Daniel P Schachtman

List of Publications by Year
in descending order

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	Root exudates impact plant performance under abiotic stress. Trends in Plant Science, 2022, 27, 80-91.	4.3	152
2	Assessment of Bacterial Inoculant Delivery Methods for Cereal Crops. Frontiers in Microbiology, 2022, 13, 791110.	1.5	6
3	Microbiome Variation Across Populations of Desert Halophyte Zygophyllum qatarensis. Frontiers in Plant Science, 2022, 13, 841217.	1.7	3
4	A glass beadÂsemi-hydroponic system for intact maize root exudate analysis and phenotyping. Plant Methods, 2022, 18, 25.	1.9	20
5	Identification of beneficial and detrimental bacteria impacting sorghum responses to drought using multi-scale and multi-system microbiome comparisons. ISME Journal, 2022, 16, 1957-1969.	4.4	25
6	Natural variation in root exudation of GABA and DIMBOA impacts the maize root endosphere and rhizosphere microbiomes. Journal of Experimental Botany, 2022, 73, 5052-5066.	2.4	16
7	Genome structure and evolutionary history of frankincense producing Boswellia sacra. IScience, 2022, 25, 104574.	1.9	3
8	The Effects of Soil Depth on the Structure of Microbial Communities in Agricultural Soils in Iowa (United States). Applied and Environmental Microbiology, 2021, 87, .	1.4	71
9	Alkaline soil pH affects bulk soil, rhizosphere and root endosphere microbiomes of plants growing in a Sandhills ecosystem. FEMS Microbiology Ecology, 2021, 97, .	1.3	35
10	Microbial Community Field Surveys Reveal Abundant Pseudomonas Population in Sorghum Rhizosphere Composed of Many Closely Related Phylotypes. Frontiers in Microbiology, 2021, 12, 598180.	1.5	20
11	The Sorghum bicolor Root Exudate Sorgoleone Shapes Bacterial Communities and Delays Network Formation. MSystems, 2021, 6, .	1.7	23
12	Sweet Sorghum Genotypes Tolerant and Sensitive to Nitrogen Stress Select Distinct Root Endosphere and Rhizosphere Bacterial Communities. Microorganisms, 2021, 9, 1329.	1.6	10
13	Feature selection and causal analysis for microbiome studies in the presence of confounding using standardization. BMC Bioinformatics, 2021, 22, 362.	1.2	3
14	Discovering candidate genes related to flowering time in the spring panel of Camelina sativa. Industrial Crops and Products, 2021, 173, 114104.	2.5	3
15	Highâ€resolution phenotyping of sorghum genotypic and phenotypic responses to low nitrogen and synthetic microbial communities. Plant, Cell and Environment, 2021, 44, 1611-1626.	2.8	23
16	Transcriptomics of tapping and healing process in frankincense tree during resin production. Genomics, 2021, 113, 4337-4351.	1.3	2
17	Belowground microbial communities respond to water deficit and are shaped by decades of maize hybrid breeding. Environmental Microbiology, 2020, 22, 889-904.	1.8	15
18	Rhizosphere Microbiome of Arid Land Medicinal Plants and Extra Cellular Enzymes Contribute to Their Abundance. Microorganisms, 2020, 8, 213.	1.6	37

