Etsushi Kato

List of Publications by Year
in descending order

86 papers	18,501 citations	76196 40 h-index	58464 82 g-index
123 all docs	123 docs citations	123 times ranked	21392 citing authors

#	Article	IF	Citations
1	Greening of the Earth and its drivers. Nature Climate Change, 2016, 6, 791-795.	8.1	1,675
2	Global Carbon Budget 2020. Earth System Science Data, 2020, 12, 3269-3340.	3.7	1,477
3	Global Carbon Budget 2018. Earth System Science Data, 2018, 10, 2141-2194.	3.7	1,167
4	Global Carbon Budget 2019. Earth System Science Data, 2019, 11, 1783-1838.	3.7	1,159
5	MIROC-ESM 2010: model description and basic results of CMIP5-20c3m experiments. Geoscientific Model Development, 2011, 4, 845-872.	1.3	1,070
6	The dominant role of semi-arid ecosystems in the trend and variability of the land CO ₂ sink. Science, 2015, 348, 895-899.	6.0	1,002
7	Biophysical and economic limits to negative CO2 emissions. Nature Climate Change, 2016, 6, 42-50.	8.1	973
8	Global Carbon Budget 2016. Earth System Science Data, 2016, 8, 605-649.	3.7	905
9	Global Carbon Budget 2017. Earth System Science Data, 2018, 10, 405-448.	3.7	801
10	Increased atmospheric vapor pressure deficit reduces global vegetation growth. Science Advances, 2019, 5, eaax1396.	4.7	755
11	Global Carbon Budget 2021. Earth System Science Data, 2022, 14, 1917-2005.	3.7	663
12	Global Carbon Budget 2015. Earth System Science Data, 2015, 7, 349-396.	3.7	616
13	The global carbon budget 1959â€“2011. Earth System Science Data, 2013, 5, 165-185.	3.7	527
14	Compensatory water effects link yearly global land CO2 sink changes to temperature. Nature, 2017, 541, 516-520.	13.7	480
15	Global carbon budget 2014. Earth System Science Data, 2015, 7, 47-85.	3.7	463
16	Effect of Anthropogenic Land-Use and Land-Cover Changes on Climate and Land Carbon Storage in CMIP5 Projections for the Twenty-First Century. Journal of Climate, 2013, 26, 6859-6881.	1.2	329
17	Recent global decline of CO ₂ fertilization effects on vegetation photosynthesis. Science, 2020, 370, 1295-1300.	6.0	317
18	Global carbon budget 2013. Earth System Science Data, 2014, 6, 235-263.	3.7	311

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19	Historical carbon dioxide emissions caused by land-use changes are possibly larger than assumed. Nature Geoscience, 2017, 10, 79-84.	5.4	284
20	An emission pathway for stabilization at 6ÂWmâˆ'2 radiative forcing. Climatic Change, 2011, 109, 59-76.	1.7	270
21	Twenty-First-Century Compatible CO2 Emissions and Airborne Fraction Simulated by CMIP5 Earth System Models under Four Representative Concentration Pathways. Journal of Climate, 2013, 26, 4398-4413.	1.2	248
22	Widespread seasonal compensation effects of spring warming on northern plant productivity. Nature, 2018, 562, 110-114.	13.7	240
23	Increased control of vegetation on global terrestrial energy fluxes. Nature Climate Change, 2020, 10, 356-362.	8.1	152
24	Evaluation of global terrestrial evapotranspiration using state-of-the-art approaches in remote sensing, machine learning and land surface modeling. Hydrology and Earth System Sciences, 2020, 24, 1485-1509.	1.9	130
25	Global energy sector emission reductions and bioenergy use: overview of the bioenergy demand phase of the EMF-33 model comparison. Climatic Change, 2020, 163, 1553-1568.	1.7	112
26	Evaluation of spatially explicit emission scenario of land-use change and biomass burning using a process-based biogeochemical model. Journal of Land Use Science, 2013, 8, 104-122.	1.0	104
27	Reconciling global-model estimates and country reporting of anthropogenic forest CO2 sinks. Nature Climate Change, 2018, 8, 914-920.	8.1	101
28	Allocation of Resources to Reproduction in Styrax obassia in a Masting Year. Annals of Botany, 2002, 89, 767-772.	1.4	86
29	Increased climate risk in Brazilian double cropping agriculture systems: Implications for land use in Northern Brazil. Agricultural and Forest Meteorology, 2016, 228-229, 286-298.	1.9	75
30	Global and regional effects of land-use change on climate in 21st century simulations with interactive carbon cycle. Earth System Dynamics, 2014, 5, 309-319.	2.7	65
31	Impact of the 2015/2016 El NiÃ±o on the terrestrial carbon cycle constrained by bottom-up and top-down approaches. Philosophical Transactions of the Royal Society B: Biological Sciences, 2018, 373, 20170304.	1.8	63
32	Japan's long-term climate mitigation policy: Multi-model assessment and sectoral challenges. Energy, 2019, 167, 1120-1131.	4.5	59
33	Sources of Uncertainty in Regional and Global Terrestrial CO₂ Exchange Estimates. Global Biogeochemical Cycles, 2020, 34, e2019GB006393.	1.9	59
34	Land-use and land-cover change carbon emissions between 1901 and 2012 constrained by biomass observations. Biogeosciences, 2017, 14, 5053-5067.	1.3	58
35	Precipitation and carbon-water coupling jointly control the interannual variability of global land gross primary production. Scientific Reports, 2016, 6, 39748.	1.6	57
36	Quantifying uncertainties in soil carbon responses to changes in global mean temperature and precipitation. Earth System Dynamics, 2014, 5, 197-209.	2.7	53

