

Arlyn E Andrews

List of Publications by Year in descending order

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112
papers

8,575
citations

50170

46
h-index

53109

85
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115
all docs

115
docs citations

115
times ranked

6405
citing authors

#	ARTICLE	IF	CITATIONS
1	Meteorological controls on the diurnal variability of carbon monoxide mixing ratio at a mountaintop monitoring site in the Appalachian Mountains. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 67, 25659.	0.8	22
2	Methane emissions in the United States, Canada, and Mexico: evaluation of national methane emission inventories and 2010–2017 sectoral trends by inverse analysis of in situ (GLOBALVIEWplus) Tj ETQq0 0 0 rgBT /Qverlock 10 Tf 50 702 Atmospheric Chemistry and Physics, 2022, 22, 395-418.	1.9	25
3	Atmospheric oil and natural gas hydrocarbon trends in the Northern Colorado Front Range are notably smaller than inventory emissions reductions. <i>Elementa</i> , 2021, 9, .	1.1	4
4	Technical note: A high-resolution inverse modelling technique for estimating surface CO ₂ fluxes based on the NIES-TM FLEXPART coupled transport model and its adjoint. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 1245-1266.	1.9	23
5	Global methane budget and trend, 2010–2017: complementarity of inverse analyses using in situ (GLOBALVIEWplus CH ₄ and ObsPack) and satellite (GOSAT) observations. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 4637-4657.	1.9	55
6	Midwest US Croplands Determine Model Divergence in North American Carbon Fluxes. <i>AGU Advances</i> , 2021, 2, e2020AV000310.	2.3	7
7	Boreal forest fire CO and CH ₄ emission factors derived from tower observations in Alaska during the extreme fire season of 2015. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 8557-8574.	1.9	17
8	Data reduction for inverse modeling: an adaptive approach v1.0. <i>Geoscientific Model Development</i> , 2021, 14, 4683-4696.	1.3	3
9	COS-derived GPP relationships with temperature and light help explain high-latitude atmospheric CO ₂ seasonal cycle amplification. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	21
10	Evaluating consistency between total column CO ₂ retrievals from OCO-2 and the in situ network over North America: implications for carbon flux estimation. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 14385-14401.	1.9	4
11	Estimating US fossil fuel CO ₂ emissions from measurements of ¹⁴ C in atmospheric CO ₂ . <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 13300-13307.	3.3	65
12	Geostatistical inverse modeling with very large datasets: an example from the Orbiting Carbon Observatory 2 (OCO-2) satellite. <i>Geoscientific Model Development</i> , 2020, 13, 1771-1785.	1.3	18
13	Intercomparison of atmospheric trace gas dispersion models: Barnett Shale case study. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 2561-2576.	1.9	24
14	Enhanced North American carbon uptake associated with El Niño. <i>Science Advances</i> , 2019, 5, eaaw0076.	4.7	45
15	Long-Term Measurements Show Little Evidence for Large Increases in Total U.S. Methane Emissions Over the Past Decade. <i>Geophysical Research Letters</i> , 2019, 46, 4991-4999.	1.5	35
16	Atmospheric observation-based estimation of fossil fuel CO ₂ emissions from regions of central and southern California. <i>Science of the Total Environment</i> , 2019, 664, 381-391.	3.9	10
17	Source Partitioning of Methane Emissions and its Seasonality in the U.S. Midwest. <i>Journal of Geophysical Research C: Biogeosciences</i> , 2018, 123, 646-659.	1.3	18
18	Atmospheric CO ₂ Observations Reveal Strong Correlation Between Regional Net Biospheric Carbon Uptake and Solar-Induced Chlorophyll Fluorescence. <i>Geophysical Research Letters</i> , 2018, 45, 1122-1132.	1.5	19

