Pieter P Tans

List of Publications by Year
in descending order

276 papers	37,374 citations	3333 91 h-index	3725 179 g-index
313 all docs	313 docs citations	313 times ranked	23227 citing authors

#	Article	IF	Citations
1	Observational Contrains on the Global Atmospheric Co2 Budget. Science, 1990, 247, 1431-1438.	6.0	1,981
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	Global Carbon Budget 2016. Earth System Science Data, 2016, 8, 605-649.	3.7	905
6	An atmospheric perspective on North American carbon dioxide exchange: CarbonTracker. Proceedings of the National Academy of Sciences of the United States of America, 2007, 104, 18925-18930.	3.3	895
7	Global Carbon Budget 2017. Earth System Science Data, 2018, 10, 405-448.	3.7	801
8	Weak Northern and Strong Tropical Land Carbon Uptake from Vertical Profiles of Atmospheric CO2. Science, 2007, 316, 1732-1735.	6.0	775
9	A Large Northern Hemisphere Terrestrial CO2 Sink Indicated by the 13C/12C Ratio of Atmospheric CO2. Science, 1995, 269, 1098-1102.	6.0	752
10	A Large Terrestrial Carbon Sink in North America Implied by Atmospheric and Oceanic Carbon Dioxide Data and Models. , 1998, 282, 442-446.		713
11	Methane Leaks from North American Natural Gas Systems. Science, 2014, 343, 733-735.	6.0	709
12	Regional Changes in Carbon Dioxide Fluxes of Land and Oceans Since 1980. Science, 2000, 290, 1342-1346.	6.0	680
13	Evidence for interannual variability of the carbon cycle from the National Oceanic and Atmospheric Administration/Climate Monitoring and Diagnostics Laboratory Global Air Sampling Network. Journal of Geophysical Research, 1994, 99, 22831.	3.3	674
14	Atmospheric carbon dioxide at Mauna Loa Observatory: 2. Analysis of the NOAA GMCC data, 1974â€“1985. Journal of Geophysical Research, 1989, 94, 8549-8565.	3.3	671
15	Global Carbon Budget 2021. Earth System Science Data, 2022, 14, 1917-2005.	3.7	663
16	Global Carbon Budget 2015. Earth System Science Data, 2015, 7, 349-396.	3.7	616
17	Increase in observed net carbon dioxide uptake by land and oceans during the past 50 years. Nature, 2012, 488, 70-72.	13.7	583
18	Global Carbon Sinks and Their Variability Inferred from Atmospheric O2 and 13C. Science, 2000, 287, 2467-2470.	6.0	471

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19	Global carbon budget 2014. Earth System Science Data, 2015, 7, 47-85.	3.7	463
20	Changes in oceanic and terrestrial carbon uptake since 1982. Nature, 1995, 373, 326-330.	13.7	457
21	Methane emissions estimate from airborne measurements over a western United States natural gas field. Geophysical Research Letters, 2013, 40, 4393-4397.	1.5	414
22	Upward revision of global fossil fuel methane emissions based on isotope database. Nature, 2016, 538, 88-91.	13.7	400
23	Continuing decline in the growth rate of the atmospheric methane burden. Nature, 1998, 393, 447-450.	13.7	384
24	Atmospheric methane levels off: Temporary pause or a new steady-state?. Geophysical Research Letters, 2003, 30, .	1.5	379
25	Recent trends in the 13C/12C ratio of atmospheric carbon dioxide. Nature, 1979, 277, 121-123.	13.7	364
26	Hydrocarbon emissions characterization in the Colorado Front Range: A pilot study. Journal of Geophysical Research, 2012, 117, .	3.3	359
27	Extension and integration of atmospheric carbon dioxide data into a globally consistent measurement record. Journal of Geophysical Research, 1995, 100, 11593.	3.3	330
28	Enhanced Seasonal Exchange of CO ₂ by Northern Ecosystems Since 1960. Science, 2013, 341, 1085-1089.	6.0	329
29	Precision requirements for space-based data. Journal of Geophysical Research, 2007, 112, .	3.3	322
30	Partitioning of ocean and land uptake of CO2as inferred by Î´13C measurements from the NOAA Climate Monitoring and Diagnostics Laboratory Global Air Sampling Network. Journal of Geophysical Research, 1995, 100, 5051.	3.3	315
31	Global carbon budget 2013. Earth System Science Data, 2014, 6, 235-263.	3.7	311
