Alexander Schulz

List of Publications by Year
in descending order

116 papers	7,877 citations	61984 43 h-index	51608 86 g-index
124 all docs	124 docs citations	124 times ranked	8373 citing authors

#	Article	IF	Citations
1	Identification of new proteins in mature sieve elements. Physiologia Plantarum, 2022, 174, e13634.	5.2	3
2	New mosaic fragments toward reconstructing the elusive phloem system. Journal of Plant Physiology, 2022, 275, 153754.	3.5	1
3	The mechanism of sugar export from long conifer needles. New Phytologist, 2021, 230, 1911-1924.	7.3	9
4	Identification of a bio-signature for barley resistance against Pyrenophora teres infection based on physiological, molecular and sensor-based phenotyping. Plant Science, 2021, 313, 111072.	3.6	9
5	Stationary sieve element proteins. Journal of Plant Physiology, 2021, 266, 153511.	3.5	4
6	Herbivore feeding preference corroborates optimal defense theory for specialized metabolites within plants. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	27
7	OUP accepted manuscript. Tree Physiology, 2021, , .	3.1	1
8	Live Imaging of Phosphate Levels in Arabidopsis Root Cells Expressing a FRET-Based Phosphate Sensor. Plants, 2020, 9, 1310.	3.5	3
9	In Arabidopsis thaliana Substrate Recognition and Tissue- as Well as Plastid Type-Specific Expression Define the Roles of Distinct Small Subunits of Isopropylmalate Isomerase. Frontiers in Plant Science, 2020, 11, 808.	3.6	2
10	Directionality of Plasmodesmata-Mediated Transport in Arabidopsis Leaves Supports Auxin Channeling. Current Biology, 2020, 30, 1970-1977.e4.	3.9	40
11	De novo indolâ€3â€ylmethyl glucosinolate biosynthesis, and not longâ€distance transport, contributes to defence of Arabidopsis against powdery mildew. Plant, Cell and Environment, 2020, 43, 1571-1583.	5.7	11
12	Environmental conditions, not sugar export efficiency, limit the length of conifer leaves. Tree Physiology, 2019, 39, 312-319.	3.1	6
13	GTR-Mediated Radial Import Directs Accumulation of Defensive Glucosinolates toÂSulfur-Rich Cells in the Phloem Cap ofÂArabidopsis Inflorescence Stem. Molecular Plant, 2019, 12, 1474-1484.	8.3	30
14	Transmission Electron Microscopy of the Phloem with Minimal Artifacts. Methods in Molecular Biology, 2019, 2014, 17-27.	0.9	7
15	Super-Resolution Microscopy of Phloem Proteins. Methods in Molecular Biology, 2019, 2014, 83-94.	0.9	0
16	Arabidopsis glucosinolate storage cells transform into phloem fibres at late stages of development. Journal of Experimental Botany, 2019, 70, 4305-4317.	4.8	28
17	Direct Comparison of Leaf Plasmodesma Structure and Function in Relation to Phloem-Loading Type. Plant Physiology, 2019, 179, 1768-1778.	4.8	23
18	Arabidopsis PLDs with C2â€domain function distinctively in hypoxia. Physiologia Plantarum, 2019, 167, 90-110.	5.2	10

