Amane Makino

List of Publications by Year
in descending order

95 papers	7,847 citations	44042 48 h-index	51562 86 g-index
96 all docs	96 docs citations	96 times ranked	8000 citing authors

#	Article	IF	Citations
1	Photosynthesis, Grain Yield, and Nitrogen Utilization in Rice and Wheat. Plant Physiology, 2011, 155, 125-129.	2.3	416
2	Effects of Nitrogen Nutrition on Nitrogen Partitioning between Chloroplasts and Mitochondria in Pea and Wheat. Plant Physiology, 1991, 96, 355-362.	2.3	353
3	Mobilization of Rubisco and Stroma-Localized Fluorescent Proteins of Chloroplasts to the Vacuole by an<i>ATG</i>Gene-Dependent Autophagic Process Â. Plant Physiology, 2008, 148, 142-155.	2.3	325
4	Autophagy Plays a Role in Chloroplast Degradation during Senescence in Individually Darkened Leaves Â Â. Plant Physiology, 2009, 149, 885-893.	2.3	313
5	A physiological role of cyclic electron transport around photosystem I in sustaining photosynthesis under fluctuating light in rice. Scientific Reports, 2016, 6, 20147.	1.6	237
6	Differences between wheat and rice in the enzymic properties of ribulose-1,5-bisphosphate carboxylase/oxygenase and the relationship to photosynthetic gas exchange. Planta, 1988, 174, 30-38.	1.6	227
7	Rubisco activase is a key regulator of nonâ€steadyâ€state photosynthesis at any leaf temperature and, to a lesser extent, of steadyâ€state photosynthesis at high temperature. Plant Journal, 2012, 71, 871-880.	2.8	220
8	Rice cultivar responses to elevated CO2 at two free-air CO2 enrichment (FACE) sites in Japan. Functional Plant Biology, 2013, 40, 148.	1.1	213
9	Cyclic electron flow around photosystem I via chloroplast NAD(P)H dehydrogenase (NDH) complex performs a significant physiological role during photosynthesis and plant growth at low temperature in rice. Plant Journal, 2011, 68, 966-976.	2.8	211
10	Photosynthesis and Ribulose 1,5-Bisphosphate Carboxylase in Rice Leaves. Plant Physiology, 1983, 73, 1002-1007.	2.3	202
11	Distinctive Responses of Ribulose-1,5-Bisphosphate Carboxylase and Carbonic Anhydrase in Wheat Leaves to Nitrogen Nutrition and their Possible Relationships to CO₂-Transfer Resistance. Plant Physiology, 1992, 100, 1737-1743.	2.3	199
12	Os-<i>GIGANTEA</i> Confers Robust Diurnal Rhythms on the Global Transcriptome of Rice in the Field Â Â. Plant Cell, 2011, 23, 1741-1755.	3.1	184
13	Physiological Functions of the Waterâ€"Water Cycle (Mehler Reaction) and the Cyclic Electron Flow around PSI in Rice Leaves. Plant and Cell Physiology, 2002, 43, 1017-1026.	1.5	176
14	OsATG7 is required for autophagy-dependent lipid metabolism in rice postmeiotic anther development. Autophagy, 2014, 10, 878-888.	4.3	176
15	Exclusion of Ribulose-1,5-bisphosphate Carboxylase/oxygenase from Chloroplasts by Specific Bodies in Naturally Senescing Leaves of Wheat. Plant and Cell Physiology, 2003, 44, 914-921.	1.5	175
16	The rateâ€limiting step for CO₂ assimilation at different temperatures is influenced by the leaf nitrogen content in several C₃ crop species. Plant, Cell and Environment, 2011, 34, 764-777.	2.8	150
17	Differences between Maize and Rice in N-use Efficiency for Photosynthesis and Protein Allocation. Plant and Cell Physiology, 2003, 44, 952-956.	1.5	149
18	Repetitive Short-Pulse Light Mainly Inactivates Photosystem I in Sunflower Leaves. Plant and Cell Physiology, 2014, 55, 1184-1193.	1.5	148

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19	Differences Between Rice and Wheat in Temperature Responses of Photosynthesis and Plant Growth. Plant and Cell Physiology, 2009, 50, 744-755.	1.5	137
