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List of Publications by Year
in descending order

Version: 2024-02-01

108 papers	15,478 citations	24978 57 h-index	25716 108 g-index
111 all docs	111 docs citations	111 times ranked	13005 citing authors

#	Article	IF	Citations
1	Measurements of carbon sequestration by long-term eddy covariance: methods and a critical evaluation of accuracy. Global Change Biology, 1996, 2, 169-182.	4.2	1,240
2	Net Exchange of CO2 in a Mid-Latitude Forest. Science, 1993, 260, 1314-1317.	6.0	833
3	Sensitivity of Boreal Forest Carbon Balance to Soil Thaw. Science, 1998, 279, 214-217.	6.0	704
4	Exchange of Carbon Dioxide by a Deciduous Forest: Response to Interannual Climate Variability. Science, 1996, 271, 1576-1578.	6.0	649
5	The FLUXNET2015 dataset and the ONEFlux processing pipeline for eddy covariance data. Scientific Data, 2020, 7, 225.	2.4	646
6	Factors Controlling Long- and Short-Term Sequestration of Atmospheric CO2 in a Mid-latitude Forest. Science, 2001, 294, 1688-1691.	6.0	519
7	Assessment of methane emissions from the U.S. oil and gas supply chain. Science, 2018, 361, 186-188.	6.0	519
8	Modelling the soil-plant-atmosphere continuum in a Quercus-Acer stand at Harvard Forest: the regulation of stomatal conductance by light, nitrogen and soil/plant hydraulic properties. Plant, Cell and Environment, 1996, 19, 911-927.	2.8	510
9	A near-field tool for simulating the upstream influence of atmospheric observations: The Stochastic Time-Inverted Lagrangian Transport (STILT) model. Journal of Geophysical Research, 2003, 108, ACH 2-1-ACH 2-17.	3.3	419
10	The terrestrial biosphere as a net source of greenhouse gases to the atmosphere. Nature, 2016, 531, 225-228.	13.7	402
11	Mechanistic scaling of ecosystem function and dynamics in space and time: Ecosystem Demography model version 2. Journal of Geophysical Research, 2009, 114, .	3.3	393
12	HIAPER Pole-to-Pole Observations (HIPPO): fine-grained, global-scale measurements of climatically important atmospheric gases and aerosols. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2011, 369, 2073-2086.	1.6	351
13	Precision requirements for space-based data. Journal of Geophysical Research, 2007, 112, .	3.3	322
14	A cross-biome comparison of daily light use efficiency for gross primary production. Global Change Biology, 2003, 9, 383-395.	4.2	298
15	Site-level evaluation of satellite-based global terrestrial gross primary production and net primary production monitoring. Global Change Biology, 2005, 11, 666-684.	4.2	286
16	Cold season emissions dominate the Arctic tundra methane budget. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 40-45.	3.3	278
17	On the use of MODIS EVI to assess gross primary productivity of North American ecosystems. Journal of Geophysical Research, 2006, 111, .	3.3	267
18	A satelliteâ€based biosphere parameterization for net ecosystem CO₂ exchange: Vegetation Photosynthesis and Respiration Model (VPRM). Global Biogeochemical Cycles, 2008, 22, .	1.9	247

