Sergey Shabala

List of Publications by Citations

336 papers	19,164 citations	78 h-index	126 g-index
359 ext. papers	23,623 ext. citations	5.7 avg, IF	7.48 L-index

#	Paper	IF	Citations
336	Potassium transport and plant salt tolerance. *Physiologia Plantarum*, **2008**, 133, 651-69	4.6	785
335	ROS homeostasis in halophytes in the context of salinity stress tolerance. *Journal of Experimental Botany*, **2014**, 65, 1241-57	7	515
334	Learning from halophytes: physiological basis and strategies to improve abiotic stress tolerance in crops. *Annals of Botany*, **2013**, 112, 1209-21	4.1	486
333	Regulation of potassium transport in plants under hostile conditions: implications for abiotic and biotic stress tolerance. *Physiologia Plantarum*, **2014**, 151, 257-79	4.6	386
332	Extracellular Ca2+ ameliorates NaCl-induced K+ loss from Arabidopsis root and leaf cells by controlling plasma membrane K+ -permeable channels. *Plant Physiology*, **2006**, 141, 1653-65	6.6	361
331	Root plasma membrane transporters controlling K+/Na+ homeostasis in salt-stressed barley. *Plant Physiology*, **2007**, 145, 1714-25	6.6	357
330	Arabidopsis 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, 1468-79	5.3	350
329	Going beyond nutrition: regulation of potassium homoeostasis as a common denominator of plant adaptive responses to environment. *Journal of Plant Physiology*, **2014**, 171, 670-87	3.6	300
328	Arabidopsis protein kinase PKS5 inhibits the plasma membrane H+ -ATPase by preventing interaction with 14-3-3 protein. *Plant Cell*, **2007**, 19, 1617-34	11.6	299
327	Compatible solute accumulation and stress-mitigating effects in barley genotypes contrasting in their salt tolerance. *Journal of Experimental Botany*, **2007**, 58, 4245-55	7	284
326	Halophyte agriculture: Success stories. *Environmental and Experimental Botany*, **2014**, 107, 71-83	5.9	269
325	Ion Transport in Halophytes. *Advances in Botanical Research*, **2011**, 57, 151-199	2.2	225
324	Ionic and osmotic relations in quinoa (Chenopodium quinoa Willd.) plants grown at various salinity levels. *Journal of Experimental Botany*, **2011**, 62, 185-93	7	222
323	Potassium and sodium relations in salinised barley tissues as a basis of differential salt tolerance. *Functional Plant Biology*, **2007**, 34, 150-162	2.7	222
322	Salinity and programmed cell death: unravelling mechanisms for ion specific signalling. *Journal of Experimental Botany*, **2009**, 60, 709-12	7	205
321	A root's ability to retain K+ correlates with salt tolerance in wheat. *Journal of Experimental Botany*, **2008**, 59, 2697-706	7	205
320	Compatible solutes reduce ROS-induced potassium efflux in Arabidopsis roots. *Plant, Cell and Environment*, **2007**, 30, 875-85	8.4	202