32	Frequency-comb-based remote sensing of greenhouse gases over kilometer air paths. Optica, 2014, 1, 290.	4.8	296
33	Slowing down of the global accumulation of atmospheric methane during the 1980s. Nature, 1992, 358, 313-316.	13.7	295
34	Atmospheric gas concentrations over the past century measured in air from firn at the South Pole. Nature, 1996, 383, 231-235.	13.7	288
35	Influence of El NiÃ±o on the equatorial Pacific contribution to atmospheric CO2 accumulation. Nature, 1999, 398, 597-601.	13.7	277
36	A new look at methane and nonmethane hydrocarbon emissions from oil and natural gas operations in the Colorado Denverâ€Julesburg Basin. Journal of Geophysical Research D: Atmospheres, 2014, 119, 6836-6852.	1.2	257

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37	Oceanic ¹³C/¹²C observations: A new window on ocean CO₂ uptake. Global Biogeochemical Cycles, 1993, 7, 353-368.	1.9	233
38	Mixing ratios of carbon monoxide in the troposphere. Journal of Geophysical Research, 1992, 97, 20731-20750.	3.3	228
39	Seven years of recent European net terrestrial carbon dioxide exchange constrained by atmospheric observations. Global Change Biology, 2010, 16, 1317-1337.	4.2	223
40	On the global distribution, seasonality, and budget of atmospheric carbonyl sulfide (COS) and some similarities to CO2. Journal of Geophysical Research, 2007, 112, .	3.3	213
41	Increases in early season ecosystem uptake explain recent changes in the seasonal cycle of atmospheric CO2at high northern latitudes. Geophysical Research Letters, 1999, 26, 2765-2768.	1.5	206
42	A dramatic decrease in the growth rate of atmospheric methane in the northern hemisphere during 1992. Geophysical Research Letters, 1994, 21, 45-48.	1.5	203
43	A three-dimensional synthesis study of Î´18O in atmospheric CO2: 1. Surface fluxes. Journal of Geophysical Research, 1997, 102, 5857-5872.	3.3	200
44	CO₂, CO, and CH₄ measurements from tall towers in the NOAA Earth System Research Laboratory's Global Greenhouse Gas Reference Network: instrumentation, uncertainty analysis, and recommendations for future high-accuracy greenhouse gas monitoring efforts. Atmospheric Measurement Techniques, 2014, 7, 647-687.	1.2	199
45	Recent Changes in Atmospheric Carbon Monoxide. Science, 1994, 263, 1587-1590.	6.0	197
46	Aircraft-Based Estimate of Total Methane Emissions from the Barnett Shale Region. Environmental Science & Technology, 2015, 49, 8124-8131.	4.6	190
47	Latitudinal distribution of the sources and sinks of atmospheric carbon dioxide derived from surface observations and an atmospheric transport model. Journal of Geophysical Research, 1989, 94, 5151-5172.	3.3	187
48	CarbonTracker-CH₄: an assimilation system for estimating emissions of atmospheric methane. Atmospheric Chemistry and Physics, 2014, 14, 8269-8293.	1.9	187
49	Monitoring the isotopic composition of atmospheric CO2: Measurements from the NOAA Global Air Sampling Network. Journal of Geophysical Research, 1996, 101, 25897-25916.	3.3	186
50	Comparison of14CO2, CO, and SF6as tracers for recently added fossil fuel CO2in the atmosphere and implications for biological CO2exchange. Geophysical Research Letters, 2006, 33, n/a-n/a.	1.5	186
51	What atmospheric oxygen measurements can tell us about the global carbon cycle. Global Biogeochemical Cycles, 1993, 7, 37-67.	1.9	185
52	Latitudinal variation in oxygen-18 of atmospheric CO2. Nature, 1987, 327, 495-497.	13.7	184
53	Weakening temperature control on the interannual variations of spring carbon uptake across northern lands. Nature Climate Change, 2017, 7, 359-363.	8.1	183
54	Partitioning net ecosystem carbon exchange with isotopic fluxes of CO2. Global Change Biology, 2001, 7, 127-145.	4.2	178

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55	An ensemble data assimilation system to estimate CO2surface fluxes from atmospheric trace gas observations. Journal of Geophysical Research, 2005, 110, .	3.3	177
