Alan Fried

List of Publications by Year
in descending order

77 papers	4,646 citations	94433 37 h-index	114465 63 g-index
80 all docs	80 docs citations	80 times ranked	3978 citing authors

#	Article	IF	Citations
1	The Role of Snow in Controlling Halogen Chemistry and Boundary Layer Oxidation During Arctic Spring: A 1D Modeling Case Study. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	6
2	Photochemical evolution of the 2013 California Rim Fire: synergistic impacts of reactive hydrocarbons and enhanced oxidants. Atmospheric Chemistry and Physics, 2022, 22, 4253-4275.	4.9	9
3	Can Column Formaldehyde Observations Inform Air Quality Monitoring Strategies for Ozone and Related Photochemical Oxidants?. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	5
4	The Koreaâ€“United States Air Quality (KORUS-AQ) field study. Elementa, 2021, 9, 1-27.	3.2	82
5	Analysis of Oil and Gas Ethane and Methane Emissions in the Southcentral and Eastern United States Using Four Seasons of Continuous Aircraft Ethane Measurements. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034194.	3.3	16
6	Atmospheric Carbon and Transport â€“ America (ACTâ€America) Data Sets: Description, Management, and Delivery. Earth and Space Science, 2021, 8, e2020EA001634.	2.6	15
7	The Atmospheric Carbon and Transport (ACT)-America Mission. Bulletin of the American Meteorological Society, 2021, 102, E1714-E1734.	3.3	17
8	Multispecies Assessment of Factors Influencing Regional CO₂ and CH₄ Enhancements During the Winter 2017 ACTâ€America Campaign. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031339.	3.3	23
9	Vertical Transport, Entrainment, and Scavenging Processes Affecting Trace Gases in a Modeled and Observed SEAC 4 RS Case Study. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031957.	3.3	5
10	Revisiting the effectiveness of HCHO/NO2 ratios for inferring ozone sensitivity to its precursors using high resolution airborne remote sensing observations in a high ozone episode during the KORUS-AQ campaign. Atmospheric Environment, 2020, 224, 117341.	4.1	65
11	Observation-based modeling of ozone chemistry in the Seoul metropolitan area during the Korea-United States Air Quality Study (KORUS-AQ). Elementa, 2020, 8, .	3.2	32
12	An inversion of NO_{<i>x</i>} and non-methane volatile organic compound (NMVOC) emissions using satellite observations during the KORUS-AQ campaign and implications for surface ozone over East Asia. Atmospheric Chemistry and Physics, 2020, 20, 9837-9854.	4.9	30
13	Autonomous airborne mid-infrared spectrometer for high-precision measurements of ethane during the NASA ACT-America studies. Atmospheric Measurement Techniques, 2020, 13, 6095-6112.	3.1	2
14	Estimating Methane Emissions From Underground Coal and Natural Gas Production in Southwestern Pennsylvania. Geophysical Research Letters, 2019, 46, 4531-4540.	4.0	32
15	Forward Modeling and Optimization of Methane Emissions in the South Central United States Using Aircraft Transects Across Frontal Boundaries. Geophysical Research Letters, 2019, 46, 13564-13573.	4.0	18
16	Atmospheric Implications of Large C₂â€C₅ Alkane Emissions From the U.S. Oil and Gas Industry. Journal of Geophysical Research D: Atmospheres, 2019, 124, 1148-1169.	3.3	12
17	Evaluation of simulated O3 production efficiency during the KORUS-AQ campaign: Implications for anthropogenic NOx emissions in Korea. Elementa, 2019, 7, .	3.2	38
18	Characterizing CO and NO_y Sources and Relative Ambient Ratios in the Baltimore Area Using Ambient Measurements and Source Attribution Modeling. Journal of Geophysical Research D: Atmospheres, 2018, 123, 3304-3320.	3.3	14

