Sergey Shabala

List of Publications by Year
in descending order

351 papers	27,162 citations	3721 89 h-index	8599 146 g-index
359 all docs	359 docs citations	359 times ranked	14872 citing authors

#	Article	IF	Citations
1	Potassium transport and plant salt tolerance. Physiologia Plantarum, 2008, 133, 651-669.	2.6	1,038
2	ROS homeostasis in halophytes in the context of salinity stress tolerance. Journal of Experimental Botany, 2014, 65, 1241-1257.	2.4	714
3	Learning from halophytes: physiological basis and strategies to improve abiotic stress tolerance in crops. Annals of Botany, 2013, 112, 1209-1221.	1.4	645
4	Regulation of potassium transport in plants under hostile conditions: implications for abiotic and biotic stress tolerance. Physiologia Plantarum, 2014, 151, 257-279.	2.6	534
5	Root Plasma Membrane Transporters Controlling K+/Na+ Homeostasis in Salt-Stressed Barley. Plant Physiology, 2007, 145, 1714-1725.	2.3	458
6	<i>Arabidopsis</i> root K+-efflux conductance activated by hydroxyl radicals: single-channel properties, genetic basis and involvement in stress-induced cell death. Journal of Cell Science, 2010, 123, 1468-1479.	1.2	424
7	Extracellular Ca2+ Ameliorates NaCl-Induced K+ Loss from Arabidopsis Root and Leaf Cells by Controlling Plasma Membrane K+-Permeable Channels. Plant Physiology, 2006, 141, 1653-1665.	2.3	418
8	Arabidopsis Protein Kinase PKS5 Inhibits the Plasma Membrane H+-ATPase by Preventing Interaction with 14-3-3 Protein. Plant Cell, 2007, 19, 1617-1634.	3.1	388
9	Going beyond nutrition: Regulation of potassium homoeostasis as a common denominator of plant adaptive responses to environment. Journal of Plant Physiology, 2014, 171, 670-687.	1.6	388
10	Mechanisms of Plant Responses and Adaptation to Soil Salinity. Innovation(China), 2020, 1, 100017.	5.2	387
11	Compatible solute accumulation and stress-mitigating effects in barley genotypes contrasting in their salt tolerance. Journal of Experimental Botany, 2007, 58, 4245-4255.	2.4	358
12	Halophyte agriculture: Success stories. Environmental and Experimental Botany, 2014, 107, 71-83.	2.0	358
13	Calcium transport across plant membranes: mechanisms and functions. New Phytologist, 2018, 220, 49-69.	3.5	289
14	Ionic and osmotic relations in quinoa (Chenopodium quinoa Willd.) plants grown at various salinity levels. Journal of Experimental Botany, 2011, 62, 185-193.	2.4	284
15	Energy costs of salt tolerance in crop plants. New Phytologist, 2020, 225, 1072-1090.	3.5	284
16	Potassium and sodium relations in salinised barley tissues as a basis of differential salt tolerance. Functional Plant Biology, 2007, 34, 150.	1.1	277
17	Ion Transport in Halophytes. Advances in Botanical Research, 2011, 57, 151-199.	0.5	276
18	GABA signalling modulates plant growth by directly regulating the activity of plant-specific anion transporters. Nature Communications, 2015, 6, 7879.	5.8	268

#	ARTICLE	IF	CITATIONS
19	Salt tolerance mechanisms in quinoa (Chenopodium quinoa Willd.). Environmental and Experimental Botany, 2013, 92, 43-54.	2.0	263
20	A root's ability to retain K+ correlates with salt tolerance in wheat. Journal of Experimental Botany, 2008, 59, 2697-2706.	2.4	249
21	Salt bladders: do they matter?. Trends in Plant Science, 2014, 19, 687-691.	4.3	247
22	It is not all about sodium: revealing tissue specificity and signalling roles of potassium in plant responses to salt stress. Plant and Soil, 2018, 431, 1-17.	1.8	245
23	Salinity and programmed cell death: unravelling mechanisms for ion specific signalling. Journal of Experimental Botany, 2009, 60, 709-712.	2.4	240
