

Daniel P Schachtman

List of Publications by Year in descending order

Source: <https://exaly.com/author-pdf/8046377/publications.pdf>

Version: 2024-02-01

105
papers

14,041
citations

24978

57
h-index

30848

102
g-index

109
all docs

109
docs citations

109
times ranked

13460
citing authors

#	ARTICLE	IF	CITATIONS
1	Phosphorus Uptake by Plants: From Soil to Cell. <i>Plant Physiology</i> , 1998, 116, 447-453.	2.3	1,582
2	The auxin influx carrier LAX3 promotes lateral root emergence. <i>Nature Cell Biology</i> , 2008, 10, 946-954.	4.6	715
3	Structure and transport mechanism of a high-affinity potassium uptake transporter from higher plants. <i>Nature</i> , 1994, 370, 655-658.	13.7	603
4	Hydrogen peroxide mediates plant root cell response to nutrient deprivation. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2004, 101, 8827-8832.	3.3	539
5	Chemical root to shoot signaling under drought. <i>Trends in Plant Science</i> , 2008, 13, 281-287.	4.3	523
6	Reactive Oxygen Species and Root Hairs in Arabidopsis Root Response to Nitrogen, Phosphorus and Potassium Deficiency. <i>Plant and Cell Physiology</i> , 2005, 46, 1350-1357.	1.5	427
7	Nutrient Sensing and Signaling: NPKS. <i>Annual Review of Plant Biology</i> , 2007, 58, 47-69.	8.6	425
8	High-Affinity Auxin Transport by the AUX1 Influx Carrier Protein. <i>Current Biology</i> , 2006, 16, 1123-1127.	1.8	365
9	The <i>Arabidopsis</i> Transcription Factor MYB77 Modulates Auxin Signal Transduction. <i>Plant Cell</i> , 2007, 19, 2440-2453.	3.1	337
10	Nomenclature for HKT transporters, key determinants of plant salinity tolerance. <i>Trends in Plant Science</i> , 2006, 11, 372-374.	4.3	329
11	Ethylene Mediates Response and Tolerance to Potassium Deprivation in <i>Arabidopsis</i> . <i>Plant Cell</i> , 2009, 21, 607-621.	3.1	326
12	Differential Metal Selectivity and Gene Expression of Two Zinc Transporters from Rice. <i>Plant Physiology</i> , 2003, 133, 126-134.	2.3	307
13	Metabolomic and proteomic changes in the xylem sap of maize under drought. <i>Plant, Cell and Environment</i> , 2008, 31, 325-340.	2.8	298
14	Expression of KT/KUP Genes in Arabidopsis and the Role of Root Hairs in K ⁺ Uptake. <i>Plant Physiology</i> , 2004, 134, 1135-1145.	2.3	296
15	The plant cDNA LCT1 mediates the uptake of calcium and cadmium in yeast. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1998, 95, 12043-12048.	3.3	259
16	Molecular pieces to the puzzle of the interaction between potassium and sodium uptake in plants. <i>Trends in Plant Science</i> , 1999, 4, 281-287.	4.3	258
17	The high affinity K ⁺ transporter AtHAK5 plays a physiological role in plants at very low K ⁺ concentrations and provides a caesium uptake pathway in <i>Arabidopsis</i> . <i>Journal of Experimental Botany</i> , 2008, 59, 595-607.	2.4	255
18	Title is missing!. <i>Plant and Soil</i> , 2002, 247, 93-105.	1.8	252