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37	<scp>BECCS</scp> capability of dedicated bioenergy crops under a future landâ€use scenario targeting net negative carbon emissions. Earth's Future, 2014, 2, 421-439.	2.4	52
38	Slowdown of the greening trend in natural vegetation with further rise in atmospheric CO₂. Biogeosciences, 2021, 18, 4985-5010.	1.3	49
39	State of the science in reconciling topâ€down and bottomâ€up approaches for terrestrial CO₂ budget. Global Change Biology, 2020, 26, 1068-1084.	4.2	43
40	Fruit set in Styrax obassia (Styracaceae): the effect of light availability, display size, and local floral density. American Journal of Botany, 1999, 86, 495-501.	0.8	42
41	Decomposing uncertainties in the future terrestrial carbon budget associated with emission scenarios, climate projections, and ecosystem simulations using the ISI-MIP results. Earth System Dynamics, 2015, 6, 435-445.	2.7	40
42	Negative extreme events in gross primary productivity and their drivers in China during the past three decades. Agricultural and Forest Meteorology, 2019, 275, 47-58.	1.9	40
43	The terrestrial carbon budget of South and Southeast Asia. Environmental Research Letters, 2016, 11, 105006.	2.2	39
44	Climateâ€Driven Variability and Trends in Plant Productivity Over Recent Decades Based on Three Global Products. Global Biogeochemical Cycles, 2020, 34, e2020GB006613.	1.9	36
45	Plant Regrowth as a Driver of Recent Enhancement of Terrestrial CO₂ Uptake. Geophysical Research Letters, 2018, 45, 4820-4830.	1.5	32
46	Implications of climate change mitigation strategies on international bioenergy trade. Climatic Change, 2020, 163, 1639-1658.	1.7	32
47	EMF 35 JMIP study for Japanâ€™s long-term climate and energy policy: scenario designs and key findings. Sustainability Science, 2021, 16, 355-374.	2.5	32
48	Regional carbon fluxes from land use and land cover change in Asia, 1980â€"2009. Environmental Research Letters, 2016, 11, 074011.	2.2	31
49	Bioenergy technologies in long-run climate change mitigation: results from the EMF-33 study. Climatic Change, 2020, 163, 1603-1620.	1.7	31
50	Contrasting effects of CO₂ fertilization, land-use change and warming on seasonal amplitude of Northern Hemisphere CO₂ exchange. Atmospheric Chemistry and Physics, 2019, 19, 12361-12375.	1.9	30
51	EMF-33 insights on bioenergy with carbon capture and storage (BECCS). Climatic Change, 2020, 163, 1621-1637.	1.7	30
52	Emission pathways to achieve 2.0Â°C and 1.5Â°C climate targets. Earth's Future, 2017, 5, 592-604.	2.4	28
53	Putting Costs of Direct Air Capture in Context. SSRN Electronic Journal, 0, , .	0.4	28
54	Land use change and El NiÃ±o-Southern Oscillation drive decadal carbon balance shifts in Southeast Asia. Nature Communications, 2018, 9, 1154.	5.8	28

