Masayoshi Maeshima

List of Publications by Year
in descending order

96 papers	10,333 citations	19657 61 h-index	37204 96 g-index
97 all docs	97 docs citations	97 times ranked	8371 citing authors

#	Article	IF	Citations
1	The ABC transporter AtPDR8 is a cadmium extrusion pump conferring heavy metal resistance. Plant Journal, 2007, 50, 207-218.	5.7	593
2	Identification of 33 Rice Aquaporin Genes and Analysis of Their Expression and Function. Plant and Cell Physiology, 2005, 46, 1568-1577.	3.1	527
3	Vacuolar transporters and their essential role in plant metabolism. Journal of Experimental Botany, 2006, 58, 83-102.	4.8	521
4	Vacuolar H+-pyrophosphatase. Biochimica Et Biophysica Acta - Biomembranes, 2000, 1465, 37-51.	2.6	404
5	Zinc Transporter of Arabidopsis thaliana AtMTP1 is Localized to Vacuolar Membranes and Implicated in Zinc Homeostasis. Plant and Cell Physiology, 2004, 45, 1749-1758.	3.1	272
6	TONOPLASTTRANSPORTERS: Organization and Function. Annual Review of Plant Biology, 2001, 52, 469-497.	14.3	256
7	The ABC transporter AtABCB14 is a malate importer and modulates stomatal response to CO2. Nature Cell Biology, 2008, 10, 1217-1223.	10.3	243
8	NIP1;1, an Aquaporin Homolog, Determines the Arsenite Sensitivity of Arabidopsis thaliana. Journal of Biological Chemistry, 2009, 284, 2114-2120.	3.4	201
9	Novel type aquaporin SIPs are mainly localized to the ER membrane and show cell-specific expression inArabidopsis thaliana. FEBS Letters, 2005, 579, 5814-5820.	2.8	185
10	Isolation of Intact Vacuoles and Proteomic Analysis of Tonoplast from Suspension-Cultured Cells of Arabidopsis thaliana. Plant and Cell Physiology, 2004, 45, 672-683.	3.1	179
11	Interaction of the Trans-Frame Potyvirus Protein P3N-PIPO with Host Protein PCaP1 Facilitates Potyvirus Movement. PLoS Pathogens, 2012, 8, e1002639.	4.7	179
12	Keep an Eye on PPi: The Vacuolar-Type H+-Pyrophosphatase Regulates Postgerminative Development in<i>Arabidopsis</i>Â Â Â. Plant Cell, 2011, 23, 2895-2908.	6.6	178
13	Genes Involved in Osmoregulation during Turgor-Driven Cell Expansion of Developing Cotton Fibers Are Differentially Regulated1. Plant Physiology, 1998, 116, 1539-1549.	4.8	177
14	Loss of AtPDR8, a Plasma Membrane ABC Transporter of Arabidopsis thaliana, Causes Hypersensitive Cell Death Upon Pathogen Infection. Plant and Cell Physiology, 2006, 47, 309-318.	3.1	171
15	The protein storage vacuole. Journal of Cell Biology, 2001, 155, 991-1002.	5.2	169
16	AtHMA1 contributes to the detoxification of excess Zn(II) in Arabidopsis. Plant Journal, 2009, 58, 737-753.	5.7	167
17	iTRAQ Analysis Reveals Mechanisms of Growth Defects Due to Excess Zinc in Arabidopsis Â Â. Plant Physiology, 2011, 155, 1893-1907.	4.8	167
18	Deletion of a Histidine-rich Loop of AtMTP1, a Vacuolar Zn2+/H+ Antiporter of Arabidopsis thaliana, Stimulates the Transport Activity. Journal of Biological Chemistry, 2008, 283, 8374-8383.	3.4	164

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19	Mn tolerance in rice is mediated by MTP8.1, a member of the cation diffusion facilitator family. Journal of Experimental Botany, 2013, 64, 4375-4387.	4.8	163
20	Effect of salt and osmotic stresses on the expression of genes for the vacuolar H+-pyrophosphatase, H+-ATPase subunit A, and Na+/H+ antiporter from barley. Journal of Experimental Botany, 2004, 55, 585-594.	4.8	157
