Maki Katsuhara

List of Publications by Year
in descending order

78 papers	7,870 citations	87888 38 h-index	66911 78 g-index
79 all docs	79 docs citations	79 times ranked	6653 citing authors

#	Article	IF	Citations
1	A silicon transporter in rice. Nature, 2006, 440, 688-691.	27.8	1,354
2	A wheat gene encoding an aluminum-activated malate transporter. Plant Journal, 2004, 37, 645-653.	5.7	858
3	An efflux transporter of silicon in rice. Nature, 2007, 448, 209-212.	27.8	762
4	An Aluminum-Activated Citrate Transporter in Barley. Plant and Cell Physiology, 2007, 48, 1081-1091.	3.1	475
5	Overexpression of the Barley Aquaporin HvPIP2;1 Increases Internal CO2 Conductance and CO2 Assimilation in the Leaves of Transgenic Rice Plants. Plant and Cell Physiology, 2004, 45, 521-529.	3.1	361
6	Salinity tolerance mechanisms in glycophytes: An overview with the central focus on rice plants. Rice, 2012, 5, 11.	4.0	279
7	Drought Stress Alters Water Relations and Expression of PIP-Type Aquaporin Genes in Nicotiana tabacum Plants. Plant and Cell Physiology, 2008, 49, 801-813.	3.1	223
8	The BnALMT1 and BnALMT2 Genes from Rape Encode Aluminum-Activated Malate Transporters That Enhance the Aluminum Resistance of Plant Cells. Plant Physiology, 2006, 142, 1294-1303.	4.8	206
9	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.	3.6	168
10	Over-expression of a Barley Aquaporin Increased the Shoot/Root Ratio and Raised Salt Sensitivity in Transgenic Rice Plants. Plant and Cell Physiology, 2003, 44, 1378-1383.	3.1	163
11	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.	3.1	151
12	Aquaporin OsPIP1;1 promotes rice salt resistance and seed germination. Plant Physiology and Biochemistry, 2013, 63, 151-158.	5.8	148
13	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.	4.8	138
14	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.	4.8	135
15	Different Mechanisms of Four Aluminum (Al)-Resistant Transgenes for Al Toxicity in Arabidopsis. Plant Physiology, 2001, 127, 918-927.	4.8	131
16	Rice sodium-insensitive potassium transporter, OsHAK5, confers increased salt tolerance in tobacco BY2 cells. Journal of Bioscience and Bioengineering, 2011, 111, 346-356.	2.2	129
17	Expanding roles of plant aquaporins in plasma membranes and cell organelles. Functional Plant Biology, 2008, 35, 1.	2.1	123
18	Functional Analysis of Water Channels in Barley Roots. Plant and Cell Physiology, 2002, 43, 885-893.	3.1	116