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19	High-resolution inversion of methane emissions in the Southeast US using SEAC<sup>4</sup</sup>RS aircraft observations of atmospheric methane: anthropogenic and wetland sources. Atmospheric Chemistry and Physics, 2018, 18, 6483-6491.	1.9	38
20	CTDAS-Lagrange v1.0: a high-resolution data assimilation system for regional carbon dioxide observations. Geoscientific Model Development, 2018, 11, 3515-3536.	1.3	16
21	Nitrous Oxide Emissions Estimated With the CarbonTracker<sup>4</sup</sup>Lagrange North American Regional Inversion Framework. Global Biogeochemical Cycles, 2018, 32, 463-485.	1.9	24
22	Forests dominate the interannual variability of the North American carbon sink. Environmental Research Letters, 2018, 13, 084015.	2.2	23
23	Inverse Estimation of an Annual Cycle of California's Nitrous Oxide Emissions. Journal of Geophysical Research D: Atmospheres, 2018, 123, 4758-4771.	1.2	6
24	Estimating methane emissions from biological and fossil<sup>6</sup</sup>fuel sources in the San Francisco Bay Area. Geophysical Research Letters, 2017, 44, 486-495.	1.5	25
25	Investigation of the N2O emission strength in the U. S. Corn Belt. Atmospheric Research, 2017, 194, 66-77.	1.8	13
26	Quantification of the SF₆ lifetime based on mesospheric loss measured in the stratospheric polar vortex. Journal of Geophysical Research D: Atmospheres, 2017, 122, 4626-4638.	1.2	71
27	Considerable contribution of the Montreal Protocol to declining greenhouse gas emissions from the United States. Geophysical Research Letters, 2017, 44, 8075-8083.	1.5	30
28	Assessment of an atmospheric transport model for annual inverse estimates of California greenhouse gas emissions. Journal of Geophysical Research D: Atmospheres, 2017, 122, 1901-1918.	1.2	18
29	Gradients of column CO<sub>2</sub> across North America from the NOAA Global Greenhouse Gas Reference Network. Atmospheric Chemistry and Physics, 2017, 17, 15151-15165.	1.9	12
30	Bias corrections of GOSAT SWIR XCO<sub>2</sub> and XCH<sub>4</sub> with TCCON data and their evaluation using aircraft measurement data. Atmospheric Measurement Techniques, 2016, 9, 3491-3512.	1.2	40
31	Evaluation of wetland methane emissions across North America using atmospheric data and inverse modeling. Biogeosciences, 2016, 13, 1329-1339.	1.3	21
32	Regional atmospheric CO₂ inversion reveals seasonal and geographic differences in Amazon net biome exchange. Global Change Biology, 2016, 22, 3427-3443.	4.2	45
33	Estimating methane emissions in California's urban and rural regions using multitower observations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 13,031.	1.2	40
34	Strong regional atmospheric $\delta^{14}\text{C}$ signature of respired CO ₂ observed from a tall tower over the midwestern United States. Journal of Geophysical Research G: Biogeosciences, 2016, 121, 2275-2295.	1.3	5
35	Investigating Alaskan methane and carbon dioxide fluxes using measurements from the CARVE tower. Atmospheric Chemistry and Physics, 2016, 16, 5383-5398.	1.9	26
36	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