21	Characterization of major proteins in sweet potato tuberous roots. Phytochemistry, 1985, 24, 1899-1902.	2.9	154
22	Aquaporin Isoforms Responsive to Salt and Water Stresses and Phytohormones in Radish Seedlings. Plant and Cell Physiology, 2002, 43, 1229-1237.	3.1	142
23	Dynamic Aspects of Ion Accumulation by Vesicle Traffic Under Salt Stress in Arabidopsis. Plant and Cell Physiology, 2009, 50, 2023-2033.	3.1	130
24	Expanding roles of plant aquaporins in plasma membranes and cell organelles. Functional Plant Biology, 2008, 35, 1.	2.1	123
25	Tissue and Cell-Specific Localization of Rice Aquaporins and Their Water Transport Activities. Plant and Cell Physiology, 2008, 49, 30-39.	3.1	123
26	Increased Expression of Vacuolar Aquaporin and H+-ATPase Related to Motor Cell Function in Mimosa pudica L. Plant Physiology, 1997, 114, 827-834.	4.8	120
27	Characterization of the Major Integral Protein of Vacuolar Membrane. Plant Physiology, 1992, 98, 1248-1254.	4.8	114
28	Rapid increase of vacuolar volume in response to salt stress. Planta, 2003, 216, 397-402.	3.2	114
29	Rapid Structural Changes and Acidification of Guard Cell Vacuoles during Stomatal Closure Require Phosphatidylinositol 3,5-Bisphosphate Â. Plant Cell, 2013, 25, 2202-2216.	6.6	114
30	Characterization of fructose-bisphosphate aldolase regulated by gibberellin in roots of rice seedling. Plant Molecular Biology, 2004, 56, 839-848.	3.9	108
31	Water Channel Activity of Radish Plasma Membrane Aquaporins Heterologously Expressed in Yeast and Their Modification by Site-Directed Mutagenesis. Plant and Cell Physiology, 2004, 45, 823-830.	3.1	105
32	Dynamics of Vacuoles and H+-Pyrophosphatase Visualized by Monomeric Green Fluorescent Protein in<i>Arabidopsis</i>: Artifactual Bulbs and Native Intravacuolar Spherical Structures Â. Plant Cell, 2014, 26, 3416-3434.	6.6	104
33	A Mutant Strain Arabidopsis thaliana that Lacks Vacuolar Membrane Zinc Transporter MTP1 Revealed the Latent Tolerance to Excessive Zinc. Plant and Cell Physiology, 2009, 50, 1156-1170.	3.1	103
34	AtABCA9 transporter supplies fatty acids for lipid synthesis to the endoplasmic reticulum. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 773-778.	7.1	103
35	Characteristics of a root hair-less line of Arabidopsis thaliana under physiological stresses. Journal of Experimental Botany, 2014, 65, 1497-1512.	4.8	102
36	Effect of Low Root Temperature on Hydraulic Conductivity of Rice Plants and the Possible Role of Aquaporins. Plant and Cell Physiology, 2008, 49, 1294-1305.	3.1	101

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37	Mutagenic Analysis of Functional Residues in Putative Substrate-binding Site and Acidic Domains of Vacuolar H+-Pyrophosphatase. Journal of Biological Chemistry, 2001, 276, 7654-7660.	3.4	97
38	Accumulation of Vacuolar H+-Pyrophosphatase and H+-ATPase during Reformation of the Central Vacuole in Germinating Pumpkin Seeds. Plant Physiology, 1994, 106, 61-69.	4.8	95
39	Molecular Cloning of Vacuolar H+-Pyrophosphatase and Its Developmental Expression in Growing Hypocotyl of Mung Bean1. Plant Physiology, 1998, 116, 589-597.	4.8	93
40	The Involvement of Tonoplast Proton Pumps and Na+(K+)/H+ Exchangers in the Change of Petal Color During Flower Opening of Morning Glory, Ipomoea tricolor cv. Heavenly Blue. Plant and Cell Physiology, 2005, 46, 407-415.	3.1	93
