Leon V Kochian

List of Publications by Year
in descending order

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256 papers	31,333 citations	2543 96 h-index	4770 169 g-index
269 all docs	269 docs citations	269 times ranked	17171 citing authors

#	Article	IF	Citations
1	HOW DO CROP PLANTS TOLERATE ACID SOILS? MECHANISMS OF ALUMINUM TOLERANCE AND PHOSPHOROUS EFFICIENCY. Annual Review of Plant Biology, 2004, 55, 459-493.	8.6	1,460
2	Trehalose accumulation in rice plants confers high tolerance levels to different abiotic stresses. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 15898-15903.	3.3	1,139
3	Plant Adaptation to Acid Soils: The Molecular Basis for Crop Aluminum Resistance. Annual Review of Plant Biology, 2015, 66, 571-598.	8.6	705
4	The molecular physiology of heavy metal transport in the Zn/Cd hyperaccumulator Thlaspi caerulescens. Proceedings of the National Academy of Sciences of the United States of America, 2000, 97, 4956-4960.	3.3	694
5	A gene in the multidrug and toxic compound extrusion (MATE) family confers aluminum tolerance in sorghum. Nature Genetics, 2007, 39, 1156-1161.	9.4	665
6	Functional expression of a probable Arabidopsis thaliana potassium channel in Saccharomyces cerevisiae.. Proceedings of the National Academy of Sciences of the United States of America, 1992, 89, 3736-3740.	3.3	657
7	The Physiology, Genetics and Molecular Biology of Plant Aluminum Resistance and Toxicity. Plant and Soil, 2005, 274, 175-195.	1.8	597
8	Aluminium Toxicity in Roots: An Investigation of Spatial Sensitivity and the Role of the Root Cap. Journal of Experimental Botany, 1993, 44, 437-446.	2.4	531
9	AtALMT1, which encodes a malate transporter, is identified as one of several genes critical for aluminum tolerance in Arabidopsis. Proceedings of the National Academy of Sciences of the United States of America, 2006, 103, 9738-9743.	3.3	509
10	The Cauliflower Or Gene Encodes a DnaJ Cysteine-Rich Domain-Containing Protein That Mediates High Levels of Î²-Carotene Accumulation. Plant Cell, 2007, 18, 3594-3605.	3.1	485
11	Organic acid exudation as an aluminum-tolerance mechanism in maize (Zea mays L.). Planta, 1995, 196, 788-795.	1.6	447
12	Aluminumâ€activated citrate and malate transporters from the MATE and ALMT families function independently to confer Arabidopsis aluminum tolerance. Plant Journal, 2009, 57, 389-399.	2.8	442
13	Toxicity of Zinc and Copper to Brassica Species: Implications for Phytoremediation. Journal of Environmental Quality, 1997, 26, 776-781.	1.0	440
14	Using membrane transporters to improve crops for sustainable food production. Nature, 2013, 497, 60-66.	13.7	440
15	Phytoextraction of Cadmium and Zinc from a Contaminated Soil. Journal of Environmental Quality, 1997, 26, 1424-1430.	1.0	383
16	Transport properties of members of the ZIP family in plants and their role in Zn and Mn homeostasis. Journal of Experimental Botany, 2013, 64, 369-381.	2.4	382
17	Three-Dimensional Root Phenotyping with a Novel Imaging and Software Platform Â Â Â. Plant Physiology, 2011, 156, 455-465.	2.3	380
18	The Role of Iron-Deficiency Stress Responses in Stimulating Heavy-Metal Transport in Plants1. Plant Physiology, 1998, 116, 1063-1072.	2.3	371

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19	Physiological Characterization of Root Zn2+ Absorption and Translocation to Shoots in Zn Hyperaccumulator and Nonaccumulator Species of Thlaspi. Plant Physiology, 1996, 112, 1715-1722.	2.3	360
20	Characterization of Cadmium Binding, Uptake, and Translocation in Intact Seedlings of Bread and Durum Wheat Cultivars. Plant Physiology, 1998, 116, 1413-1420.	2.3	336
21	Genetic Architecture of Aluminum Tolerance in Rice (Oryza sativa) Determined through Genome-Wide Association Analysis and QTL Mapping. PLoS Genetics, 2011, 7, e1002221.	1.5	334