24	Salicylic acid improves salinity tolerance in Arabidopsis by restoring membrane potential and preventing salt-induced K+ loss via a GORK channel. Journal of Experimental Botany, 2013, 64, 2255-2268.	2.4	226
25	Salinity-induced ion flux patterns from the excised roots of Arabidopsis sos mutants. Planta, 2005, 222, 1041-1050.	1.6	223
26	Compatible solutes reduce ROS-induced potassium efflux in Arabidopsis roots. Plant, Cell and Environment, 2007, 30, 875-885.	2.8	220
27	OsHKT1;5 mediates Na⁺ exclusion in the vasculature to protect leaf blades and reproductive tissues from salt toxicity in rice. Plant Journal, 2017, 91, 657-670.	2.8	210
28	Calcium Efflux Systems in Stress Signaling and Adaptation in Plants. Frontiers in Plant Science, 2011, 2, 85.	1.7	206
29	Xylem ionic relations and salinity tolerance in barley. Plant Journal, 2010, 61, 839-853.	2.8	198
30	Cross-talk between reactive oxygen species and polyamines in regulation of ion transport across the plasma membrane: implications for plant adaptive responses. Journal of Experimental Botany, 2014, 65, 1271-1283.	2.4	197
31	Salt stress sensing and early signalling events in plant roots: Current knowledge and hypothesis. Plant Science, 2015, 241, 109-119.	1.7	189
32	Chloroplast function and ion regulation in plants growing on saline soils: lessons from halophytes. Journal of Experimental Botany, 2017, 68, 3129-3143.	2.4	187
33	Salicylic acid in plant salinity stress signalling and tolerance. Plant Growth Regulation, 2015, 76, 25-40.	1.8	186
34	Genotypic difference in salinity tolerance in quinoa is determined by differential control of xylem Na+ loading and stomatal density. Journal of Plant Physiology, 2013, 170, 906-914.	1.6	185
35	Oxidative stress protection and stomatal patterning as components of salinity tolerance mechanism in quinoa (<i>Chenopodium quinoa</i>). Physiologia Plantarum, 2012, 146, 26-38.	2.6	181
36	Rapid regulation of the plasma membrane H+-ATPase activity is essential to salinity tolerance in two halophyte species, Atriplex lentiformis and Chenopodium quinoa. Annals of Botany, 2015, 115, 481-494.	1.4	181

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37	Exogenously Supplied Compatible Solutes Rapidly Ameliorate NaCl-induced Potassium Efflux from Barley Roots. Plant and Cell Physiology, 2005, 46, 1924-1933.	1.5	179
38	Physiological and cellular aspects of phytotoxicity tolerance in plants: the role of membrane transporters and implications for crop breeding for waterlogging tolerance. New Phytologist, 2011, 190, 289-298.	3.5	179
39	Effect of calcium on root development and root ion fluxes in salinised barley seedlings. Functional Plant Biology, 2003, 30, 507.	1.1	177
40	<i>Arabidopsis</i> Annexin1 Mediates the Radical-Activated Plasma Membrane Ca²⁺- and K⁺-Permeable Conductance in Root Cells. Plant Cell, 2012, 24, 1522-1533.	3.1	173
41	A high-quality genome assembly of quinoa provides insights into the molecular basis of salt bladder-based salinity tolerance and the exceptional nutritional value. Cell Research, 2017, 27, 1327-1340.	5.7	170
42	Polyamines control of cation transport across plant membranes: implications for ion homeostasis and abiotic stress signaling. Frontiers in Plant Science, 2014, 5, 154.	1.7	168
43	Assessing the role of root plasma membrane and tonoplast Na⁺/H⁺ exchangers in salinity tolerance in wheat: <i>in planta</i> quantification methods. Plant, Cell and Environment, 2011, 34, 947-961.	2.8	159
