gene Cohorts Controlled by Each Signal Regulating Trans-Differentiation of Epidermal Cells of Vicia faba Cotyledons to a Transfer Cell Phenotype. Frontiers in Plant Science, 2017, 8, 2021.	1.7	5

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73	Enzymes contributing to the hydrogen peroxide signal dynamics that regulate wall labyrinth formation in transfer cells. Journal of Experimental Botany, 2020, 71, 219-233.	2.4	5
74	Genotypic differences in seed growth rates of Phaseolus vulgaris L. I. General characteristics, seed coat factors and comparative roles of seed coats and cotyledons. Functional Plant Biology, 2000, 27, 109.	1.1	5
75	Actin filaments modulate hypoosmotic-responsive K+ efflux channels in specialised cells of developing bean seed coats. Functional Plant Biology, 2007, 34, 874.	1.1	4
76	Contribution of sucrose transporters to phloem unloading within <i>Sorghum bicolor</i> stem internodes. Plant Signaling and Behavior, 2017, 12, e1319030.	1.2	4
77	A Structurally Specialized Uniform Wall Layer is Essential for Constructing Wall Ingrowth Papillae in Transfer Cells. Frontiers in Plant Science, 2017, 8, 2035.	1.7	4
78	Ethylene and hydrogen peroxide regulate formation of a sterol-enriched domain essential for wall labyrinth assembly in transfer cells. Journal of Experimental Botany, 2019, 70, 1469-1482.	2.4	4
79	How are sugars unloaded from the phloem? Some answers from a novel experimental system. Journal of Biological Education, 1989, 23, 147-151.	0.8	0
80	Assimilate transport and partitioning. Integration of structure, physiology and molecular biology. Functional Plant Biology, 2000, 27, 473.	1.1	0
81	Resin-embedded Thin-section Immunohistochemistry Coupled with Triple Cellular Counterstaining. Bio-protocol, 2017, 7, e2052.	0.2	0