22	Phytoextraction of Zinc by Oat (Avena sativa), Barley (Hordeum vulgare), and Indian Mustard (Brassica) Tj ETQq0 0 0 rgBT /Overlock 10	4.6	304
23	Identification of Thlaspi caerulescens Genes That May Be Involved in Heavy Metal Hyperaccumulation and Tolerance. Characterization of a Novel Heavy Metal Transporting ATPase. Plant Physiology, 2004, 136, 3814-3823.	2.3	294
24	Altered Zn Compartmentation in the Root Symplasm and Stimulated Zn Absorption into the Leaf as Mechanisms Involved in Zn Hyperaccumulation in Thlaspi caerulescens. Plant Physiology, 1998, 118, 875-883.	2.3	289
25	Transport interactions between cadmium and zinc in roots of bread and durum wheat seedlings. Physiologia Plantarum, 2002, 116, 73-78.	2.6	287
26	Molecular physiology of zinc transport in the Zn hyperaccumulator Thlaspi caerulescens. Journal of Experimental Botany, 2000, 51, 71-79.	2.4	275
27	Investigating Heavy-metal Hyperaccumulation using Thlaspi caerulescens as a Model System. Annals of Botany, 2008, 102, 3-13.	1.4	275
28	Interactive Effects of Al³⁺, H⁺, and Other Cations on Root Elongation Considered in Terms of Cell-Surface Electrical Potential. Plant Physiology, 1992, 99, 1461-1468.	2.3	271
29	Critical evaluation of organic acid mediated iron dissolution in the rhizosphere and its potential role in root iron uptake. Plant and Soil, 1996, 180, 57-66.	1.8	266
30	Rapid Induction of Regulatory and Transporter Genes in Response to Phosphorus, Potassium, and Iron Deficiencies in Tomato Roots. Evidence for Cross Talk and Root/Rhizosphere-Mediated Signals. Plant Physiology, 2002, 130, 1361-1370.	2.3	266
31	Two functionally distinct members of the MATE (multi-drug and toxic compound extrusion) family of transporters potentially underlie two major aluminum tolerance QTLs in maize. Plant Journal, 2010, 61, 728-740.	2.8	266
32	Aluminum tolerance in maize is associated with higher<i>MATE1</i>gene copy number. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 5241-5246.	3.3	265
33	Role of uranium speciation in the uptake and translocation of uranium by plants. Journal of Experimental Botany, 1998, 49, 1183-1190.	2.4	240
34	Nitrate-Induced Genes in Tomato Roots. Array Analysis Reveals Novel Genes That May Play a Role in Nitrogen Nutrition. Plant Physiology, 2001, 127, 345-359.	2.3	238
35	Spatial coordination of aluminium uptake, production of reactive oxygen species, callose production and wall rigidification in maize roots. Plant, Cell and Environment, 2006, 29, 1309-1318.	2.8	237
36	Studies of the Uptake of Nitrate in Barley. Plant Physiology, 1992, 99, 456-463.	2.3	235

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37	Phosphorus and Aluminum Interactions in Soybean in Relation to Aluminum Tolerance. Exudation of Specific Organic Acids from Different Regions of the Intact Root System. Plant Physiology, 2006, 141, 674-684.	2.3	231
38	Potassium Transport in Corn Roots. Plant Physiology, 1982, 70, 1723-1731.	2.3	229
39	How do some plants tolerate low levels of soil zinc? Mechanisms of zinc efficiency in crop plants. New Phytologist, 2003, 159, 341-350.	3.5	229
40	Aluminum Resistance in the Arabidopsis Mutantalr-104 Is Caused by an Aluminum-Induced Increase in Rhizosphere pH1. Plant Physiology, 1998, 117, 19-27.	2.3	227
41	OPT3 Is a Phloem-Specific Iron Transporter That Is Essential for Systemic Iron Signaling and Redistribution of Iron and Cadmium in<i>Arabidopsis</i>Â Â. Plant Cell, 2014, 26, 2249-2264.	3.1	215
42	Low pH, Aluminum, and Phosphorus Coordinately Regulate Malate Exudation through <i>GmALMT1</i> to Improve Soybean Adaptation to Acid Soils Â Â. Plant Physiology, 2013, 161, 1347-1361.	2.3	210