56	Towards real-time verification of CO2 emissions. Nature Climate Change, 2017, 7, 848-850.	8.1	168
57	Inverse modeling estimates of the global nitrous oxide surface flux from 1998-2001. Global Biogeochemical Cycles, 2006, 20, n/a-n/a.	1.9	161
58	Compiled records of carbon isotopes in atmospheric CO₂ for historical simulations in CMIP6. Geoscientific Model Development, 2017, 10, 4405-4417.	1.3	154
59	Seasonal climatology of CO₂ across North America from aircraft measurements in the NOAA/ESRL Global Greenhouse Gas Reference Network. Journal of Geophysical Research D: Atmospheres, 2015, 120, 5155-5190.	1.2	153
60	Natural atmospheric 14C variation and the Suess effect. Nature, 1979, 280, 826-828.	13.7	151
61	Accelerating net terrestrial carbon uptake during the warming hiatus due to reduced respiration. Nature Climate Change, 2017, 7, 148-152.	8.1	151
62	Reversal of global atmospheric ethane and propane trends largely due to US oil and natural gas production. Nature Geoscience, 2016, 9, 490-495.	5.4	149
63	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
64	Assessment of fossil fuel carbon dioxide and other anthropogenic trace gas emissions from airborne measurements over Sacramento, California in spring 2009. Atmospheric Chemistry and Physics, 2011, 11, 705-721.	1.9	148
65	New constraints on Northern Hemisphere growing season net flux. Geophysical Research Letters, 2007, 34, .	1.5	147
66	A geostatistical approach to surface flux estimation of atmospheric trace gases. Journal of Geophysical Research, 2004, 109, .	3.3	146
67	Estimating uncertainty of the WMO mole fraction scale for carbon dioxide in air. Journal of Geophysical Research, 2006, 111, .	3.3	146
68	AirCore: An Innovative Atmospheric Sampling System. Journal of Atmospheric and Oceanic Technology, 2010, 27, 1839-1853.	0.5	145
69	Measurements of carbon dioxide on very tall towers: results of the NOAA/CMDL program. Tellus, Series B: Chemical and Physical Meteorology, 1998, 50, 401-415.	0.8	143
70	Toward quantification and source sector identification of fossil fuel CO₂ emissions from an urban area: Results from the INFLUX experiment. Journal of Geophysical Research D: Atmospheres, 2015, 120, 292-312.	1.2	140
71	CH4sources estimated from atmospheric observations of CH4and its13C/12C isotopic ratios: 1. Inverse modeling of source processes. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	1.9	139
72	A new look at atmospheric carbon dioxide. Atmospheric Environment, 2009, 43, 2084-2086.	1.9	139

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73	Increased water-use efficiency and reduced CO2 uptake by plants during droughts at a continental scale. Nature Geoscience, 2018, 11, 744-748.	5.4	139
74	Combined Simple Biosphere/Carnegieâ€Amesâ€Stanford Approach terrestrial carbon cycle model. Journal of Geophysical Research, 2008, 113, .	3.3	138
75	Measurements of carbon dioxide on very tall towers: results of the NOAA/CMDL program. Tellus, Series B: Chemical and Physical Meteorology, 1998, 50, 401-415.	0.8	137
76	Calculating isotopic fractionation from atmospheric measurements at various scales. Tellus, Series B: Chemical and Physical Meteorology, 2003, 55, 207-214.	0.8	135
77	The role of carbon dioxide in climate forcing from 1979 to 2004: introduction of the Annual Greenhouse Gas Index. Tellus, Series B: Chemical and Physical Meteorology, 2006, 58, 614-619.	0.8	132
78	Climatic Change in Tasmania Inferred from a 1089-Year Tree-Ring Chronology of Huon Pine. Science, 1991, 253, 1266-1268.	6.0	126
79	What is the concentration footprint of a tall tower?. Journal of Geophysical Research, 2001, 106, 17831-17840.	3.3	124
80	Five decades of northern land carbon uptake revealed by the interhemispheric CO2 gradient. Nature, 2019, 568, 221-225.	13.7	124
81	Atmospheric carbon dioxide measurements in the remote global troposphere, 1981-1984. Tellus, Series B: Chemical and Physical Meteorology, 1988, 40B, 81-115.	0.8	123
