

Hidemitsu Sakai

List of Publications by Year in descending order

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Version: 2024-02-01

60
papers

3,146
citations

185998

28
h-index

155451

55
g-index

60
all docs

60
docs citations

60
times ranked

3320
citing authors

#	ARTICLE	IF	CITATIONS
1	Increasing CO ₂ threatens human nutrition. <i>Nature</i> , 2014, 510, 139-142.	13.7	1,024
2	Rice cultivar responses to elevated CO ₂ at two free-air CO ₂ enrichment (FACE) sites in Japan. <i>Functional Plant Biology</i> , 2013, 40, 148.	1.1	213
3	Interactions of elevated [CO ₂] and night temperature on rice growth and yield. <i>Agricultural and Forest Meteorology</i> , 2009, 149, 51-58.	1.9	179
4	Combined effects of elevated [CO ₂] and high night temperature on carbon assimilation, nitrogen absorption, and the allocations of C and N by rice (<i>Oryza sativa</i> L.). <i>Agricultural and Forest Meteorology</i> , 2010, 150, 1174-1181.	1.9	91
5	Rice grain yield and quality responses to free-air CO ₂ enrichment combined with soil and water warming. <i>Global Change Biology</i> , 2016, 22, 1256-1270.	4.2	86
6	Effects of Elevated Atmospheric CO ₂ Concentrations on CH ₄ and N ₂ O Emission from Rice Soil: An Experiment in Controlled-environment Chambers. <i>Biogeochemistry</i> , 2006, 77, 351-373.	1.7	83
7	Rice carbon balance under elevated CO ₂ . <i>New Phytologist</i> , 2001, 150, 241-249.	3.5	69
8	Impacts of elevated atmospheric CO ₂ on nutrient content of important food crops. <i>Scientific Data</i> , 2015, 2, 150036.	2.4	66
9	A meta-analysis of leaf nitrogen distribution within plant canopies. <i>Annals of Botany</i> , 2016, 118, 239-247.	1.4	66
10	Response of soil, leaf endosphere and phyllosphere bacterial communities to elevated CO ₂ and soil temperature in a rice paddy. <i>Plant and Soil</i> , 2015, 392, 27-44.	1.8	58
11	Do the Rich Always Become Richer? Characterizing the Leaf Physiological Response of the High-Yielding Rice Cultivar Takanari to Free-Air CO ₂ Enrichment. <i>Plant and Cell Physiology</i> , 2014, 55, 381-391.	1.5	57
12	Effects of elevated carbon dioxide concentration on biological nitrogen fixation, nitrogen mineralization and carbon decomposition in submerged rice soil. <i>Biology and Fertility of Soils</i> , 2001, 34, 7-13.	2.3	56
13	CH ₄ emission with differences in atmospheric CO ₂ enrichment and rice cultivars in a Japanese paddy soil. <i>Global Change Biology</i> , 2008, 14, 2678-2687.	4.2	51
14	Heat-tolerant rice cultivars retain grain appearance quality under free-air CO ₂ enrichment. <i>Rice</i> , 2014, 7, 6.	1.7	50
15	The effects of free-air CO ₂ enrichment (FACE) on carbon and nitrogen accumulation in grains of rice (<i>Oryza sativa</i> L.). <i>Journal of Experimental Botany</i> , 2013, 64, 3179-3188.	2.4	49
16	Increasing canopy photosynthesis in rice can be achieved without a large increase in water use: A model based on free-air CO ₂ enrichment. <i>Global Change Biology</i> , 2018, 24, 1321-1341.	4.2	47
17	Performance of the enlarged Rice-FACE system using pure CO ₂ installed in Tsukuba, Japan. <i>J Agricultural Meteorology</i> , 2012, 68, 15-23.	0.8	47
18	Grain growth of different rice cultivars under elevated CO ₂ concentrations affects yield and quality. <i>Field Crops Research</i> , 2015, 179, 72-80.	2.3	45