43	Elevated expression of <i>TcHMA3</i> plays a key role in the extreme Cd tolerance in a Cdâ€hyperaccumulating ecotype of <i>Thlaspi caerulescens</i>. Plant Journal, 2011, 66, 852-862.	2.8	209
44	Development of a Novel Aluminum Tolerance Phenotyping Platform Used for Comparisons of Cereal Aluminum Tolerance and Investigations into Rice Aluminum Tolerance Mechanisms Â Â Â. Plant Physiology, 2010, 153, 1678-1691.	2.3	199
45	Phytochelatin synthesis is not responsible for Cd tolerance in the Zn/Cd hyperaccumulator Thlaspi caerulescens (J. & C. Presl). Planta, 2002, 214, 635-640.	1.6	192
46	GEOCHEM-EZ: a chemical speciation program with greater power and flexibility. Plant and Soil, 2010, 330, 207-214.	1.8	189
47	The Physiology and Biophysics of an Aluminum Tolerance Mechanism Based on Root Citrate Exudation in Maize. Plant Physiology, 2002, 129, 1194-1206.	2.3	186
48	Aluminum Effects on Calcium Fluxes at the Root Apex of Aluminum-Tolerant and Aluminum-Sensitive Wheat Cultivars. Plant Physiology, 1992, 98, 230-237.	2.3	185
49	Characterization of <i>AtALMT1</i> Expression in Aluminum-Inducible Malate Release and Its Role for Rhizotoxic Stress Tolerance in Arabidopsis. Plant Physiology, 2007, 145, 843-852.	2.3	184
50	Highâ€throughput twoâ€dimensional root system phenotyping platform facilitates genetic analysis of root growth and development. Plant, Cell and Environment, 2013, 36, 454-466.	2.8	184
51	Multiple Aluminum-Resistance Mechanisms in Wheat (Roles of Root Apical Phosphate and Malate) Tj ETQq1 1 0.784314 rgBT /Overlo	2.3	179
52	A Patch-Clamp Study on the Physiology of Aluminum Toxicity and Aluminum Tolerance in Maize. Identification and Characterization of Al3+-Induced Anion Channels. Plant Physiology, 2001, 125, 292-305.	2.3	179
53	Induction of iron(III) and copper(II) reduction in pea (Pisum sativum L.) roots by Fe and Cu status: Does the root-cell plasmalemma Fe(III)-chelate reductase perform a general role in regulating cation uptake?. Planta, 1993, 190, 555.	1.6	175
54	Aluminum-Resistant Arabidopsis Mutants That Exhibit Altered Patterns of Aluminum Accumulation and Organic Acid Release from Roots1. Plant Physiology, 1998, 117, 9-17.	2.3	175

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55	Transcriptional regulation of metal transport genes and mineral nutrition during acclimatization to cadmium and zinc in the Cd/Zn hyperaccumulator, <i>Thlaspi caerulescens</i> (Ganges population). New Phytologist, 2010, 185, 114-129.	3.5	170
56	Rooting for more phosphorus. Nature, 2012, 488, 466-467.	13.7	168
57	Evidence for Cotransport of Nitrate and Protons in Maize Roots. Plant Physiology, 1990, 93, 281-289.	2.3	165
58	Natural variation underlies alterations in Nramp aluminum transporter (<i>NRAT1</i>) expression and function that play a key role in rice aluminum tolerance. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 6503-6508.	3.3	160
59	The role of aluminum sensing and signaling in plant aluminum resistance. Journal of Integrative Plant Biology, 2014, 56, 221-230.	4.1	153
60	Phytoremediation of a Radiocesiumâ€Contaminated Soil: Evaluation of Cesiumâ€137 Bioaccumulation in the Shoots of Three Plant Species. Journal of Environmental Quality, 1998, 27, 165-169.	1.0	152
61	Molecular characterization and mapping of<i>ALMT1</i>, the aluminium-tolerance gene of bread wheat (<i>Triticum aestivum</i>L.). Genome, 2005, 48, 781-791.	0.9	149
62	Mechanisms of Aluminum Tolerance in Wheat. Plant Physiology, 1989, 91, 1188-1196.	2.3	147
63	Early Copper-Induced Leakage of K+ from Arabidopsis Seedlings Is Mediated by Ion Channels and Coupled to Citrate Efflux. Plant Physiology, 1999, 121, 1375-1382.	2.3	147
64	Identification and Characterization of Aluminum Tolerance Loci in Arabidopsis (Landsberg erecta Ã—) Tj ETQq0 0 0 rgBT /Overlock 10 Tf Plant Physiology, 2003, 132, 936-948.	2.3	147
