

Andrew J Weinheimer

List of Publications by Citations

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

92 papers	4,606 citations	35 h-index	66 g-index
96 ext. papers	5,274 ext. citations	5.7 avg, IF	4.51 L-index

#	Paper	IF	Citations
92	Effects of aging on organic aerosol from open biomass burning smoke in aircraft and laboratory studies. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 12049-12064	6.8	418
91	Investigation of the sources and processing of organic aerosol over the Central Mexican Plateau from aircraft measurements during MILAGRO. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 5257-5280	6.8	279
90	Effect of petrochemical industrial emissions of reactive alkenes and NO _x on tropospheric ozone formation in Houston, Texas. <i>Journal of Geophysical Research</i> , 2003 , 108,		225
89	Nitrogen oxides and PAN in plumes from boreal fires during ARCTAS-B and their impact on ozone: an integrated analysis of aircraft and satellite observations. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 9739-9760	6.8	188
88	Chemistry of hydrogen oxide radicals (HO _x) in the Arctic troposphere in spring. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 5823-5838	6.8	184
87	Boreal forest fire emissions in fresh Canadian smoke plumes: C ₁ -C ₁₀ ; volatile organic compounds (VOCs), CO ₂ , CO, NO ₂ , NO, HCN and CH ₃ SH. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 6445-6473	6.8	178
86	Characterization of trace gases measured over Alberta oil sands mining operations: 76 speciated C ₂ -C ₁₀ ; volatile organic compounds (VOCs), CO ₂ , CH ₄ , CO, NO, NO ₂ , NO _y , O ₃ and SO ₂ .	6.8	172
85	Emissions of black carbon, organic, and inorganic aerosols from biomass burning in North America and Asia in 2008. <i>Journal of Geophysical Research</i> , 2011 , 116,		166
84	The Deep Convective Clouds and Chemistry (DC3) Field Campaign. <i>Bulletin of the American Meteorological Society</i> , 2015 , 96, 1281-1309	6.1	140
83	A comparison of Arctic BrO measurements by chemical ionization mass spectrometry and long path-differential optical absorption spectroscopy. <i>Journal of Geophysical Research</i> , 2011 , 116,		93
82	Measured and modeled CO and NO _y in DISCOVER-AQ: An evaluation of emissions and chemistry over the eastern US. <i>Atmospheric Environment</i> , 2014 , 96, 78-87	5.3	92
81	Fast-response airborne in situ measurements of HNO ₃ during the Texas 2000 Air Quality Study. <i>Journal of Geophysical Research</i> , 2002 , 107, ACH 8-1		89
80	Sources of HO _x and production of ozone in the upper troposphere over the United States. <i>Geophysical Research Letters</i> , 1998 , 25, 1709-1712	4.9	88
79	Airborne in-situ OH and HO ₂ observations in the cloud-free troposphere and lower stratosphere during SUCCESS. <i>Geophysical Research Letters</i> , 1998 , 25, 1701-1704	4.9	88
78	Meridional distributions of NO _x , NO _y , and other species in the lower stratosphere and upper troposphere during AASE II. <i>Geophysical Research Letters</i> , 1994 , 21, 2583-2586	4.9	88
77	Chemical feedbacks weaken the wintertime response of particulate sulfate and nitrate to emissions reductions over the eastern United States. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2018 , 115, 8110-8115	11.5	86
76	Comparison of chemical characteristics of 495 biomass burning plumes intercepted by the NASA DC-8 aircraft during the ARCTAS/CARB-2008 field campaign. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 13325-13337	6.8	86