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19	Atmospheric CH₄ in the first decade of the 21st century: Inverse modeling analysis using SCIAMACHY satellite retrievals and NOAA surface measurements. Journal of Geophysical Research D: Atmospheres, 2013, 118, 7350-7369.	1.2	226
20	Methane emissions from natural gas infrastructure and use in the urban region of Boston, Massachusetts. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 1941-1946.	3.3	225
21	How climate and vegetation type influence evapotranspiration and water use efficiency in Canadian forest, peatland and grassland ecosystems. Agricultural and Forest Meteorology, 2012, 153, 14-30.	1.9	224
22	Stratospheric Mean Ages and Transport Rates from Observations of Carbon Dioxide and Nitrous Oxide. Science, 1996, 274, 1340-1343.	6.0	205
23	Seasonal controls on the exchange of carbon and water in an Amazonian rain forest. Journal of Geophysical Research, 2007, 112, .	3.3	201
24	Comparison of carbon dioxide fluxes over three boreal black spruce forests in Canada. Global Change Biology, 2007, 13, 89-107.	4.2	199
25	Seasonality of temperate forest photosynthesis and daytime respiration. Nature, 2016, 534, 680-683.	13.7	196
26	Toward constraining regional-scale fluxes of CO2with atmospheric observations over a continent: 2. Analysis of COBRA data using a receptor-oriented framework. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	186
27	Global methane and nitrous oxide emissions from terrestrial ecosystems due to multiple environmental changes. Ecosystem Health and Sustainability, 2015, 1, 1-20.	1.5	180
28	Uncertainties in, and interpretation of, carbon flux estimates using the eddy covariance technique. Journal of Geophysical Research, 2006, 111, .	3.3	179
29	Quantifying sources of methane using light alkanes in the Los Angeles basin, California. Journal of Geophysical Research D: Atmospheres, 2013, 118, 4974-4990.	1.2	167
30	Toward constraining regional-scale fluxes of CO2with atmospheric observations over a continent: 1. Observed spatial variability from airborne platforms. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	162
31	Coupled weather research and forecastingâ€“stochastic time-inverted lagrangian transport (WRFâ€“STILT) model. Meteorology and Atmospheric Physics, 2010, 107, 51-64.	0.9	151
32	Carbon dioxide sources from Alaska driven by increasing early winter respiration from Arctic tundra. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, 5361-5366.	3.3	149
33	Emissions of CH₄ and N₂O over the United States and Canada based on a receptorâ€oriented modeling framework and COBRAâ€NA atmospheric observations. Geophysical Research Letters, 2008, 35, .	1.5	132
34	Antarctic O₃: Chemical mechanisms for the spring decrease. Geophysical Research Letters, 1986, 13, 1296-1299.	1.5	127
35	Atmospheric observations of Arctic Ocean methane emissions up to 82Â° north. Nature Geoscience, 2012, 5, 318-321.	5.4	124
36	Observational evidence for interhemispheric hydroxyl-radical parity. Nature, 2014, 513, 219-223.	13.7	121

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37	The effects of biomass burning aerosols and clouds on the CO2 flux in Amazonia. Tellus, Series B: Chemical and Physical Meteorology, 2007, 59, 338-349.	0.8	119
38	Validation of MOPITT Version 5 thermalâ€infrared, nearâ€infrared, and multispectral carbon monoxide profile retrievals for 2000â€“2011. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6710-6725.	1.2	119
39	A large increase in U.S. methane emissions over the past decade inferred from satellite data and surface observations. Geophysical Research Letters, 2016, 43, 2218-2224.	1.5	118
40	North American terrestrial CO2 uptake largely offset by CH4 and N2O emissions: toward a full accounting of the greenhouse gas budget. Climatic Change, 2015, 129, 413-426.	1.7	112
41	Environmental controls on the photosynthesis and respiration of a boreal lichen woodland: a growing season of whole-ecosystem exchange measurements by eddy correlation. Oecologia, 1995, 102, 443-452.	0.9	111
42	Anthropogenic and biogenic CO ₂ fluxes in the Boston urban region. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 7491-7496.	3.3	110
43	Increasing contribution of peatlands to boreal evapotranspiration in a warming climate. Nature Climate Change, 2020, 10, 555-560.	8.1	106
44	Climatic variability and vegetation vulnerability in AmazÃ´nia. Geophysical Research Letters, 2005, 32, .	1.5	99
45	Latitudinal patterns of magnitude and interannual variability in net ecosystem exchange regulated by biological and environmental variables. Global Change Biology, 2009, 15, 2905-2920.	4.2	94
46	Soil respiration in a northeastern US temperate forest: a 22â€year synthesis. Ecosphere, 2013, 4, 1-28.	1.0	83
47	Denitrification in the Antarctic stratosphere. Nature, 1989, 339, 525-527.	13.7	81
48	Tropospheric distribution and variability of N₂O: Evidence for strong tropical emissions. Geophysical Research Letters, 2011, 38, .	1.5	78
49	Global atmospheric CO₂ inverse models converging on neutral tropical land exchange, but disagreeing on fossil fuel and atmospheric growth rate. Biogeosciences, 2019, 16, 117-134.	1.3	77
50	Evaluation of the airborne quantum cascade laser spectrometer (QCLS) measurements of the carbon and greenhouse gas suite â€“ CO₂, CH₄, N₂O, and CO â€“ during the CalNex and HIPPO campaigns. Atmospheric Measurement Techniques, 2014, 7, 1509-1526.	1.2	75
51	Fluxes of nitrogen oxides over a temperate deciduous forest. Journal of Geophysical Research, 2004, 109, .	3.3	73
52	Measuring fluxes of trace gases at regional scales by Lagrangian observations: Application to the CO2Budget and Rectification Airborne (COBRA) study. Journal of Geophysical Research, 2004, 109, .	3.3	73
53	Estimating regional carbon exchange in New England and Quebec by combining atmospheric, ground-based and satellite data. Tellus, Series B: Chemical and Physical Meteorology, 2006, 58, 344-358.	0.8	70
54	A High-Precision Fast-Response Airborne CO2Analyzer for In Situ Sampling from the Surface to the Middle Stratosphere. Journal of Atmospheric and Oceanic Technology, 2002, 19, 1532-1543.	0.5	70