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19	Genetic Diversity and Population Structure of a Camelina sativa Spring Panel. Frontiers in Plant Science, 2019, 10, 184.	1.7	118
20	High-throughput quantitative analysis of phytohormones in sorghum leaf and root tissue by ultra-performance liquid chromatography-mass spectrometry. Analytical and Bioanalytical Chemistry, 2019, 411, 4839-4848.	1.9	26
21	Metabolomics of sorghum roots during nitrogen stress reveals compromised metabolic capacity for salicylic acid biosynthesis. Plant Direct, 2019, 3, e00122.	0.8	32
22	CC-type glutaredoxins mediate plant response and signaling under nitrate starvation in Arabidopsis. BMC Plant Biology, 2018, 18, 281.	1.6	33
23	Elucidating Sorghum Biomass, Nitrogen and Chlorophyll Contents With Spectral and Morphological Traits Derived From Unmanned Aircraft System. Frontiers in Plant Science, 2018, 9, 1406.	1.7	54
24	Isolation and Analysis of Microbial Communities in Soil, Rhizosphere, and Roots in Perennial Grass Experiments. Journal of Visualized Experiments, 2018, , .	0.2	57
25	SCYL2 Genes Are Involved in Clathrin-Mediated Vesicle Trafficking and Essential for Plant Growth. Plant Physiology, 2017, 175, 194-209.	2.3	10
26	Highâ€throughput profiling and analysis of plant responses over time to abiotic stress. Plant Direct, 2017, 1, e00023.	0.8	27
27	Shifts in microbial communities in soil, rhizosphere and roots of two major crop systems under elevated CO2 and O3. Scientific Reports, 2017, 7, 15019.	1.6	75
28	Overexpression of the transporters AtZIP1 and AtMTP1 in cassava changes zinc accumulation and partitioning. Frontiers in Plant Science, 2015, 6, 492.	1.7	43
29	The Role of Ethylene in Plant Responses to K+ Deficiency. Frontiers in Plant Science, 2015, 6, 1153.	1.7	48
30	Members of the NPF3 Transporter Subfamily Encode Pathogen-Inducible Nitrate/Nitrite Transporters in Grapevine and Arabidopsis. Plant and Cell Physiology, 2014, 55, 162-170.	1.5	62
31	Challenges of modifying root traits in crops for agriculture. Trends in Plant Science, 2014, 19, 779-788.	4.3	210
32	The reduced mycorrhizal colonisation (rmc) mutation of tomato disrupts five gene sequences including the CYCLOPS/IPD3 homologue. Mycorrhiza, 2013, 23, 573-584.	1.3	20
33	The Amino Acid Permeases AAP3 and AAP6 Are Involved in Root-Knot Nematode Parasitism of <i>Arabidopsis</i>. Molecular Plant-Microbe Interactions, 2013, 26, 44-54.	1.4	43
34	Enhanced Proton Translocating Pyrophosphatase Activity Improves Nitrogen Use Efficiency in Romaine Lettuce Â Â Â. Plant Physiology, 2013, 161, 1557-1569.	2.3	63
35	Identification and Characterization of Transcription Factors Regulating Arabidopsis HAK5. Plant and Cell Physiology, 2013, 54, 1478-1490.	1.5	94
36	Inside Arbuscular Mycorrhizal Roots â€" Molecular Probes to Understand the Symbiosis. Plant Genome, 2013, 6, plantgenome2012.06.0007.	1.6	19

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37	The Arabidopsis AP2/ERF Transcription Factor RAP2.11 Modulates Plant Response to Low-Potassium Conditions. Molecular Plant, 2012, 5, 1042-1057.	3.9	157
38	Recent Advances in Nutrient Sensing and Signaling. Molecular Plant, 2012, 5, 1170-1172.	3.9	11
39	Transcriptomic and metabolic responses of mycorrhizal roots to nitrogen patches under field conditions. Plant and Soil, 2012, 350, 145-162.	1.8	51
40	14-3-3 Proteins fine-tune plant nutrient metabolism. FEBS Letters, 2011, 585, 143-147.	1.3	81
41	The BioCassava Plus Program: Biofortification of Cassava for Sub-Saharan Africa. Annual Review of Plant Biology, 2011, 62, 251-272.	8.6	245
42	Gene Expression Biomarkers Provide Sensitive Indicators of in Planta Nitrogen Status in Maize Â. Plant Physiology, 2011, 157, 1841-1852.	2.3	80
43	Tomato root transcriptome response to a nitrogen-enriched soil patch. BMC Plant Biology, 2010, 10, 75.	1.6	44
44	Changes in protein abundance during powdery mildew infection of leaf tissues of Cabernet Sauvignon grapevine (<i>Vitis vinifera</i> L.). Proteomics, 2010, 10, 2057-2064.	1.3	69
45	Sulphate as a xylem-borne chemical signal precedes the expression of ABA biosynthetic genes in maize roots. Journal of Experimental Botany, 2010, 61, 3395-3405.	2.4	105
46	A Peroxidase Contributes to ROS Production during Arabidopsis Root Response to Potassium Deficiency. Molecular Plant, 2010, 3, 420-427.	3.9	174
47	Re-examining the role of ABA as the primary long-distance signal produced by water-stressed roots. Plant Signaling and Behavior, 2010, 5, 1298-1301.	1.2	46
48	Ethylene Mediates Response and Tolerance to Potassium Deprivation in<i>Arabidopsis</i>Â. Plant Cell, 2009, 21, 607-621.	3.1	326
49	A Nuclear Factor Regulates Abscisic Acid Responses in Arabidopsis. Plant Physiology, 2009, 151, 1433-1445.	2.3	51
50	Up-regulated transcripts in a compatible powdery mildewâ€“grapevine interaction. Plant Physiology and Biochemistry, 2009, 47, 732-738.	2.8	35
51	Plant extracellular ATP signalling by plasma membrane NADPH oxidase and Ca²⁺channels. Plant Journal, 2009, 58, 903-913.	2.8	191
52	Nitrogen Source Influences Root to Shoot Signaling Under Drought. , 2009, , 165-173.		0
53	The auxin influx carrier LAX3 promotes lateral root emergence. Nature Cell Biology, 2008, 10, 946-954.	4.6	715
54	Metabolomic and proteomic changes in the xylem sap of maize under drought. Plant, Cell and Environment, 2008, 31, 325-340.	2.8	298