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19	Phloem transport in gymnosperms: a question of pressure and resistance. Current Opinion in Plant Biology, 2018, 43, 36-42.	7.1	18
20	Phospholipases <i>AtPLDÎ¶1</i> and <i>AtPLDÎ¶2</i> function differently in hypoxia. Physiologia Plantarum, 2018, 162, 98-108.	5.2	8
21	Localization of the glucosinolate biosynthetic enzymes reveals distinct spatial patterns for the biosynthesis of indole and aliphatic glucosinolates. Physiologia Plantarum, 2018, 163, 138-154.	5.2	69
22	Water Motion and Sugar Translocation in Leaves. , 2018, , 351-374.		1
23	Long-Distance Trafficking: Lost in Transit or Stopped at the Gate?. Plant Cell, 2017, 29, 426-430.	6.6	19
24	Improving analytical methods for protein-protein interaction through implementation of chemically inducible dimerization. Scientific Reports, 2016, 6, 27766.	3.3	6
25	Characterization of methylsulfinylalkyl glucosinolate specific polyclonal antibodies. Journal of Plant Biochemistry and Biotechnology, 2016, 25, 433-436.	1.7	1
26	Novel approach to measure the size of plasmaâ€membrane nanodomains in single molecule localization microscopy. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2015, 87, 868-877.	1.5	12
27	Aquaporin-Based Biomimetic Polymeric Membranes: Approaches and Challenges. Membranes, 2015, 5, 307-351.	3.0	54
28	Scaling of phloem structure and optimality of photoassimilate transport in conifer needles. Proceedings of the Royal Society B: Biological Sciences, 2015, 282, 20141863.	2.6	26
29	Diffusion or bulk flow: how plasmodesmata facilitate pre-phloem transport of assimilates. Journal of Plant Research, 2015, 128, 49-61.	2.4	38
30	Identification of the transporter responsible for sucrose accumulation in sugar beet taproots. Nature Plants, 2015, 1, 14001.	9.3	141
31	Slower phloem transport in gymnosperm trees can be attributed to higher sieve element resistance. Tree Physiology, 2015, 35, 376-386.	3.1	52
32	Quantification of Plant Cell Coupling with Live-Cell Microscopy. Methods in Molecular Biology, 2015, 1217, 137-148.	0.9	3
33	Expression of <scp>TWISTED DWARF</scp>1 lacking its inâ€plane membrane anchor leads to increased cell elongation and hypermorphic growth. Plant Journal, 2014, 77, 108-118.	5.7	19
34	<scp>SVR4</scp> (suppressor of variegation 4) and <scp>SVR4</scp>â€like: two proteins with a role in proper organization of the chloroplast genetic machinery. Physiologia Plantarum, 2014, 150, 477-492.	5.2	20
35	Overexpression of a protonâ€coupled vacuolar glucose exporter impairs freezing tolerance and seed germination. New Phytologist, 2014, 202, 188-197.	7.3	74
36	The <scp>SNARE</scp> protein vti1a functions in denseâ€core vesicle biogenesis. EMBO Journal, 2014, 33, 1681-1697.	7.8	34

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37	Diffusion and bulk flow in phloem loading: A theoretical analysis of the polymer trap mechanism for sugar transport in plants. Physical Review E, 2014, 90, 042704.	2.1	18
38	Syncytin-1 in differentiating human myoblasts: relationship to caveolin-3 and myogenin. Cell and Tissue Research, 2014, 357, 355-362.	2.9	29
39	Galactosyltransferases from Arabidopsis thaliana in the biosynthesis of type II arabinogalactan: molecular interaction enhances enzyme activity. BMC Plant Biology, 2014, 14, 90.	3.6	47
40	Imaging dynamics of CD11c+ cells and Foxp3+ cells in progressive autoimmune insulitis in the NOD mouse model of type 1 diabetes. Diabetologia, 2013, 56, 2669-2678.	6.3	37
41	Perspectives for using genetically encoded fluorescent biosensors in plants. Frontiers in Plant Science, 2013, 4, 234.	3.6	23
42	<i>Arabidopsis</i> TWISTED DWARF1 Functionally Interacts with Auxin Exporter ABCB1 on the Root Plasma Membrane Â. Plant Cell, 2013, 25, 202-214.	6.6	83
43	Symplasmic Transport in Phloem Loading and Unloading. , 2013, , 133-163.		9
44	Inhibition of cytoplasmic streaming by cytochalasin D is superior to paraformaldehyde fixation for measuring FRET between fluorescent proteinâ€tagged Golgi components. Cytometry Part A: the Journal of the International Society for Analytical Cytology, 2013, 83, 830-838.	1.5	8
45	Super-resolution imaging with Pontamine Fast Scarlet 4BS enables direct visualization of cellulose orientation and cell connection architecture in onion epidermis cells. BMC Plant Biology, 2013, 13, 226.	3.6	68
46	Modeling the parameters for plasmodesmal sugar filtering in active symplasmic phloem loaders. Frontiers in Plant Science, 2013, 4, 207.	3.6	35
47	Live imaging of intra- and extracellular pH in plants using pHusion, a novel genetically encoded biosensor. Journal of Experimental Botany, 2012, 63, 3207-3218.	4.8	143
48	In Vivo Quantification of Cell Coupling in Plants with Different Phloem-Loading Strategies Â. Plant Physiology, 2012, 159, 355-365.	4.8	47
49	Regulation of ABCB1/PGP1-catalysed auxin transport by linker phosphorylation. EMBO Journal, 2012, 31, 2965-2980.	7.8	114
50	Universality of phloem transport in seed plants. Plant, Cell and Environment, 2012, 35, 1065-1076.	5.7	83
51	Quantification of plant cell coupling with threeâ€dimensional photoactivation microscopy. Journal of Microscopy, 2012, 247, 2-9.	1.8	18
52	Protonâ€driven sucrose symport and antiport are provided by the vacuolar transporters SUC4 and TMT1/2. Plant Journal, 2011, 68, 129-136.	5.7	207
53	A member of the mitogenâ€activated protein 3â€kinase family is involved in the regulation of plant vacuolar glucose uptake. Plant Journal, 2011, 68, 890-900.	5.7	56
54	Symplasmic transport and phloem loading in gymnosperm leaves. Protoplasma, 2011, 248, 181-190.	2.1	57