44	Signalling by potassium: another second messenger to add to the list?. Journal of Experimental Botany, 2017, 68, 4003-4007.	2.4	159
45	Cell-Type-Specific H⁺-ATPase Activity in Root Tissues Enables K⁺ Retention and Mediates Acclimation of Barley (<i>Hordeum vulgare</i>) to Salinity Stress. Plant Physiology, 2016, 172, 2445-2458.	2.3	158
46	Competition between uptake of ammonium and potassium in barley and Arabidopsis roots: molecular mechanisms and physiological consequences. Journal of Experimental Botany, 2010, 61, 2303-2315.	2.4	157
47	Regulation of Potassium Transport in Leaves: from Molecular to Tissue Level. Annals of Botany, 2003, 92, 627-634.	1.4	155
48	Evaluating contribution of ionic, osmotic and oxidative stress components towards salinity tolerance in barley. BMC Plant Biology, 2014, 14, 113.	1.6	152
49	Polyamines prevent NaCl-induced K+efflux from pea mesophyll by blocking non-selective cation channels. FEBS Letters, 2007, 581, 1993-1999.	1.3	149
50	Varietal differences of quinoaâ€™s tolerance to saline conditions. Plant and Soil, 2012, 357, 117-129.	1.8	149
51	Hydroxyl radical scavenging by cerium oxide nanoparticles improves <i>Arabidopsis</i> salinity tolerance by enhancing leaf mesophyll potassium retention. Environmental Science: Nano, 2018, 5, 1567-1583.	2.2	147
52	Polyamines Interact with Hydroxyl Radicals in Activating Ca2+ and K+ Transport across the Root Epidermal Plasma Membranes Â. Plant Physiology, 2011, 157, 2167-2180.	2.3	144
53	Doing â€˜business as usualâ€™ comes with a cost: evaluating energy cost of maintaining plant intracellular K⁺ homeostasis under saline conditions. New Phytologist, 2020, 225, 1097-1104.	3.5	140
54	Using QTL mapping to investigate the relationships between abiotic stress tolerance (drought and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50	1.2	139

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55	Reduced Tonoplast Fast-Activating and Slow-Activating Channel Activity Is Essential for Conferring Salinity Tolerance in a Facultative Halophyte, Quinoa Â Â Â. Plant Physiology, 2013, 162, 940-952.	2.3	138
56	On a quest for stress tolerance genes: membrane transporters in sensing and adapting to hostile soils. Journal of Experimental Botany, 2016, 67, 1015-1031.	2.4	135
57	Nutritional and chlorophyll fluorescence responses of lucerne (Medicago sativa) to waterlogging and subsequent recovery. Plant and Soil, 2005, 270, 31-45.	1.8	134
58	Salinity-Induced Calcium Signaling and Root Adaptation in Arabidopsis Require the Calcium Regulatory Protein Annexin1 Â Â. Plant Physiology, 2013, 163, 253-262.	2.3	132
59	K⁺ retention in leaf mesophyll, an overlooked component of salinity tolerance mechanism: A case study for barley. Journal of Integrative Plant Biology, 2015, 57, 171-185.	4.1	132
60	Membrane transporters mediating root signalling and adaptive responses to oxygen deprivation and soil flooding. Plant, Cell and Environment, 2014, 37, 2216-2233.	2.8	130
61	Non-stomatal limitation of photosynthesis by soil salinity. Critical Reviews in Environmental Science and Technology, 2021, 51, 791-825.	6.6	129
62	Cell surface and intracellular auxin signalling for H+ fluxes in root growth. Nature, 2021, 599, 273-277.	13.7	128
63	Amino acids regulate salinity-induced potassium efflux in barley root epidermis. Planta, 2007, 225, 753-761.	1.6	127
64	Difference in root K⁺retention ability and reduced sensitivity of K⁺-permeable channels to reactive oxygen species confer differential salt tolerance in three<i>Brassica</i>species. Journal of Experimental Botany, 2016, 67, 4611-4625.	2.4	127