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55	Spatial distribution of transcript changes in the maize primary root elongation zone at low water potential. BMC Plant Biology, 2008, 8, 32.	1.6	94
56	Chemical root to shoot signaling under drought. Trends in Plant Science, 2008, 13, 281-287.	4.3	523
57	Powdery Mildew Induces Defense-Oriented Reprogramming of the Transcriptome in a Susceptible But Not in a Resistant Grapevine. Plant Physiology, 2008, 146, 236-249.	2.3	247
58	The high affinity K⁺transporter AtHAK5 plays a physiological role<i>in planta</i>at very low K⁺concentrations and provides a caesium uptake pathway in<i>Arabidopsis</i>. Journal of Experimental Botany, 2008, 59, 595-607.	2.4	255
59	The<i>Arabidopsis</i>Transcription Factor MYB77 Modulates Auxin Signal Transduction. Plant Cell, 2007, 19, 2440-2453.	3.1	337
60	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. Plant Physiology, 2007, 145, 1533-1548.	2.3	196
61	Phosphoproteomic identification of targets of the Arabidopsis sucrose nonfermenting-like kinase SnRK2.8 reveals a connection to metabolic processes. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 6460-6465.	3.3	129
62	Nutrient Sensing and Signaling: NPKS. Annual Review of Plant Biology, 2007, 58, 47-69.	8.6	425
63	Developing a new interdisciplinary lab course for undergraduate and graduate students: Plant cells and proteins. Biochemistry and Molecular Biology Education, 2007, 35, 410-415.	0.5	4
64	Gene expression variation in grapevine species Vitis vinifera L. and Vitis aestivalis Michx.. Genetic Resources and Crop Evolution, 2007, 54, 1541-1553.	0.8	29
65	Localization of proton-ATPase genes expressed in arbuscular mycorrhizal tomato plants. Mycorrhiza, 2007, 17, 249-258.	1.3	25
66	Characterization of the Maize Xylem Sap Proteome. Journal of Proteome Research, 2006, 5, 963-972.	1.8	100
67	Nomenclature for HKT transporters, key determinants of plant salinity tolerance. Trends in Plant Science, 2006, 11, 372-374.	4.3	329
68	AtCAT6, a sink-tissue-localized transporter for essential amino acids in Arabidopsis. Plant Journal, 2006, 48, 414-426.	2.8	106
69	Cell Wall Proteome in the Maize Primary Root Elongation Zone. I. Extraction and Identification of Water-Soluble and Lightly Ionically Bound Proteins. Plant Physiology, 2006, 140, 311-325.	2.3	140
70	High-Affinity Auxin Transport by the AUX1 Influx Carrier Protein. Current Biology, 2006, 16, 1123-1127.	1.8	365
71	High-Affinity Auxin Transport by the AUX1 Influx Carrier Protein. Current Biology, 2006, 16, 1160.	1.8	9
72	Transporters expressed during grape berry (Vitis vinifera L.) development are associated with an increase in berry size and berry potassium accumulation. Journal of Experimental Botany, 2006, 57, 3209-3216.	2.4	109