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19	Quantitative trait loci for large sink capacity enhance rice grain yield under free-air CO ₂ enrichment conditions. <i>Scientific Reports</i> , 2017, 7, 1827.	1.6	43
20	Increased night temperature reduces the stimulatory effect of elevated carbon dioxide concentration on methane emission from rice paddy soil. <i>Global Change Biology</i> , 2008, 14, 644-656.	4.2	42
21	Rice plant response to long term CO ₂ enrichment: Gene expression profiling. <i>Plant Science</i> , 2009, 177, 203-210.	1.7	41
22	Soil and Water Warming Accelerates Phenology and Down-Regulation of Leaf Photosynthesis of Rice Plants Grown Under Free-Air CO ₂ Enrichment (FACE). <i>Plant and Cell Physiology</i> , 2014, 55, 370-380.	1.5	41
23	Effects of Elevated Carbon Dioxide, Elevated Temperature, and Rice Growth Stage on the Community Structure of Rice Root-Associated Bacteria. <i>Microbes and Environments</i> , 2014, 29, 184-190.	0.7	41
24	Response of the floating aquatic fern <i>Azolla filiculoides</i> to elevated CO ₂ , temperature, and phosphorus levels. <i>Hydrobiologia</i> , 2010, 656, 5-14.	1.0	39
25	Differential response of rice plants to high night temperatures imposed at varying developmental phases. <i>Agricultural and Forest Meteorology</i> , 2015, 209-210, 69-77.	1.9	38
26	Elevated atmospheric CO ₂ levels affect community structure of rice root-associated bacteria. <i>Frontiers in Microbiology</i> , 2015, 6, 136.	1.5	38
27	A High-Yielding Rice Cultivar ‘Takanari’ Shows No N Constraints on CO ₂ Fertilization. <i>Frontiers in Plant Science</i> , 2019, 10, 361.	1.7	31
28	How elevated CO ₂ affects our nutrition in rice, and how we can deal with it. <i>PLoS ONE</i> , 2019, 14, e0212840.	1.1	31
29	Yield responses to elevated CO ₂ concentration among Japanese rice cultivars released since 1882. <i>Plant Production Science</i> , 2019, 22, 352-366.	0.9	30
30	Influence of elevated concentrations of atmospheric CO ₂ on CH ₄ and CO ₂ entrapped in rice-paddy soil. <i>Chemical Geology</i> , 2005, 218, 15-24.	1.4	27
31	Characterization of Leaf Blade- and Leaf Sheath-Associated Bacterial Communities and Assessment of Their Responses to Environmental Changes in CO ₂ , Temperature, and Nitrogen Levels under Field Conditions. <i>Microbes and Environments</i> , 2015, 30, 51-62.	0.7	24
32	Effect of Elevated CO ₂ Concentration, Elevated Temperature and No Nitrogen Fertilization on Methanogenic Archaeal and Methane-Oxidizing Bacterial Community Structures in Paddy Soil. <i>Microbes and Environments</i> , 2016, 31, 349-356.	0.7	23
33	Vulnerability of lodging risk to elevated CO ₂ and increased soil temperature differs between rice cultivars. <i>European Journal of Agronomy</i> , 2013, 46, 20-24.	1.9	22
34	Rice Free-Air Carbon Dioxide Enrichment Studies to Improve Assessment of Climate Change Effects on Rice Agriculture. <i>Advances in Agricultural Systems Modeling</i> , 2016, , 45-68.	0.3	22
35	Elevated temperature has stronger effects on the soil food web of a flooded paddy than does CO ₂ . <i>Soil Biology and Biochemistry</i> , 2014, 70, 166-175.	4.2	20
36	Effect of CO ₂ Enrichment on the Translocation and Partitioning of Carbon at the Early Grain-filling Stage in Rice (<i>Oryza sativa</i> L.). <i>Plant Production Science</i> , 2005, 8, 8-15.	0.9	19