65	The Venus Flytrap Dionaea muscipula Counts Prey-Induced Action Potentials to Induce Sodium Uptake. Current Biology, 2016, 26, 286-295.	1.8	127
66	Growth and physiological responses of six barley genotypes to waterlogging and subsequent recovery. Australian Journal of Agricultural Research, 2004, 55, 895.	1.5	126
67	Ionic relations and osmotic adjustment in durum and bread wheat under saline conditions. Functional Plant Biology, 2009, 36, 1110.	1.1	124
68	Transcriptional stimulation of rate-limiting components of the autophagic pathway improves plant fitness. Journal of Experimental Botany, 2018, 69, 1415-1432.	2.4	120
69	Soil and Crop Management Practices to Minimize the Impact of Waterlogging on Crop Productivity. Frontiers in Plant Science, 2019, 10, 140.	1.7	120
70	Mechanisms of cytosolic calcium elevation in plants: the role of ion channels, calcium extrusion systems and NADPH oxidase-mediated 'ROS-Ca2+ Hub'. Functional Plant Biology, 2018, 45, 9.	1.1	115
71	Blue light-induced kinetics of H+ and Ca2+ fluxes in etiolated wild-type and phototropin-mutant Arabidopsis seedlings. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 2433-2438.	3.3	114
72	Ion transport and osmotic adjustment in <i>Escherichia coli</i> in response to ionic and nonâ€ionic osmotica. Environmental Microbiology, 2009, 11, 137-148.	1.8	113

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73	Ability of leaf mesophyll to retain potassium correlates with salinity tolerance in wheat and barley. Physiologia Plantarum, 2013, 149, 515-527.	2.6	113
74	Receptor kinaseâ€mediated control of primary active proton pumping at the plasma membrane. Plant Journal, 2014, 80, 951-964.	2.8	112
75	Stomata in a saline world. Current Opinion in Plant Biology, 2018, 46, 87-95.	3.5	111
76	Annexin 1 regulates the <scp>H</scp>₂<scp>O</scp>₂â€induced calcium signature in <i><scp>A</scp>rabidopsis thaliana</i> roots. Plant Journal, 2014, 77, 136-145.	2.8	109
77	QTLs for stomatal and photosynthetic traits related to salinity tolerance in barley. BMC Genomics, 2017, 18, 9.	1.2	108
78	Kinetics of xylem loading, membrane potential maintenance, and sensitivity of <scp><scp>K⁺</scp></scp>â€permeable channels to reactive oxygen species: physiological traits that differentiate salinity tolerance between pea and barley. Plant, Cell and Environment, 2014, 37, 589-600.	2.8	107
79	Root-to-shoot signalling: integration of diverse molecules, pathways and functions. Functional Plant Biology, 2016, 43, 87.	1.1	107
80	The NPR1-dependent salicylic acid signalling pathway is pivotal for enhanced salt and oxidative stress tolerance in Arabidopsis. Journal of Experimental Botany, 2015, 66, 1865-1875.	2.4	105
81	Ion transport and osmotic adjustment in plants and bacteria. Biomolecular Concepts, 2011, 2, 407-419.	1.0	104
82	Transport Across Chloroplast Membranes: Optimizing Photosynthesis for Adverse Environmental Conditions. Molecular Plant, 2016, 9, 356-370.	3.9	104
83	Expression of animal CED-9 anti-apoptotic gene in tobacco modifies plasma membrane ion fluxes in response to salinity and oxidative stress. Planta, 2007, 227, 189-197.	1.6	102
84	Screening methods for waterlogging tolerance in lucerne: comparative analysis of waterlogging effects on chlorophyll fluorescence, photosynthesis, biomass and chlorophyll content. Functional Plant Biology, 2003, 30, 335.	1.1	101
