A Scott Denning

List of Publications by Year
in descending order

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114 papers	13,804 citations	41323 49 h-index	24961 109 g-index
123 all docs	123 docs citations	123 times ranked	9789 citing authors

#	Article	IF	Citations
1	Modeling the Exchanges of Energy, Water, and Carbon Between Continents and the Atmosphere. Science, 1997, 275, 502-509.	6.0	1,280
2	Recent patterns and mechanisms of carbon exchange by terrestrial ecosystems. Nature, 2001, 414, 169-172.	13.7	1,162
3	Towards robust regional estimates of CO2 sources and sinks using atmospheric transport models. Nature, 2002, 415, 626-630.	13.7	1,157
4	The Common Land Model. Bulletin of the American Meteorological Society, 2003, 84, 1013-1024.	1.7	1,058
5	Weak Northern and Strong Tropical Land Carbon Uptake from Vertical Profiles of Atmospheric CO2. Science, 2007, 316, 1732-1735.	6.0	775
6	Interactions between the atmosphere and terrestrial ecosystems: influence on weather and climate. Global Change Biology, 1998, 4, 461-475.	4.2	524
7	TransCom 3 inversion intercomparison: Impact of transport model errors on the interannual variability of regional CO2fluxes, 1988-2003. Global Biogeochemical Cycles, 2006, 20, n/a-n/a.	1.9	417
8	Latitudinal gradient of atmospheric CO2 due to seasonal exchange with land biota. Nature, 1995, 376, 240-243.	13.7	384
9	Precision requirements for space-based data. Journal of Geophysical Research, 2007, 112, .	3.3	322
10	Transcom 3 inversion intercomparison: Model mean results for the estimation of seasonal carbon sources and sinks. Global Biogeochemical Cycles, 2004, 18, n/a-n/a.	1.9	312
11	Seasonal drought stress in the Amazon: Reconciling models and observations. Journal of Geophysical Research, 2008, 113, .	3.3	248
12	TransCom 3 CO2 inversion intercomparison: 1. Annual mean control results and sensitivity to transport and prior flux information. Tellus, Series B: Chemical and Physical Meteorology, 2003, 55, 555-579.	0.8	235
13	Use of FLUXNET in the Community Land Model development. Journal of Geophysical Research, 2008, 113, .	3.3	210
14	Carbon 13 exchanges between the atmosphere and biosphere. Global Biogeochemical Cycles, 1997, 11, 507-533.	1.9	206
15	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
16	An ensemble data assimilation system to estimate CO2surface fluxes from atmospheric trace gas observations. Journal of Geophysical Research, 2005, 110, .	3.3	177
17	Remote sensing data assimilation for a prognostic phenology model. Journal of Geophysical Research, 2008, 113, .	3.3	160
18	Variations in modeled atmospheric transport of carbon dioxide and the consequences for CO2inversions. Global Biogeochemical Cycles, 1996, 10, 783-796.	1.9	155

