

# Hidemitsu Sakai

## List of Publications by Citations

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60  
papers

2,356  
citations

26  
h-index

48  
g-index

60  
ext. papers

2,820  
ext. citations

5.5  
avg. IF

4.41  
L-index

#	Paper	IF	Citations
60	Increasing CO <sub>2</sub> threatens human nutrition. <i>Nature</i> , <b>2014</b> , 510, 139-42	50.4	762
59	Rice cultivar responses to elevated CO <sub>2</sub> at two free-air CO <sub>2</sub> enrichment (FACE) sites in Japan. <i>Functional Plant Biology</i> , <b>2013</b> , 40, 148-159	2.7	174
58	Interactions of elevated [CO <sub>2</sub> ] and night temperature on rice growth and yield. <i>Agricultural and Forest Meteorology</i> , <b>2009</b> , 149, 51-58	5.8	140
57	Combined effects of elevated [CO <sub>2</sub> ] 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> , <b>2010</b> , 150, 1174-1181	5.8	74
56	Effects of Elevated Atmospheric CO <sub>2</sub> Concentrations on CH <sub>4</sub> and N <sub>2</sub> O Emission from Rice Soil: An Experiment in Controlled-environment Chambers. <i>Biogeochemistry</i> , <b>2006</b> , 77, 351-373	3.8	73
55	Rice carbon balance under elevated CO <sub>2</sub> . <i>New Phytologist</i> , <b>2001</b> , 150, 241-249	9.8	56
54	Rice grain yield and quality responses to free-air CO <sub>2</sub> enrichment combined with soil and water warming. <i>Global Change Biology</i> , <b>2016</b> , 22, 1256-70	11.4	56
53	Impacts of elevated atmospheric CO <sub>2</sub> on nutrient content of important food crops. <i>Scientific Data</i> , <b>2015</b> , 2, 150036	8.2	50
52	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> , <b>2001</b> , 34, 7-13	6.1	50
51	A meta-analysis of leaf nitrogen distribution within plant canopies. <i>Annals of Botany</i> , <b>2016</b> , 118, 239-47	4.1	45
50	Heat-tolerant rice cultivars retain grain appearance quality under free-air CO <sub>2</sub> enrichment. <i>Rice</i> , <b>2014</b> , 7, 6	5.8	41
49	CH <sub>4</sub> emission with differences in atmospheric CO <sub>2</sub> enrichment and rice cultivars in a Japanese paddy soil. <i>Global Change Biology</i> , <b>2008</b> , 14, 2678-2687	11.4	41
48	Performance of the enlarged Rice-FACE system using pure CO <sub>2</sub> installed in Tsukuba, Japan. <i>J Agricultural Meteorology</i> , <b>2012</b> , 68, 15-23	1.1	41
47	Do the rich always become richer? Characterizing the leaf physiological response of the high-yielding rice cultivar Takanari to free-air CO <sub>2</sub> enrichment. <i>Plant and Cell Physiology</i> , <b>2014</b> , 55, 381-91	4.9	40
46	The effects of free-air CO <sub>2</sub> enrichment (FACE) on carbon and nitrogen accumulation in grains of rice ( <i>Oryza sativa</i> L.). <i>Journal of Experimental Botany</i> , <b>2013</b> , 64, 3179-88	7	37
45	Rice plant response to long term CO <sub>2</sub> enrichment: Gene expression profiling. <i>Plant Science</i> , <b>2009</b> , 177, 203-210	5.3	37
44	Quantitative trait loci for large sink capacity enhance rice grain yield under free-air CO <sub>2</sub> enrichment conditions. <i>Scientific Reports</i> , <b>2017</b> , 7, 1827	4.9	35