#	ARTICLE	IF	CITATIONS
19	Powdery Mildew Induces Defense-Oriented Reprogramming of the Transcriptome in a Susceptible But Not in a Resistant Grapevine. <i>Plant Physiology</i> , 2008, 146, 236-249.	2.3	247
20	The BioCassava Plus Program: Biofortification of Cassava for Sub-Saharan Africa. <i>Annual Review of Plant Biology</i> , 2011, 62, 251-272.	8.6	245
21	A review of potassium nutrition in grapevines with special emphasis on berry accumulation. <i>Australian Journal of Grape and Wine Research</i> , 2003, 9, 154-168.	1.0	224
22	Challenges of modifying root traits in crops for agriculture. <i>Trends in Plant Science</i> , 2014, 19, 779-788.	4.3	210
23	Cell Wall Proteome in the Maize Primary Root Elongation Zone. II. Region-Specific Changes in Water Soluble and Lightly Ionically Bound Proteins under Water Deficit. <i>Plant Physiology</i> , 2007, 145, 1533-1548.	2.3	196
24	Plant extracellular ATP signalling by plasma membrane NADPH oxidase and Ca ²⁺ channels. <i>Plant Journal</i> , 2009, 58, 903-913.	2.8	191
25	Molecular and functional characterization of a novel low-affinity cation transporter (LCT1) in higher plants. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 1997, 94, 11079-11084.	3.3	177
26	Over-Expression of an Arabidopsis Zinc Transporter in <i>Hordeum Vulgare</i> Increases Short-Term Zinc Uptake after Zinc Deprivation and Seed Zinc Content. <i>Plant Molecular Biology</i> , 2004, 54, 373-385.	2.0	174
27	A Peroxidase Contributes to ROS Production during Arabidopsis Root Response to Potassium Deficiency. <i>Molecular Plant</i> , 2010, 3, 420-427.	3.9	174
28	The Arabidopsis AP2/ERF Transcription Factor RAP2.11 Modulates Plant Response to Low-Potassium Conditions. <i>Molecular Plant</i> , 2012, 5, 1042-1057.	3.9	157
29	Root exudates impact plant performance under abiotic stress. <i>Trends in Plant Science</i> , 2022, 27, 80-91.	4.3	152
30	Cell Wall Proteome in the Maize Primary Root Elongation Zone. I. Extraction and Identification of Water-Soluble and Lightly Ionically Bound Proteins. <i>Plant Physiology</i> , 2006, 140, 311-325.	2.3	140
31	Phosphoproteomic identification of targets of the Arabidopsis sucrose nonfermenting-like kinase SnRK2.8 reveals a connection to metabolic processes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 6460-6465.	3.3	129
32	The K ⁺ /Na ⁺ Selectivity of a Cation Channel in the Plasma Membrane of Root Cells Does Not Differ in Salt-Tolerant and Salt-Sensitive Wheat Species. <i>Plant Physiology</i> , 1991, 97, 598-605.	2.3	127
33	Nematode-Induced Changes of Transporter Gene Expression in Arabidopsis Roots. <i>Molecular Plant-Microbe Interactions</i> , 2005, 18, 1247-1257.	1.4	121
34	Genetic Diversity and Population Structure of a <i>Camelina sativa</i> Spring Panel. <i>Frontiers in Plant Science</i> , 2019, 10, 184.	1.7	118
35	Transporters expressed during grape berry (<i>Vitis vinifera</i> L.) development are associated with an increase in berry size and berry potassium accumulation. <i>Journal of Experimental Botany</i> , 2006, 57, 3209-3216.	2.4	109
36	A <i>Lycopersicon esculentum</i> phosphate transporter (LePT1) involved in phosphorus uptake from a vesicular arbuscular mycorrhizal fungus. <i>New Phytologist</i> , 1999, 144, 507-516.	3.5	106