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19	Impacts of physical parameterization on prediction of ethane concentrations for oil and gas emissions in WRF-Chem. Atmospheric Chemistry and Physics, 2018, 18, 16863-16883.	4.9	10
20	High-resolution inversion of OMI formaldehyde columns to quantify isoprene emission on ecosystem-relevant scales: application to the southeast US. Atmospheric Chemistry and Physics, 2018, 18, 5483-5497.	4.9	64
21	Sources and characteristics of summertime organic aerosol in the Colorado Front Range: perspective from measurements and WRF-Chem modeling. Atmospheric Chemistry and Physics, 2018, 18, 8293-8312.	4.9	13
22	Estimator of Surface Ozone Using Formaldehyde and Carbon Monoxide Concentrations Over the Eastern United States in Summer. Journal of Geophysical Research D: Atmospheres, 2018, 123, 7642-7655.	3.3	11
23	Effects of Scavenging, Entrainment, and Aqueous Chemistry on Peroxides and Formaldehyde in Deep Convective Outflow Over the Central and Southeast United States. Journal of Geophysical Research D: Atmospheres, 2018, 123, 7594-7614.	3.3	15
24	Modeling NH 4 NO 3 Over the San Joaquin Valley During the 2013 DISCOVERâ€AQ Campaign. Journal of Geophysical Research D: Atmospheres, 2018, 123, 4727-4745.	3.3	18
25	Contrasting aerosol refractive index and hygroscopicity in the inflow and outflow of deep convective storms: Analysis of airborne data from DC3. Journal of Geophysical Research D: Atmospheres, 2017, 122, 4565-4577.	3.3	10
26	Using Observations and Sourceâ€Specific Model Tracers to Characterize Pollutant Transport During FRAPPÃ‰ and DISCOVERâ€AQ. Journal of Geophysical Research D: Atmospheres, 2017, 122, 10510-10538.	3.3	22
27	New insights into the column CH₂O/NO₂ ratio as an indicator of nearâ€surface ozone sensitivity. Journal of Geophysical Research D: Atmospheres, 2017, 122, 8885-8907.	3.3	87
28	Revisiting global fossil fuel and biofuel emissions of ethane. Journal of Geophysical Research D: Atmospheres, 2017, 122, 2493-2512.	3.3	43
29	Formaldehyde column density measurements as a suitable pathway to estimate nearâ€surface ozone tendencies from space. Journal of Geophysical Research D: Atmospheres, 2016, 121, 13088-13112.	3.3	19
30	Convective transport of formaldehyde to the upper troposphere and lower stratosphere and associated scavenging in thunderstorms over the central United States during the 2012â€‰DC3 study. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7430-7460.	3.3	28
31	Large vertical gradient of reactive nitrogen oxides in the boundary layer: Modeling analysis of DISCOVERâ€AQ 2011 observations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 1922-1934.	3.3	38
32	Observing atmospheric formaldehyde (HCHO) from space: validation and intercomparison of six retrievals from four satellites (OMI, GOME2A, GOME2B, OMPS) with SEAC⁴RS aircraft observations over the southeast US. Atmospheric Chemistry and Physics, 2016, 16, 13477-13490.	4.9	99
33	Convective transport and scavenging of peroxides by thunderstorms observed over the central U.S. during DC3. Journal of Geophysical Research D: Atmospheres, 2016, 121, 4272-4295.	3.3	24
34	Impacts of the Denver Cyclone on regional air quality and aerosol formation in the Colorado Front Range during FRAPPÃ‰Â2014. Atmospheric Chemistry and Physics, 2016, 16, 12039-12058.	4.9	24
35	On the effectiveness of nitrogen oxide reductions as a control over ammonium nitrate aerosol. Atmospheric Chemistry and Physics, 2016, 16, 2575-2596.	4.9	53
36	Wet scavenging of soluble gases in DC3 deep convective storms using WRFâ€Chem simulations and aircraft observations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 4233-4257.	3.3	29

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37	Spatial and temporal variability of trace gas columns derived from WRF/Chem regional model output: Planning for geostationary observations of atmospheric composition. Atmospheric Environment, 2015, 118, 28-44.	4.1	11
38	Interactions of bromine, chlorine, and iodine photochemistry during ozone depletions in Barrow, Alaska. Atmospheric Chemistry and Physics, 2015, 15, 9651-9679.	4.9	29
39	The NO_{<i>x</i>} dependence of bromine chemistry in the Arctic atmospheric boundary layer. Atmospheric Chemistry and Physics, 2015, 15, 10799-10809.	4.9	23
40	The Deep Convective Clouds and Chemistry (DC3) Field Campaign. Bulletin of the American Meteorological Society, 2015, 96, 1281-1309.	3.3	165
41	Compact highly sensitive multi-species airborne mid-IR spectrometer. Applied Physics B: Lasers and Optics, 2015, 119, 119-131.	2.2	79
42	High levels of molecular chlorine in the Arctic atmosphere. Nature Geoscience, 2014, 7, 91-94.	12.9	105
43	Measured and modeled CO and NO y in DISCOVER-AQ: An evaluation of emissions and chemistry over the eastern US. Atmospheric Environment, 2014, 96, 78-87.	4.1	114
44	Characterization of soluble bromide measurements and a case study of BrO observations during ARCTAS. Atmospheric Chemistry and Physics, 2012, 12, 1327-1338.	4.9	27
45	Impact of the deep convection of isoprene and other reactive trace species on radicals and ozone in the upper troposphere. Atmospheric Chemistry and Physics, 2012, 12, 1135-1150.	4.9	33
46	Primary and secondary sources of formaldehyde in urban atmospheres: Houston Texas region. Atmospheric Chemistry and Physics, 2012, 12, 3273-3288.	4.9	153
47	Observations of inorganic bromine (HOBr, BrO, and Br₂) speciation at Barrow, Alaska, in spring 2009. Journal of Geophysical Research, 2012, 117, .	3.3	71
48	Nitrous acid (HONO) during polar spring in Barrow, Alaska: A net source of OH radicals?. Journal of Geophysical Research, 2011, 116, .	3.3	69
49	Boreal forest fire emissions in fresh Canadian smoke plumes: C₁-C₁₀ volatile organic compounds (VOCs), CO₂, CO, NO₂, NO, HCN and	4.9	209
50	Detailed comparisons of airborne formaldehyde measurements with box models during the 2006 INTEX-B and MILAGRO campaigns: potential evidence for significant impacts of unmeasured and multi-generation volatile organic carbon compounds. Atmospheric Chemistry and Physics, 2011, 11, 11867-11894.	4.9	46
51	Difference frequency generation spectrometer for simultaneous multispecies detection. Optics Express, 2010, 18, 27670.	3.4	27
52	First demonstration of a high performance difference frequency spectrometer on airborne platforms. Optics Express, 2007, 15, 13476.	3.4	74
53	Hydrogen peroxide, methyl hydroperoxide, and formaldehyde over North America and the North Atlantic. Journal of Geophysical Research, 2007, 112, .	3.3	58
54	Surface and lightning sources of nitrogen oxides over the United States: Magnitudes, chemical evolution, and outflow. Journal of Geophysical Research, 2007, 112, .	3.3	279