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55	Seasonal fluxes of carbonyl sulfide in a midlatitude forest. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 14162-14167.	3.3	69
56	Carbon budget of the Harvard Forest Longâ€Term Ecological Research site: pattern, process, and response to global change. Ecological Monographs, 2020, 90, e01423.	2.4	67
57	Satellite-based survey of extreme methane emissions in the Permian basin. Science Advances, 2021, 7, .	4.7	66
58	Loss of ozone in the Arctic vortex for the winter of 1989. Geophysical Research Letters, 1990, 17, 561-564.	1.5	65
59	Global emissions of refrigerants HCFC-22 and HFC-134a: Unforeseen seasonal contributions. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 17379-17384.	3.3	59
60	Methane emissions from Alaska in 2012 from CARVE airborne observations. Proceedings of the National Academy of Sciences of the United States of America, 2014, 111, 16694-16699.	3.3	58
61	Simultaneous measurements of atmospheric HONO and NO2 viaÂabsorption spectroscopy using tunable mid-infrared continuous-wave quantum cascade lasers. Applied Physics B: Lasers and Optics, 2011, 102, 417-423.	1.1	56
62	Interannual, seasonal, and diel variation in soil respiration relative to ecosystem respiration at a wetland to upland slope at Harvard Forest. Journal of Geophysical Research, 2010, 115, .	3.3	55
63	Severe chemical ozone loss inside the Arctic Polar Vortex during winter 1999-2000 Inferred fromin situairborne measurements. Geophysical Research Letters, 2001, 28, 2197-2200.	1.5	53
64	Radon fluxes in tropical forest ecosystems of Brazilian Amazonia: night-time CO2 net ecosystem exchange derived from radon and eddy covariance methods. Global Change Biology, 2004, 10, 618-629.	4.2	52
65	Large contribution of biomass burning emissions to ozone throughout the global remote troposphere. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	51
66	Airborne observations of methane emissions from rice cultivation in the Sacramento Valley of California. Journal of Geophysical Research, 2012, 117, .	3.3	50
67	Measurements of stratospheric carbon dioxide and water vapor at northern midlatitudes: Implications for troposphere-to-stratosphere transport. Geophysical Research Letters, 1995, 22, 2737-2740.	1.5	45
68	Strong Southern Ocean carbon uptake evident in airborne observations. Science, 2021, 374, 1275-1280.	6.0	44
69	Attributing uncertainties in simulated biospheric carbon fluxes to different error sources. Global Biogeochemical Cycles, 2011, 25, n/a-n/a.	1.9	42
70	Contemporary and projected biogenic fluxes of methane and nitrous oxide in North American terrestrial ecosystems. Frontiers in Ecology and the Environment, 2012, 10, 528-536.	1.9	41
71	Atmospheric Acetaldehyde: Importance of Airâ€Sea Exchange and a Missing Source in the Remote Troposphere. Geophysical Research Letters, 2019, 46, 5601-5613.	1.5	41
72	Title is missing!. Plant and Soil, 2002, 242, 15-32.	1.8	40

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73	WRF Simulations of the Urban Circulation in the Salt Lake City Area for CO2 Modeling. Journal of Applied Meteorology and Climatology, 2013, 52, 323-340.	0.6	40
74	Estimating photosynthetic13C discrimination in terrestrial CO2exchange from canopy to regional scales. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	1.9	39
75	Continuing global significance of emissions of Montreal Protocolâ€“restricted halocarbons in the United States and Canada. Journal of Geophysical Research, 2006, 111, .	3.3	39
76	The NASA Atmospheric Tomography (ATom) Mission: Imaging the Chemistry of the Global Atmosphere. Bulletin of the American Meteorological Society, 2022, 103, E761-E790.	1.7	39
77	A multiyear estimate of methane fluxes in Alaska from CARVE atmospheric observations. Global Biogeochemical Cycles, 2016, 30, 1441-1453.	1.9	36
78	Influence of polar stratospheric clouds on the depletion of Antarctic ozone. Geophysical Research Letters, 1988, 15, 871-874.	1.5	35
79	Modeling the carbon balance of Amazonian rain forests: resolving ecological controls on net ecosystem productivity. Ecological Monographs, 2009, 79, 445-463.	2.4	34
80	Modeling analysis of primary controls on net ecosystem productivity of seven boreal and temperate coniferous forests across a continental transect. Global Change Biology, 2008, 14, 1765-1784.	4.2	33
81	Detecting regional patterns of changing CO ₂ flux in Alaska. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 7733-7738.	3.3	33
82	What have we learned from intensive atmospheric sampling field programmes of CO2?. Tellus, Series B: Chemical and Physical Meteorology, 2006, 58, 331-343.	0.8	31
83	The Global Budget of Atmospheric Methanol: New Constraints on Secondary, Oceanic, and Terrestrial Sources. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033439.	1.2	31
84	Anthropogenic emissions of nonmethane hydrocarbons in the northeastern United States: Measured seasonal variations from 1992â€“1996 and 1999â€“2001. Journal of Geophysical Research, 2006, 111, .	3.3	29
85	Majority of US urban natural gas emissions unaccounted for in inventories. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	29
86	Mass fluxes and isofluxes of methane (CH₄) at a New Hampshire fen measured by a continuous wave quantum cascade laser spectrometer. Journal of Geophysical Research, 2012, 117, .	3.3	28
87	A Chemical Survey of the Mississippi Estuary. Estuaries and Coasts, 1987, 10, 1.	1.7	27
88	An empirical analysis of the spatial variability of atmospheric CO2: Implications for inverse analyses and space-borne sensors. Geophysical Research Letters, 2004, 31, .	1.5	27
89	The CO2 budget and rectification airborne study: Strategies for measuring rectifiers and regional fluxes. Geophysical Monograph Series, 2000, , 311-324.	0.1	25
90	Nitrous oxide (N₂O) emissions from California based on 2010 CalNex airborne measurements. Journal of Geophysical Research D: Atmospheres, 2013, 118, 2809-2820.	1.2	24