75	High levels of molecular chlorine in the Arctic atmosphere. <i>Nature Geoscience</i> , 2014 , 7, 91-94	18.3	79
74	Coupled evolution of BrOx-CLOx-HOx-NOx chemistry during bromine-catalyzed ozone depletion events in the arctic boundary layer. <i>Journal of Geophysical Research</i> , 2003 , 108,		72
73	Heterogeneous N2O5 Uptake During Winter: Aircraft Measurements During the 2015 WINTER Campaign and Critical Evaluation of Current Parameterizations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 4345-4372	4.4	69
72	Ozone depletion events observed in the high latitude surface layer during the TOPSE aircraft program. <i>Journal of Geophysical Research</i> , 2003 , 108, TOP 4-1		67
71	Emission characteristics of black carbon in anthropogenic and biomass burning plumes over California during ARCTAS-CARB 2008. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		60
70	Ozone production and its sensitivity to NO ₂ and VOCs: results from the DISCOVER-AQ field experiment, Houston 2013. <i>Atmospheric Chemistry and Physics</i> , 2016 , 16, 14463-14474	6.8	58
69	Observations of inorganic bromine (HOBr, BrO, and Br ₂) speciation at Barrow, Alaska, in spring 2009. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		58
68	Observations of total RONO ₂ over the boreal forest: NO _x sinks and HNO ₃ sources. <i>Atmospheric Chemistry and Physics</i> , 2013 , 13, 4543-4562	6.8	57
67	Analysis of satellite-derived Arctic tropospheric BrO columns in conjunction with aircraft measurements during ARCTAS and ARCPAC. <i>Atmospheric Chemistry and Physics</i> , 2012 , 12, 1255-1285	6.8	55
66	Convective transport of water vapor into the lower stratosphere observed during double-tropopause events. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014 , 119, 10,941-10,958	4.4	54
65	New insights into the column CH ₂ O/NO ₂ ratio as an indicator of near-surface ozone sensitivity. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017 , 122, 8885-8907	4.4	49
64	Patterns of CO ₂ and radiocarbon across high northern latitudes during International Polar Year 2008. <i>Journal of Geophysical Research</i> , 2011 , 116,		48
63	Nitric acid uptake on subtropical cirrus cloud particles. <i>Journal of Geophysical Research</i> , 2004 , 109, n/a-n/a		44
62	On the effectiveness of nitrogen oxide reductions as a control over ammonium nitrate aerosol. <i>Atmospheric Chemistry and Physics</i> , 2016 , 16, 2575-2596	6.8	41
61	Global and regional effects of the photochemistry of CH ₃ O ₂ /NO ₂ ; evidence from ARCTAS. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 4209-4219	6.8	41
60	The Convective Transport of Active Species in the Tropics (CONTRAST) Experiment. <i>Bulletin of the American Meteorological Society</i> , 2017 , 98, 106-128	6.1	40
59	Frequency and Impact of Summertime Stratospheric Intrusions over Maryland during DISCOVER-AQ (2011): New Evidence from NASA's GEOS-5 Simulations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , Volume 121, 3687-3706	4.4	40
58	Relationship between column-density and surface mixing ratio: Statistical analysis of O ₃ and NO ₂ data from the July 2011 Maryland DISCOVER-AQ mission. <i>Atmospheric Environment</i> , 2014 , 92, 429-441	5.3	36

57	Revisiting the effectiveness of HCHO/NO ₂ 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. <i>Atmospheric Environment</i> , 2020 , 224, 117341	5.3	35
56	Fraction and composition of NO _y transported in air masses lofted from the North American continental boundary layer. <i>Journal of Geophysical Research</i> , 2004 , 109,		35
55	Large vertical gradient of reactive nitrogen oxides in the boundary layer: Modeling analysis of DISCOVER-AQ 2011 observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 1922-1934	4.4	33
54	Characteristics of tropospheric ozone depletion events in the Arctic spring: analysis of the ARCTAS, ARCPAC, and ARCIONS measurements and satellite BrO observations. <i>Atmospheric Chemistry and Physics</i> , 2012 , 12, 9909-9922	6.8	33
53	NO _x Lifetime and NO _y Partitioning During WINTER. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 9813-9827	4.4	32
52	Nitrogen Oxides Emissions, Chemistry, Deposition, and Export Over the Northeast United States During the WINTER Aircraft Campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 12,368	4.4	32
51	Stratospheric Injection of Brominated Very Short-Lived Substances: Aircraft Observations in the Western Pacific and Representation in Global Models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 5690-5719	4.4	30
50	Mercury Emission Ratios from Coal-Fired Power Plants in the Southeastern United States during NOMADSS. <i>Environmental Science & Technology</i> , 2015 , 49, 10389-97	10.3	29
49	Quantifying the contribution of thermally driven recirculation to a high-ozone event along the Colorado Front Range using lidar. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 10,377-10,390	4.4	27
48	A pervasive role for biomass burning in tropical high ozone/low water structures. <i>Nature Communications</i> , 2016 , 7, 10267	17.4	27
47	HONO Emissions from Western U.S. Wildfires Provide Dominant Radical Source in Fresh Wildfire Smoke. <i>Environmental Science & Technology</i> , 2020 , 54, 5954-5963	10.3	26
46	Observations of APAN during TexAQs 2000. <i>Geophysical Research Letters</i> , 2001 , 28, 4195-4198	4.9	26
45	Flight Deployment of a High-Resolution Time-of-Flight Chemical Ionization Mass Spectrometer: Observations of Reactive Halogen and Nitrogen Oxide Species. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 7670	4.4	25
44	Airborne quantification of upper tropospheric NO _x production from lightning in deep convective storms over the United States Great Plains. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 2002-2028	4.4	24
43	The effect of entrainment through atmospheric boundary layer growth on observed and modeled surface ozone in the Colorado Front Range. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017 , 122, 6075-6093	4.4	24
42	Nitrogen dioxide and formaldehyde measurements from the GEOstationary Coastal and Air Pollution Events (GEO-CAPE) Airborne Simulator over Houston, Texas. <i>Atmospheric Measurement Techniques</i> , 2018 , 11, 5941-5964	4	24
41	ClNO ₂ Yields From Aircraft Measurements During the 2015 WINTER Campaign and Critical Evaluation of the Current Parameterization. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 12,994	4.4	24
40	BrO and inferred Br_y profiles over the western Pacific: relevance of inorganic bromine sources and a Br_y minimum in the aged tropical tropopause layer. <i>Atmospheric Chemistry and Physics</i> , 2017 , 17, 15245-15270	6.8	22