82	Linking emissions of fossil fuel CO₂ and other anthropogenic trace gases using atmospheric ¹⁴CO₂. Journal of Geophysical Research, 2012, 117, .	3.3	121
83	Maximum likelihood estimation of covariance parameters for Bayesian atmospheric trace gas surface flux inversions. Journal of Geophysical Research, 2005, 110, .	3.3	118
84	Variability in the O2/N2ratio of southern hemisphere air, 1991-1994: Implications for the carbon cycle. Global Biogeochemical Cycles, 1996, 10, 9-21.	1.9	115
85	Development of analytical methods and measurements of13C/12C in atmospheric CH4from the NOAA Climate Monitoring and Diagnostics Laboratory Global Air Sampling Network. Journal of Geophysical Research, 2002, 107, ACH 11-1.	3.3	115
86	Airborne measurements indicate large methane emissions from the eastern Amazon basin. Geophysical Research Letters, 2007, 34, .	1.5	115
87	Changes in CH4and CO growth rates after the eruption of Mt. Pinatubo and their link with changes in tropical tropospheric UV flux. Geophysical Research Letters, 1996, 23, 2761-2764.	1.5	108
88	Validation of XCO₂ derived from SWIR spectra of GOSAT TANSO-FTS with aircraft measurement data. Atmospheric Chemistry and Physics, 2013, 13, 9771-9788.	1.9	106
89	Observed and simulated global distribution and budget of atmospheric C₂-C₅ alkanes. Atmospheric Chemistry and Physics, 2010, 10, 4403-4422.	1.9	104
90	A high precision isotope ratio mass spectrometry method for measuring the ratio of air. Geochimica Et Cosmochimica Acta, 1994, 58, 4751-4758.	1.6	103

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91	In situ measurement of atmospheric CO₂ at the four WMO/GAW stations in China. Atmospheric Chemistry and Physics, 2014, 14, 2541-2554.	1.9	102
92	Past atmospheric CO_2 levels and the 13C/12C ratios in tree rings. Tellus, 1980, 32, 268-283.	0.4	101
93	CH_4sources estimated from atmospheric observations of $CH_4$and its13C/12C isotopic ratios: 2. Inverse modeling of CH_4fluxes from geographical regions. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	1.9	99
94	Determination of the isotopic(13C/12C) discrimination by terrestrial biology from a global network of observations. Global Biogeochemical Cycles, 1998, 12, 555-562.	1.9	96
95	Measurement of18O/16O in the soil-atmosphere CO_2flux. Global Biogeochemical Cycles, 1999, 13, 761-774.	1.9	96
96	An Accounting of the Observed Increase in Oceanic and Atmospheric CO_2 and the Outlook for the Future. Oceanography, 2009, 22, 26-35.	0.5	96
97	Audit of the global carbon budget: estimate errors and their impact on uptake uncertainty. Biogeosciences, 2015, 12, 2565-2584.	1.3	96
98	Verification of flux measurement using relaxed eddy accumulation. Atmospheric Environment Part A General Topics, 1993, 27, 2417-2426.	1.3	95
99	Revision of global carbon fluxes based on a reassessment of oceanic and riverine carbon transport. Nature Geoscience, 2018, 11, 504-509.	5.4	95
100	A feasible Global Carbon Cycle Observing System: a plan to decipher today's carbon cycle based on observations. Global Change Biology, 1996, 2, 309-318.	4.2	94
101	Tropical nighttime warming as a dominant driver of variability in the terrestrial carbon sink. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 15591-15596.	3.3	92
102	NOAA/CSIRO Flask Air Intercomparison Experiment: A strategy for directly assessing consistency among atmospheric measurements made by independent laboratories. Journal of Geophysical Research, 2001, 106, 20445-20464.	3.3	91
103	Measurements of carbon dioxide on a very tall tower. Tellus, Series B: Chemical and Physical Meteorology, 1995, 47, 535-549.	0.8	90
104	ObsPack: a framework for the preparation, delivery, and attribution of atmospheric greenhouse gas measurements. Earth System Science Data, 2014, 6, 375-384.	3.7	88
105	Long-term greenhouse gas measurements from aircraft. Atmospheric Measurement Techniques, 2013, 6, 511-526.	1.2	87