20	Autophagy Supports Biomass Production and Nitrogen Use Efficiency at the Vegetative Stage in Rice. Plant Physiology, 2015, 168, 60-73.	2.3	130
21	Leaf photosynthesis, plant growth and nitrogen allocation in rice under different irradiances. Planta, 1997, 203, 390-398.	1.6	128
22	Enhanced leaf photosynthesis as a target to increase grain yield: insights from transgenic rice lines with variable Rieske FeS protein content in the cytochrome <i>b</i>₆/<i>f</i> complex. Plant, Cell and Environment, 2016, 39, 80-87.	2.8	125
23	Autophagy Contributes to Nighttime Energy Availability for Growth in Arabidopsis Â Â. Plant Physiology, 2013, 161, 1682-1693.	2.3	124
24	Increased Rubisco Content in Transgenic Rice Transformed with the â€˜Senseâ€™ rbcS Gene. Plant and Cell Physiology, 2007, 48, 626-637.	1.5	119
25	New insights into the cellular mechanisms of plant growth at elevated atmospheric carbon dioxide concentrations. Plant, Cell and Environment, 2018, 41, 1233-1246.	2.8	118
26	Roles of autophagy in chloroplast recycling. Biochimica Et Biophysica Acta - Bioenergetics, 2014, 1837, 512-521.	0.5	110
27	Photosynthetic Characteristics of Rice Leaves Aged under Different Irradiances from Full Expansion through Senescence. Plant Physiology, 1991, 97, 1287-1293.	2.3	109
28	Transgenic rice overproducing Rubisco exhibits increased yields with improved nitrogen-use efficiency in an experimental paddy field. Nature Food, 2020, 1, 134-139.	6.2	107
29	Light-dependent fragmentation of the large subunit of ribulose-1,5-bisphosphate carboxylase/oxygenase in chloroplasts isolated from wheat leaves. Planta, 1998, 204, 305-309.	1.6	101
30	RBCS1A and RBCS3B, two major members within the Arabidopsis RBCS multigene family, function to yield sufficient Rubisco content for leaf photosynthetic capacity. Journal of Experimental Botany, 2012, 63, 2159-2170.	2.4	98
31	Rubisco and nitrogen relationships in rice: Leaf photosynthesis and plant growth. Soil Science and Plant Nutrition, 2003, 49, 319-327.	0.8	97
32	Establishment of Monitoring Methods for Autophagy in Rice Reveals Autophagic Recycling of Chloroplasts and Root Plastids during Energy Limitation. Plant Physiology, 2015, 167, 1307-1320.	2.3	97
33	Enzymic Properties of Ribulose-1,5-bisphosphate Carboxylase/Oxygenase Purified from Rice Leaves. Plant Physiology, 1985, 79, 57-61.	2.3	94
34	Rubisco content and photosynthesis of leaves at different positions in transgenic rice with an overexpression of <i>RBCS</i>. Plant, Cell and Environment, 2009, 32, 417-427.	2.8	92
35	Flavodiiron Protein Substitutes for Cyclic Electron Flow without Competing CO₂ Assimilation in Rice. Plant Physiology, 2018, 176, 1509-1518.	2.3	91
36	Temperature Response of Photosynthesis in Transgenic Rice Transformed with â€˜Senseâ€™ or â€˜Antisenseâ€™ rbcS. Plant and Cell Physiology, 2007, 48, 1472-1483.	1.5	86

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37	A large-grain rice cultivar, Akita 63, exhibits high yields with high physiological N-use efficiency. Field Crops Research, 2006, 97, 227-237.	2.3	85
38	Photosynthesis, plant growth and N allocation in transgenic rice plants with decreased Rubisco under CO2 enrichment. Journal of Experimental Botany, 2000, 51, 383-389.	2.4	83
39	Evidence for contribution of autophagy to <scp>R</scp>ubisco degradation during leaf senescence in <i><scp>A</scp>rabidopsis thaliana</i>. Plant, Cell and Environment, 2013, 36, 1147-1159.	2.8	79