#	ARTICLE	IF	CITATIONS
37	AtCAT6, a sink-tissue-localized transporter for essential amino acids in Arabidopsis. <i>Plant Journal</i> , 2006, 48, 414-426.	2.8	106
38	Sulphate as a xylem-borne chemical signal precedes the expression of ABA biosynthetic genes in maize roots. <i>Journal of Experimental Botany</i> , 2010, 61, 3395-3405.	2.4	105
39	Relationships between xylem sap constituents and leaf conductance of well-watered and water-stressed maize across three xylem sap sampling techniques. <i>Journal of Experimental Botany</i> , 2005, 56, 2389-2400.	2.4	103
40	Characterisation of two distinct HKT1-like potassium transporters from <i>Eucalyptus camaldulensis</i> . <i>Plant Molecular Biology</i> , 2000, 43, 515-525.	2.0	102
41	Characterization of the Maize Xylem Sap Proteome. <i>Journal of Proteome Research</i> , 2006, 5, 963-972.	1.8	100
42	The Wheat cDNA LCT1 Generates Hypersensitivity to Sodium in a Salt-Sensitive Yeast Strain. <i>Plant Physiology</i> , 2001, 126, 1061-1071.	2.3	97
43	Spatial distribution of transcript changes in the maize primary root elongation zone at low water potential. <i>BMC Plant Biology</i> , 2008, 8, 32.	1.6	94
44	Identification and Characterization of Transcription Factors Regulating Arabidopsis HAK5. <i>Plant and Cell Physiology</i> , 2013, 54, 1478-1490.	1.5	94
45	Molecular insights into the structure and function of plant K ⁺ transport mechanisms. <i>Biochimica Et Biophysica Acta - Biomembranes</i> , 2000, 1465, 127-139.	1.4	93
46	Characterization of Two HKT1 Homologues from <i>Eucalyptus camaldulensis</i> That Display Intrinsic Osmosensing Capability. <i>Plant Physiology</i> , 2001, 127, 283-294.	2.3	88
47	14-3-3 Proteins fine-tune plant nutrient metabolism. <i>FEBS Letters</i> , 2011, 585, 143-147.	1.3	81
48	Gene Expression Biomarkers Provide Sensitive Indicators of in Planta Nitrogen Status in Maize \hat{A} . <i>Plant Physiology</i> , 2011, 157, 1841-1852.	2.3	80
49	Shifts in microbial communities in soil, rhizosphere and roots of two major crop systems under elevated CO ₂ and O ₃ . <i>Scientific Reports</i> , 2017, 7, 15019.	1.6	75
50	The expression of salt tolerance from <i>Triticum tauschii</i> in hexaploid wheat. <i>Theoretical and Applied Genetics</i> , 1992, 84-84, 714-719.	1.8	72
51	Root structure and cellular chloride, sodium and potassium distribution in salinized grapevines. <i>Plant, Cell and Environment</i> , 2003, 26, 789-800.	2.8	71
52	The Effects of Soil Depth on the Structure of Microbial Communities in Agricultural Soils in Iowa (United States). <i>Applied and Environmental Microbiology</i> , 2021, 87, .	1.4	71
53	Changes in protein abundance during powdery mildew infection of leaf tissues of Cabernet Sauvignon grapevine (<i>Vitis vinifera</i> L.). <i>Proteomics</i> , 2010, 10, 2057-2064.	1.3	69
54	Enhanced Proton Translocating Pyrophosphatase Activity Improves Nitrogen Use Efficiency in Romaine Lettuce \hat{A} \hat{A} . <i>Plant Physiology</i> , 2013, 161, 1557-1569.	2.3	63