106	Elevated atmospheric CO_2effects and soil water feedbacks on soil respiration components in a Colorado grassland. Global Biogeochemical Cycles, 2003, 17, n/a-n/a.	1.9	85
107	An improved Kalman Smoother for atmospheric inversions. Atmospheric Chemistry and Physics, 2005, 5, 2691-2702.	1.9	83
108	A new high precision14CO2time series for North American continental air. Journal of Geophysical Research, 2007, 112, .	3.3	83

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109	Improved Mechanistic Understanding of Natural Gas Methane Emissions from Spatially Resolved Aircraft Measurements. Environmental Science & Technology, 2017, 51, 7286-7294.	4.6	83
110	A note on isotopic ratios and the global atmospheric methane budget. Global Biogeochemical Cycles, 1997, 11, 77-81.	1.9	82
111	Deep air convection in the firn at a zero-accumulation site, central Antarctica. Earth and Planetary Science Letters, 2010, 293, 359-367.	1.8	82
112	A high precision manometric system for absolute calibrations of CO_2in dry air. Journal of Geophysical Research, 1997, 102, 5885-5894.	3.3	81
113	Atmospheric O_2/N_2changes, 1993-2002: Implications for the partitioning of fossil fuel CO_2sequestration. Global Biogeochemical Cycles, 2005, 19, n/a-n/a.	1.9	78
114	Atmospheric carbon dioxide measurements in the remote global troposphere, 1981-1984. Tellus, Series B: Chemical and Physical Meteorology, 2022, 40, 81.	0.8	77
115	A three-dimensional synthesis study of Î´18O in atmospheric CO_2: 2. Simulations with the TM2 transport model. Journal of Geophysical Research, 1997, 102, 5873-5883.	3.3	75
116	Application of a Differential Fuel-Cell Analyzer for Measuring Atmospheric Oxygen Variations. Journal of Atmospheric and Oceanic Technology, 2007, 24, 82-94.	0.5	74
117	Toward regional-scale modeling using the two-way nested global model TM5: Characterization of transport using SF_6. Journal of Geophysical Research, 2004, 109, .	3.3	73
118	Canopy-scale delta13C of photosynthetic and respiratory CO_2 fluxes: observations in forest biomes across the United States. Global Change Biology, 2005, 11, 633-643.	4.2	67
119	Atmospheric observations of carbon monoxide and fossil fuel CO₂emissions from East Asia. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	65
120	Estimating US fossil fuel CO ₂ emissions from measurements of ¹⁴ C in atmospheric CO ₂. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 13300-13307.	3.3	65
121	Predicted shift in the ¹³<i>C</i>/¹²<i>C</i> ratio of atmospheric carbon dioxide. Geophysical Research Letters, 1980, 7, 505-508.	1.5	64
122	Atmospheric potential oxygen: New observations and their implications for some atmospheric and oceanic models. Global Biogeochemical Cycles, 2006, 20, n/a-n/a.	1.9	64
123	Accurate measurements of carbon monoxide in humid air using the cavity ring-down spectroscopy (CRDS) technique. Atmospheric Measurement Techniques, 2013, 6, 1031-1040.	1.2	64
124	Vertical profiles of CO₂ above eastern Amazonia suggest a net carbon flux to the atmosphere and balanced biosphere between 2000 and 2009. Tellus, Series B: Chemical and Physical Meteorology, 2022, 62, 581.	0.8	63
125	Variations in atmospheric methane at Mauna Loa Observatory related to longâ€range transport. Journal of Geophysical Research, 1992, 97, 6003-6010.	3.3	62
126	Calculating isotopic fractionation from atmospheric measurements at various scales. Tellus, Series B: Chemical and Physical Meteorology, 2022, 55, 207.	0.8	62

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127	Regional US carbon sinks from three-dimensional atmospheric CO ₂ sampling. Proceedings of the National Academy of Sciences of the United States of America, 2010, 107, 18348-18353.	3.3	61
128	Anthropogenic sources of halocarbons, sulfur hexafluoride, carbon monoxide, and methane in the southeastern United States. Journal of Geophysical Research, 1997, 102, 15915-15925.	3.3	58