40	FLAVODIIRON2 and FLAVODIIRON4 Proteins Mediate an Oxygen-Dependent Alternative Electron Flow in <i>Synechocystis</i> sp. PCC 6803 under CO2-Limited Conditions Â. Plant Physiology, 2015, 167, 472-480.	2.3	77
41	New insight into photosynthetic acclimation to elevated CO2: The role of leaf nitrogen and ribulose-1,5-bisphosphate carboxylase/oxygenase content in rice leaves. Environmental and Experimental Botany, 2011, 71, 128-136.	2.0	76
42	PGR5-Dependent Cyclic Electron Transport Around PSI Contributes to the Redox Homeostasis in Chloroplasts Rather Than CO2 Fixation and Biomass Production in Rice. Plant and Cell Physiology, 2012, 53, 2117-2126.	1.5	68
43	Responses of the Photosynthetic Electron Transport Reactions Stimulate the Oxidation of the Reaction Center Chlorophyll of Photosystem I, P700, under Drought and High Temperatures in Rice. International Journal of Molecular Sciences, 2019, 20, 2068.	1.8	63
44	Overexpression of both Rubisco and Rubisco activase rescues rice photosynthesis and biomass under heat stress. Plant, Cell and Environment, 2021, 44, 2308-2320.	2.8	63
45	Colorimetric Measurement of Protein Stained with Coomassie Brilliant Blue R on Sodium Dodecyl Sulfate-Polyacrylamide Gel Electrophoresis by Eluting with Formamide. Agricultural and Biological Chemistry, 1986, 50, 1911-1912.	0.3	61
46	In vivo Fragmentation of the Large Subunit of Ribulose-1,5-Bisphosphate Carboxylase by Reactive Oxygen Species in an Intact Leaf of Cucumber under Chilling-light Conditions. Plant and Cell Physiology, 2006, 47, 270-276.	1.5	55
47	Availability of Rubisco Small Subunit Up-Regulates the Transcript Levels of Large Subunit for Stoichiometric Assembly of Its Holoenzyme in Rice. Plant Physiology, 2012, 160, 533-540.	2.3	55
48	Effect of individual suppression of <i>RBCS</i> multigene family on Rubisco contents in rice leaves. Plant, Cell and Environment, 2012, 35, 546-553.	2.8	52
49	Differences in Expression of the RBCS Multigene Family and Rubisco Protein Content in Various Rice Plant Tissues at Different Growth Stages. Plant and Cell Physiology, 2009, 50, 1851-1855.	1.5	51
50	Metabolome analysis of photosynthesis and the related primary metabolites in the leaves of transgenic rice plants with increased or decreased Rubisco content. Plant, Cell and Environment, 2012, 35, 1369-1379.	2.8	50
51	Nitrogen accumulation in the inferior spikelet of rice ear during ripening. Soil Science and Plant Nutrition, 1992, 38, 517-525.	0.8	45
52	Land plants drive photorespiration as higher electronâ€sink: comparative study of postâ€illumination transient <scp>O₂</scp>â€uptake rates from liverworts to angiosperms through ferns and gymnosperms. Physiologia Plantarum, 2017, 161, 138-149.	2.6	45
53	Variations in the Contents and Kinetic Properties of Ribulose-1,5-bisphosphate Carboxylases among Rice Species. Plant and Cell Physiology, 1987, 28, 799-804.	1.5	44
54	Effects of co-overexpression of the genes of Rubisco and transketolase on photosynthesis in rice. Photosynthesis Research, 2017, 131, 281-289.	1.6	43

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55	A Small Decrease in Rubisco Content by Individual Suppression of RBCS Genes Leads to Improvement of Photosynthesis and Greater Biomass Production in Rice Under Conditions of Elevated CO2. Plant and Cell Physiology, 2017, 58, 635-642.	1.5	41
56	Solubilization of ribulose-1,5-bisphosphate carboxylase from the membrane fraction of pea leaves. Photosynthesis Research, 1991, 29, 79-85.	1.6	38