65	Aluminum Resistance in Maize Cannot Be Solely Explained by Root Organic Acid Exudation. A Comparative Physiological Study. Plant Physiology, 2005, 137, 231-241.	2.3	146
66	Zinc Efficiency Is Correlated with Enhanced Expression and Activity of Zinc-Requiring Enzymes in Wheat. Plant Physiology, 2003, 131, 595-602.	2.3	145
67	Molecular and Biochemical Characterization of the Selenocysteine Se-Methyltransferase Gene and Se-Methylselenocysteine Synthesis in Broccoli. Plant Physiology, 2005, 138, 409-420.	2.3	144
68	Aluminum interaction with plasma membrane lipids and enzyme metal binding sites and its potential role in Al cytotoxicity. FEBS Letters, 1997, 400, 51-57.	1.3	143
69	Fluxes of H⁺ and K⁺ in Corn Roots. Plant Physiology, 1987, 84, 1177-1184.	2.3	137
70	Ammonium Uptake by Rice Roots (III. Electrophysiology). Plant Physiology, 1994, 104, 899-906.	2.3	137
71	Development, Characterization, and Application of a Cadmium-Selective Microelectrode for the Measurement of Cadmium Fluxes in Roots of Thlaspi Species and Wheat1. Plant Physiology, 1998, 116, 1393-1401.	2.3	135
72	Phosphate transporters <scp><scp>OsPHT1</scp></scp>;9 and <scp><scp>OsPHT1</scp></scp>;10 are involved in phosphate uptake in rice. Plant, Cell and Environment, 2014, 37, 1159-1170.	2.8	135

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73	Kinetics of malate transport and decomposition in acid soils and isolated bacterial populations: The effect of microorganisms on root exudation of malate under Al stress. Plant and Soil, 1996, 182, 239-247.	1.8	134
74	An Arabidopsis ABC Transporter Mediates Phosphate Deficiency-Induced Remodeling of Root Architecture by Modulating Iron Homeostasis in Roots. Molecular Plant, 2017, 10, 244-259.	3.9	133
75	Comparative Mapping of a Major Aluminum Tolerance Gene in Sorghum and Other Species in the Poaceae. Genetics, 2004, 167, 1905-1914.	1.2	132
76	Transcriptional profiling of aluminum toxicity and tolerance responses in maize roots. New Phytologist, 2008, 179, 116-128.	3.5	129
77	Mechanisms of arsenic hyperaccumulation in Pteris species: root As influx and translocation. Planta, 2004, 219, 1080-1088.	1.6	125
78	Genotypic recognition and spatial responses by rice roots. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 2670-2675.	3.3	124
79	Vascular-mediated signalling involved in early phosphate stress response in plants. Nature Plants, 2016, 2, 16033.	4.7	124
80	Effect of aluminum on cytoplasmic Ca 2+ homeostasis in root hairs of Arabidopsis thaliana (L.). Planta, 1998, 206, 378-387.	1.6	123
81	NIP1;2 is a plasma membrane-localized transporter mediating aluminum uptake, translocation, and tolerance in <i>Arabidopsis</i>. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5047-5052.	3.3	121
82	High- and Low-Affinity Zinc Transport Systems and Their Possible Role in Zinc Efficiency in Bread Wheat. Plant Physiology, 2001, 125, 456-463.	2.3	120
83	Evidence for Cotransport of Nitrate and Protons in Maize Roots. Plant Physiology, 1990, 93, 290-294.	2.3	119
84	Kinetic properties of a micronutrient transporter from Pisum sativum indicate a primary function in Fe uptake from the soil. Planta, 2004, 218, 784-792.	1.6	119
85	Interaction between Aluminum Toxicity and Calcium Uptake at the Root Apex in Near-Isogenic Lines of Wheat (Triticum aestivum L.) Differing in Aluminum Tolerance. Plant Physiology, 1993, 102, 975-982.	2.3	117
86	Duplicate and Conquer: Multiple Homologs of<i>PHOSPHORUS-STARVATION TOLERANCE1</i>Enhance Phosphorus Acquisition and Sorghum Performance on Low-Phosphorus Soils Â Â Â. Plant Physiology, 2014, 166, 659-677.	2.3	117
87	Aluminum Toxicity in Roots. Plant Physiology, 1992, 99, 1193-1200.	2.3	115
88	Potassium Transport in Corn Roots. Plant Physiology, 1983, 73, 208-215.	2.3	110