129	Past atmospheric CO₂levels and the¹³C/¹²C ratios in tree rings. Tellus, 1980, 32, 268-283.	0.4	57
130	Oxygen isotopic equilibrium between carbon dioxide and water in soils. Tellus, Series B: Chemical and Physical Meteorology, 1998, 50, 163-178.	0.8	57
131	Improving stratospheric transport trend analysis based on SF₆ and CO₂ measurements. Journal of Geophysical Research D: Atmospheres, 2014, 119, 14,110.	1.2	57
132	Chemical pretreatment and radial flow of 14C in tree rings. Nature, 1978, 271, 234-235.	13.7	55
133	Net terrestrial CO₂exchange over China during 2001-2010 estimated with an ensemble data assimilation system for atmospheric CO₂. Journal of Geophysical Research D: Atmospheres, 2014, 119, 3500-3515.	1.2	54
134	Carbon monoxide budget in the northern hemisphere. Geophysical Research Letters, 1994, 21, 433-436.	1.5	52
135	No significant increase in longâ€term CH₄ emissions on North Slope of Alaska despite significant increase in air temperature. Geophysical Research Letters, 2016, 43, 6604-6611.	1.5	52
136	Oxygen isotopic equilibrium between carbon dioxide and water in soils. Tellus, Series B: Chemical and Physical Meteorology, 2022, 50, 163.	0.8	51
137	Correlations among combustion effluent species at Barrow, Alaska: Aerosol black carbon, carbon dioxide, and methane. Journal of Atmospheric Chemistry, 1989, 9, 283-299.	1.4	50
138	Trends and temporal variations of major greenhouse gases at a rural site in Central Europe. Atmospheric Environment, 2008, 42, 8707-8716.	1.9	50
139	Improved Constraints on Global Methane Emissions and Sinks Using <i>Î´</i>¹³Câ€CH₄. Global Biogeochemical Cycles, 2021, 35, e2021GB007000.	1.9	50
140	A comprehensive global three-dimensional model of Î´18O in atmospheric CO2: 2. Mapping the atmospheric signal. Journal of Geophysical Research, 2003, 108, .	3.3	49
141	Carbon Crucible. Science, 2008, 320, 460-461.	6.0	49
142	Carbon flux estimation for Siberia by inverse modeling constrained by aircraft and tower CO₂ measurements. Journal of Geophysical Research D: Atmospheres, 2013, 118, 1100-1122.	1.2	49
143	Atmospheric Carbon Dioxide Variability in the Community Earth System Model: Evaluation and Transient Dynamics during the Twentieth and Twenty-First Centuries. Journal of Climate, 2013, 26, 4447-4475.	1.2	48
144	Carbon isotope discrimination of arctic and boreal biomes inferred from remote atmospheric measurements and a biosphere-atmosphere model. Global Biogeochemical Cycles, 2002, 16, 1-1-1-15.	1.9	47

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145	U.S. CH₄ emissions from oil and gas production: Have recent large increases been detected?. Journal of Geophysical Research D: Atmospheres, 2017, 122, 4070-4083.	1.2	47
146	Biosphere model simulations of interannual variability in terrestrial ¹³C/¹²C exchange. Global Biogeochemical Cycles, 2013, 27, 637-649.	1.9	46
147	Enhanced North American carbon uptake associated with El NiÃ±o. Science Advances, 2019, 5, eaaw0076.	4.7	45
148	A global calculation of the Î´13C of soil respired carbon: Implications for the biospheric uptake of anthropogenic CO2. Global Biogeochemical Cycles, 1999, 13, 519-530.	1.9	44
149	Volatile Organic Compounds in the Global Atmosphere. Eos, 2009, 90, 513-514.	0.1	44
150	A multi-year record of airborne CO₂ observations in the US Southern Great Plains. Atmospheric Measurement Techniques, 2013, 6, 751-763.	1.2	44
151	Strong Southern Ocean carbon uptake evident in airborne observations. Science, 2021, 374, 1275-1280.	6.0	44
152	Boreal ecosystems sequestered more carbon in warmer years. Geophysical Research Letters, 2006, 33, n/a-n/a.	1.5	42
153	Highâ€resolution emissions of CO₂ from power generation in the USA. Journal of Geophysical Research, 2008, 113, .	3.3	42
154	Atmospheric CO₂inversion validation using vertical profile measurements: Analysis of four independent inversion models. Journal of Geophysical Research, 2011, 116, .	3.3	41