#	ARTICLE	IF	CITATIONS
55	Members of the NPF3 Transporter Subfamily Encode Pathogen-Inducible Nitrate/Nitrite Transporters in Grapevine and Arabidopsis. <i>Plant and Cell Physiology</i> , 2014, 55, 162-170.	1.5	62
56	Avenues for increasing salt tolerance of crops, and the role of physiologically based selection traits. , 2002, , 93-105.		61
57	Identification and characterization of plant transporters. <i>Journal of Experimental Botany</i> , 1999, 50, 1073-1087.	2.4	60
58	Site directed mutagenesis reduces the Na ⁺ affinity of HKT1, an Na ⁺ -energized high affinity K ⁺ transporter. <i>FEBS Letters</i> , 1998, 432, 31-36.	1.3	59
59	Isolation and Analysis of Microbial Communities in Soil, Rhizosphere, and Roots in Perennial Grass Experiments. <i>Journal of Visualized Experiments</i> , 2018, , .	0.2	57
60	Elucidating Sorghum Biomass, Nitrogen and Chlorophyll Contents With Spectral and Morphological Traits Derived From Unmanned Aircraft System. <i>Frontiers in Plant Science</i> , 2018, 9, 1406.	1.7	54
61	Variation in rDNA ITS sequences in <i>Glomus mosseae</i> and <i>Gigaspora margarita</i> spores from a permanent pasture. <i>Mycological Research</i> , 2000, 104, 708-715.	2.5	51
62	A Nuclear Factor Regulates Abscisic Acid Responses in Arabidopsis. <i>Plant Physiology</i> , 2009, 151, 1433-1445.	2.3	51
63	Transcriptomic and metabolic responses of mycorrhizal roots to nitrogen patches under field conditions. <i>Plant and Soil</i> , 2012, 350, 145-162.	1.8	51
64	The Role of Ethylene in Plant Responses to K ⁺ Deficiency. <i>Frontiers in Plant Science</i> , 2015, 6, 1153.	1.7	48
65	Re-examining the role of ABA as the primary long-distance signal produced by water-stressed roots. <i>Plant Signaling and Behavior</i> , 2010, 5, 1298-1301.	1.2	46
66	Tomato root transcriptome response to a nitrogen-enriched soil patch. <i>BMC Plant Biology</i> , 2010, 10, 75.	1.6	44
67	The Amino Acid Permeases AAP3 and AAP6 Are Involved in Root-Knot Nematode Parasitism of <i>Arabidopsis</i> . <i>Molecular Plant-Microbe Interactions</i> , 2013, 26, 44-54.	1.4	43
68	Overexpression of the transporters AtZIP1 and AtMTP1 in cassava changes zinc accumulation and partitioning. <i>Frontiers in Plant Science</i> , 2015, 6, 492.	1.7	43
69	Rhizosphere Microbiome of Arid Land Medicinal Plants and Extra Cellular Enzymes Contribute to Their Abundance. <i>Microorganisms</i> , 2020, 8, 213.	1.6	37
70	Calcium-accumulating cells in the meristematic region of grapevine root apices. <i>Functional Plant Biology</i> , 2003, 30, 719.	1.1	36
71	Up-regulated transcripts in a compatible powdery mildew-grapevine interaction. <i>Plant Physiology and Biochemistry</i> , 2009, 47, 732-738.	2.8	35
72	Alkaline soil pH affects bulk soil, rhizosphere and root endosphere microbiomes of plants growing in a Sandhills ecosystem. <i>FEMS Microbiology Ecology</i> , 2021, 97, .	1.3	35

#	ARTICLE	IF	CITATIONS
73	CC-type glutaredoxins mediate plant response and signaling under nitrate starvation in Arabidopsis. <i>BMC Plant Biology</i> , 2018, 18, 281.	1.6	33
74	Partial Deletion of a Loop Region in the High Affinity K ⁺ Transporter HKT1 Changes Ionic Permeability Leading to Increased Salt Tolerance. <i>Journal of Biological Chemistry</i> , 2000, 275, 27924-27932.	1.6	32
75	Metabolomics of sorghum roots during nitrogen stress reveals compromised metabolic capacity for salicylic acid biosynthesis. <i>Plant Direct</i> , 2019, 3, e00122.	0.8	32
76	Molecular approaches for increasing the micronutrient density in edible portions of food crops. <i>Field Crops Research</i> , 1999, 60, 81-92.	2.3	31
77	Gene expression variation in grapevine species <i>Vitis vinifera</i> L. and <i>Vitis aestivalis</i> Michx.. <i>Genetic Resources and Crop Evolution</i> , 2007, 54, 1541-1553.	0.8	29
78	High-throughput profiling and analysis of plant responses over time to abiotic stress. <i>Plant Direct</i> , 2017, 1, e00023.	0.8	27
79	High-throughput quantitative analysis of phytohormones in sorghum leaf and root tissue by ultra-performance liquid chromatography-mass spectrometry. <i>Analytical and Bioanalytical Chemistry</i> , 2019, 411, 4839-4848.	1.9	26
80	Localization of proton-ATPase genes expressed in arbuscular mycorrhizal tomato plants. <i>Mycorrhiza</i> , 2007, 17, 249-258.	1.3	25
81	Identification of beneficial and detrimental bacteria impacting sorghum responses to drought using multi-scale and multi-system microbiome comparisons. <i>ISME Journal</i> , 2022, 16, 1957-1969.	4.4	25
82	The Sorghum bicolor Root Exudate Sorgoleone Shapes Bacterial Communities and Delays Network Formation. <i>MSystems</i> , 2021, 6, .	1.7	23
83	High-resolution phenotyping of sorghum genotypic and phenotypic responses to low nitrogen and synthetic microbial communities. <i>Plant, Cell and Environment</i> , 2021, 44, 1611-1626.	2.8	23
84	The reduced mycorrhizal colonisation (rmc) mutation of tomato disrupts five gene sequences including the CYCLOPS/IPD3 homologue. <i>Mycorrhiza</i> , 2013, 23, 573-584.	1.3	20
85	Microbial Community Field Surveys Reveal Abundant Pseudomonas Population in Sorghum Rhizosphere Composed of Many Closely Related Phylotypes. <i>Frontiers in Microbiology</i> , 2021, 12, 598180.	1.5	20
86	A glass bead semi-hydroponic system for intact maize root exudate analysis and phenotyping. <i>Plant Methods</i> , 2022, 18, 25.	1.9	20
87	Inside Arbuscular Mycorrhizal Roots – Molecular Probes to Understand the Symbiosis. <i>Plant Genome</i> , 2013, 6, plantgenome2012.06.0007.	1.6	19
88	Natural variation in root exudation of GABA and DIMBOA impacts the maize root endosphere and rhizosphere microbiomes. <i>Journal of Experimental Botany</i> , 2022, 73, 5052-5066.	2.4	16
89	Belowground microbial communities respond to water deficit and are shaped by decades of maize hybrid breeding. <i>Environmental Microbiology</i> , 2020, 22, 889-904.	1.8	15
90	The role of ion channels in plant nutrition and prospects for their genetic manipulation. <i>Plant and Soil</i> , 1992, 146, 137-144.	1.8	12