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19	Hydrogen peroxide permeability of plasma membrane aquaporins of Arabidopsis thaliana. Journal of Plant Research, 2012, 125, 147-153.	2.4	108
20	Salt stress-induced lipid peroxidation is reduced by glutathione S-transferase, but this reduction of lipid peroxides is not enough for a recovery of root growth in Arabidopsis. Plant Science, 2005, 169, 369-373.	3.6	107
21	Expression and Stress-Dependent Induction of Potassium Channel Transcripts in the Common Ice Plant. Plant Physiology, 2001, 125, 604-614.	4.8	86
22	Involvement of <i>HbPIP2;1</i> and <i>HbTIP1;1</i> Aquaporins in Ethylene Stimulation of Latex Yield through Regulation of Water Exchanges between Inner Liber and Latex Cells in <i>Hevea brasiliensis</i> Â Â Â. Plant Physiology, 2009, 151, 843-856.	4.8	85
23	Functional and molecular characteristics of rice and barley NIP aquaporins transporting water, hydrogen peroxide and arsenite. Plant Biotechnology, 2014, 31, 213-219.	1.0	81
24	CO2 Transport by PIP2 Aquaporins of Barley. Plant and Cell Physiology, 2014, 55, 251-257.	3.1	75
25	Influence of Low Air Humidity and Low Root Temperature on Water Uptake, Growth and Aquaporin Expression in Rice Plants. Plant and Cell Physiology, 2012, 53, 1418-1431.	3.1	74
26	Overexpression of Alternative Oxidase Gene Confers Aluminum Tolerance by Altering the Respiratory Capacity and the Response to Oxidative Stress in Tobacco Cells. Molecular Biotechnology, 2013, 54, 551-563.	2.4	70
27	Characterization of Four Plasma Membrane Aquaporins in Tulip Petals: A Putative Homolog is Regulated by Phosphorylation. Plant and Cell Physiology, 2008, 49, 1196-1208.	3.1	66
28	Salt Stress-Induced Cytoplasmic Acidification and Vacuolar Alkalization in Nitellopsis obtusa Cells. Plant Physiology, 1989, 90, 1102-1107.	4.8	61
29	Exogenous application of abscisic acid (ABA) increases root and cell hydraulic conductivity and abundance of some aquaporin isoforms in the ABA-deficient barley mutant Az34. Annals of Botany, 2016, 118, 777-785.	2.9	58
30	A Novel Cyanobacterial SmtB/ArsR Family Repressor Regulates the Expression of a CPx-ATPase and a Metallothionein in Response to Both Cu(I)/Ag(I) and Zn(II)/Cd(II). Journal of Biological Chemistry, 2004, 279, 17810-17818.	3.4	54
31	The photosynthetic response of tobacco plants overexpressing ice plant aquaporin McMIPB to a soil water deficit and high vapor pressure deficit. Journal of Plant Research, 2013, 126, 517-527.	2.4	50
32	Genome-Wide Characterization of Major Intrinsic Proteins in Four Grass Plants and Their Non-Aqua Transport Selectivity Profiles with Comparative Perspective. PLoS ONE, 2016, 11, e0157735.	2.5	46
33	Hormonal treatment of the bark of rubber trees (Hevea brasiliensis) increases latex yield through latex dilution in relation with the differential expression of two aquaporin genes. Journal of Plant Physiology, 2011, 168, 253-262.	3.5	43
34	A metallothionein and CPx-ATPase handle heavy-metal tolerance in the filamentous cyanobacteriumOscillatoria brevis1. FEBS Letters, 2003, 542, 159-163.	2.8	41
35	Barley plasma membrane intrinsic proteins (PIP Aquaporins) as water and CO2 transporters. Pflugers Archiv European Journal of Physiology, 2008, 456, 687-691.	2.8	41
36	A Bacterial Biosensor for Oxidative Stress Using the Constitutively Expressed Redox-Sensitive Protein roGFP2. Sensors, 2010, 10, 6290-6306.	3.8	41

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37	Female mating receptivity inhibited by injection of male-derived extracts in Callosobruchus chinensis. Journal of Insect Physiology, 2008, 54, 501-507.	2.0	40
38	Ectopic expression of a rice plasma membrane intrinsic protein (OsPIP1;3) promotes plant growth and water uptake. Plant Journal, 2020, 102, 779-796.	5.7	40
39	ATP-Regulated Ion Channels in the Plasma Membrane of a Characeae Alga, <i>Nitellopsis obtusa</i>. Plant Physiology, 1990, 93, 343-346.	4.8	38
40	A Novel Histidine-Rich CPx-ATPase from the Filamentous Cyanobacterium Oscillatoria brevis Related to Multiple-Heavy-Metal Cotolerance. Journal of Bacteriology, 2002, 184, 5027-5035.	2.2	36
41	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.	4.1	35
42	Patch-Clamp Study on a Ca2+-Regulated K+ Channel in the Tonoplast of the Brackish Characeae Lamprothamnium succinctum. Plant and Cell Physiology, 1989, 30, 549-555.	3.1	33
43	Insights into the salt tolerance mechanism in barley (Hordeum vulgare) from comparisons of cultivars that differ in salt sensitivity. Journal of Plant Research, 2010, 123, 105-118.	2.4	33
44	Presence of aquaporin and Vâ€ATPase on the contractile vacuole of <i>Amoeba proteus</i>. Biology of the Cell, 2008, 100, 179-188.	2.0	32
45	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.	2.4	32
46	Dynamic Regulation of the Root Hydraulic Conductivity of Barley Plants in Response to Salinity/Osmotic Stress. Plant and Cell Physiology, 2015, 56, 875-882.	3.1	28
47	Expression of an aquaporin at night in relation to the growth and root water permeability in barley seedlings. Soil Science and Plant Nutrition, 2003, 49, 883-888.	1.9	26
48	Abiotic stresses modulate expression of major intrinsic proteins in barley (Hordeum vulgare). Comptes Rendus - Biologies, 2011, 334, 127-139.	0.2	23
49	Barley root hydraulic conductivity and aquaporins expression in relation to salt tolerance. Soil Science and Plant Nutrition, 2007, 53, 466-470.	1.9	21
50	Early response in water relations influenced by NaCl reflects tolerance or sensitivity of barley plants to salinity stress via aquaporins. Soil Science and Plant Nutrition, 2011, 57, 50-60.	1.9	18
51	Functional screening of salt tolerance genes from a halophyte Sporobolus virginicus and transcriptomic and metabolomic analysis of salt tolerant plants expressing glycine-rich RNA-binding protein. Plant Science, 2019, 278, 54-63.	3.6	18
52	Water and CO₂ permeability of SsAqpZ, the cyanobacterium <i>Synechococcus</i> sp. PCC7942 aquaporin. Biology of the Cell, 2013, 105, 118-128.	2.0	17
53	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.	5.2	17
54	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.	4.1	17