41	Immunological detection of tonoplast polypeptides in the plasma membrane of pea cotyledons. Planta, 1996, 198, 95.	3.2	88
42	Subunit composition of vacuolar membrane H+-ATPase from mung bean. FEBS Journal, 1990, 187, 745-751.	0.2	84
43	H+-translocating inorganic pyrophosphatase of plant vacuoles Inhibition by Ca2+, stabilization by Mg2+ and immunological comparison with other inorganic pyrophosphatases. FEBS Journal, 1991, 196, 11-17.	0.2	83
44	<i>Arabidopsis</i> TWISTED DWARF1 Functionally Interacts with Auxin Exporter ABCB1 on the Root Plasma Membrane Â. Plant Cell, 2013, 25, 202-214.	6.6	83
45	Molecular Cloning, Water Channel Activity and Tissue Specific Expression of Two Isoforms of Radish Vacuolar Aquaporin1. Plant and Cell Physiology, 1998, 39, 905-913.	3.1	81
46	Changes in H+-Pumps and a Tonoplast Intrinsic Protein of Vacuolar Membranes during the Development of Pear Fruit. Plant and Cell Physiology, 1997, 38, 1039-1045.	3.1	79
47	Low Aquaporin Content and Low Osmotic Water Permeability of the Plasma and Vacuolar Membranes of a CAM Plant Graptopetalum paraguayense: Comparison with Radish. Plant and Cell Physiology, 2001, 42, 1119-1129.	3.1	78
48	Specificity of the accumulation of mRNAs and proteins of the plasma membrane and tonoplast aquaporins in radish organs. Planta, 2001, 212, 294-304.	3.2	77
49	A high molecular mass zinc transporter <scp>MTP</scp>12 forms a functional heteromeric complex with <scp>MTP</scp>5 in the Golgi in <i>ArabidopsisÂthaliana</i>. FEBS Journal, 2015, 282, 1965-1979.	4.7	77
50	Residues in Internal Repeats of the Rice Cation/H+ Exchanger Are Involved in the Transport and Selection of Cations. Journal of Biological Chemistry, 2004, 279, 812-819.	3.4	76
51	Deactivation of aquaporins decreases internal conductance to CO2 diffusion in tobacco leaves grown under long-term drought. Functional Plant Biology, 2008, 35, 553.	2.1	75
52	Activity of tonoplast proton pumps and Na+/H+ exchange in potato cell cultures is modulated by salt. Journal of Experimental Botany, 2009, 60, 1363-1374.	4.8	73
53	Mechanism of the Decline in Vacuolar H+ -ATPase Activity in Mung Bean Hypocotyls during Chilling. Plant Physiology, 1992, 100, 718-722.	4.8	72
54	Characterization of a Tobacco TPK-type K+ Channel as a Novel Tonoplast K+ Channel Using Yeast Tonoplasts. Journal of Biological Chemistry, 2008, 283, 1911-1920.	3.4	72

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55	Subcellular localization of Strboh proteins and NADPH-dependent O2â ˆ’-generating activity in potato tuber tissues. Journal of Experimental Botany, 2006, 57, 1373-1379.	4.8	69
56	Molecular cloning and nucleotide sequence of cDNA for sporamin, the major soluble protein of sweet potato tuberous roots. Plant Molecular Biology, 1985, 5, 313-320.	3.9	67
57	Molecular Cloning of cDNA for Vacuolar Membrane Proton-Translocating Inorganic Pyrophosphatase in Hordeum vulgare. Biochemical and Biophysical Research Communications, 1993, 190, 1110-1114.	2.1	67
58	Expression Profile of the Genes for Rice Cation/H+ Exchanger Family and Functional Analysis in Yeast. Plant and Cell Physiology, 2005, 46, 1735-1740.	3.1	66
59	Functional expression of mung bean Ca2+/H+ antiporter in yeast and its intracellular localization in the hypocotyl and tobacco cells. FEBS Journal, 2000, 267, 3090-3098.	0.2	65