89	Potassium Transport in Corn Roots. Plant Physiology, 1985, 79, 771-776.	2.3	109
90	Phytofiltration of Arsenic from Drinking Water Using Arsenic-Hyperaccumulating Ferns. Environmental Science & Technology, 2004, 38, 3412-3417.	4.6	108

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91	Arabidopsis Mutants with Increased Sensitivity to Aluminum. Plant Physiology, 1996, 110, 743-751.	2.3	106
92	Aluminum effects on the kinetics of calcium uptake into cells of the wheat root apex. Planta, 1992, 188, 414-21.	1.6	105
93	Voltage-dependent Ca2+ influx into right-side-out plasma membrane vesicles isolated from wheat roots: characterization of a putative Ca2+ channel.. Proceedings of the National Academy of Sciences of the United States of America, 1994, 91, 3473-3477.	3.3	104
94	Aluminum Induces a Decrease in Cytosolic Calcium Concentration in BY-2 Tobacco Cell Cultures1. Plant Physiology, 1998, 116, 81-89.	2.3	101
95	Zinc effects on cadmium accumulation and partitioning in nearâ€isogenic lines of durum wheat that differ in grain cadmium concentration. New Phytologist, 2005, 167, 391-401.	3.5	101
96	Physiological Characterization of a Single-Gene Mutant of <i>Pisum sativum</i> Exhibiting Excess Iron Accumulation. Plant Physiology, 1990, 93, 976-981.	2.3	99
97	Novel Properties of the Wheat Aluminum Tolerance Organic Acid Transporter (TaALMT1) Revealed by Electrophysiological Characterization in <i>Xenopus</i> Oocytes: Functional and Structural Implications. Plant Physiology, 2008, 147, 2131-2146.	2.3	99
98	Use of an extracellular, ion-selective, vibrating microelectrode system for the quantification of K+, H+, and Ca2+ fluxes in maize roots and maize suspension cells. Planta, 1992, 188, 601-10.	1.6	98
99	The ALMT Family of Organic Acid Transporters in Plants and Their Involvement in Detoxification and Nutrient Security. Frontiers in Plant Science, 2016, 7, 1488.	1.7	98
100	Not all ALMT1â€type transporters mediate aluminumâ€activated organic acid responses: the case of <i>ZmALMT1 â€“</i> an anionâ€selective transporter. Plant Journal, 2008, 53, 352-367.	2.8	97
101	Root and shoot transcriptome analysis of two ecotypes of <i><scp>N</scp>occaea caerulescens</i> uncovers the role of <i><scp>N</scp>c<scp>N</scp>ramp1</i> in <scp>C</scp>d hyperaccumulation. Plant Journal, 2014, 78, 398-410.	2.8	97
102	High Affinity K⁺ Uptake in Maize Roots. Plant Physiology, 1989, 91, 1202-1211.	2.3	96
103	Identification of RFLP Markers Linked to the Barley Aluminum Tolerance Gene <i>Alp</i>. Crop Science, 2000, 40, 778-782.	0.8	94
104	Role of calcium and other ions in directing root hair tip growth in Limnobium stoloniferum. Planta, 1995, 197, 672.	1.6	92
105	Characterization of cadmium uptake, translocation and storage in nearâ€isogenic lines of durum wheat that differ in grain cadmium concentration. New Phytologist, 2006, 172, 261-271.	3.5	91
106	Association and Linkage Analysis of Aluminum Tolerance Genes in Maize. PLoS ONE, 2010, 5, e9958.	1.1	91
107	Targeted expression of Sb<scp>MATE</scp> in the root distal transition zone is responsible for sorghum aluminum resistance. Plant Journal, 2013, 76, 297-307.	2.8	91
108	Plant Cd 2+ and Zn 2+ status effects on root and shoot heavy metal accumulation in Thlaspi caerulescens. New Phytologist, 2007, 175, 51-58.	3.5	90

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109	Putrescine-Induced Wounding and Its Effects on Membrane Integrity and Ion Transport Processes in Roots of Intact Corn Seedlings. Plant Physiology, 1989, 90, 988-995.	2.3	89
110	Potential for phytoextraction of137 Cs from a contaminated soil. Plant and Soil, 1997, 195, 99-106.	1.8	88
111	Potassium Transport in Roots. Advances in Botanical Research, 1989, 15, 93-178.	0.5	87