155	A 3-dimensional study of delta18O in atmospheric CO2: contribution of different land ecosystems. Tellus, Series B: Chemical and Physical Meteorology, 1999, 51, 642-667.	0.8	40
156	Bias corrections of GOSAT SWIR XCO₂ and XCH₄ with TCCON data and their evaluation using aircraft measurement data. Atmospheric Measurement Techniques, 2016, 9, 3491-3512.	1.2	40
157	Estimating photosynthetic13C discrimination in terrestrial CO2exchange from canopy to regional scales. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	1.9	39
158	Estimating Asian terrestrial carbon fluxes from CONTRAIL aircraft and surface CO₂ observations for the period 2006â€“2010. Atmospheric Chemistry and Physics, 2014, 14, 5807-5824.	1.9	38
159	Controls on the movement and composition of firn air at the West Antarctic Ice Sheet Divide. Atmospheric Chemistry and Physics, 2011, 11, 11007-11021.	1.9	37
160	The seasonal cycle of atmospheric CO2: A study based on the NCAR Community Climate Model (CCM2). Journal of Geophysical Research, 1996, 101, 15079-15097.	3.3	36
161	A 3-dimensional study of Î´¹⁸O in atmospheric CO₂: contribution of different land ecosystems. Tellus, Series B: Chemical and Physical Meteorology, 2022, 51, 642.	0.8	36
162	Threeâ€dimensional SF₆ data and tropospheric transport simulations: Signals, modeling accuracy, and implications for inverse modeling. Journal of Geophysical Research, 2007, 112, .	3.3	35

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163	Spatial and temporal resolution of carbon flux estimates for 1983â€"2002. Biogeosciences, 2011, 8, 1309-1331.	1.3	35
164	Allocation of Terrestrial Carbon Sources Using ¹⁴CO₂: Methods, Measurement, and Modeling. Radiocarbon, 2013, 55, 1484-1495.	0.8	35
165	Longâ€Term Measurements Show Little Evidence for Large Increases in Total U.S. Methane Emissions Over the Past Decade. Geophysical Research Letters, 2019, 46, 4991-4999.	1.5	35
166	On calculating the transfer of carbon-13 in reservoir models of the carbon cycle. Tellus, 1980, 32, 464-469.	0.4	34
167	Spatial distribution of Î"¹⁴CO₂ across Eurasia: measurements from the TROICA-8 expedition. Atmospheric Chemistry and Physics, 2009, 9, 175-187.	1.9	34
168	Inverse Modeling of CO₂ Fluxes Using GOSAT Data and Multi-Year Ground-Based Observations. Scientific Online Letters on the Atmosphere, 2013, 9, 45-50.	0.6	34
169	Characteristics of atmospheric CO2 and CH4 at the Shangdianzi regional background station in China. Atmospheric Environment, 2016, 131, 1-8.	1.9	34
170	Impact of CO₂measurement bias on CarbonTracker surface flux estimates. Journal of Geophysical Research, 2011, 116, .	3.3	33
171	An integrated flask sample collection system for greenhouse gas measurements. Atmospheric Measurement Techniques, 2012, 5, 2321-2327.	1.2	33
172	Abundances of isotopologues and calibration of CO₂ greenhouse gas measurements. Atmospheric Measurement Techniques, 2017, 10, 2669-2685.	1.2	33
173	Validation of XCH₄ derived from SWIR spectra of GOSAT TANSO-FTS with aircraft measurement data. Atmospheric Measurement Techniques, 2014, 7, 2987-3005.	1.2	32
174	Continued emissions of carbon tetrachloride from the United States nearly two decades after its phaseout for dispersive uses. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 2880-2885.	3.3	32
175	A Design for Unattended Monitoring of Carbon Dioxide on a Very Tall Tower. Journal of Atmospheric and Oceanic Technology, 1997, 14, 1139-1145.	0.5	31
176	Evaluation of solid adsorbent materials for cryogen-free trappingâ€"gas chromatographic analysis of atmospheric C2â€"C6 non-methane hydrocarbons. Journal of Chromatography A, 2006, 1134, 1-15.	1.8	31
177	Reconstruction of Northern Hemisphere 1950â€"2010 atmospheric non-methane hydrocarbons. Atmospheric Chemistry and Physics, 2014, 14, 1463-1483.	1.9	31
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