Tomoaki Horie

List of Publications by Year
in descending order

37 papers	7,518 citations	186209 28 h-index	315616 38 g-index
39 all docs	39 docs citations	39 times ranked	5680 citing authors

#	Article	IF	Citations
1	Plant salt-tolerance mechanisms. Trends in Plant Science, 2014, 19, 371-379.	4.3	1,343
2	Enhanced salt tolerance mediated by AtHKT1 transporter-induced Na+ unloading from xylem vessels to xylem parenchyma cells. Plant Journal, 2005, 44, 928-938.	2.8	572
3	A conserved primary salt tolerance mechanism mediated by HKT transporters: a mechanism for sodium exclusion and maintenance of high K⁺/Na⁺ ratio in leaves during salinity stress. Plant, Cell and Environment, 2010, 33, 552-565.	2.8	455
4	Using membrane transporters to improve crops for sustainable food production. Nature, 2013, 497, 60-66.	13.7	440
5	HKT transporter-mediated salinity resistance mechanisms in Arabidopsis and monocot crop plants. Trends in Plant Science, 2009, 14, 660-668.	4.3	433
6	Genomics, Physiology, and Molecular Breeding Approaches for Improving Salt Tolerance. Annual Review of Plant Biology, 2017, 68, 405-434.	8.6	359
7	Altered shoot/root Na+ distribution and bifurcating salt sensitivity in Arabidopsis by genetic disruption of the Na+ transporter AtHKT1. FEBS Letters, 2002, 531, 157-161.	1.3	336
8	Rice OsHKT2;1 transporter mediates large Na+ influx component into K+-starved roots for growth. EMBO Journal, 2007, 26, 3003-3014.	3.5	333
9	Nomenclature for HKT transporters, key determinants of plant salinity tolerance. Trends in Plant Science, 2006, 11, 372-374.	4.3	329
10	Two types of HKT transporters with different properties of Na+ and K+ transport in Oryza sativa. Plant Journal, 2001, 27, 129-138.	2.8	314
11	Salinity tolerance mechanisms in glycophytes: An overview with the central focus on rice plants. Rice, 2012, 5, 11.	1.7	279
12	Glycine residues in potassium channel-like selectivity filters determine potassium selectivity in four-loop-per-subunit HKT transporters from plants. Proceedings of the National Academy of Sciences of the United States of America, 2002, 99, 6428-6433.	3.3	257
13	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
14	Sodium Transporters in Plants. Diverse Genes and Physiological Functions. Plant Physiology, 2004, 136, 2457-2462.	2.3	199
15	HKT transporters mediate salt stress resistance in plants: from structure and function to the field. Current Opinion in Biotechnology, 2015, 32, 113-120.	3.3	195
16	OsHKT1;4-mediated Na+ transport in stems contributes to Na+ exclusion from leaf blades of rice at the reproductive growth stage upon salt stress. BMC Plant Biology, 2016, 16, 22.	1.6	168
17	Mechanisms of Water Transport Mediated by PIP Aquaporins and Their Regulation Via Phosphorylation Events Under Salinity Stress in Barley Roots. Plant and Cell Physiology, 2011, 52, 663-675.	1.5	151
18	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

#	Article	IF	Citations
19	K+ Transport by the OsHKT2;4 Transporter from Rice with Atypical Na+ Transport Properties and Competition in Permeation of K+ over Mg2+ and Ca2+ Ions Â Â Â. Plant Physiology, 2011, 156, 1493-1507.	2.3	138
20	Differential Sodium and Potassium Transport Selectivities of the Rice OsHKT2;1 and OsHKT2;2 Transporters in Plant Cells Â Â. Plant Physiology, 2009, 152, 341-355.	2.3	135
21	Rice sodium-insensitive potassium transporter, OsHAK5, confers increased salt tolerance in tobacco BY2 cells. Journal of Bioscience and Bioengineering, 2011, 111, 346-356.	1.1	129
22	A Magnesium Transporter OsMGT1 Plays a Critical Role in Salt Tolerance in Rice. Plant Physiology, 2017, 174, 1837-1849.	2.3	105
23	Functional and molecular characteristics of rice and barley NIP aquaporins transporting water, hydrogen peroxide and arsenite. Plant Biotechnology, 2014, 31, 213-219.	0.5	81
24	Calcium Regulation of Sodium Hypersensitivities of sos3 and athkt1 Mutants. Plant and Cell Physiology, 2006, 47, 622-633.	1.5	80
25	AtHKT1;1 Mediates Nernstian Sodium Channel Transport Properties in Arabidopsis Root Stelar Cells. PLoS ONE, 2011, 6, e24725.	1.1	61
26	T-DNA Tagging-Based Gain-of-Function of OsHKT1;4 Reinforces Na Exclusion from Leaves and Stems but Triggers Na Toxicity in Roots of Rice Under Salt Stress. International Journal of Molecular Sciences, 2018, 19, 235.	1.8	35
27	OsHKT2;2/1-mediated Na+ influx over K+ uptake in roots potentially increases toxic Na+ accumulation in a salt-tolerant landrace of rice Nona Bokra upon salinity stress. Journal of Plant Research, 2016, 129, 67-77.	1.2	32
28	Dynamic Regulation of the Root Hydraulic Conductivity of Barley Plants in Response to Salinity/Osmotic Stress. Plant and Cell Physiology, 2015, 56, 875-882.	1.5	28
29	Changes in Expression Level of OsHKT1;5 Alters Activity of Membrane Transporters Involved in K+ and Ca2+ Acquisition and Homeostasis in Salinized Rice Roots. International Journal of Molecular Sciences, 2020, 21, 4882.	1.8	23
30	Functions of HKT transporters in sodium transport in roots and in protecting leaves from salinity stress. Plant Biotechnology, 2008, 25, 233-239.	0.5	22
31	Identification of an <scp>H₂O₂</scp> permeable <scp>PIP</scp> aquaporin in barley and a serine residue promoting <scp>H₂O₂</scp> transport. Physiologia Plantarum, 2017, 159, 120-128.	2.6	17
32	A Survey of Barley PIP Aquaporin Ionic Conductance Reveals Ca2+-Sensitive HvPIP2;8 Na+ and K+ Conductance. International Journal of Molecular Sciences, 2020, 21, 7135.	1.8	17
33	Expression and Ion Transport Activity of Rice OsHKT1;1 Variants. Plants, 2020, 9, 16.	1.6	15
34	High-Affinity K+ Transporters from a Halophyte,<i>Sporobolus virginicus</i>, Mediate Both K+ and Na+ Transport in Transgenic Arabidopsis,<i>X. laevis</i>Oocytes and Yeast. Plant and Cell Physiology, 2019, 60, 176-187.	1.5	12
35	Functions and structure of roots and their contributions to salinity tolerance in plants. Breeding Science, 2021, 71, 89-108.	0.9	10
36	Mechanisms Activating Latent Functions of PIP Aquaporin Water Channels via the Interaction between PIP1 and PIP2 Proteins. Plant and Cell Physiology, 2021, 62, 92-99.	1.5	8

#	Article	IF	Citations
37	Distinct Functions of the Atypical Terminal Hydrophilic Domain of the HKT Transporter in the Liverwort <i>Marchantia polymorpha</i>. Plant and Cell Physiology, 2022, , .	1.5	1