319	Salinity-induced ion flux patterns from the excised roots of Arabidopsis sos mutants. *Planta*, **2005**, 222, 1041-50	4.7	200
318	Salt tolerance mechanisms in quinoa (Chenopodium quinoa Willd.). *Environmental and Experimental Botany*, **2013**, 92, 43-54	5.9	195
317	GABA signalling modulates plant growth by directly regulating the activity of plant-specific anion transporters. *Nature Communications*, **2015**, 6, 7879	17.4	192
316	Salt bladders: do they matter?. *Trends in Plant Science*, **2014**, 19, 687-91	13.1	186
315	Calcium transport across plant membranes: mechanisms and functions. *New Phytologist*, **2018**, 220, 49-69	9.8	185
314	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, 2255-68	7	171
313	Calcium efflux systems in stress signaling and adaptation in plants. *Frontiers in Plant Science*, **2011**, 2, 85	6.2	163
312	Xylem ionic relations and salinity tolerance in barley. *Plant Journal*, **2010**, 61, 839-53	6.9	159
311	Exogenously supplied compatible solutes rapidly ameliorate NaCl-induced potassium efflux from barley roots. *Plant and Cell Physiology*, **2005**, 46, 1924-33	4.9	159
310	Mechanisms of Plant Responses and Adaptation to Soil Salinity. *Innovation(China)*, **2020**, 1, 100017	17.8	156
309	Effect of calcium on root development and root ion fluxes in salinised barley seedlings. *Functional Plant Biology*, **2003**, 30, 507-514	2.7	154
308	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, 1271-83	7	152
307	Arabidopsis annexin1 mediates the radical-activated plasma membrane Ca□+- and K+-permeable conductance in root cells. *Plant Cell*, **2012**, 24, 1522-33	11.6	146
306	Oxidative stress protection and stomatal patterning as components of salinity tolerance mechanism in quinoa (Chenopodium quinoa). *Physiologia Plantarum*, **2012**, 146, 26-38	4.6	145
305	Energy costs of salt tolerance in crop plants. *New Phytologist*, **2020**, 225, 1072-1090	9.8	144
304	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, 289-98	9.8	143
303	Salicylic acid in plant salinity stress signalling and tolerance. *Plant Growth Regulation*, **2015**, 76, 25-40	3.2	139
302	Polyamines control of cation transport across plant membranes: implications for ion homeostasis and abiotic stress signaling. *Frontiers in Plant Science*, **2014**, 5, 154	6.2	131

301	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, 906-14	3.6	131
300	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	4.2	129
299	Polyamines interact with hydroxyl radicals in activating Ca(2+) and K(+) transport across the root epidermal plasma membranes. *Plant Physiology*, **2011**, 157, 2167-80	6.6	129
298	Polyamines prevent NaCl-induced K+ efflux from pea mesophyll by blocking non-selective cation channels. *FEBS Letters*, **2007**, 581, 1993-9	3.8	129
297	Competition between uptake of ammonium and potassium in barley and Arabidopsis roots: molecular mechanisms and physiological consequences. *Journal of Experimental Botany*, **2010**, 61, 2303-15	7	128
296	Regulation of potassium transport in leaves: from molecular to tissue level. *Annals of Botany*, **2003**, 92, 627-34	4.1	127
295	Assessing the role of root plasma membrane and tonoplast Na+/H+ exchangers in salinity tolerance in wheat: in planta quantification methods. *Plant, Cell and Environment*, **2011**, 34, 947-961	8.4	126
294	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, 481-94	4.1	125
293	Reduced tonoplast fast-activating and slow-activating channel activity is essential for conferring salinity tolerance in a facultative halophyte, quinoa. *Plant Physiology*, **2013**, 162, 940-52	6.6	119
292	Evaluating contribution of ionic, osmotic and oxidative stress components towards salinity tolerance in barley. *BMC Plant Biology*, **2014**, 14, 113	5.3	118
291	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	6.9	117
290	Varietal differences of quinoa□ tolerance to saline conditions. *Plant and Soil*, **2012**, 357, 117-129	4.2	114
289	Growth and physiological responses of six barley genotypes to waterlogging and subsequent recovery. *Australian Journal of Agricultural Research*, **2004**, 55, 895		112
288	Salt stress sensing and early signalling events in plant roots: Current knowledge and hypothesis. *Plant Science*, **2015**, 241, 109-19	5.3	109
287	Nutritional and chlorophyll fluorescence responses of lucerne (Medicago sativa) to waterlogging and subsequent recovery. *Plant and Soil*, **2005**, 270, 31-45	4.2	109
286	Signalling by potassium: another second messenger to add to the list?. *Journal of Experimental Botany*, **2017**, 68, 4003-4007	7	108
285	Amino acids regulate salinity-induced potassium efflux in barley root epidermis. *Planta*, **2007**, 225, 753-61	4.7	107
284	Ionic relations and osmotic adjustment in durum and bread wheat under saline conditions. *Functional Plant Biology*, **2010**, 36, 1110-1119	2.7	105