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19	A coupled model of the global cycles of carbonyl sulfide and CO₂: A possible new window on the carbon cycle. Journal of Geophysical Research G: Biogeosciences, 2013, 118, 842-852.	1.3	149
20	Africa and the global carbon cycle. Carbon Balance and Management, 2007, 2, 3.	1.4	144
21	Simulation of carbon isotope discrimination of the terrestrial biosphere. Global Biogeochemical Cycles, 2005, 19, .	1.9	143
22	TransCom model simulations of hourly atmospheric CO₂: Experimental overview and diurnal cycle results for 2002. Global Biogeochemical Cycles, 2008, 22, .	1.9	142
23	Combined Simple Biosphere/Carnegieâ€Amesâ€Stanford Approach terrestrial carbon cycle model. Journal of Geophysical Research, 2008, 113, .	3.3	138
24	A Revised Land Surface Parameterization (SiB2) for GCMS. Part III: The Greening of the Colorado State University General Circulation Model. Journal of Climate, 1996, 9, 738-763.	1.2	131
25	TransCom model simulations of hourly atmospheric CO₂: Analysis of synopticâ€scale variations for the period 2002â€“2003. Global Biogeochemical Cycles, 2008, 22, .	1.9	119
26	A regional high-resolution carbon flux inversion of North America for 2004. Biogeosciences, 2010, 7, 1625-1644.	1.3	106
27	TransCom 3 CO₂ inversion intercomparison: 1. Annual mean control results and sensitivity to transport and prior flux information. Tellus, Series B: Chemical and Physical Meteorology, 2022, 55, 555.	0.8	105
28	A global reanalysis of vegetation phenology. Journal of Geophysical Research, 2011, 116, .	3.3	105
29	Three-dimensional transport and concentration of SF6. A model intercomparison study (TransCom 2). Tellus, Series B: Chemical and Physical Meteorology, 1999, 51, 266-297.	0.8	101
30	Simulations of terrestrial carbon metabolism and atmospheric CO₂ in a general circulation model: Part 1: Surface carbon fluxes. Tellus, Series B: Chemical and Physical Meteorology, 2022, 48, 521.	0.8	99
31	Interannual variations in continentalâ€scale net carbon exchange and sensitivity to observing networks estimated from atmospheric CO₂ inversions for the period 1980 to 2005. Global Biogeochemical Cycles, 2008, 22, .	1.9	96
32	Quantifying the Impact of Atmospheric Transport Uncertainty on CO₂ Surface Flux Estimates. Global Biogeochemical Cycles, 2019, 33, 484-500.	1.9	95
33	Mesoscale inversion: first results from the CERES campaign with synthetic data. Atmospheric Chemistry and Physics, 2008, 8, 3459-3471.	1.9	91
34	Simulations of terrestrial carbon metabolism and atmospheric CO₂ in a general circulation model: Part 2: Simulated CO₂ concentrations. Tellus, Series B: Chemical and Physical Meteorology, 2022, 48, 543.	0.8	90
35	Simulated and observed fluxes of sensible and latent heat and CO2 at the WLEF-TV tower using SiB2.5. Global Change Biology, 2003, 9, 1262-1277.	4.2	88
36	Three-dimensional transport and concentration of SF₆ A model intercomparison study (TransCom 2). Tellus, Series B: Chemical and Physical Meteorology, 2022, 51, 266.	0.8	88

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37	On error estimation in atmospheric CO2inversions. Journal of Geophysical Research, 2002, 107, ACL 10-1.	3.3	79
38	Carbon flux bias estimation employing Maximum Likelihood Ensemble Filter (MLEF). Journal of Geophysical Research, 2007, 112, .	3.3	78
39	Simulations of terrestrial carbon metabolism and atmospheric CO2 in a general circulation model. Part 1: Surface carbon fluxes. Tellus, Series B: Chemical and Physical Meteorology, 1996, 48, 521-542.	0.8	76
40	Simulated variations in atmospheric CO2 over a Wisconsin forest using a coupled ecosystem-atmosphere model. Global Change Biology, 2003, 9, 1241-1250.	4.2	76
41	Evaluating atmospheric CO₂ inversions at multiple scales over a highly inventoried agricultural landscape. Global Change Biology, 2013, 19, 1424-1439.	4.2	76
42	A three-dimensional synthesis study of Î´18O in atmospheric CO2: 2. Simulations with the TM2 transport model. Journal of Geophysical Research, 1997, 102, 5873-5883.	3.3	75
43	Sources of dissolved and particulate organic material in Loch Vale Watershed, Rocky Mountain National Park, Colorado, USA. Biogeochemistry, 1991, 15, 89.	1.7	73
44	Influence of biotic exchange and combustion sources on atmospheric CO2concentrations in New England from observations at a forest flux tower. Journal of Geophysical Research, 1999, 104, 9561-9569.	3.3	70
45	Simulations of terrestrial carbon metabolism and atmospheric CO2 in a general circulation model. Part 2: Simulated CO2 concentrations. Tellus, Series B: Chemical and Physical Meteorology, 1996, 48, 543-567.	0.8	69
46	Global seasonal variations of midday planetary boundary layer depth from CALIPSO spaceâ€borne LIDAR. Journal of Geophysical Research D: Atmospheres, 2013, 118, 1226-1233.	1.2	67
47	A possible global covariance between terrestrial gross primary production and13C discrimination: Consequences for the atmospheric13C budget and its response to ENSO. Global Biogeochemical Cycles, 2002, 16, 83-1-83-16.	1.9	65
48	Estimates of net CO2flux by application of equilibrium boundary layer concepts to CO2and water vapor measurements from a tall tower. Journal of Geophysical Research, 2004, 109, .	3.3	64
49	River breeze circulation in eastern Amazonia: observations and modelling results. Theoretical and Applied Climatology, 2004, 78, 111.	1.3	63
50	Observations and simulations of synoptic, regional, and local variations in atmospheric CO2. Journal of Geophysical Research, 2007, 112, .	3.3	61
51	The influence of mountain meteorology on precipitation chemistry at low and high elevations of the Colorado Front Range, U.S.A.. Atmospheric Environment Part A General Topics, 1993, 27, 2337-2349.	1.3	60
52	Sensitivity, uncertainty and time dependence of parameters in a complex land surface model. Agricultural and Forest Meteorology, 2008, 148, 268-287.	1.9	60
53	Mechanisms for synoptic variations of atmospheric CO₂ in North America, South America and Europe. Atmospheric Chemistry and Physics, 2008, 8, 7239-7254.	1.9	60
54	Observed covariance between ecosystem carbon exchange and atmospheric boundary layer dynamics at a site in northern Wisconsin. Journal of Geophysical Research, 2004, 109, .	3.3	55