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55	Proximate composition, histochemical analysis and microstructural localisation of nutrients in immature and mature seeds of marama bean (Tylosema esculentum) â€“ An underutilised food legume. Food Chemistry, 2011, 127, 1555-1561.	8.2	18
56	Recycling of Solanum Sucrose Transporters Expressed in Yeast, Tobacco, and in Mature Phloem Sieve Elements. Molecular Plant, 2010, 3, 1064-1074.	8.3	35
57	Occupational irritant contact dermatitis in a carpenter exposed to wood from Brazilian rainforest tree <i>Manilkara bidentata</i>. Contact Dermatitis, 2009, 60, 240-241.	1.4	8
58	Monitoring reactive oxygen species formation and localisation in living cells by use of the fluorescent probe CMâ€H₂DCFDA and confocal laser microscopy. Physiologia Plantarum, 2009, 136, 369-383.	5.2	117
59	Non-invasive method for in vivo detection of chlorophyll precursors. Photochemical and Photobiological Sciences, 2009, 8, 279-286.	2.9	6
60	Cell-to-cell transport through plasmodesmata in tree callus cultures. Tree Physiology, 2009, 29, 809-818.	3.1	46
61	Dimerization and endocytosis of the sucrose transporter StSUT1 in mature sieve elements. Plant Signaling and Behavior, 2008, 3, 1136-1137.	2.4	21
62	The <i>Arabidopsis</i> P4-ATPase ALA3 Localizes to the Golgi and Requires a Î²-Subunit to Function in Lipid Translocation and Secretory Vesicle Formation. Plant Cell, 2008, 20, 658-676.	6.6	129
63	Ca2+-mediated remote control of reversible sieve tube occlusion in Vicia faba. Journal of Experimental Botany, 2007, 58, 2827-2838.	4.8	141
64	An extra-plastidial Â-glucan, water dikinase from Arabidopsis phosphorylates amylopectin in vitro and is not necessary for transient starch degradation. Journal of Experimental Botany, 2007, 58, 3949-3960.	4.8	31
65	An Early Nodulin-Like Protein Accumulates in the Sieve Element Plasma Membrane of Arabidopsis. Plant Physiology, 2007, 143, 1576-1589.	4.8	65
66	Arabidopsis Protein Kinase PKS5 Inhibits the Plasma Membrane H+-ATPase by Preventing Interaction with 14-3-3 Protein. Plant Cell, 2007, 19, 1617-1634.	6.6	388
67	Specific Aquaporins Facilitate the Diffusion of Hydrogen Peroxide across Membranes. Journal of Biological Chemistry, 2007, 282, 1183-1192.	3.4	1,086
68	Quantification of Plasmodesmatal Endoplasmic Reticulum Coupling between Sieve Elements and Companion Cells Using Fluorescence Redistribution after Photobleaching. Plant Physiology, 2006, 142, 471-480.	4.8	77
69	Arabidopsis Chromatin-Associated HMGA and HMGB Use Different Nuclear Targeting Signals and Display Highly Dynamic Localization within the Nucleus. Plant Cell, 2006, 18, 2904-2918.	6.6	86
70	Pollen development and fertilization in Arabidopsis is dependent on the MALE GAMETOGENESIS IMPAIRED ANTHERS gene encoding a Type V P-type ATPase. Genes and Development, 2005, 19, 2757-2769.	5.9	86
71	Cucurbit phloem serpins are graft-transmissible and appear to be resistant to turnover in the sieve elementâ€“companion cell complex. Journal of Experimental Botany, 2005, 56, 3111-3120.	4.8	37
72	Phytoplasmas and their interactions with hosts. Trends in Plant Science, 2005, 10, 526-535.	8.8	190