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55	Summertime influence of Asian pollution in the free troposphere over North America. Journal of Geophysical Research, 2007, 112, .	3.3	86
56	Ultra-high-precision mid-IR spectrometer II: system description and spectroscopic performance. Applied Physics B: Lasers and Optics, 2006, 85, 207-218.	2.2	71
57	Vertical profiles of HDO/H2O in the troposphere. Journal of Geophysical Research, 2005, 110, .	3.3	40
58	Photochemistry in the Arctic Free Troposphere: Ozone Budget and Its Dependence on Nitrogen Oxides and the Production Rate of Free Radicals. Journal of Atmospheric Chemistry, 2004, 47, 107-138.	3.2	14
59	Analysis of the atmospheric distribution, sources, and sinks of oxygenated volatile organic chemicals based on measurements over the Pacific during TRACE-P. Journal of Geophysical Research, 2004, 109, .	3.3	228
60	Testing fast photochemical theory during TRACE-P based on measurements of OH, HO2, and CH2O. Journal of Geophysical Research, 2004, 109, .	3.3	71
61	Evaluation of GOME satellite measurements of tropospheric NO2and HCHO using regional data from aircraft campaigns in the southeastern United States. Journal of Geophysical Research, 2004, 109, .	3.3	113
62	Ozone depletion events observed in the high latitude surface layer during the TOPSE aircraft program. Journal of Geophysical Research, 2003, 108, TOP 4-1.	3.3	75
63	Steady state free radical budgets and ozone photochemistry during TOPSE. Journal of Geophysical Research, 2003, 108, .	3.3	57
64	Tunable diode laser measurements of formaldehyde during the TOPSE 2000 study: Distributions, trends, and model comparisons. Journal of Geophysical Research, 2003, 108, .	3.3	62
65	Signatures of terminal alkene oxidation in airborne formaldehyde measurements during TexAQS 2000. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	126
66	Coupled evolution of BrOx-ClOx-HOx-NOxchemistry during bromine-catalyzed ozone depletion events in the arctic boundary layer. Journal of Geophysical Research, 2003, 108, .	3.3	82
67	Design and performance of a tunable diode laser absorption spectrometer for airborne formaldehyde measurements. Journal of Geophysical Research, 2003, 108, .	3.3	54
68	Effect of petrochemical industrial emissions of reactive alkenes and NOxon tropospheric ozone formation in Houston, Texas. Journal of Geophysical Research, 2003, 108, .	3.3	263
69	Large-scale ozone and aerosol distributions, air mass characteristics, and ozone fluxes over the western Pacific Ocean in late winter/early spring. Journal of Geophysical Research, 2003, 108, .	3.3	46
70	Airborne tunable diode laser measurements of formaldehyde during TRACE-P: Distributions and box model comparisons. Journal of Geophysical Research, 2003, 108, .	3.3	68
71	OH and HO2concentrations, sources, and loss rates during the Southern Oxidants Study in Nashville, Tennessee, summer 1999. Journal of Geophysical Research, 2003, 108, .	3.3	174
72	Peroxy radical behavior during the Transport and Chemical Evolution over the Pacific (TRACE-P) campaign as measured aboard the NASA P-3B aircraft. Journal of Geophysical Research, 2003, 108, .	3.3	44

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73	Comparisons of box model calculations and measurements of formaldehyde from the 1997 North Atlantic Regional Experiment. Journal of Geophysical Research, 2002, 107, ACH 3-1.	3.3	42
74	Ozone production rates as a function of NOxabundances and HOxproduction rates in the Nashville urban plume. Journal of Geophysical Research, 2002, 107, ACH 7-1.	3.3	207
75	Tunable diode laser studies of the reaction of Cl atoms with CH3CHO. International Journal of Chemical Kinetics, 1999, 31, 766-775.	1.6	22
76	Laboratory, ground-based, and airborne tunable diode laser systems: performance characteristics and applications in atmospheric studies. Applied Physics B: Lasers and Optics, 1998, 67, 317-330.	2.2	98
77	Tunable diode laser absorption spectroscopy for measuring atmospheric molecular species. , 0, , .		0