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91	Atmospheric constraints on 2004 emissions of methane and nitrous oxide in North America from atmospheric measurements and a receptor-oriented modeling framework. Journal of Integrative Environmental Sciences, 2010, 7, 125-133.	1.0	20
92	Carbonyl sulfide in the planetary boundary layer: Coastal and continental influences. Journal of Geophysical Research D: Atmospheres, 2013, 118, 8001-8009.	1.2	20
93	Reevaluating the Use of O₂Âa¹Î”_g Band in Spaceborne Remote Sensing of Greenhouse Gases. Geophysical Research Letters, 2018, 45, 5779-5787.	1.5	19
94	Global Atmospheric Budget of Acetone: Airâ€Sea Exchange and the Contribution to Hydroxyl Radicals. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD032553.	1.2	17
95	Earlier snowmelt may lead to late season declines in plant productivity and carbon sequestration in Arctic tundra ecosystems. Scientific Reports, 2022, 12, 3986.	1.6	16
96	Ecosystem fluxes of hydrogen in a midâ€latitude forest driven by soil microorganisms and plants. Global Change Biology, 2017, 23, 906-919.	4.2	14
97	â€œDesigning Lagrangian experiments to measure regionalâ€scale trace gas fluxesâ€. Journal of Geophysical Research, 2007, 112, .	3.3	13
98	Chemical evidence of inter-hemispheric air mass intrusion into the Northern Hemisphere mid-latitudes. Scientific Reports, 2018, 8, 4669.	1.6	11
99	Spectral calibration of the MethaneAIR instrument. Atmospheric Measurement Techniques, 2021, 14, 3737-3753.	1.2	11
100	Effects of atmospheric transport on column abundances of nitrogen and chlorine compounds in the Arctic stratosphere. Geophysical Research Letters, 1990, 17, 533-536.	1.5	9
101	Comparison of upper tropospheric carbon monoxide from MOPITT, ACEâ€FTS, and HIPPOâ€QCLS. Journal of Geophysical Research D: Atmospheres, 2014, 119, 14,144.	1.2	9
102	Evidence for an Oceanic Source of Methyl Ethyl Ketone to the Atmosphere. Geophysical Research Letters, 2020, 47, e2019GL086045.	1.5	8
103	Using Lidar Technology To Assess Urban Air Pollution and Improve Estimates of Greenhouse Gas Emissions in Boston. Environmental Science & Technology, 2019, 53, 8957-8966.	4.6	7
104	A multi-city urban atmospheric greenhouse gas measurement data synthesis. Scientific Data, 2022, 9, .	2.4	5
105	Listening to the Forest: An Artificial Neural Networkâ€Based Model of Carbon Uptake at Harvard Forest. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 461-478.	1.3	4
106	Atmospheric Chemistry and Global Change. Eos, 1999, 80, 468.	0.1	3
107	Atmospheric mercury sources in a coastal-urban environment: a case study in Boston, Massachusetts, USA. Environmental Sciences: Processes and Impacts, 2021, 23, 1914-1929.	1.7	2
108	An optimal estimation-based retrieval of upper atmospheric oxygen airglow and temperature from SCIAMACHY limb observations. Atmospheric Measurement Techniques, 2022, 15, 3721-3745.	1.2	0