43	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> , <b>2014</b> , 29, 184-90	2.6	35
42	Increased night temperature reduces the stimulatory effect of elevated carbon dioxide concentration on methane emission from rice paddy soil. <i>Global Change Biology</i> , <b>2008</b> , 14, 644-656	11.4	35
41	Increasing canopy photosynthesis in rice can be achieved without a large increase in water use-A model based on free-air CO <sub>2</sub> enrichment. <i>Global Change Biology</i> , <b>2018</b> , 24, 1321-1341	11.4	33
40	Response of soil, leaf endosphere and phyllosphere bacterial communities to elevated CO <sub>2</sub> and soil temperature in a rice paddy. <i>Plant and Soil</i> , <b>2015</b> , 392, 27-44	4.2	32
39	Differential response of rice plants to high night temperatures imposed at varying developmental phases. <i>Agricultural and Forest Meteorology</i> , <b>2015</b> , 209-210, 69-77	5.8	31
38	Soil and water warming accelerates phenology and down-regulation of leaf photosynthesis of rice plants grown under free-air CO <sub>2</sub> enrichment (FACE). <i>Plant and Cell Physiology</i> , <b>2014</b> , 55, 370-80	4.9	31
37	Response of the floating aquatic fern <i>Azolla filiculoides</i> to elevated CO <sub>2</sub> , temperature, and phosphorus levels. <i>Hydrobiologia</i> , <b>2010</b> , 656, 5-14	2.4	31
36	Grain growth of different rice cultivars under elevated CO <sub>2</sub> concentrations affects yield and quality. <i>Field Crops Research</i> , <b>2015</b> , 179, 72-80	5.5	29
35	Elevated atmospheric CO <sub>2</sub> levels affect community structure of rice root-associated bacteria. <i>Frontiers in Microbiology</i> , <b>2015</b> , 6, 136	5.7	26
34	Influence of elevated concentrations of atmospheric CO <sub>2</sub> on CH <sub>4</sub> and CO <sub>2</sub> entrapped in rice-paddy soil. <i>Chemical Geology</i> , <b>2005</b> , 218, 15-24	4.2	26
33	A High-Yielding Rice Cultivar "Takanari" Shows No N Constraints on CO Fertilization. <i>Frontiers in Plant Science</i> , <b>2019</b> , 10, 361	6.2	20
32	How elevated CO <sub>2</sub> affects our nutrition in rice, and how we can deal with it. <i>PLoS ONE</i> , <b>2019</b> , 14, e0212849	3.7	19
31	Yield responses to elevated CO <sub>2</sub> concentration among Japanese rice cultivars released since 1882. <i>Plant Production Science</i> , <b>2019</b> , 22, 352-366	2.4	17
30	Characterization of leaf blade- and leaf sheath-associated bacterial communities and assessment of their responses to environmental changes in CO <sub>2</sub> , temperature, and nitrogen levels under field conditions. <i>Microbes and Environments</i> , <b>2015</b> , 30, 51-62	2.6	17
29	Effect of Elevated CO <sub>2</sub> Concentration, Elevated Temperature and No Nitrogen Fertilization on Methanogenic Archaeal and Methane-Oxidizing Bacterial Community Structures in Paddy Soil. <i>Microbes and Environments</i> , <b>2016</b> , 31, 349-56	2.6	16
28	Elevated temperature has stronger effects on the soil food web of a flooded paddy than does CO <sub>2</sub> . <i>Soil Biology and Biochemistry</i> , <b>2014</b> , 70, 166-175	7.5	16
27	Vulnerability of lodging risk to elevated CO <sub>2</sub> and increased soil temperature differs between rice cultivars. <i>European Journal of Agronomy</i> , <b>2013</b> , 46, 20-24	5	16
26	Rice Free-Air Carbon Dioxide Enrichment Studies to Improve Assessment of Climate Change Effects on Rice Agriculture. <i>Advances in Agricultural Systems Modeling</i> , <b>2016</b> , 45-68	0.3	15