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37	Interactive Effects of Elevated Atmospheric CO ₂ and Waterlogging on Vegetative Growth of Soybean (<i>Glycine max</i> (L.) Merr.). <i>Plant Production Science</i> , 2012, 15, 238-245.	0.9	16
38	Effects of elevated [CO ₂] on stem and root lodging among rice cultivars. <i>Science Bulletin</i> , 2013, 58, 1787-1794.	1.7	16
39	Planting geometry as a pre-screening technique for identifying CO ₂ responsive rice genotypes: a case study of panicle number. <i>Physiologia Plantarum</i> , 2014, 152, 520-528.	2.6	16
40	Nitrogen Distribution in Leaf Canopies of High-Yielding Rice Cultivar Takanari. <i>Crop Science</i> , 2017, 57, 2080-2088.	0.8	16
41	Effects of Elevated Atmospheric CO ₂ on Respiratory Rates in Mature Leaves of Two Rice Cultivars Grown at a Free-Air CO ₂ Enrichment Site and Analyses of the Underlying Mechanisms. <i>Plant and Cell Physiology</i> , 2018, 59, 637-649.	1.5	16
42	Five-year soil warming changes soil C and N dynamics in a single rice paddy field in Japan. <i>Science of the Total Environment</i> , 2021, 756, 143845.	3.9	16
43	Varietal Difference in the Occurrence of Milky White Kernels in Response to Assimilate Supply in Rice Plants (<i>Oryza sativa</i> L.). <i>Plant Production Science</i> , 2011, 14, 111-117.	0.9	14
44	Changes in concentration and $\delta^{13}C$ value of dissolved CH ₄ , CO ₂ and organic carbon in rice paddies under ambient and elevated concentrations of atmospheric CO ₂ . <i>Organic Geochemistry</i> , 2005, 36, 813-823.	0.9	13
45	High mesophyll conductance in the high-yielding rice cultivar Takanari quantified with the combined gas exchange and chlorophyll fluorescence measurements under free-air CO ₂ enrichment. <i>Plant Production Science</i> , 2019, 22, 395-406.	0.9	13
46	Oxalate contents in leaves of two rice cultivars grown at a free-air CO ₂ enrichment (FACE) site. <i>Plant Production Science</i> , 2019, 22, 407-411.	0.9	13
47	Effects of Elevated CO ₂ Concentration on Photosynthetic Carbon Metabolism in Flag-Leaf Blades of Rice before and after Heading. <i>Plant Production Science</i> , 2003, 6, 52-58.	0.9	12
48	Analysis of factors related to varietal differences in the yield of rice (<i>Oryza sativa</i> L.) under Free-Air CO ₂ Enrichment (FACE) conditions. <i>Plant Production Science</i> , 2020, 23, 19-27.	0.9	12
49	Short-term high nighttime temperatures pose an emerging risk to rice grain failure. <i>Agricultural and Forest Meteorology</i> , 2022, 314, 108779.	1.9	11
50	Effects of free-air CO ₂ enrichment on flower opening time in rice. <i>Plant Production Science</i> , 2019, 22, 367-373.	0.9	9
51	Winter nocturnal warming affects the freeze-thaw frequency, soil aggregate distribution, and the contents and decomposability of C and N in paddy fields. <i>Science of the Total Environment</i> , 2022, 802, 149870.	3.9	9
52	Effects of free-air CO ₂ enrichment on heat-induced sterility and pollination in rice. <i>Plant Production Science</i> , 2019, 22, 374-381.	0.9	8
53	The lowland paddy weed <i>Monochoria vaginalis</i> emits N ₂ O but not CH ₄ . <i>Agriculture, Ecosystems and Environment</i> , 2010, 137, 219-221.	2.5	7
54	Nitrogen resorption in senescing leaf blades of rice exposed to free-air CO ₂ enrichment (FACE) under different N fertilization levels. <i>Plant and Soil</i> , 2017, 418, 231-240.	1.8	5

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55	Yield response of high-yielding rice cultivar Oonari to different environmental conditions. <i>Plant Production Science</i> , 2020, 23, 69-74.	0.9	4
56	Atmospheric CO ₂ Concentration and N Availability Affect the Balance of the Two Photosystems in Mature Leaves of Rice Plants Grown at a Free-Air CO ₂ Enrichment Site. <i>Frontiers in Plant Science</i> , 2020, 11, 786.	1.7	3
57	Effect of foliar spray of kinetin on the enhancement of rice yield by elevated CO ₂ . <i>Journal of Agronomy and Crop Science</i> , 2021, 207, 535-543.	1.7	2
58	Heat-Mitigation Effects of Irrigated Rice-Paddy Fields Under Changing Atmospheric Carbon Dioxide Based on a Coupled Atmosphere and Crop Energy-Balance Model. <i>Boundary-Layer Meteorology</i> , 2021, 179, 447-476.	1.2	2
59	Fertilizer-derived nitrogen use of two varieties of single-crop paddy rice: a free-air carbon dioxide enrichment study using polymer-coated ¹⁵ N-labeled urea. <i>Soil Science and Plant Nutrition</i> , 0, , 1-12.	0.8	2
60	Low N level increases the susceptibility of <sc>PSI</sc> to photoinhibition induced by short repetitive flashes in leaves of different rice varieties. <i>Physiologia Plantarum</i> , 2022, 174, e13644.	2.6	2