57	O2-dependent large electron flow functioned as an electron sink, replacing the steady-state electron flux in photosynthesis in the cyanobacterium <i>Synechocystis</i> sp. PCC 6803, but not in the cyanobacterium <i>Synechococcus</i> sp. PCC 7942. Bioscience, Biotechnology and Biochemistry, 2014, 78, 384-393.	0.6	35
58	Photorespiration provides the chance of cyclic electron flow to operate for the redox-regulation of P700 in photosynthetic electron transport system of sunflower leaves. Photosynthesis Research, 2016, 129, 279-290.	1.6	35
59	Translational downregulation of RBCL is operative in the coordinated expression of Rubisco genes in senescent leaves in rice. Journal of Experimental Botany, 2013, 64, 1145-1152.	2.4	34
60	Phosphorus toxicity disrupts Rubisco activation and reactive oxygen species defence systems by phytic acid accumulation in leaves. Plant, Cell and Environment, 2020, 43, 2033-2053.	2.8	32
61	Postâ€illumination transient <scp>O₂</scp>â€uptake is driven by photorespiration in tobacco leaves. Physiologia Plantarum, 2016, 156, 227-238.	2.6	30
62	Whole-Plant Growth and N Utilization in Transgenic Rice Plants with Increased or Decreased Rubisco Content under Different CO2 Partial Pressures. Plant and Cell Physiology, 2014, 55, 1905-1911.	1.5	29
63	Oxidation of P700 Induces Alternative Electron Flow in Photosystem I in Wheat Leaves. Plants, 2019, 8, 152.	1.6	29
64	Co-overproducing Rubisco and Rubisco activase enhances photosynthesis in the optimal temperature range in rice. Plant Physiology, 2021, 185, 108-119.	2.3	25
65	Effect of nitrogen, phosphorus or potassium on the photosynthetic rate and ribulose-1,5-bisphosphate carboxylase content in rice leaves during expansion. Soil Science and Plant Nutrition, 1984, 30, 63-70.	0.8	24
66	Effects of Overproduction of Rubisco Activase on Rubisco Content in Transgenic Rice Grown at Different N Levels. International Journal of Molecular Sciences, 2020, 21, 1626.	1.8	24
67	Effects of genetic manipulation of the activity of photorespiration on the redox state of photosystem I and its robustness against excess light stress under CO2-limited conditions in rice. Photosynthesis Research, 2018, 137, 431-441.	1.6	23
68	Differential Expression of Genes of the Calvinâ€“Benson Cycle and its Related Genes During Leaf Development in Rice. Plant and Cell Physiology, 2016, 57, 115-124.	1.5	22
69	High yielding ability of a large-grain rice cultivar, Akita 63. Scientific Reports, 2020, 10, 12231.	1.6	21
70	Overproduction of Chloroplast Glyceraldehyde-3-Phosphate Dehydrogenase Improves Photosynthesis Slightly under Elevated [CO2] Conditions in Rice. Plant and Cell Physiology, 2021, 62, 156-165.	1.5	21
71	Overproduction of PGR5 enhances the electron sink downstream of photosystem I in a C₄ plant, <i>Flaveria bidentis</i>. Plant Journal, 2020, 103, 814-823.	2.8	20
72	Photosynthesis improvement for enhancing productivity in rice. Soil Science and Plant Nutrition, 2021, 67, 513-519.	0.8	20

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73	Photorespiration Coupled With CO2 Assimilation Protects Photosystem I From Photoinhibition Under Moderate Poly(Ethylene Glycol)-Induced Osmotic Stress in Rice. Frontiers in Plant Science, 2020, 11, 1121.	1.7	19
74	Relationship between Rubisco activase and Rubisco contents in transgenic rice plants with overproduced or decreased Rubisco content. Soil Science and Plant Nutrition, 2018, 64, 352-359.	0.8	18
75	Intrinsic Fluctuations in Transpiration Induce Photorespiration to Oxidize P700 in Photosystem I. Plants, 2020, 9, 1761.	1.6	15
76	P700 oxidation suppresses the production of reactive oxygen species in photosystem I. Advances in Botanical Research, 2020, 96, 151-176.	0.5	15