25	Nitrogen Distribution in Leaf Canopies of High-Yielding Rice Cultivar Takanari. <i>Crop Science</i> , <b>2017</b> , 57, 2080-2088	2.4	14
24	Planting geometry as a pre-screening technique for identifying CO <sub>2</sub> responsive rice genotypes: a case study of panicle number. <i>Physiologia Plantarum</i> , <b>2014</b> , 152, 520-8	4.6	12
23	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> , <b>2011</b> , 14, 111-117	2.4	12
22	Effect of CO <sub>2</sub> 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> , <b>2005</b> , 8, 8-15	2.4	12
21	Effects of Elevated CO <sub>2</sub> Concentration on Photosynthetic Carbon Metabolism in Flag-Leaf Blades of Rice before and after Heading. <i>Plant Production Science</i> , <b>2003</b> , 6, 52-58	2.4	12
20	Effects of elevated [CO <sub>2</sub> ] on stem and root lodging among rice cultivars. <i>Science Bulletin</i> , <b>2013</b> , 58, 1787-1794	11	
19	Interactive Effects of Elevated Atmospheric CO <sub>2</sub> and Waterlogging on Vegetative Growth of Soybean ( <i>Glycine max</i> (L.) Merr.). <i>Plant Production Science</i> , <b>2012</b> , 15, 238-245	2.4	11
18	Changes in concentration and $\delta^{13}\text{C}$ value of dissolved CH <sub>4</sub> , CO <sub>2</sub> and organic carbon in rice paddies under ambient and elevated concentrations of atmospheric CO <sub>2</sub> . <i>Organic Geochemistry</i> , <b>2005</b> , 36, 813-823	3.1	11
17	High mesophyll conductance in the high-yielding rice cultivar Takanari quantified with the combined gas exchange and chlorophyll fluorescence measurements under free-air CO <sub>2</sub> enrichment. <i>Plant Production Science</i> , <b>2019</b> , 22, 395-406	2.4	10
16	Oxalate contents in leaves of two rice cultivars grown at a free-air CO <sub>2</sub> enrichment (FACE) site. <i>Plant Production Science</i> , <b>2019</b> , 22, 407-411	2.4	9
15	Effects of Elevated Atmospheric CO <sub>2</sub> on Respiratory Rates in Mature Leaves of Two Rice Cultivars Grown at a Free-Air CO <sub>2</sub> Enrichment Site and Analyses of the Underlying Mechanisms. <i>Plant and Cell Physiology</i> , <b>2018</b> , 59, 637-649	4.9	8
14	Analysis of factors related to varietal differences in the yield of rice ( <i>Oryza sativa</i> L.) under Free-Air CO <sub>2</sub> Enrichment (FACE) conditions. <i>Plant Production Science</i> , <b>2020</b> , 23, 19-27	2.4	6
13	The lowland paddy weed <i>Monochoria vaginalis</i> emits N <sub>2</sub> O but not CH <sub>4</sub> . <i>Agriculture, Ecosystems and Environment</i> , <b>2010</b> , 137, 219-221	5.7	5
12	Effects of free-air CO <sub>2</sub> enrichment on flower opening time in rice. <i>Plant Production Science</i> , <b>2019</b> , 22, 367-373	2.4	5
11	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> , <b>2021</b> , 756, 143845	10.2	5
10	Nitrogen resorption in senescing leaf blades of rice exposed to free-air CO <sub>2</sub> enrichment (FACE) under different N fertilization levels. <i>Plant and Soil</i> , <b>2017</b> , 418, 231-240	4.2	4
9	Effects of free-air CO <sub>2</sub> enrichment on heat-induced sterility and pollination in rice. <i>Plant Production Science</i> , <b>2019</b> , 22, 374-381	2.4	3
8	Yield response of high-yielding rice cultivar Oonari to different environmental conditions. <i>Plant Production Science</i> , <b>2020</b> , 23, 69-74	2.4	3

7	Atmospheric CO Concentration and N Availability Affect the Balance of the Two Photosystems in Mature Leaves of Rice Plants Grown at a Free-Air CO Enrichment Site. <i>Frontiers in Plant Science</i> , <b>2020</b> , 11, 786	6.2	2
6	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> , <b>2022</b> , 802, 149870	10.2	2
5	Fertilizer-derived nitrogen use of two varieties of single-crop paddy rice: a free-air carbon dioxide enrichment study using polymer-coated 15N-labeled urea. <i>Soil Science and Plant Nutrition</i> , 1-12	1.6	1
4	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> , <b>2021</b> , 179, 447-476	3.4	1
3	Low N level increases the susceptibility of PSI to photoinhibition induced by short repetitive flashes in leaves of different rice varieties.. <i>Physiologia Plantarum</i> , <b>2022</b> , e13644	4.6	0
2	Short-term high nighttime temperatures pose an emerging risk to rice grain failure. <i>Agricultural and Forest Meteorology</i> , <b>2022</b> , 314, 108779	5.8	0
1	Effect of foliar spray of kinetin on the enhancement of rice yield by elevated CO2. <i>Journal of Agronomy and Crop Science</i> , <b>2021</b> , 207, 535-543	3.9	0