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37	U.S. emissions of HFCâ€134a derived for 2008â€2012 from an extensive flaskâ€air sampling network. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 801-825.	1.2	30
38	Biases in atmospheric CO<sub>2</sub> estimates from correlated meteorology modeling errors. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 2903-2914.	1.9	22
39	Estimating global and North American methane emissions with high spatial resolution using GOSAT satellite data. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 7049-7069.	1.9	225
40	Seasonal climatology of CO₂ across North America from aircraft measurements in the NOAA/ESRL Global Greenhouse Gas Reference Network. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 5155-5190.	1.2	153
41	Landscape-level terrestrial methane flux observed from a very tall tower. <i>Agricultural and Forest Meteorology</i> , 2015, 201, 61-75.	1.9	61
42	Quantifying nitrous oxide fluxes on multiple spatial scales in the Upper Midwest, USA. <i>International Journal of Biometeorology</i> , 2015, 59, 299-310.	1.3	10
43	Evaluation of the airborne quantum cascade laser spectrometer (QCLS) measurements of the carbon and greenhouse gas suite â€“ CO<sub>2</sub>, CH<sub>4</sub>, N<sub>2</sub>, O, and CO â€“ during the CalNex and HIPPO campaigns. <i>Atmospheric Measurement Techniques</i> , 2014, 7, 1509-1526.	1.2	75
44	CO<sub>2</sub>, CO, and CH<sub>4</sub> 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. <i>Atmospheric Measurement Techniques</i> , 2014, 7, 647-687.	1.2	199
45	Observational constraints on the distribution, seasonality, and environmental predictors of North American boreal methane emissions. <i>Global Biogeochemical Cycles</i> , 2014, 28, 146-160.	1.9	37
46	Modelâ€data comparison of MCI field campaign atmospheric CO₂ mole fractions. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 10536-10551.	1.2	24
47	CarbonTracker-CH<sub>4</sub>: an assimilation system for estimating emissions of atmospheric methane. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 8269-8293.	1.9	187
48	A new look at methane and nonmethane hydrocarbon emissions from oil and natural gas operations in the Colorado Denverâ€Julesburg Basin. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 6836-6852.	1.2	257
49	The 2010 California Research at the Nexus of Air Quality and Climate Change (CalNex) field study. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 5830-5866.	1.2	199
50	Evaluating atmospheric CO₂ inversions at multiple scales over a highly inventoried agricultural landscape. <i>Global Change Biology</i> , 2013, 19, 1424-1439.	4.2	76
51	Constraints on emissions of carbon monoxide, methane, and a suite of hydrocarbons in the Colorado Front Range using observations of <sup>14</sup>CO<sub>2</sub>. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 11101-11120.	1.9	27
52	High accuracy measurements of dry mole fractions of carbon dioxide and methane in humid air. <i>Atmospheric Measurement Techniques</i> , 2013, 6, 837-860.	1.2	151
53	Input Data Requirements for Lagrangian Trajectory Models. <i>Bulletin of the American Meteorological Society</i> , 2013, 94, 1051-1058.	1.7	56
54	Long-term greenhouse gas measurements from aircraft. <i>Atmospheric Measurement Techniques</i> , 2013, 6, 511-526.	1.2	87

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55	Anthropogenic emissions of methane in the United States. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 20018-20022.	3.3	437
56	Evaluation of Lagrangian Particle Dispersion Models with Measurements from Controlled Tracer Releases. Journal of Applied Meteorology and Climatology, 2013, 52, 2623-2637.	0.6	70
57	Allocation of Terrestrial Carbon Sources Using ^{14}C : Methods, Measurement, and Modeling. Radiocarbon, 2013, 55, 1484-1495.	0.8	35
58	Diurnal tracking of anthropogenic CO_2 emissions in the Los Angeles basin megacity during spring 2010. Atmospheric Chemistry and Physics, 2013, 13, 4359-4372.	1.9	100
59	Global CO_2 fluxes estimated from GOSAT retrievals of total column CO_2 . Atmospheric Chemistry and Physics, 2013, 13, 8695-8717.	1.9	251
60	Atmospheric column-averaged mole fractions of carbon dioxide at 53 aircraft measurement sites. Atmospheric Chemistry and Physics, 2013, 13, 5265-5275.	1.9	20
61	Corrigendum to "Atmospheric column-averaged mole fractions of carbon dioxide at 53 aircraft measurement sites" published in Atmos. Chem. Phys. 13, 5265-5275, 2013. Atmospheric Chemistry and Physics, 2013, 13, 9213-9216.	1.9	2
62	Validation of XCO_2 derived from SWIR spectra of GOSAT TANSO-FTS with aircraft measurement data. Atmospheric Chemistry and Physics, 2013, 13, 9771-9788.	1.9	106
63	Nitrous oxide (N_2O) emissions from California based on 2010 CalNex airborne measurements. Journal of Geophysical Research D: Atmospheres, 2013, 118, 2809-2820.	1.2	24
64	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
65	A multitower measurement network estimate of California's methane emissions. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,339.	1.2	72
66	Pollutant transport among California regions. Journal of Geophysical Research D: Atmospheres, 2013, 118, 6750-6763.	1.2	26
67	An integrated flask sample collection system for greenhouse gas measurements. Atmospheric Measurement Techniques, 2012, 5, 2321-2327.	1.2	33
68	Field Testing of Cavity Ring-Down Spectroscopy Analyzers Measuring Carbon Dioxide and Water Vapor. Journal of Atmospheric and Oceanic Technology, 2012, 29, 397-406.	0.5	54
69	Constraining the CO_2 budget of the corn belt: exploring uncertainties from the assumptions in a mesoscale inverse system. Atmospheric Chemistry and Physics, 2012, 12, 337-354.	1.9	145
70	Hydrocarbon emissions characterization in the Colorado Front Range: A pilot study. Journal of Geophysical Research, 2012, 117, .	3.3	359
71	Airborne and ground-based observations of a weekend effect in ozone, precursors, and oxidation products in the California South Coast Air Basin. Journal of Geophysical Research, 2012, 117, .	3.3	97
72	Seasonal variation of CH_4 emissions from central California. Journal of Geophysical Research, 2012, 117, .	3.3	60