283	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	24.7	104
282	Chloroplast function and ion regulation in plants growing on saline soils: lessons from halophytes. *Journal of Experimental Botany*, **2017**, 68, 3129-3143	7	102
281	On a quest for stress tolerance genes: membrane transporters in sensing and adapting to hostile soils. *Journal of Experimental Botany*, **2016**, 67, 1015-31	7	102
280	Cell-Type-Specific H+-ATPase Activity in Root Tissues Enables K+ Retention and Mediates Acclimation of Barley (Hordeum vulgare) to Salinity Stress. *Plant Physiology*, **2016**, 172, 2445-2458	6.6	99
279	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, 2433-8	11.5	99
278	K+ retention in leaf mesophyll, an overlooked component of salinity tolerance mechanism: a case study for barley. *Journal of Integrative Plant Biology*, **2015**, 57, 171-85	8.3	98
277	Ion transport and osmotic adjustment in Escherichia coli in response to ionic and non-ionic osmotica. *Environmental Microbiology*, **2009**, 11, 137-48	5.2	97
276	Hydroxyl radical scavenging by cerium oxide nanoparticles improves Arabidopsis salinity tolerance by enhancing leaf mesophyll potassium retention. *Environmental Science: Nano*, **2018**, 5, 1567-1583	7.1	95
275	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, 189-97	4.7	94
274	Salinity-induced calcium signaling and root adaptation in Arabidopsis require the calcium regulatory protein annexin1. *Plant Physiology*, **2013**, 163, 253-62	6.6	93
273	The Venus Flytrap Dionaea muscipula Counts Prey-Induced Action Potentials to Induce Sodium Uptake. *Current Biology*, **2016**, 26, 286-95	6.3	92
272	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 bioelectrogenesis. *Plant Physiology*, **1999**, 119, 1115-24	6.6	91
271	Annexin 1 regulates the H2O2-induced calcium signature in Arabidopsis thaliana roots. *Plant Journal*, **2014**, 77, 136-45	6.9	89
270	Kinetics of xylem loading, membrane potential maintenance, and sensitivity of K(+) -permeable channels to reactive oxygen species: physiological traits that differentiate salinity tolerance between pea and barley. *Plant, Cell and Environment*, **2014**, 37, 589-600	8.4	88
269	Ability of leaf mesophyll to retain potassium correlates with salinity tolerance in wheat and barley. *Physiologia Plantarum*, **2013**, 149, 515-27	4.6	88
268	Non-invasive microelectrode ion flux measurements to study adaptive responses of microorganisms to the environment. *FEMS Microbiology Reviews*, **2006**, 30, 472-86	15.1	88
267	Ion-specific mechanisms of osmoregulation in bean mesophyll cells. *Journal of Experimental Botany*, **2000**, 51, 1243-1253	7	87
266	Mechanisms of cytosolic calcium elevation in plants: the role of ion channels, calcium extrusion systems and NADPH oxidase-mediated 'ROS-Ca Hub'. *Functional Plant Biology*, **2018**, 45, 9-27	2.7	86

265	Difference in root K+ retention ability and reduced sensitivity of K+-permeable channels to reactive oxygen species confer differential salt tolerance in three Brassica species. *Journal of Experimental Botany*, **2016**, 67, 4611-25	7	84
264	Membrane transporters mediating root signalling and adaptive responses to oxygen deprivation and soil flooding. *Plant, Cell and Environment*, **2014**, 37, 2216-33	8.4	84
263	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	5.4	82
262	Microelectrode ion and O2 fluxes measurements reveal differential sensitivity of barley root tissues to hypoxia. *Plant, Cell and Environment*, **2006**, 29, 1107-21	8.4	82
261	The NPR1-dependent salicylic acid signalling pathway is pivotal for enhanced salt and oxidative stress tolerance in Arabidopsis. *Journal of Experimental Botany*, **2015**, 66, 1865-75	7	80
260	Using QTL mapping to investigate the relationships between abiotic stress tolerance (drought and salinity) and agronomic and physiological traits. *BMC Genomics*, **2015**, 16, 43	4.5	79
259	Effect of divalent cations on ion fluxes and leaf photochemistry in salinized barley leaves. *Journal of Experimental Botany*, **2005**, 56, 1369-78	7	79
258	Physiology of acclimation to salinity stress in pea (Pisum sativum). *Environmental and Experimental Botany*, **2012**, 84, 44-51	5.9	78
257	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, 9267-85	6.3	78
256	Root-to-shoot signalling: integration of diverse molecules, pathways and functions. *Functional Plant Biology*, **2016**, 43, 87-104	2.7	77
255	Ion transport and osmotic adjustment in plants and bacteria. *Biomolecular Concepts*, **2011**, 2, 407-19	3.7	76
254	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, 335-343	2.7	76
253	Transport Across Chloroplast Membranes: Optimizing Photosynthesis for Adverse Environmental Conditions. *Molecular Plant*, **2016**, 9, 356-370	14.4	75
252	Specificity of polyamine effects on NaCl-induced ion flux kinetics and salt stress amelioration in plants. *Plant and Cell Physiology*, **2010**, 51, 422-34	4.9	74
251	Transcriptional stimulation of rate-limiting components of the autophagic pathway improves plant fitness. *Journal of Experimental Botany*, **2018**, 69, 1415-1432	7	73
250	Oscillations in plant membrane transport: model predictions, experimental validation, and physiological implications. *Journal of Experimental Botany*, **2006**, 57, 171-84	7	73
249	Salinity-induced accumulation of organic osmolytes in barley and wheat leaves correlates with increased oxidative stress tolerance: in planta evidence for cross-tolerance. *Plant Physiology and Biochemistry*, **2014**, 83, 32-9	5.4	72
248	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, 7309-14	11.5	72