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55	Estimates of North American summertime planetary boundary layer depths derived from spaceâ€borne lidar. Journal of Geophysical Research, 2012, 117, .	3.3	54
56	Testing a model of CO2, water and energy exchange in Great Plains tallgrass prairie and wheat ecosystems. Agricultural and Forest Meteorology, 2005, 131, 162-179.	1.9	53
57	Hydrologic pathways and chemical composition of runoff during snowmelt in Loch Vale Watershed, Rocky Mountain National Park, Colorado, USA. Water, Air, and Soil Pollution, 1991, 59, 107.	1.1	52
58	Effect of climate on interannual variability of terrestrial CO2fluxes. Global Biogeochemical Cycles, 2002, 16, 49-1-49-12.	1.9	51
59	A multiple-scale simulation of variations in atmospheric carbon dioxide using a coupled biosphere-atmospheric model. Journal of Geophysical Research, 2004, 109, .	3.3	51
60	100 Years of Earth System Model Development. Meteorological Monographs, 2019, 59, 12.1-12.66.	5.0	48
61	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
62	Interannual variability of photosynthesis across Africa and its attribution. Journal of Geophysical Research, 2008, 113, .	3.3	45
63	Impact of Evapotranspiration on Dry Season Climate in the Amazon Forest*. Journal of Climate, 2014, 27, 574-591.	1.2	45
64	Possible representation errors in inversions of satellite CO₂ retrievals. Journal of Geophysical Research, 2008, 113, .	3.3	43
65	Using continental observations in global atmospheric inversions of CO₂: North American carbon sources and sinks. Tellus, Series B: Chemical and Physical Meteorology, 2022, 62, 550.	0.8	43
66	Estimate of carbonyl sulfide tropical oceanic surface fluxes using Aura Tropospheric Emission Spectrometer observations. Journal of Geophysical Research D: Atmospheres, 2015, 120, 11,012.	1.2	43
67	Estimation of global CO₂ fluxes at regional scale using the maximum likelihood ensemble filter. Journal of Geophysical Research, 2008, 113, .	3.3	42
68	KEYNOTE PERSPECTIVE. Can a strong atmospheric CO2 rectifier effect be reconciled with a "reasonable" carbon budget?. Tellus, Series B: Chemical and Physical Meteorology, 1999, 51, 249-253.	0.8	41
69	North American gross primary productivity: regional characterization and interannual variability. Tellus, Series B: Chemical and Physical Meteorology, 2022, 62, 533.	0.8	41
70	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
71	Mesoscale circulations and atmospheric CO2variations in the TapajÃ³s Region, ParÃ¡, Brazil. Journal of Geophysical Research, 2005, 110, .	3.3	40
72	Sensitivity of inverse estimation of annual mean CO2sources and sinks to ocean-only sites versus all-sites observational networks. Geophysical Research Letters, 2006, 33, .	1.5	40