85	Light-Induced Changes in Hydrogen, Calcium, Potassium, and Chloride Ion Fluxes and Concentrations from the Mesophyll and Epidermal Tissues of Bean Leaves. Understanding the Ionic Basis of Light-Induced Bioelectrogenesis1. Plant Physiology, 1999, 119, 1115-1124.	2.3	100
86	Calcium sensor kinase activates potassium uptake systems in gland cells of Venus flytraps. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 7309-7314.	3.3	98
87	Epidermal bladder cells confer salinity stress tolerance in the halophyte quinoa and Atriplex species. Plant, Cell and Environment, 2017, 40, 1900-1915.	2.8	98
88	Understanding the Molecular Basis of Salt Sequestration in Epidermal Bladder Cells of Chenopodium quinoa. Current Biology, 2018, 28, 3075-3085.e7.	1.8	98
89	Non-invasive microelectrode ion flux measurements to study adaptive responses of microorganisms to the environment. FEMS Microbiology Reviews, 2006, 30, 472-486.	3.9	97
90	Physiology of acclimation to salinity stress in pea (Pisum sativum). Environmental and Experimental Botany, 2012, 84, 44-51.	2.0	96

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91	Differential Activity of Plasma and Vacuolar Membrane Transporters Contributes to Genotypic Differences in Salinity Tolerance in a Halophyte Species, Chenopodium quinoa. International Journal of Molecular Sciences, 2013, 14, 9267-9285.	1.8	96
92	Root respiratory burst oxidase homologue-dependent H2O2 production confers salt tolerance on a grafted cucumber by controlling Na+ exclusion and stomatal closure. Journal of Experimental Botany, 2018, 69, 3465-3476.	2.4	96
93	<i>Nax</i>loci affect SOS1-like Na⁺/H⁺exchanger expression and activity in wheat. Journal of Experimental Botany, 2016, 67, 835-844.	2.4	95
94	Ionâ€specific mechanisms of osmoregulation in bean mesophyll cells. Journal of Experimental Botany, 2000, 51, 1243-1253.	2.4	94
95	Reproductive Physiology of Halophytes: Current Standing. Frontiers in Plant Science, 2018, 9, 1954.	1.7	94
96	Melatonin improves rice salinity stress tolerance by <scp>NADPH</scp> oxidaseâ€dependent control of the plasma membrane K⁺ transporters and K⁺ homeostasis. Plant, Cell and Environment, 2020, 43, 2591-2605.	2.8	93
97	Meta-analysis of major QTL for abiotic stress tolerance in barley and implications for barley breeding. Planta, 2017, 245, 283-295.	1.6	91
98	Molecular mechanisms of salinity tolerance in rice. Crop Journal, 2021, 9, 506-520.	2.3	91
99	Barley responses to combined waterlogging and salinity stress: separating effects of oxygen deprivation and elemental toxicity. Frontiers in Plant Science, 2013, 4, 313.	1.7	90
100	Salinity-induced accumulation of organic osmolytes in barley and wheat leaves correlates with increased oxidative stress tolerance: InÂplanta evidence for cross-tolerance. Plant Physiology and Biochemistry, 2014, 83, 32-39.	2.8	90
101	Tissue-specific respiratory burst oxidase homolog-dependent H2O2 signaling to the plasma membrane H+-ATPase confers potassium uptake and salinity tolerance in Cucurbitaceae. Journal of Experimental Botany, 2019, 70, 5879-5893.	2.4	90
102	Salt-sensitive and salt-tolerant barley varieties differ in the extent of potentiation of the ROS-induced K+ efflux by polyamines. Plant Physiology and Biochemistry, 2012, 61, 18-23.	2.8	89
103	Physiological and molecular mechanisms mediating xylem Na⁺ loading in barley in the context of salinity stress tolerance. Plant, Cell and Environment, 2017, 40, 1009-1020.	2.8	89
104	Microelectrode ion and O2 fluxes measurements reveal differential sensitivity of barley root tissues to hypoxia. Plant, Cell and Environment, 2006, 29, 1107-1121.	2.8	88