247	Nax loci affect SOS1-like Na+/H+ exchanger expression and activity in wheat. *Journal of Experimental Botany*, **2016**, 67, 835-44	7	70
246	Receptor kinase-mediated control of primary active proton pumping at the plasma membrane. *Plant Journal*, **2014**, 80, 951-64	6.9	69
245	Calcium- and potassium-permeable plasma membrane transporters are activated by copper in Arabidopsis root tips: linking copper transport with cytosolic hydroxyl radical production. *Plant, Cell and Environment*, **2013**, 36, 844-55	8.4	69
244	Doing 'business as usual' comes with a cost: evaluating energy cost of maintaining plant intracellular K homeostasis under saline conditions. *New Phytologist*, **2020**, 225, 1097-1104	9.8	69
243	Linking salinity stress tolerance with tissue-specific Na(+) sequestration in wheat roots. *Frontiers in Plant Science*, **2015**, 6, 71	6.2	65
242	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	4.7	65
241	Barley responses to combined waterlogging and salinity stress: separating effects of oxygen deprivation and elemental toxicity. *Frontiers in Plant Science*, **2013**, 4, 313	6.2	64
240	Epidermal bladder cells confer salinity stress tolerance in the halophyte quinoa and Atriplex species. *Plant, Cell and Environment*, **2017**, 40, 1900-1915	8.4	61
239	Polyamines cause plasma membrane depolarization, activate Ca2+-, and modulate H+-ATPase pump activity in pea roots. *Journal of Experimental Botany*, **2014**, 65, 2463-72	7	61
238	Multiple traits associated with salt tolerance in lucerne: revealing the underlying cellular mechanisms. *Functional Plant Biology*, **2008**, 35, 640-650	2.7	61
237	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, 471-81	7	60
236	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	8.4	59
235	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, 638-48	4.9	57
234	Salinity Effects on the Activity of Plasma Membrane H + and Ca 2+ Transporters in Bean Leaf Mesophyll: Masking Role of the Cell Wall. *Annals of Botany*, **2000**, 85, 681-686	4.1	57
233	Understanding the Molecular Basis of Salt Sequestration in Epidermal Bladder Cells of Chenopodium quinoa. *Current Biology*, **2018**, 28, 3075-3085.e7	6.3	57
232	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* , **2015**, 43, 75-86	2.7	56
231	Effect of secondary metabolites associated with anaerobic soil conditions on ion fluxes and electrophysiology in barley roots. *Plant Physiology*, **2007**, 145, 266-76	6.6	55
230	Reproductive Physiology of Halophytes: Current Standing. *Frontiers in Plant Science*, **2018**, 9, 1954	6.2	55