39	Evaluation of simulated O ₃ production efficiency during the KORUS-AQ campaign: Implications for anthropogenic NO _x emissions in Korea. <i>Elementa</i> , 2019 , 7,	3.6	22
38	Formaldehyde in the Tropical Western Pacific: Chemical sources and sinks, convective transport, and representation in CAM-Chem and the CCM1 models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017 , 122, 11201-11226	4.4	21
37	Airborne Observations of Reactive Inorganic Chlorine and Bromine Species in the Exhaust of Coal-Fired Power Plants. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 11225-11237	4.4	21
36	Ozone profiles in the Baltimore-Washington region (2006-2011): satellite comparisons and DISCOVER-AQ observations. <i>Journal of Atmospheric Chemistry</i> , 2015 , 72, 393-422	3.2	19
35	Impacts of the Denver Cyclone on regional air quality and aerosol formation in the Colorado Front Range during FRAPP2014. <i>Atmospheric Chemistry and Physics</i> , 2016 , 16, 12039-12058	6.8	19
34	Simulating reactive nitrogen, carbon monoxide, and ozone in California during ARCTAS-CARB 2008 with high wildfire activity. <i>Atmospheric Environment</i> , 2016 , 128, 28-44	5.3	19
33	Observation-based modeling of ozone chemistry in the Seoul metropolitan area during the Korea-United States Air Quality Study (KORUS-AQ). <i>Elementa</i> , 2020 , 8,	3.6	19
32	Using observations and source specific model tracers to characterize pollutant transport during FRAPP and DISCOVER-AQ. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017 , 122, 10510-10538	4.4	18
31	Quantifying the impact of the North American monsoon and deep midlatitude convection on the subtropical lowermost stratosphere using in situ measurements. <i>Journal of Geophysical Research</i> , 2007 , 112,		18
30	Daytime Oxidized Reactive Nitrogen Partitioning in Western U.S. Wildfire Smoke Plumes. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021 , 126, e2020JD033484	4.4	18
29	Bimodal distribution of free tropospheric ozone over the tropical western Pacific revealed by airborne observations. <i>Geophysical Research Letters</i> , 2015 , 42, 7844-7851	4.9	17
28	A complete dynamical ozone budget measured in the tropical marine boundary layer during PASE. <i>Journal of Atmospheric Chemistry</i> , 2011 , 68, 55-70	3.2	17
27	An observationally constrained evaluation of the oxidative capacity in the tropical western Pacific troposphere. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 7461-7488	4.4	17
26	First Top-Down Estimates of Anthropogenic NO _x Emissions Using High-Resolution Airborne Remote Sensing Observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 3269-3284	4.4	15
25	Airborne measurements of BrO and the sum of HOBr and Br ₂ over the Tropical West Pacific from 1 to 15 km during the CONvective TRANsport of Active Species in the Tropics (CONTRAST) experiment. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 12,560-12,578	4.4	15
24	Modeling NHNO Over the San Joaquin Valley During the 2013 DISCOVER-AQ Campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 4727-4745	4.4	15
23	Higher measured than modeled ozone production at increased NO ₂ levels in the Colorado Front Range. <i>Atmospheric Chemistry and Physics</i> , 2017 , 17, 11273-11292	6.8	15
22	An inversion of NO ₂ and non-methane volatile organic compound (NMVOC) emissions using satellite observations during the KORUS-AQ campaign and implications for surface ozone over East Asia. <i>Atmospheric Chemistry and Physics</i> , 2020 , 20, 9837-9854	6.8	15