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73	Assessing the impact of crops on regional CO₂ fluxes and atmospheric concentrations. Tellus, Series B: Chemical and Physical Meteorology, 2022, 62, 521.	0.8	40
74	Moist synoptic transport of CO₂ along the midâ€latitude storm track. Geophysical Research Letters, 2011, 38, .	1.5	40
75	Closing the scale gap between land surface parameterizations and <scp>GCM</scp>s with a new scheme, <scp>S</scp>i<scp>B</scp>3â€<scp>B</scp>ins. Journal of Advances in Modeling Earth Systems, 2017, 9, 691-711.	1.3	38
76	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
77	Can a strong atmospheric CO₂ rectifier effect be reconciled with a “reasonable” carbon budget?. Tellus, Series B: Chemical and Physical Meteorology, 2022, 51, 249.	0.8	34
78	The winter Arctic Oscillation, the timing of spring, and carbon fluxes in the Northern Hemisphere. Global Biogeochemical Cycles, 2005, 19, .	1.9	33
79	Role of deep soil moisture in modulating climate in the Amazon rainforest. Geophysical Research Letters, 2010, 37, .	1.5	33
80	Global observations of the carbon budget: 1. Expected satellite capabilities for emission spectroscopy in the EOS and NPOESS eras. Journal of Geophysical Research, 2001, 106, 20055-20068.	3.3	32
81	Evaluation of modeled atmospheric boundary layer depth at the WLEF tower. Agricultural and Forest Meteorology, 2008, 148, 206-215.	1.9	32
82	Isentropic transport and the seasonal cycle amplitude of CO₂. Journal of Geophysical Research D: Atmospheres, 2016, 121, 8106-8124.	1.2	30
83	CO₂ flux estimation errors associated with moist atmospheric processes. Atmospheric Chemistry and Physics, 2012, 12, 6405-6416.	1.9	28
84	An approach for verifying biogenic greenhouse gas emissions inventories with atmospheric CO ₂ concentration data. Environmental Research Letters, 2015, 10, 034012.	2.2	27
85	Seeing the forest through the trees: Recovering largeâ€scale carbon flux biases in the midst of smallâ€scale variability. Journal of Geophysical Research, 2009, 114, .	3.3	24
86	Carbon and energy fluxes in cropland ecosystems: a model-data comparison. Biogeochemistry, 2016, 129, 53-76.	1.7	24
87	The winter Arctic Oscillation and the timing of snowmelt in Europe. Geophysical Research Letters, 2004, 31, .	1.5	21
88	Using continuous data to estimate clear-sky errors in inversions of satellite CO2measurements. Geophysical Research Letters, 2006, 33, .	1.5	21
89	COS-derived GPP relationships with temperature and light help explain high-latitude atmospheric CO ₂ seasonal cycle amplification. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	3.3	21
90	Calculation of the global land surface energy, water and CO2fluxes with an off-line version of SiB2. Journal of Geophysical Research, 1996, 101, 19061-19075.	3.3	20