77	Photosynthetic Enhancement, Lifespan Extension, and Leaf Area Enlargement in Flag Leaves Increased the Yield of Transgenic Rice Plants Overproducing Rubisco Under Sufficient N Fertilization. Rice, 2022, 15, 10.	1.7	14
78	Effects of co-overproduction of sedoheptulose-1,7-bisphosphatase and Rubisco on photosynthesis in rice. Soil Science and Plant Nutrition, 2019, 65, 36-40.	0.8	13
79	Photochemistry of Photosystems II and I in Rice Plants Grown under Different N Levels at Normal and High Temperature. Plant and Cell Physiology, 2021, 62, 1121-1130.	1.5	13
80	Suppression of chloroplast triose phosphate isomerase evokes inorganic phosphate-limited photosynthesis in rice. Plant Physiology, 2022, 188, 1550-1562.	2.3	13
81	Impacts of autophagy on nitrogen use efficiency in plants. Soil Science and Plant Nutrition, 2018, 64, 100-105.	0.8	11
82	Whole-plant growth and N allocation in transgenic rice plants with decreased content of ribulose-1,5-bisphosphate carboxylase under different CO2 partial pressures. Functional Plant Biology, 2000, 27, 1.	1.1	10
83	O2-enhanced induction of photosynthesis in rice leaves: the Mehler-ascorbate peroxidase (MAP) pathway drives cyclic electron flow within PSII and cyclic electron flow around PSI. Soil Science and Plant Nutrition, 2012, 58, 718-727.	0.8	8
84	Effects of co-overproduction of Rubisco and chloroplast glyceraldehyde-3-phosphate dehydrogenase on photosynthesis in rice. Soil Science and Plant Nutrition, 2021, 67, 283-287.	0.8	8
85	Oxidation of the reaction center chlorophyll of photosystem I is induced via close cooperation of photosystems II and I with progress of drought stress in soybean seedlings. Soil Science and Plant Nutrition, 2021, 67, 662-669.	0.8	8
86	Expression of flavodiiron protein rescues defects in electron transport around PSI resulting from overproduction of Rubisco activase in rice. Journal of Experimental Botany, 2022, 73, 2589-2600.	2.4	7
87	Effect of sodium dodecylsulfate on the degradation of ribulose-1,5-bisphosphate carboxylase/oxygenase in the extract of rice (<i>Oryza sativa</i>L.) leaves. Soil Science and Plant Nutrition, 1990, 36, 91-96.	0.8	6
88	Manganese toxicity disrupts indole acetic acid homeostasis and suppresses the CO2 assimilation reaction in rice leaves. Scientific Reports, 2021, 11, 20922.	1.6	6
89	The <i>gs3</i> allele from a largeâ€grain rice cultivar, Akita 63, increases yield and improves nitrogenâ€use efficiency. Plant Direct, 2022, 6, .	0.8	6
90	O2supports 3-phosphoglycerate-dependent O2evolution in chloroplasts from spinach leaves. Soil Science and Plant Nutrition, 2012, 58, 462-468.	0.8	5

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91	Cyclic electron flow around PSI functions in the photoinhibited rice leaves. Soil Science and Plant Nutrition, 2011, 57, 105-113.	0.8	4
92	Contribution of the grain size QTL <i>GS3</i> to yield properties and physiological nitrogen-use efficiency in the large-grain rice cultivar â€˜Akita 63â€™. Breeding Science, 2022, 72, 124-131.	0.9	4
93	Effects of suppression of chloroplast phosphoglycerate kinase on photosynthesis in rice. Photosynthesis Research, 2022, 153, 83-91.	1.6	4
94	GFS9 Affects Piecemeal Autophagy of Plastids in Young Seedlings of<i>Arabidopsis thaliana</i>. Plant and Cell Physiology, 2021, 62, 1372-1386.	1.5	3
95	Effects of overexpression of the Rubisco small subunit gene under the control of the Rubisco activase promoter on Rubisco contents of rice leaves at different positions. Soil Science and Plant Nutrition, 2020, 66, 569-578.	0.8	2