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55	Evaluation of Japanese energy system toward 2050 with TIMES-Japan â€“ deep decarbonization pathways. Energy Procedia, 2019, 158, 4141-4146.	1.8	28
56	Modeling in Earth system science up to and beyond IPCC AR5. Progress in Earth and Planetary Science, 2014, 1, .	1.1	27
57	Enterotoxigenicity of Staphylococcus aureus Strains Isolated from Chickens. Journal of Food Protection, 1980, 43, 683-686.	0.8	26
58	Competitive effects of the exotic Bombus terrestris on native bumble bees revealed by a field removal experiment. Population Ecology, 2010, 52, 123-136.	0.7	26
59	Role of CO₂, climate and land use in regulating the seasonal amplitude increase of carbon fluxes in terrestrial ecosystems: a multimodel analysis. Biogeosciences, 2016, 13, 5121-5137.	1.3	26
60	The carbon cycle in Mexico: past, present and future of C stocks and fluxes. Biogeosciences, 2016, 13, 223-238.	1.3	24
61	Role of negative emissions technologies (NETs) and innovative technologies in transition of Japanâ€™s energy systems toward net-zero CO2 emissions. Sustainability Science, 2021, 16, 463-475.	2.5	24
62	Assessing the representation of the Australian carbon cycle in global vegetation models. Biogeosciences, 2021, 18, 5639-5668.	1.3	21
63	Abundance, body size, and morphology of bumblebees in an area where an exotic species, Bombus terrestris, has colonized in Japan. Ecological Research, 2007, 22, 331-341.	0.7	18
64	The role of renewables in the Japanese power sector: implications from the EMF35 JMIP. Sustainability Science, 2021, 16, 375-392.	2.5	16
65	Industrial decarbonization under Japanâ€™s national mitigation scenarios: a multi-model analysis. Sustainability Science, 2021, 16, 411-427.	2.5	15
66	Response to Comments on â€œRecent global decline of CO ₂ fertilization effects on vegetation photosynthesisâ€. Science, 2021, 373, eabg7484.	6.0	15
67	Causes of slowingâ€down seasonal CO₂ amplitude at Mauna Loa. Global Change Biology, 2020, 26, 4462-4477.	4.2	14
68	Demand-side decarbonization and electrification: EMF 35 JMIP study. Sustainability Science, 2021, 16, 395-410.	2.5	14
69	MIROC-INTEG-LAND version 1: a global biogeochemical land surface model with human water management, crop growth, and land-use change. Geoscientific Model Development, 2020, 13, 4713-4747.	1.3	14
70	Current status and future of land surface models. Soil Science and Plant Nutrition, 2015, 61, 34-47.	0.8	13
71	Key factors for achieving emission reduction goals cognizant of CCS. International Journal of Greenhouse Gas Control, 2020, 99, 103097.	2.3	12
72	Climate Change, Allowable Emission, and Earth System Response to Representative Concentration Pathway Scenarios. Journal of the Meteorological Society of Japan, 2012, 90, 417-434.	0.7	12

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73	Linking global terrestrial CO₂ fluxes and environmental drivers: inferences from the Orbiting Carbon ObservatoryÂ2 satellite and terrestrial biospheric models. Atmospheric Chemistry and Physics, 2021, 21, 6663-6680.	1.9	10
74	Fruit set in Styrax obassia (Styracaceae): the effect of light availability, display size, and local floral density. American Journal of Botany, 1999, 86, 495-501.	0.8	10
75	Development of spatially explicit emission scenario from land-use change and biomass burning for the input data of climate projection. Procedia Environmental Sciences, 2011, 6, 146-152.	1.3	8
76	Five years of variability in the global carbon cycle: comparing an estimate from the Orbiting Carbon Observatory-2 and process-based models. Environmental Research Letters, 2021, 16, 054041.	2.2	8
77	Job creation in response to Japanâ€™s energy transition towards deep mitigation: An extension of partial equilibrium integrated assessment models. Applied Energy, 2022, 318, 119178.	5.1	8
78	Investigating the rankâ€size relationship of urban areas using land cover maps. Geophysical Research Letters, 2008, 35, .	1.5	7
79	A Sustainable Pathway of Bioenergy with Carbon Capture and Storage Deployment. Energy Procedia, 2017, 114, 6115-6123.	1.8	7
80	Enhanced regional terrestrial carbon uptake over Korea revealed by atmospheric CO 2 measurements from 1999 to 2017. Global Change Biology, 2020, 26, 3368-3383.	4.2	7
81	Can global models provide insights into regional mitigation strategies? A diagnostic model comparison study of bioenergy in Brazil. Climatic Change, 2022, 170, 1.	1.7	7
82	Are Landâ€Use Change Emissions in Southeast Asia Decreasing or Increasing?. Global Biogeochemical Cycles, 2022, 36, .	1.9	7
83	Role of NETs and carbon recycling technologies in the transitions of Japanâ€™s energy systems toward net-zero CO2 emissions goal. SSRN Electronic Journal, 0, , .	0.4	1
84	The Paris Agreement and Climate Change Countermeasure Technologies. Kagaku Kogaku Ronbunshu, 2017, 43, 171-177.	0.1	0
85	Establishment of a simple method to search natural products that suppress Î±-glucosidase amount in intestinal epithelial cell. Planta Medica International Open, 2017, 4, .	0.3	0
86	Efficient and Sustainable Use of Technologies and Feedstock for Beccs Deployment in Mitigation Pathways. SSRN Electronic Journal, 0, , .	0.4	0