105	Reducing Cadmium Accumulation in Plants: Structureâ€"Function Relations and Tissue-Specific Operation of Transporters in the Spotlight. Plants, 2020, 9, 223.	1.6	88
106	Effect of divalent cations on ion fluxes and leaf photochemistry in salinized barley leaves. Journal of Experimental Botany, 2005, 56, 1369-1378.	2.4	86
107	Linking salinity stress tolerance with tissue-specific Na+ sequestration in wheat roots. Frontiers in Plant Science, 2015, 6, 71.	1.7	86
108	The energy cost of the tonoplast futile sodium leak. New Phytologist, 2020, 225, 1105-1110.	3.5	86

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109	Calciumâ€•and potassiumâ€permeable plasma membrane transporters are activated by copper in <i>Arabidopsis</i> root tips: linking copper transport with cytosolic hydroxyl radical production. Plant, Cell and Environment, 2013, 36, 844-855.	2.8	85
110	Oscillations in plant membrane transport: model predictions, experimental validation, and physiological implications. Journal of Experimental Botany, 2006, 57, 171-184.	2.4	83
111	Genome-Wide Association Study Reveals a New QTL for Salinity Tolerance in Barley (Hordeum vulgare) Tj ETQq1 1 0.784314 rgBT /Ov	1.7	83
112	Polyamines cause plasma membrane depolarization, activate Ca2+-, and modulate H+-ATPase pump activity in pea roots. Journal of Experimental Botany, 2014, 65, 2463-2472.	2.4	82
113	Specificity of Polyamine Effects on NaCl-induced Ion Flux Kinetics and Salt Stress Amelioration in Plants. Plant and Cell Physiology, 2010, 51, 422-434.	1.5	80
114	Root vacuolar Na⁺ sequestration but not exclusion from uptake correlates with barley salt tolerance. Plant Journal, 2019, 100, 55-67.	2.8	80
115	An early ABA-induced stomatal closure, Na+ sequestration in leaf vein and K+ retention in mesophyll confer salt tissue tolerance in Cucurbita species. Journal of Experimental Botany, 2018, 69, 4945-4960.	2.4	77
116	Crop Halophytism: An Environmentally Sustainable Solution for Global Food Security. Trends in Plant Science, 2020, 25, 630-634.	4.3	77
117	Effects of magnesium availability on the activity of plasma membrane ion transporters and light-induced responses from broad bean leaf mesophyll. Planta, 2005, 221, 56-65.	1.6	76
118	Rutin, a flavonoid with antioxidant activity, improves plant salinity tolerance by regulating K+ retention and Na+ exclusion from leaf mesophyll in quinoa and broad beans. Functional Plant Biology, 2016, 43, 75.	1.1	76
119	Na+ extrusion from the cytosol and tissue-specific Na+ sequestration in roots confer differential salt stress tolerance between durum and bread wheat. Journal of Experimental Botany, 2018, 69, 3987-4001.	2.4	73
120	GABA operates upstream of H+-ATPase and improves salinity tolerance in Arabidopsis by enabling cytosolic K+ retention and Na+ exclusion. Journal of Experimental Botany, 2019, 70, 6349-6361.	2.4	73
121	GORK Channel: A Master Switch of Plant Metabolism?. Trends in Plant Science, 2020, 25, 434-445.	4.3	73
122	Waterlogging tolerance in barley is associated with faster aerenchyma formation in adventitious roots. Plant and Soil, 2015, 394, 355-372.	1.8	72
123	Piriformospora indica improves salinity stress tolerance in Zea mays L. plants by regulating Na+ and K+ loading in root and allocating K+ in shoot. Plant Growth Regulation, 2018, 86, 323-331.	1.8	71