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73	Regional sources of nitrous oxide over the United States: Seasonal variation and spatial distribution. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	52
74	Large amplitude spatial and temporal gradients in atmospheric boundary layer CO ₂ mole fractions detected with a tower-based network in the U.S. upper Midwest. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	73
75	Seasonal variations in N ₂ O emissions from central California. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	30
76	Evaluation of MOPITT retrievals of lower-tropospheric carbon monoxide over the United States. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	60
77	Airborne observations of methane emissions from rice cultivation in the Sacramento Valley of California. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	50
78	North American CO ₂ exchange: inter-comparison of modeled estimates with results from a fine-scale atmospheric inversion. <i>Biogeosciences</i> , 2012, 9, 457-475.	1.3	102
79	Carbon dioxide variability during cold front passages and fair weather days at a forested mountaintop site. <i>Atmospheric Environment</i> , 2012, 46, 405-416.	1.9	27
80	Impact of CO ₂ measurement bias on CarbonTracker surface flux estimates. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	33
81	The influence of carbon exchange of a large lake on regional tracer-transport inversions: results from Lake Superior. <i>Environmental Research Letters</i> , 2011, 6, 034016.	2.2	3
82	Can CO ₂ Turbulent Flux Be Measured by Lidar? A Preliminary Study. <i>Journal of Atmospheric and Oceanic Technology</i> , 2011, 28, 365-377.	0.5	16
83	Regional-scale geostatistical inverse modeling of North American CO ₂ fluxes: a synthetic data study. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 6151-6167.	1.9	58
84	A regional high-resolution carbon flux inversion of North America for 2004. <i>Biogeosciences</i> , 2010, 7, 1625-1644.	1.3	106
85	Corrigendum to "A regional high-resolution carbon flux inversion of North America for 2004" published in <i>Biogeosciences</i> , 7, 1625-1644, 2010. <i>Biogeosciences</i> , 2010, 7, 2245-2245.	1.3	1
86	Atmospheric constraints on 2004 emissions of methane and nitrous oxide in North America from atmospheric measurements and a receptor-oriented modeling framework. <i>Journal of Integrative Environmental Sciences</i> , 2010, 7, 125-133.	1.0	20
87	Remote sensing atmospheric CO ₂ column abundance using an airborne pulsed laser sounder at 13 km altitude. , 2010, , .		0
88	An observational and modeling strategy to investigate the impact of remote sources on local air quality: A Houston, Texas, case study from the Second Texas Air Quality Study (TexAQS II). <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	32
89	Climatic controls of interannual variability in regional carbon fluxes from top-down and bottom-up perspectives. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	27
90	Age of stratospheric air unchanged within uncertainties over the past 30 years. <i>Nature Geoscience</i> , 2009, 2, 28-31.	5.4	260