229	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	7	54
228	The energy cost of the tonoplast futile sodium leak. *New Phytologist*, **2020**, 225, 1105-1110	9.8	54
227	Soil and Crop Management Practices to Minimize the Impact of Waterlogging on Crop Productivity. *Frontiers in Plant Science*, **2019**, 10, 140	6.2	53
226	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, 1093-104	4.9	53
225	Receptor-like activity evoked by extracellular ADP in Arabidopsis root epidermal plasma membrane. *Plant Physiology*, **2011**, 156, 1375-85	6.6	53
224	Kinetics of net H+, Ca2+, K+, Na+, NH+4, 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	4.6	51
223	Stomata in a saline world. *Current Opinion in Plant Biology*, **2018**, 46, 87-95	9.9	49
222	SV channels dominate the vacuolar Ca2+ release during intracellular signaling. *FEBS Letters*, **2009**, 583, 921-6	3.8	49
221	Transition metals: a double edge sward in ROS generation and signaling. *Plant Signaling and Behavior*, **2013**, 8, e23425	2.5	48
220	Potassium retention in leaf mesophyll as an element of salinity tissue tolerance in halophytes. *Plant Physiology and Biochemistry*, **2016**, 109, 346-354	5.4	47
219	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	7	46
218	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	7	46
217	Meta-analysis of major QTL for abiotic stress tolerance in barley and implications for barley breeding. *Planta*, **2017**, 245, 283-295	4.7	46
216	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	4.2	46
215	Na-K transport in roots under salt stress. *Plant Signaling and Behavior*, **2008**, 3, 401-3	2.5	45
214	Oxygen deficiency and salinity affect cell-specific ion concentrations in adventitious roots of barley (Hordeum vulgare). *New Phytologist*, **2015**, 208, 1114-25	9.8	44
213	Waterlogging tolerance in barley is associated with faster aerenchyma formation in adventitious roots. *Plant and Soil*, **2015**, 394, 355-372	4.2	44
212	QTLs for stomatal and photosynthetic traits related to salinity tolerance in barley. *BMC Genomics*, **2017**, 18, 9	4.5	43

211	GORK Channel: A Master Switch of Plant Metabolism?. *Trends in Plant Science*, **2020**, 25, 434-445	13.1	43
210	Hypoxia Sensing in Plants: On a Quest for Ion Channels as Putative Oxygen Sensors. *Plant and Cell Physiology*, **2017**, 58, 1126-1142	4.9	43
209	Aluminium-induced ion transport in Arabidopsis: the relationship between Al tolerance and root ion flux. *Journal of Experimental Botany*, **2010**, 61, 3163-75	7	43
208	Combining Ability of Salinity Tolerance on the Basis of NaCl-Induced K+ Flux from Roots of Barley. *Crop Science*, **2008**, 48, 1382-1388	2.4	43
207	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, 3747-62	7	42
206	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	7	42
205	Acclimation improves salt stress tolerance in Zea mays plants. *Journal of Plant Physiology*, **2016**, 201, 1-8	3.6	41
204	Evaluating relative contribution of osmotolerance and tissue tolerance mechanisms toward salinity stress tolerance in three Brassica species. *Physiologia Plantarum*, **2016**, 158, 135-51	4.6	41
203	Boron Alleviates Aluminum Toxicity by Promoting Root Alkalization in Transition Zone via Polar Auxin Transport. *Plant Physiology*, **2018**, 177, 1254-1266	6.6	41
202	Identification of aerenchyma formation-related QTL in barley that can be effective in breeding for waterlogging tolerance. *Theoretical and Applied Genetics*, **2016**, 129, 1167-77	6	40
201	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, 1749-62	4.9	40
200	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	8.5	40
199	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	8.4	40
198	Genome-Wide Association Study Reveals a New QTL for Salinity Tolerance in Barley (Hordeum vulgare L.). *Frontiers in Plant Science*, **2016**, 7, 946	6.2	40
197	Non-stomatal limitation of photosynthesis by soil salinity. *Critical Reviews in Environmental Science and Technology*, **2021**, 51, 791-825	11.1	40
196	K(bg) and Kv1.3 channels mediate potassium efflux in the early phase of apoptosis in Jurkat T lymphocytes. *American Journal of Physiology - Cell Physiology*, **2009**, 297, C1544-53	5.4	39
195	Root vacuolar Na sequestration but not exclusion from uptake correlates with barley salt tolerance. *Plant Journal*, **2019**, 100, 55-67	6.9	38
194	Measurements of net fluxes and extracellular changes of H+, Ca2+, K+, and NH4+ in Escherichia coli using ion-selective microelectrodes. *Journal of Microbiological Methods*, **2001**, 46, 119-29	2.8	38