124	Haem oxygenase modifies salinity tolerance in Arabidopsis by controlling K+ retention via regulation of the plasma membrane H+-ATPase and by altering SOS1 transcript levels in roots. Journal of Experimental Botany, 2013, 64, 471-481.	2.4	70
125	Low-pH and Aluminum Resistance in Arabidopsis Correlates with High Cytosolic Magnesium Content and Increased Magnesium Uptake by Plant Roots. Plant and Cell Physiology, 2013, 54, 1093-1104.	1.5	69
126	Tissue-Specific Regulation of Na+ and K+ Transporters Explains Genotypic Differences in Salinity Stress Tolerance in Rice. Frontiers in Plant Science, 2019, 10, 1361.	1.7	67

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127	Plant Cell Growth and Ion Flux Responses to the Streptomycete Phytotoxin Thaxtomin A: Calcium and Hydrogen Flux Patterns Revealed by the Non-invasive MIFE Technique. Plant and Cell Physiology, 2005, 46, 638-648.	1.5	65
128	Boron Alleviates Aluminum Toxicity by Promoting Root Alkalization in Transition Zone via Polar Auxin Transport. Plant Physiology, 2018, 177, 1254-1266.	2.3	65
129	Multiple traits associated with salt tolerance in lucerne: revealing the underlying cellular mechanisms. Functional Plant Biology, 2008, 35, 640.	1.1	64
130	Salinity Effects on the Activity of Plasma Membrane H+and Ca2+Transporters in Bean Leaf Mesophyll: Masking Role of the Cell Wall. Annals of Botany, 2000, 85, 681-686.	1.4	63
131	Effect of Secondary Metabolites Associated with Anaerobic Soil Conditions on Ion Fluxes and Electrophysiology in Barley Roots. Plant Physiology, 2007, 145, 266-276.	2.3	63
132	Receptor-Like Activity Evoked by Extracellular ADP in Arabidopsis Root Epidermal Plasma Membrane. Plant Physiology, 2011, 156, 1375-1385.	2.3	62
133	SV channels dominate the vacuolar Ca²⁺ release during intracellular signaling. FEBS Letters, 2009, 583, 921-926.	1.3	61
134	Tissue-specific root ion profiling reveals essential roles of the CAX and ACA calcium transport systems in response to hypoxia in Arabidopsis. Journal of Experimental Botany, 2016, 67, 3747-3762.	2.4	60
135	Kinetics of net H+ , Ca2+ , K+ , Na+ , , and Cl- fluxes associated with post-chilling recovery of plasma membrane transporters in Zea mays leaf and root tissues. Physiologia Plantarum, 2002, 114, 47-56.	2.6	59
136	Oxygen deficiency and salinity affect cellâ€specific ion concentrations in adventitious roots of barley (<i><scp>H</scp>ordeum vulgare</i>). New Phytologist, 2015, 208, 1114-1125.	3.5	59
137	AFB1 controls rapid auxin signalling through membrane depolarization in Arabidopsis thaliana root. Nature Plants, 2021, 7, 1229-1238.	4.7	59
138	Potassium retention in leaf mesophyll as an element of salinity tissue tolerance in halophytes. Plant Physiology and Biochemistry, 2016, 109, 346-354.	2.8	58
139	Evaluating relative contribution of osmotolerance and tissue tolerance mechanisms toward salinity stress tolerance in three <i>Brassica</i> species. Physiologia Plantarum, 2016, 158, 135-151.	2.6	58
140	Identification of aerenchyma formation-related QTL in barley that can be effective in breeding for waterlogging tolerance. Theoretical and Applied Genetics, 2016, 129, 1167-1177.	1.8	58
141	Transition metals: A double edge sward in ROS generation and signaling. Plant Signaling and Behavior, 2013, 8, e23425.	1.2	57
142	Hypoxia Sensing in Plants: On a Quest for Ion Channels as Putative Oxygen Sensors. Plant and Cell Physiology, 2017, 58, 1126-1142.	1.5	55
143	Back to the Wild: On a Quest for Donors Toward Salinity Tolerant Rice. Frontiers in Plant Science, 2020, 11, 323.	1.7	54
144	Na+- K+transport in roots under salt stress. Plant Signaling and Behavior, 2008, 3, 401-403.	1.2	53