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91	Atmospheric inverse estimates of methane emissions from Central California. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	97
92	Causes of interannual variability in ecosystemâ€“atmosphere CO ₂ exchange in a northern Wisconsin forest using a Bayesian model calibration. <i>Agricultural and Forest Meteorology</i> , 2008, 148, 309-327.	1.9	46
93	Sources of carbon monoxide and formaldehyde in North America determined from high-resolution atmospheric data. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 7673-7696.	1.9	72
94	An atmospheric perspective on North American carbon dioxide exchange: CarbonTracker. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2007, 104, 18925-18930.	3.3	895
95	What have we learned from intensive atmospheric sampling field programmes of CO ₂ ?. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2006, 58, 331-343.	0.8	31
96	Estimating regional carbon exchange in New England and Quebec by combining atmospheric, ground-based and satellite data. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2006, 58, 344-358.	0.8	70
97	Sensitivity of atmospheric CO ₂ inversions to seasonal and interannual variations in fossil fuel emissions. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	100
98	Combining a receptor-oriented framework for tracer distributions with a cloud-resolving model to study transport in deep convective clouds: Application to the NASA CRYSTAL-FACE campaign. <i>Geophysical Research Letters</i> , 2004, 31, .	1.5	6
99	An empirical analysis of the spatial variability of atmospheric CO ₂ : Implications for inverse analyses and space-borne sensors. <i>Geophysical Research Letters</i> , 2004, 31, .	1.5	27
100	Measuring fluxes of trace gases at regional scales by Lagrangian observations: Application to the CO ₂ Budget and Rectification Airborne (COBRA) study. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	73
101	Chlorine budget and partitioning during the Stratospheric Aerosol and Gas Experiment (SAGE) III Ozone Loss and Validation Experiment (SOLVE). <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	69
102	Toward constraining regional-scale fluxes of CO ₂ with atmospheric observations over a continent: 1. Observed spatial variability from airborne platforms. <i>Journal of Geophysical Research</i> , 2003, 108, n/a-n/a.	3.3	162
103	A near-field tool for simulating the upstream influence of atmospheric observations: The Stochastic Time-Inverted Lagrangian Transport (STILT) model. <i>Journal of Geophysical Research</i> , 2003, 108, ACH 2-1-ACH 2-17.	3.3	419
104	Toward constraining regional-scale fluxes of CO ₂ with atmospheric observations over a continent: 2. Analysis of COBRA data using a receptor-oriented framework. <i>Journal of Geophysical Research</i> , 2003, 108, n/a-n/a.	3.3	186
105	Global tracer modeling during SOLVE: High-latitude descent and mixing. <i>Journal of Geophysical Research</i> , 2002, 107, SOL 52-1-SOL 52-14.	3.3	34
106	A High-Precision Fast-Response Airborne CO ₂ Analyzer for In Situ Sampling from the Surface to the Middle Stratosphere. <i>Journal of Atmospheric and Oceanic Technology</i> , 2002, 19, 1532-1543.	0.5	70
107	Mean ages of stratospheric air derived from in situ observations of CO ₂ , CH ₄ , and N ₂ O. <i>Journal of Geophysical Research</i> , 2001, 106, 32295-32314.	3.3	181
108	Constraints on the seasonal cycle of stratospheric water vapor using in situ measurements from the ER-2 and a CO photochemical clock. <i>Journal of Geophysical Research</i> , 2001, 106, 22707-22724.	3.3	10

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109	Empirical age spectra for the midlatitude lower stratosphere from in situ observations of CO ₂ : Quantitative evidence for a subtropical "barrier" to horizontal transport. <i>Journal of Geophysical Research</i> , 2001, 106, 10257-10274.	3.3	60
110	Severe chemical ozone loss inside the Arctic Polar Vortex during winter 1999-2000 Inferred from in situ airborne measurements. <i>Geophysical Research Letters</i> , 2001, 28, 2197-2200.	1.5	53
111	Empirical age spectra for the lower tropical stratosphere from in situ observations of CO ₂ : Implications for stratospheric transport. <i>Journal of Geophysical Research</i> , 1999, 104, 26581-26595.	3.3	101
112	Comparison between DC-8 and ER-2 species measurements in the tropical middle troposphere: NO, NO _y , O ₃ , CO ₂ , CH ₄ , and N ₂ O. <i>Journal of Geophysical Research</i> , 1998, 103, 22087-22096.	3.3	22