193	Melatonin improves rice salinity stress tolerance by NADPH oxidase-dependent control of the plasma membrane K transporters and K homeostasis. *Plant, Cell and Environment*, **2020**, 43, 2591-2605	8.4	37
192	Cyclic mononucleotides modulate potassium and calcium flux responses to H2O2 in Arabidopsis roots. *FEBS Letters*, **2014**, 588, 1008-15	3.8	37
191	Sequential depolarization of root cortical and stelar cells induced by an acute salt shock - implications for Na(+) and K(+) transport into xylem vessels. *Plant, Cell and Environment*, **2011**, 34, 859-69	8.4	37
190	Screening broad beans (Vicia faba) for magnesium deficiency. II. Photosynthetic performance and leaf bioelectrical responses. *Functional Plant Biology*, **2004**, 31, 539-549	2.7	37
189	Hydrogen Peroxide-Induced Root Ca and K+ Fluxes Correlate with Salt Tolerance in Cereals: Towards the Cell-Based Phenotyping. *International Journal of Molecular Sciences*, **2018**, 19,	6.3	36
188	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	7	36
187	Plasma membrane Ca+ transporters mediate virus-induced acquired resistance to oxidative stress. *Plant, Cell and Environment*, **2011**, 34, 406-17	8.4	36
186	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	3.2	35
185	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	11.5	34
184	Reducing Cadmium Accumulation in Plants: Structure-Function Relations and Tissue-Specific Operation of Transporters in the Spotlight. *Plants*, **2020**, 9,	4.5	34
183	Linking oxygen availability with membrane potential maintenance and K+ retention of barley roots: implications for waterlogging stress tolerance. *Plant, Cell and Environment*, **2014**, 37, 2325-38	8.4	34
182	Linking osmotic adjustment and stomatal characteristics with salinity stress tolerance in contrasting barley accessions. *Functional Plant Biology*, **2015**, 42, 252-263	2.7	34
181	Wheat cultivars can be screened for NaCl salinity tolerance by measuring leaf chlorophyll content and shoot sap potassium. *Functional Plant Biology*, **2010**, 37, 656	2.7	34
180	A recombinant plant natriuretic peptide causes rapid and spatially differentiated K+, Na+ and H+ flux changes in Arabidopsis thaliana roots. *Plant and Cell Physiology*, **2004**, 45, 1093-8	4.9	34
179	Targeting Redox Regulatory Mechanisms for Salinity Stress Tolerance in Crops **2018**, 213-234		33
178	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	6.2	33
177	Synergism between polyamines and ROS in the induction of Ca (2+) and K (+) fluxes in roots. *Plant Signaling and Behavior*, **2012**, 7, 1084-7	2.5	33
176	Revealing the roles of GORK channels and NADPH oxidase in acclimation to hypoxia in Arabidopsis. *Journal of Experimental Botany*, **2017**, 68, 3191-3204	7	33

175	Friend or Foe? Chloride Patterning in Halophytes. *Trends in Plant Science*, **2019**, 24, 142-151	13.1	32
174	A new major-effect QTL for waterlogging tolerance in wild barley (H. spontaneum). *Theoretical and Applied Genetics*, **2017**, 130, 1559-1568	6	31
173	Calcium efflux as a component of the hypersensitive response of Nicotiana benthamiana to Pseudomonas syringae. *Plant and Cell Physiology*, **2008**, 49, 40-6	4.9	31
172	Release of extracellular purines from plant roots and effect on ion fluxes. *Plant Signaling and Behavior*, **2011**, 6, 1855-7	2.5	30
171	Rhythmic patterns of nutrient acquisition by wheat roots. *Functional Plant Biology*, **2002**, 29, 595-605	2.7	30
170	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	4.6	29
169	Aluminum-dependent dynamics of ion transport in Arabidopsis: specificity of low pH and aluminum responses. *Physiologia Plantarum*, **2010**, 139, 401-12	4.6	29
168	Heterogeneity in bean leaf mesophyll tissue and ion flux profiles: leaf electrophysiological characteristics correlate with the anatomical structure. *Annals of Botany*, **2002**, 89, 221-6	4.1	29
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