112	Identification of Black Bean (<i>Phaseolus vulgaris</i> L.) Polyphenols That Inhibit and Promote Iron Uptake by Caco-2 Cells. Journal of Agricultural and Food Chemistry, 2015, 63, 5950-5956.	2.4	87
113	COPT6 Is a Plasma Membrane Transporter That Functions in Copper Homeostasis in Arabidopsis and Is a Novel Target of SQUAMOSA Promoter-binding Protein-like 7. Journal of Biological Chemistry, 2012, 287, 33252-33267.	1.6	86
114	Proteomic analysis of chromoplasts from six crop species reveals insights into chromoplast function and development. Journal of Experimental Botany, 2013, 64, 949-961.	2.4	85
115	A <i>de novo</i> synthesis citrate transporter, <i>Vigna umbellata</i> multidrug and toxic compound extrusion, implicates in Alâ€activated citrate efflux in rice bean (<i>Vigna umbellata</i>) root apex. Plant, Cell and Environment, 2011, 34, 2138-2148.	2.8	84
116	Uptake and retranslocation of leafâ€applied cadmium (109Cd) in diploid, tetraploid and hexaploid wheats. Journal of Experimental Botany, 2000, 51, 221-226.	2.4	82
117	Adaption of Roots to Nitrogen Deficiency Revealed by 3D Quantification and Proteomic Analysis. Plant Physiology, 2019, 179, 329-347.	2.3	81
118	The CTR/COPT-dependent copper uptake and SPL7-dependent copper deficiency responses are required for basal cadmium tolerance in A. thaliana. Metallomics, 2013, 5, 1262.	1.0	78
119	Characterization of Zinc Uptake, Binding, and Translocation in Intact Seedlings of Bread and Durum Wheat Cultivars. Plant Physiology, 1998, 118, 219-226.	2.3	77
120	Genetic and Physiological Analysis of Iron Biofortification in Maize Kernels. PLoS ONE, 2011, 6, e20429.	1.1	77
121	Arabidopsis Pollen Fertility Requires the Transcription Factors CITF1 and SPL7 That Regulate Copper Delivery to Anthers and Jasmonic Acid Synthesis. Plant Cell, 2017, 29, 3012-3029.	3.1	76
122	Does Iron Deficiency in Pisum sativum Enhance the Activity of the Root Plasmalemma Iron Transport Protein?. Plant Physiology, 1990, 94, 1353-1357.	2.3	74
123	Maize ZmALMT2 is a root anion transporter that mediates constitutive root malate efflux. Plant, Cell and Environment, 2012, 35, 1185-1200.	2.8	74
124	Aluminum Interactions with Voltage-Dependent Calcium Transport in Plasma Membrane Vesicles Isolated from Roots of Aluminum-Sensitive and -Resistant Wheat Cultivars. Plant Physiology, 1996, 110, 561-569.	2.3	73
125	Direct Measurement of 59Fe-Labeled Fe2+ Influx in Roots of Pea Using a Chelator Buffer System to Control Free Fe2+ in Solution. Plant Physiology, 1996, 111, 93-100.	2.3	71
126	A promoterâ€swap strategy between the <i>AtALMT</i> and <i>AtMATE</i> genes increased Arabidopsis aluminum resistance and improved carbonâ€use efficiency for aluminum resistance. Plant Journal, 2012, 71, 327-337.	2.8	70

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127	Genetic diversity for aluminum tolerance in sorghum. Theoretical and Applied Genetics, 2007, 114, 863-876.	1.8	69
128	Aluminium is essential for root growth and development of tea plants (<i>Camellia sinensis</i>). Journal of Integrative Plant Biology, 2020, 62, 984-997.	4.1	69
129	Molecular physiology of zinc transport in the Zn hyperaccumulator Thlaspi caerulescens. Journal of Experimental Botany, 2000, 51, 71-79.	2.4	69
130	Transport Interactions between Paraquat and Polyamines in Roots of Intact Maize Seedlings. Plant Physiology, 1992, 99, 1400-1405.	2.3	68
131	Physiological basis of reduced Al tolerance in ditelosomic lines of Chinese Spring wheat. Planta, 2001, 212, 829-834.	1.6	68
132	Zinc Absorption from Hydroponic Solutions by Plant Roots. , 1993, , 45-57.		67
133	Title is missing!. Plant and Soil, 1999, 208, 243-250.	1.8	66
134	Mechanisms of metal resistance in plants: aluminum and heavy metals. Plant and Soil, 2002, 247, 109-119.	1.8	66