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91	Representing Grasslands Using Dynamic Prognostic Phenology Based on Biological Growth Stages: 1. Implementation in the Simple Biosphere Model (SiB4). Journal of Advances in Modeling Earth Systems, 2019, 11, 4423-4439.	1.3	20
92	Impact of entrainment from overshooting thermals on landâ€“atmosphere interactions during summer 1999. Tellus, Series B: Chemical and Physical Meteorology, 2022, 62, 441.	0.8	18
93	The Atmospheric Carbon and Transport (ACT)-America Mission. Bulletin of the American Meteorological Society, 2021, 102, E1714-E1734.	1.7	17
94	Evaluation of OCOâ€2 X Variability at Local and Synoptic Scales using Lidar and In Situ Observations from the ACTâ€America Campaigns. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031400.	1.2	16
95	The space and time impacts on U.S. regional atmospheric CO₂ concentrations from a high resolution fossil fuel CO₂ emissions inventory. Tellus, Series B: Chemical and Physical Meteorology, 2022, 62, 506.	0.8	15
96	Iconic CO ₂ Time Series at Risk. Science, 2012, 337, 1038-1040.	6.0	15
97	A Multiyear Gridded Data Ensemble of Surface Biogenic Carbon Fluxes for North America: Evaluation and Analysis of Results. Journal of Geophysical Research G: Biogeosciences, 2020, 125, e2019JG005314.	1.3	14
98	The effect of CO2variability on the retrieval of atmospheric temperatures. Geophysical Research Letters, 2001, 28, 3259-3262.	1.5	11
99	Representing Grasslands Using Dynamic Prognostic Phenology Based on Biological Growth Stages: Part 2. Carbon Cycling. Journal of Advances in Modeling Earth Systems, 2019, 11, 4440-4465.	1.3	11
100	Assessing temporal clear-sky errors in assimilation of satellite CO₂ retrievals using a global transport model. Atmospheric Chemistry and Physics, 2009, 9, 3043-3048.	1.9	9
101	Differences between Nipher and Alter shielded Universal Belfort precipitation gages at two Colorado deposition monitoring sites. Environmental Science & Technology, 1990, 24, 758-760.	4.6	8
102	Sensitivity of land-atmosphere exchanges to overshooting PBL thermals in an idealized coupled model. Journal of Advances in Modeling Earth Systems, 2009, 2, .	1.3	6
103	Surfaceâ€Atmosphere Coupling Scale, the Fate of Water, and Ecophysiological Function in a Brazilian Forest. Journal of Advances in Modeling Earth Systems, 2019, 11, 2523-2546.	1.3	6
104	Reducing Wet Ammonium Deposition in Rocky Mountain National Park: the Development and Evaluation of A Pilot Early Warning System for Agricultural Operations in Eastern Colorado. Environmental Management, 2019, 64, 626-639.	1.2	6
105	Where Has All the Carbon Gone?. Annual Review of Earth and Planetary Sciences, 2022, 50, .	4.6	5
106	Publisher's correction to â€œOn error estimation in atmospheric CO2inversionsâ€• Journal of Geophysical Research, 2006, 111, .	3.3	4
107	When the long run matters. Climatic Change, 2015, 129, 57-72.	1.7	4
108	Increasing the Diversity of Your Graduate Program: Translating Best Practices into Success. Bulletin of the American Meteorological Society, 2016, 97, 1169-1172.	1.7	4

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109	Investigators share improved understanding of the North American Carbon Cycle. Eos, 2007, 88, 255-255.	0.1	3
110	Accurate Simulation of Both Sensitivity and Variability for Amazonian Photosynthesis: Is It Too Much to Ask?. Journal of Advances in Modeling Earth Systems, 2021, 13, e2021MS002555.	1.3	3
111	A sampling method for improving the representation of spatially varying precipitation and soil moisture using the Simple Biosphere Model. Journal of Advances in Modeling Earth Systems, 2014, 6, 9-20.	1.3	2
112	TransCom 3 inversion intercomparison: Impact of transport model errors on the interannual variability of regional CO2fluxes, 1988-2003. Global Biogeochemical Cycles, 2006, 20, n/a-n/a.	1.9	2
113	Corrigendum to "A regional high-resolution carbon flux inversion of North America for 2004" published in Biogeosciences, 7, 1625-1644, 2010. Biogeosciences, 2010, 7, 2245-2245.	1.3	1
114	The effects of acid precipitation-long term ecological measurements in loch vale watershed, Rocky Mountain National Park. Environmental Monitoring and Assessment, 1989, 12, 293-293.	1.3	0