#	ARTICLE	IF	CITATIONS
91	Recent Advances in Nutrient Sensing and Signaling. <i>Molecular Plant</i> , 2012, 5, 1170-1172.	3.9	11
92	SCYL2 Genes Are Involved in Clathrin-Mediated Vesicle Trafficking and Essential for Plant Growth. <i>Plant Physiology</i> , 2017, 175, 194-209.	2.3	10
93	Sweet Sorghum Genotypes Tolerant and Sensitive to Nitrogen Stress Select Distinct Root Endosphere and Rhizosphere Bacterial Communities. <i>Microorganisms</i> , 2021, 9, 1329.	1.6	10
94	High-Affinity Auxin Transport by the AUX1 Influx Carrier Protein. <i>Current Biology</i> , 2006, 16, 1160.	1.8	9
95	A rapid method for generating sufficient amounts of uniform genotype-specific material from the woody perennial grapevine for ion transport studies. <i>Plant and Soil</i> , 2003, 253, 195-199.	1.8	7
96	The effect of low concentrations of sodium on potassium uptake and growth of wheat. <i>Functional Plant Biology</i> , 2000, 27, 175.	1.1	6
97	Assessment of Bacterial Inoculant Delivery Methods for Cereal Crops. <i>Frontiers in Microbiology</i> , 2022, 13, 791110.	1.5	6
98	Developing a new interdisciplinary lab course for undergraduate and graduate students: Plant cells and proteins. <i>Biochemistry and Molecular Biology Education</i> , 2007, 35, 410-415.	0.5	4
99	Feature selection and causal analysis for microbiome studies in the presence of confounding using standardization. <i>BMC Bioinformatics</i> , 2021, 22, 362.	1.2	3
100	Discovering candidate genes related to flowering time in the spring panel of <i>Camelina sativa</i> . <i>Industrial Crops and Products</i> , 2021, 173, 114104.	2.5	3
101	Microbiome Variation Across Populations of Desert Halophyte <i>Zygophyllum qatarensis</i> . <i>Frontiers in Plant Science</i> , 2022, 13, 841217.	1.7	3
102	Genome structure and evolutionary history of frankincense producing <i>Boswellia sacra</i> . <i>IScience</i> , 2022, 25, 104574.	1.9	3
103	Transcriptomics of tapping and healing process in frankincense tree during resin production. <i>Genomics</i> , 2021, 113, 4337-4351.	1.3	2
104	Nitrogen Source Influences Root to Shoot Signaling Under Drought. , 2009, , 165-173.		0
105	Increased signal-to-noise ratios within experimental field trials by regressing spatially distributed soil properties as principal components. <i>ELife</i> , 0, 11, .	2.8	0