60	Properties and molecular cloning of Ca2+/H+ antiporter in the vacuolar membrane of mung bean. FEBS Journal, 1999, 262, 417-425.	0.2	64
61	Aquaporin NIP2;1 is Mainly Localized to the ER Membrane and Shows Root-Specific Accumulation in Arabidopsis thaliana. Plant and Cell Physiology, 2006, 47, 1420-1426.	3.1	63
62	An Arabidopsis Hydrophilic Ca2+-Binding Protein with a PEVK-Rich Domain, PCaP2, is Associated with the Plasma Membrane and Interacts with Calmodulin and Phosphatidylinositol Phosphates. Plant and Cell Physiology, 2010, 51, 366-379.	3.1	63
63	Analysis of the Substrate Binding Site and Carboxyl Terminal Region of Vacuolar H+-Pyrophosphatase of Mung Bean with Peptide Antibodies. Journal of Biochemistry, 1997, 122, 883-889.	1.7	59
64	Quantification, Organ-Specific Accumulation and Intracellular Localization of Type II H+-Pyrophosphatase in Arabidopsis thaliana. Plant and Cell Physiology, 2010, 51, 1350-1360.	3.1	58
65	Purification and characterization of sweet potato cytochrome c oxidase. Archives of Biochemistry and Biophysics, 1978, 187, 423-430.	3.0	56
66	A hydrophilic cationâ€•binding protein of <i>Arabidopsisâ€ƒthaliana</i>, AtPCaP1, is localized to plasma membrane via <i>N</i>â€•myristoylation and interacts with calmodulin and the phosphatidylinositol phosphates PtdIns(3,4,5)<i>P</i>₃ and PtdIns(3,5)<i>P</i>₂. FEBS Journal, 2008, 275, 2267-2282.	4.7	56
67	Purification and Properties of Glyoxysomal Lipase from Castor Bean. Plant Physiology, 1985, 79, 489-493.	4.8	55
68	Expression and distribution of a vacuolar aquaporin in young and mature leaf tissues of Brassica napus in relation to water fluxes. Planta, 2001, 212, 270-278.	3.2	52
69	Differences in Aquaporin Levels among Cell Types of Radish and Measurement of Osmotic Water Permeability of Individual Protoplasts. Plant and Cell Physiology, 2003, 44, 277-286.	3.1	51
70	Synchrony between flower opening and petal-color change from red to blue in morning glory, Ipomoea tricolor cv. Heavenly Blue. Proceedings of the Japan Academy Series B: Physical and Biological Sciences, 2009, 85, 187-197.	3.8	51
71	Studies on Vacuolar Membrane Microdomains Isolated from Arabidopsis Suspension-Cultured Cells: Local Distribution of Vacuolar Membrane Proteins. Plant and Cell Physiology, 2013, 54, 1571-1584.	3.1	50
72	Membrane Topology of the H+-pyrophosphatase of Streptomyces coelicolor Determined by Cysteine-scanning Mutagenesis. Journal of Biological Chemistry, 2004, 279, 35106-35112.	3.4	49

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73	Proton pumps of the vacuolar membrane in growing plant cells. Journal of Plant Research, 1996, 109, 119-125.	2.4	47
74	Expression of the Vacuolar Ca2+/H+ Exchanger, OsCAX1a, in Rice: Cell and Age Specificity of Expression, and Enhancement by Ca2+. Plant and Cell Physiology, 2006, 47, 96-106.	3.1	47
75	ER membrane aquaporins in plants. Pflugers Archiv European Journal of Physiology, 2008, 456, 709-716.	2.8	47
76	Pyrophosphate inhibits gluconeogenesis by restricting UDP-glucose formation in vivo. Scientific Reports, 2018, 8, 14696.	3.3	46
77	Dimeric structure of H+-translocating pyrophosphatase from pumpkin vacuolar membranes. FEBS Letters, 1991, 290, 177-180.	2.8	44
78	The Small GTPase Rab5a Is Essential for Intracellular Transport of Proglutelin from the Golgi Apparatus to the Protein Storage Vacuole and Endosomal Membrane Organization in Developing Rice Endosperm Â Â Â. Plant Physiology, 2011, 157, 632-644.	4.8	44