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73	Nematode-Induced Changes of Transporter Gene Expression in Arabidopsis Roots. Molecular Plant-Microbe Interactions, 2005, 18, 1247-1257.	1.4	121
74	Relationships between xylem sap constituents and leaf conductance of well-watered and water-stressed maize across three xylem sap sampling techniques. Journal of Experimental Botany, 2005, 56, 2389-2400.	2.4	103
75	Reactive Oxygen Species and Root Hairs in Arabidopsis Root Response to Nitrogen, Phosphorus and Potassium Deficiency. Plant and Cell Physiology, 2005, 46, 1350-1357.	1.5	427
76	Expression of KT/KUP Genes in Arabidopsis and the Role of Root Hairs in K+ Uptake. Plant Physiology, 2004, 134, 1135-1145.	2.3	296
77	Hydrogen peroxide mediates plant root cell response to nutrient deprivation. Proceedings of the National Academy of Sciences of the United States of America, 2004, 101, 8827-8832.	3.3	539
78	Over-Expression of an Arabidopsis Zinc Transporter in Hordeum Vulgare Increases Short-Term Zinc Uptake after Zinc Deprivation and Seed Zinc Content. Plant Molecular Biology, 2004, 54, 373-385.	2.0	174
79	A rapid method for generating sufficient amounts of uniform genotype-specific material from the woody perennial grapevine for ion transport studies. Plant and Soil, 2003, 253, 195-199.	1.8	7
80	Root structure and cellular chloride, sodium and potassium distribution in salinized grapevines. Plant, Cell and Environment, 2003, 26, 789-800.	2.8	71
81	Calcium-accumulating cells in the meristematic region of grapevine root apices. Functional Plant Biology, 2003, 30, 719.	1.1	36
82	A review of potassium nutrition in grapevines with special emphasis on berry accumulation. Australian Journal of Grape and Wine Research, 2003, 9, 154-168.	1.0	224
83	Differential Metal Selectivity and Gene Expression of Two Zinc Transporters from Rice. Plant Physiology, 2003, 133, 126-134.	2.3	307
84	Avenues for increasing salt tolerance of crops, and the role of physiologically based selection traits. , 2002, , 93-105.		61
85	Title is missing!. Plant and Soil, 2002, 247, 93-105.	1.8	252
86	The Wheat cDNA LCT1 Generates Hypersensitivity to Sodium in a Salt-Sensitive Yeast Strain. Plant Physiology, 2001, 126, 1061-1071.	2.3	97
87	Characterization of Two HKT1 Homologues from Eucalyptus camaldulensis That Display Intrinsic Osmosensing Capability. Plant Physiology, 2001, 127, 283-294.	2.3	88
88	Variation in rDNA ITS sequences in Glomus mosseae and Gigaspora margarita spores from a permanent pasture. Mycological Research, 2000, 104, 708-715.	2.5	51
89	Characterisation of two distinct HKT1-like potassium transporters from Eucalyptus camaldulensis. Plant Molecular Biology, 2000, 43, 515-525.	2.0	102
90	The effect of low concentrations of sodium on potassium uptake and growth of wheat. Functional Plant Biology, 2000, 27, 175.	1.1	6

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91	Partial Deletion of a Loop Region in the High Affinity K+ Transporter HKT1 Changes Ionic Permeability Leading to Increased Salt Tolerance. Journal of Biological Chemistry, 2000, 275, 27924-27932.	1.6	32
92	Molecular insights into the structure and function of plant K+ transport mechanisms. Biochimica Et Biophysica Acta - Biomembranes, 2000, 1465, 127-139.	1.4	93
93	A Lycopersicon esculentum phosphate transporter (LePT1) involved in phosphorus uptake from a vesicularâ€"arbuscular mycorrhizal fungus. New Phytologist, 1999, 144, 507-516.	3.5	106
94	Molecular pieces to the puzzle of the interaction between potassium and sodium uptake in plants. Trends in Plant Science, 1999, 4, 281-287.	4.3	258
95	Molecular approaches for increasing the micronutrient density in edible portions of food crops. Field Crops Research, 1999, 60, 81-92.	2.3	31
96	Identification and characterization of plant transporters. Journal of Experimental Botany, 1999, 50, 1073-1087.	2.4	60
97	Site directed mutagenesis reduces the Na+affinity of HKT1, an Na+energized high affinity K+transporter. FEBS Letters, 1998, 432, 31-36.	1.3	59
98	Phosphorus Uptake by Plants: From Soil to Cell. Plant Physiology, 1998, 116, 447-453.	2.3	1,582
99	The plant cDNA LCT1 mediates the uptake of calcium and cadmium in yeast. Proceedings of the National Academy of Sciences of the United States of America, 1998, 95, 12043-12048.	3.3	259
100	Molecular and functional characterization of a novel low-affinity cation transporter (LCT1) in higher plants. Proceedings of the National Academy of Sciences of the United States of America, 1997, 94, 11079-11084.	3.3	177
101	Structure and transport mechanism of a high-affinity potassium uptake transporter from higher plants. Nature, 1994, 370, 655-658.	13.7	603
102	The expression of salt tolerance from Triticum tauschii in hexaploid wheat. Theoretical and Applied Genetics, 1992, 84-84, 714-719.	1.8	72
103	The role of ion channels in plant nutrition and prospects for their genetic manipulation. Plant and Soil, 1992, 146, 137-144.	1.8	12
104	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. Plant Physiology, 1991, 97, 598-605.	2.3	127
105	Increased signal-to-noise ratios within experimental field trials by regressing spatially distributed soil properties as principal components. ELife, 0, 11, .	2.8	0