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55	Control of the Water Transport Activity of Barley HvTIP3;1 Specifically Expressed in Seeds. Plant and Cell Physiology, 2015, 56, 1831-1840.	3.1	16
56	Osmotic stress decreases PIP aquaporin transcripts in barley roots but H2O2 is not involved in this process. Journal of Plant Research, 2014, 127, 787-792.	2.4	15
57	Expression and Ion Transport Activity of Rice OsHKT1;1 Variants. Plants, 2020, 9, 16.	3.5	15
58	Yeast functional screen to identify genes conferring salt stress tolerance in Salicornia europaea. Frontiers in Plant Science, 2015, 6, 920.	3.6	14
59	Cytoplasmic Alkalization and Cytoplasmic Streaming Induced by Light and Histidine in Leaf Cells of Egeria densa: in vivo 31P-NMR study. Plant and Cell Physiology, 1991, 32, 261-268.	3.1	13
60	A Cyclic Nucleotide-Gated Channel, HvCNGC2-3, Is Activated by the Co-Presence of Na+ and K+ and Permeable to Na+ and K+ Non-Selectively. Plants, 2018, 7, 61.	3.5	12
61	The mechanism of SO₂â€‘induced stomatal closure differs from O₃ and CO₂ responses and is mediated by nonapoptotic cell death in guard cells. Plant, Cell and Environment, 2019, 42, 437-447.	5.7	12
62	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.	3.1	12
63	Na+ Transporter SvHKT1;1 from a Halophytic Turf Grass Is Specifically Upregulated by High Na+ Concentration and Regulates Shoot Na+ Concentration. International Journal of Molecular Sciences, 2020, 21, 6100.	4.1	12
64	Patch-Clamp Study on Ion Channels in the Tonoplast of Nitellopsis obtusa. Plant and Cell Physiology, 1991, 32, 179-184.	3.1	10
65	The BnALMT1 Protein that is an Aluminum-Activated Malate Transporter is Localized in the Plasma Membrane. Plant Signaling and Behavior, 2007, 2, 255-257.	2.4	9
66	In situ RNA hybridization using Technovit resin in Arabidopsis thaliana. Plant Molecular Biology Reporter, 1999, 17, 43-51.	1.8	8
67	Functional characterization of a novel plasma membrane intrinsic protein2 in barley. Plant Signaling and Behavior, 2012, 7, 1648-1652.	2.4	8
68	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.	3.1	8
69	Hydraulic Conductivity and Aquaporins of Cortical Cells in Gravitropically Bending Roots of Pisum sativum L.. Plant Production Science, 2005, 8, 515-524.	2.0	7
70	Accession difference in leaf photosynthesis, root hydraulic conductance and gene expression of root aquaporins under salt stress in barley seedlings. Plant Production Science, 2021, 24, 73-82.	2.0	7
71	Effect of nutrient deficiencies on the water transport properties in figleaf gourd plants. Horticulture Environment and Biotechnology, 2011, 52, 629-634.	2.1	6
72	Physiological Role of Aerobic Fermentation Constitutively Expressed in an Aluminum-Tolerant Cell Line of Tobacco (<i>Nicotiana tabacum</i>). Plant and Cell Physiology, 2021, 62, 1460-1477.	3.1	6

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73	Identification and Characterization of Rice OsHKT1;3 Variants. Plants, 2021, 10, 2006.	3.5	5
74	Dynamics of the contents and distribution of ABA, auxins and aquaporins in developing caryopses of an ABA-deficient barley mutant and its parental cultivar. Seed Science Research, 2019, 29, 261-269.	1.7	4
75	Age dependence of the hydraulic resistances of the plasma membrane and the tonoplast (vacuolar) Tj ETQq1 1 0.784314 rgBT /Overlo	2.1	2
76	Isolation of barleysalTgene: Its relation to salt tolerance and to hormonal regulation by abscisic acid and jasmonic acid. Soil Science and Plant Nutrition, 2001, 47, 187-193.	1.9	1
77	Distinct Functions of the Atypical Terminal Hydrophilic Domain of the HKT Transporter in the Liverwort <i>Marchantia polymorpha</i>. Plant and Cell Physiology, 2022, , .	3.1	1
78	Calcium control of the hydraulic resistance in cells of Chara corallina. Protoplasma, 0, , .	2.1	1