21	Formaldehyde column density measurements as a suitable pathway to estimate near-surface ozone tendencies from space. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 13088-13112	4.4	14
20	Emissions of Reactive Nitrogen From Western U.S. Wildfires During Summer 2018. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021 , 126, e2020JD032657	4.4	14
19	Wintertime Overnight NO _x Removal in a Southeastern United States Coal-fired Power Plant Plume: A Model for Understanding Winter NO _x Processing and its Implications. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 1412-1425	4.4	13
18	Large biogenic contribution to boundary layer O ₃ -CO regression slope in summer. <i>Geophysical Research Letters</i> , 2017 , 44, 7061-7068	4.9	12
17	Characterizing CO and NO _y Sources and Relative Ambient Ratios in the Baltimore Area Using Ambient Measurements and Source Attribution Modeling. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 3304-3320	4.4	10
16	Spatial and temporal variability of trace gas columns derived from WRF/Chem regional model output: Planning for geostationary observations of atmospheric composition. <i>Atmospheric Environment</i> , 2015 , 118, 28-44	5.3	10
15	Arctic springtime observations of volatile organic compounds during the OASIS-2009 campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016 , 121, 9789-9813	4.4	10
14	Transport in the subtropical lowermost stratosphere during the Cirrus Regional Study of Tropical Anvils and Cirrus Layers-Florida Area Cirrus Experiment. <i>Journal of Geophysical Research</i> , 2007 , 112,		9
13	Estimator of Surface Ozone Using Formaldehyde and Carbon Monoxide Concentrations Over the Eastern United States in Summer. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018 , 123, 7642	4.4	9
12	Variability and Time of Day Dependence of Ozone Photochemistry in Western Wildfire Plumes. <i>Environmental Science & Technology</i> , 2021 , 55, 10280-10290	10.3	9
11	Rates of Wintertime Atmospheric SO ₂ Oxidation based on Aircraft Observations during Clear-Sky Conditions over the Eastern United States. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019 , 124, 6630-6649	4.4	8
10	Nighttime and daytime dark oxidation chemistry in wildfire plumes: an observation and model analysis of FIREX-AQ aircraft data. <i>Atmospheric Chemistry and Physics</i> , 2021 , 21, 16293-16317	6.8	8
9	Evaluation of deep convective transport in storms from different convective regimes during the DC3 field campaign using WRF-Chem with lightning data assimilation. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017 , 122, 7140-7163	4.4	7
8	Comparison of Airborne Reactive Nitrogen Measurements During WINTER. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019 , 124, 10483-10502	4.4	4
7	Empirical Insights Into the Fate of Ammonia in Western U.S. Wildfire Smoke Plumes. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021 , 126, e2020JD033730	4.4	4
6	Evidence of Nighttime Production of Organic Nitrates During SEAC4RS, FRAPP and KORUS-AQ. <i>Geophysical Research Letters</i> , 2020 , 47, e2020GL087860	4.9	2
5	Novel Analysis to Quantify Plume Crosswind Heterogeneity Applied to Biomass Burning Smoke. <i>Environmental Science & Technology</i> , 2021 , 55, 15646-15657	10.3	2
4	Spatially Resolved Photochemistry Impacts Emissions Estimates in Fresh Wildfire Plumes. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL095443	4.9	1

3	Comprehensive evaluations of diurnal NO ₂ measurements during DISCOVER-AQ 2011: effects of resolution-dependent representation of NO _x emissions. <i>Atmospheric Chemistry and Physics</i> , 2021 , 21, 11133-11160	6.8	1
2	Observations and Modeling of NO _x Photochemistry and Fate in Fresh Wildfire Plumes. <i>ACS Earth and Space Chemistry</i> ,	3.2	1
1	Wildfire-driven changes in the abundance of gas-phase pollutants in the city of Boise, ID during summer 2018. <i>Atmospheric Pollution Research</i> , 2022 , 13, 101269	4.5	0