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73	Energization of Transport Processes in Plants. Roles of the Plasma Membrane H+-ATPase. Plant Physiology, 2004, 136, 2475-2482.	4.8	290
74	Uptake of a Fluorescent Dye as a Swift and Simple Indicator of Organelle Intactness: Import-competent Chloroplasts from Soil-grown <i>Arabidopsis</i>. Journal of Histochemistry and Cytochemistry, 2004, 52, 701-704.	2.5	36
75	Caged probes: a novel tool in studying symplasmic transport in plant tissues. Protoplasma, 2004, 223, 63-66.	2.1	27
76	Distribution of Phytoplasmas in Infected Plants as Revealed by Real-Time PCR and Bioimaging. Molecular Plant-Microbe Interactions, 2004, 17, 1175-1184.	2.6	235
77	Development of Cuscuta species on a partially incompatible host: induction of xylem transfer cells. Protoplasma, 2003, 220, 131-142.	2.1	26
78	The molecular deposition of transgenically modified starch in the starch granule as imaged by functional microscopy. Journal of Structural Biology, 2003, 143, 229-241.	2.8	151
79	Exploitation of GFP-Technology with Filamentous Fungi. Mycology, 2003, , .	0.5	3
80	Proteinâ€“Protein Interactions between Sucrose Transporters of Different Affinities Colocalized in the Same Enucleate Sieve Element. Plant Cell, 2002, 14, 1567-1577.	6.6	140
81	Post-translational Modification of Plant Plasma Membrane H+-ATPase as a Requirement for Functional Complementation of a Yeast Transport Mutant. Journal of Biological Chemistry, 2002, 277, 6353-6358.	3.4	32
82	Effects of Water and Nitrogen Supply on Water Use Efficiency and Carbon Isotope Discrimination in Edible Canna (Canna edulis Ker-Gawler). Plant Biology, 2001, 3, 326-334.	3.8	29
83	Tuber Physiology and Properties of Starch from Tubers of Transgenic Potato Plants with Altered Plastidic Adenylate Transporter Activity. Plant Physiology, 2001, 125, 1667-1678.	4.8	96
84	Bundle sheath cells of small veins in maize leaves are the location of uptake from the xylem. Journal of Experimental Botany, 2001, 52, 709-714.	4.8	11
85	Long-Distance Phloem Transport of Glucosinolates in Arabidopsis. Plant Physiology, 2001, 127, 194-201.	4.8	153
86	SUT2, a Putative Sucrose Sensor in Sieve Elements. Plant Cell, 2000, 12, 1153-1164.	6.6	303
87	SUT2, a Putative Sucrose Sensor in Sieve Elements. Plant Cell, 2000, 12, 1153.	6.6	27
88	Dynamic transitions in the translocated phloem filament protein. Functional Plant Biology, 2000, 27, 733.	2.1	8
89	Translocation of Structural P Proteins in the Phloem. Plant Cell, 1999, 11, 127.	6.6	3
90	Translocation of Structural P Proteins in the Phloem. Plant Cell, 1999, 11, 127-140.	6.6	177