79	Vacuolar H⁺-Pyrophosphatase and Cytosolic Soluble Pyrophosphatases Cooperatively Regulate Pyrophosphate Levels in <i>Arabidopsis thaliana</i>. Plant Cell, 2018, 30, 1040-1061.	6.6	44
80	Contribution of the Plasma Membrane and Central Vacuole in the Formation of Autolysosomes in Cultured Tobacco Cells. Plant and Cell Physiology, 2004, 45, 951-957.	3.1	43
81	Molecular properties of a novel, hydrophilic cation-binding protein associated with the plasma membrane. Journal of Experimental Botany, 2007, 58, 1173-1183.	4.8	43
82	Amino acid screening based on structural modeling identifies critical residues for the function, ion selectivity and structure of Arabidopsis MTP1. FEBS Journal, 2012, 279, 2339-2356.	4.7	43
83	Purification, Properties, and Molecular Cloning of a Novel Ca2+-Binding Protein in Radish Vacuoles. Plant Physiology, 2000, 124, 1069-1078.	4.8	41
84	Vacuolar Proton Pumps and Aquaporins Involved in Rapid Internode Elongation of Deepwater Rice. Bioscience, Biotechnology and Biochemistry, 2011, 75, 114-122.	1.3	41
85	Oligomeric structure of H+-translocating inorganic pyrophosphatase of plant vacuoles. Biochemical and Biophysical Research Communications, 1990, 168, 1157-1162.	2.1	40
86	The Ca²⁺â€binding protein <scp>PC</scp>aP2 located on the plasma membrane is involved in root hair development as a possible signal transducer. Plant Journal, 2013, 74, 690-700.	5.7	40
87	Patch Clamp Analysis of a H+ Pump Heterologously Expressed in Giant Yeast Vacuoles. Journal of Biochemistry, 2003, 134, 615-623.	1.7	34
88	Response of the plant root to aluminum stress: Analysis of the inhibition of the root elongation and changes in membrane function. Journal of Plant Research, 1996, 109, 99-105.	2.4	32
89	Tissue Specificity of E Subunit Isoforms of Plant Vacuolar H+-ATPase and Existence of Isotype Enzymes. Journal of Biological Chemistry, 2000, 275, 6515-6522.	3.4	32
90	Molecular Cloning of Vacuolar H+-pyrophosphatase and Its Expression during the Development of Pear Fruit. Plant and Cell Physiology, 1999, 40, 900-904.	3.1	28

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91	The Activity of the Root Vacuolar H+-Pyrophosphatase in Rye Plants Grown under Conditions Deficient in Mineral Nutrients. Plant and Cell Physiology, 1998, 39, 890-894.	3.1	26
92	The Distribution of Aquaporin Subtypes (PIP1, PIP2 and Î³-TIP) is Tissue Dependent in Soybean (Glycine max) Root Nodules. Annals of Botany, 2005, 96, 457-460.	2.9	26
93	Zincâ€binding and structural properties of the histidineâ€rich loop of <i>Arabidopsis thaliana</i> vacuolar membrane zinc transporter MTP1. FEBS Open Bio, 2013, 3, 218-224.	2.3	26
94	PCaPs, possible regulators of PtdInsP signals on plasma membrane. Plant Signaling and Behavior, 2010, 5, 848-850.	2.4	25
95	Molecular cloning and sequencing of the cDNA for vacuolar H+-pyrophosphatase from Chara corallina1The nucleotide sequence data reported in this paper will appear in the DDBJ/EMBL/GenBank nucleotide sequence databases with the accession number AB018529.1. Biochimica Et Biophysica Acta - Biomembranes, 1999, 1418, 245-250.	2.6	21
96	Transcriptional Induction of Two Genes for CCaPs, Novel Cytosolic Proteins, in Arabidopsis thaliana in the Dark. Plant and Cell Physiology, 2006, 48, 54-65.	3.1	3