135	Aluminum Inhibition of the Inositol 1,4,5-Trisphosphate Signal Transduction Pathway in Wheat Roots: A Role in Aluminum Toxicity?. Plant Cell, 1995, 7, 1913.	3.1	65
136	The physiology, genetics and molecular biology of plant aluminum resistance and toxicity. Plant Ecophysiology, 2005, , 175-195.	1.5	65
137	Molecular and Physiological Analysis of Al3+ and H+ Rhizotoxicities at Moderately Acidic Conditions Â Â. Plant Physiology, 2013, 163, 180-192.	2.3	65
138	Mechanisms of Micronutrient Uptake and Translocation in Plants. Soil Science Society of America Book Series, 0, , 229-296.	0.3	64
139	Physiological Genetics of Aluminum Tolerance in the Wheat Cultivar Atlas 66. Crop Science, 2002, 42, 1541-1546.	0.8	64
140	Aluminium-organic acid interactions in acid soils. Plant and Soil, 1996, 182, 221-228.	1.8	62
141	Transport Kinetics and Metabolism of Exogenously Applied Putrescine in Roots of Intact Maize Seedlings. Plant Physiology, 1992, 98, 611-620.	2.3	61
142	Involvement of multiple aluminium exclusion mechanisms in aluminium tolerance in wheat. Plant and Soil, 1997, 192, 63-68.	1.8	60
143	Title is missing!. Plant and Soil, 2000, 219, 279-284.	1.8	60
144	Genotypic variation in common bean in response to zinc deficiency in calcareous soil. Plant and Soil, 2004, 259, 71-83.	1.8	59

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145	The Raf-like kinase ILK1 and the high affinity K+ transporter HAK5 are required for Innate Immunity and Abiotic Stress Response. Plant Physiology, 2016, 171, pp.00035.2016.	2.3	59
146	Characterization of the high affinity Zn transporter from <i>Noccaea caerulescens</i>, NcZNT1, and dissection of its promoter for its role in Zn uptake and hyperaccumulation. New Phytologist, 2012, 195, 113-123.	3.5	57
147	The roots of future rice harvests. Rice, 2014, 7, 29.	1.7	57
148	The Transcriptional Landscape of Polyploid Wheats and Their Diploid Ancestors during Embryogenesis and Grain Development. Plant Cell, 2019, 31, 2888-2911.	3.1	57
149	Shoot biomass and zinc/cadmium uptake for hyperaccumulator and non-accumulator Thlaspi species in response to growth on a zinc-deficient calcareous soil. Plant Science, 2003, 164, 1095-1101.	1.7	56
150	Potassium Transport in Corn Roots. Plant Physiology, 1985, 77, 429-436.	2.3	54
151	Drosophila ABC Transporter, DmHMT-1, Confers Tolerance to Cadmium. Journal of Biological Chemistry, 2009, 284, 354-362.	1.6	54
152	Phosphorylation at S384 regulates the activity of the TaALMT1 malate transporter that underlies aluminum resistance in wheat. Plant Journal, 2009, 60, 411-423.	2.8	54
153	Characterization of the transport and cellular compartmentation of paraquat in roots of intact maize seedlings. Pesticide Biochemistry and Physiology, 1992, 43, 212-222.	1.6	52
154	The Effect of Acidification and Chelating Agents on the Solubilization of Uranium from Contaminated Soil. Journal of Environmental Quality, 1998, 27, 1486-1494.	1.0	51
155	Uptake of Cesiumâ€•137 and Strontiumâ€•90 from Contaminated Soil by Three Plant Species; Application to Phytoremediation. Journal of Environmental Quality, 2002, 31, 904-909.	1.0	51
156	The genetic architecture of phosphorus efficiency in sorghum involves pleiotropic QTL for root morphology and grain yield under low phosphorus availability in the soil. BMC Plant Biology, 2019, 19, 87.	1.6	51
157	Functional, structural and phylogenetic analysis of domains underlying the <scp>A</scp>l sensitivity of the aluminumâ€•activated malate/anion transporter, <scp>T</scp>a<scp>ALMT</scp>1. Plant Journal, 2013, 76, 766-780.	2.8	50
158	Lossâ€•ofâ€•function mutation of the calcium sensor <scp>CBL</scp>1 increases aluminum sensitivity in <i>Arabidopsis</i>. New Phytologist, 2017, 214, 830-841.	3.5	50
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