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91	Macromolecular trafficking in the phloem. Trends in Plant Science, 1999, 4, 354-360.	8.8	127
92	A symplasmic flow of sucrose contributes to phloem loading in Ricinus cotyledons. Planta, 1998, 206, 108-116.	3.2	25
93	Ultrastructural effects in potato leaves due to antisense-inhibition of the sucrose transporter indicate an apoplasmic mode of phloem loading. Planta, 1998, 206, 533-543.	3.2	44
94	Evidence for graft transmission of structural phloem proteins or their precursors in heterografts of Cucurbitaceae. Planta, 1998, 206, 630-640.	3.2	80
95	Origin of a chloroplast protein importer. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 15831-15836.	7.1	146
96	Phloem. Structure Related to Function. Progress in Botany Fortschritte Der Botanik, 1998, , 429-475.	0.3	63
97	Macromolecular Trafficking Indicated by Localization and Turnover of Sucrose Transporters in Enucleate Sieve Elements. Science, 1997, 275, 1298-1300.	12.6	443
98	Expression of the phloem lectin is developmentally linked to vascular differentiation in cucurbits. Planta, 1997, 201, 405-414.	3.2	85
99	Companion cell-specific inhibition of the potato sucrose transporter SUT1. Plant, Cell and Environment, 1996, 19, 1115-1123.	5.7	172
100	Plasmodesmal widening accompanies the short-term increase in symplasmic phloem unloading in pea root tips under osmotic stress. Protoplasma, 1995, 188, 22-37.	2.1	102
101	Phloem Loading by the PmSUC2 Sucrose Carrier from Plantago major Occurs into Companion Cells. Plant Cell, 1995, 7, 1545.	6.6	29
102	Phloem transport and differential unloading in pea seedlings after source and sink manipulations. Planta, 1994, 192, 239.	3.2	18
103	Phloem transport and differential unloading in pea seedlings after source and sink manipulations. Planta, 1994, 192, 239-248.	3.2	58
104	Sink strength: The importance of the distance between phloem and receiver cells. Plant, Cell and Environment, 1993, 16, 1031-1032.	5.7	6
105	Phloem Regeneration. , 1993, , 63-78.		0
106	Living sieve cells of conifers as visualized by confocal, laser-scanning fluorescence microscopy. Protoplasma, 1992, 166, 153-164.	2.1	38
107	Regeneration of Sucrose Translocation in Wounded Roots of Pea Seedlings. Journal of Plant Physiology, 1990, 136, 599-605.	3.5	9
108	Wound-Sieve Elements. , 1990, , 199-217.		9

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109	Conifers. , 1990, , 63-88.		21
110	A phloem-specific, lectin-like protein is located in pine sieve-element plastids by immunocytochemistry. Planta, 1989, 179, 506-515.	3.2	18
111	Vascular differentiation in the root cortex of peas: Premitotic stages of cytoplasmic reactivation. Protoplasma, 1988, 143, 176-187.	2.1	16
112	Sieve-element differentiation and fluoresceine translocation in wound-phloem of pea roots after complete severance of the stele. Planta, 1987, 170, 289-299.	3.2	31
113	Wound phloem in transition to bundle phloem in primary roots ofPisum sativum L.. Protoplasma, 1986, 130, 12-26.	2.1	28
114	Wound phloem in transition to bundle phloem in primary roots ofPisum sativum L.. Protoplasma, 1986, 130, 27-40.	2.1	28
115	The development of specific sieve-element plastids in wound phloem ofColeus blumei (S-type) andPisum sativum (P-type), regenerated from amyloplast-containing parenchyma cells. Protoplasma, 1983, 114-114, 125-132.	2.1	18
116	Fine structure, pattern of division, and course of wound phloem in Coleus blumei. Planta, 1980, 150, 357-365.	3.2	29