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145	Linking oxidative and salinity stress tolerance in barley: can root antioxidant enzyme activity be used as a measure of stress tolerance?. Plant and Soil, 2013, 365, 141-155.	1.8	53
146	Combining Ability of Salinity Tolerance on the Basis of NaClâ€Induced K⁺ Flux from Roots of Barley. Crop Science, 2008, 48, 1382-1388.	0.8	52
147	Rewilding crops for climate resilience: economic analysis and <i>de novo</i> domestication strategies. Journal of Experimental Botany, 2021, 72, 6123-6139.	2.4	52
148	Aluminium-induced ion transport in Arabidopsis: the relationship between Al tolerance and root ion flux. Journal of Experimental Botany, 2010, 61, 3163-3175.	2.4	51
149	Sequential depolarization of root cortical and stelar cells induced by an acute salt shock â€“ implications for Na⁺ and K⁺ transport into xylem vessels. Plant, Cell and Environment, 2011, 34, 859-869.	2.8	51
150	Microfluidic chips for capillary electrophoresis with integrated electrodes for capacitively coupled conductivity detection based on printed circuit board technology. Sensors and Actuators B: Chemical, 2011, 159, 307-313.	4.0	50
151	Insect haptoelectrical stimulation of Venus flytrap triggers exocytosis in gland cells. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 4822-4827.	3.3	50
152	A new major-effect QTL for waterlogging tolerance in wild barley (H. spontaneum). Theoretical and Applied Genetics, 2017, 130, 1559-1568.	1.8	50
153	Control of xylem Na⁺ loading and transport to the shoot in rice and barley as a determinant of differential salinity stress tolerance. Physiologia Plantarum, 2019, 165, 619-631.	2.6	50
154	Linking stomatal traits and expression of slow anion channel genes HvSLAH1 and HvSLAC1 with grain yield for increasing salinity tolerance in barley. Frontiers in Plant Science, 2014, 5, 634.	1.7	49
155	Acclimation improves salt stress tolerance in Zea mays plants. Journal of Plant Physiology, 2016, 201, 1-8.	1.6	49
156	Residual transpiration as a component of salinity stress tolerance mechanism: a case study for barley. BMC Plant Biology, 2017, 17, 107.	1.6	49
157	Hydrogen Peroxide-Induced Root Ca2+ and K+ Fluxes Correlate with Salt Tolerance in Cereals: Towards the Cell-Based Phenotyping. International Journal of Molecular Sciences, 2018, 19, 702.	1.8	49
158	Friend or Foe? Chloride Patterning in Halophytes. Trends in Plant Science, 2019, 24, 142-151.	4.3	49
159	NADPH oxidases and the evolution of plant salinity tolerance. Plant, Cell and Environment, 2020, 43, 2957-2968.	2.8	49
160	Prospects for the accelerated improvement of the resilient crop quinoa. Journal of Experimental Botany, 2020, 71, 5333-5347.	2.4	49
161	The State of the Art in Modeling Waterlogging Impacts on Plants: What Do We Know and What Do We Need to Know. Earth's Future, 2020, 8, e2020EF001801.	2.4	49
162	Electrical signalling and cytokinins mediate effects of light and root cutting on ion uptake in intact plants. Plant, Cell and Environment, 2009, 32, 194-207.	2.8	48

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163	Durum and Bread Wheat Differ in Their Ability to Retain Potassium in Leaf Mesophyll: Implications for Salinity Stress Tolerance. Plant and Cell Physiology, 2014, 55, 1749-1762.	1.5	48
164	Cyclic mononucleotides modulate potassium and calcium flux responses to H₂O₂ in Arabidopsis roots. FEBS Letters, 2014, 588, 1008-1015.	1.3	48
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