Kirk Ullmann

List of Publications by Year
in descending order

67 papers	2,620 citations	159585 30 h-index	206112 48 g-index
83 all docs	83 docs citations	83 times ranked	3068 citing authors

#	Article	IF	Citations
1	The NASA Atmospheric Tomography (ATom) Mission: Imaging the Chemistry of the Global Atmosphere. Bulletin of the American Meteorological Society, 2022, 103, E761-E790.	3.3	39
2	Wildfire-driven changes in the abundance of gas-phase pollutants in the city of Boise, ID during summer 2018. Atmospheric Pollution Research, 2022, 13, 101269.	3.8	5
3	Observations of atmospheric oxidation and ozone production in South Korea. Atmospheric Environment, 2022, 269, 118854.	4.1	6
4	Field observational constraints on the controllers in glyoxal (CHOCHO) reactive uptake to aerosol. Atmospheric Chemistry and Physics, 2022, 22, 805-821.	4.9	5
5	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
6	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
7	Evaluating the Impact of Chemical Complexity and Horizontal Resolution on Tropospheric Ozone Over the Conterminous US With a Global Variable Resolution Chemistry Model. Journal of Advances in Modeling Earth Systems, 2022, 14, .	3.8	20
8	Daytime Oxidized Reactive Nitrogen Partitioning in Western U.S. Wildfire Smoke Plumes. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033484.	3.3	36
9	Chemical Tomography in a Fresh Wildland Fire Plume: A Large Eddy Simulation (LES) Study. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD035203.	3.3	16
10	Observations and Modeling of NO<i>_x</i> Photochemistry and Fate in Fresh Wildfire Plumes. ACS Earth and Space Chemistry, 2021, 5, 2652-2667.	2.7	17
11	Deriving Tropospheric Transit Time Distributions Using Airborne Trace Gas Measurements: Uncertainty and Information Content. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034358.	3.3	2
12	Evolution of formaldehyde (HCHO) in a plume originating from a petrochemical industry and its volatile organic compounds (VOCs) emission rate estimation. Elementa, 2021, 9, .	3.2	6
13	Rapid cloud removal of dimethyl sulfide oxidation products limits SO ₂ and cloud condensation nuclei production in the marine atmosphere. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	28
14	Nighttime and daytime dark oxidation chemistry in wildfire plumes: an observation and model analysis of FIREX-AQ aircraft data. Atmospheric Chemistry and Physics, 2021, 21, 16293-16317.	4.9	34
15	Novel Analysis to Quantify Plume Crosswind Heterogeneity Applied to Biomass Burning Smoke. Environmental Science & Technology, 2021, 55, 15646-15657.	10.0	11
16	Spatially Resolved Photochemistry Impacts Emissions Estimates in Fresh Wildfire Plumes. Geophysical Research Letters, 2021, 48, e2021GL095443.	4.0	7
17	Ozone chemistry in western U.S. wildfire plumes. Science Advances, 2021, 7, eabl3648.	10.3	45
18	Formaldehyde evolution in US wildfire plumes during the Fire Influence on Regional to Global Environments and Air Quality experiment (FIREX-AQ). Atmospheric Chemistry and Physics, 2021, 21, 18319-18331.	4.9	24

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19	Ozone depletion due to dust release of iodine in the free troposphere. Science Advances, 2021, 7, eabj6544.	10.3	5
20	Exploring Oxidation in the Remote Free Troposphere: Insights From Atmospheric Tomography (ATom). Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031685.	3.3	23
21	Global Atmospheric Budget of Acetone: Airâ€Sea Exchange and the Contribution to Hydroxyl Radicals. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD032553.	3.3	17
22	Quantification of organic aerosol and brown carbon evolution in fresh wildfire plumes. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 29469-29477.	7.1	100
23	Missing OH reactivity in the global marine boundary layer. Atmospheric Chemistry and Physics, 2020, 20, 4013-4029.	4.9	25
24	Quantitative detection of iodine in the stratosphere. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 1860-1866.	7.1	61
25	HONO Emissions from Western U.S. Wildfires Provide Dominant Radical Source in Fresh Wildfire Smoke. Environmental Science & Technology, 2020, 54, 5954-5963.	10.0	51
26	Comprehensive isoprene and terpene gas-phase chemistry improves simulated surface ozone in the southeastern US. Atmospheric Chemistry and Physics, 2020, 20, 3739-3776.	4.9	47
27	Constraining remote oxidation capacity with ATom observations. Atmospheric Chemistry and Physics, 2020, 20, 7753-7781.	4.9	36
28	Rates of Wintertime Atmospheric SO₂ Oxidation based on Aircraft Observations during Clearâ€Sky Conditions over the Eastern United States. Journal of Geophysical Research D: Atmospheres, 2019, 124, 6630-6649.	3.3	12
29	Mapping hydroxyl variability throughout the global remote troposphere via synthesis of airborne and satellite formaldehyde observations. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 11171-11180.	7.1	58
30	Atmospheric Acetaldehyde: Importance of Airâ€Sea Exchange and a Missing Source in the Remote Troposphere. Geophysical Research Letters, 2019, 46, 5601-5613.	4.0	41
31	Integration of airborne and ground observations of nitryl chloride in the Seoul metropolitan area and the implications on regional oxidation capacity during KORUS-AQ 2016. Atmospheric Chemistry and Physics, 2019, 19, 12779-12795.	4.9	24
32	Heterogeneous N₂O₅ Uptake During Winter: Aircraft Measurements During the 2015 WINTER Campaign and Critical Evaluation of Current Parameterizations. Journal of Geophysical Research D: Atmospheres, 2018, 123, 4345-4372.	3.3	103
33	Impact of Biomass Burning Plumes on Photolysis Rates and Ozone Formation at the Mount Bachelor Observatory. Journal of Geophysical Research D: Atmospheres, 2018, 123, 2272-2284.	3.3	36
34	Cloud impacts on photochemistry: building a climatology of photolysis rates from the Atmospheric Tomography mission. Atmospheric Chemistry and Physics, 2018, 18, 16809-16828.	4.9	34
35	Wintertime Transport of Reactive Trace Gases From East Asia Into the Deep Tropics. Journal of Geophysical Research D: Atmospheres, 2018, 123, 12,877.	3.3	5
36	Atmospheric oxidation in the presence of clouds during the Deep Convective Clouds and Chemistry (DC3) study. Atmospheric Chemistry and Physics, 2018, 18, 14493-14510.	4.9	18

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37	ClNO₂ Yields From Aircraft Measurements During the 2015 WINTER Campaign and Critical Evaluation of the Current Parameterization. Journal of Geophysical Research D: Atmospheres, 2018, 123, 12,994.	3.3	31
38	Tropospheric sources and sinks of gas-phase acids in the Colorado Front Range. Atmospheric Chemistry and Physics, 2018, 18, 12315-12327.	4.9	23
39	Stratospheric Injection of Brominated Very Shortâ€Lived Substances: Aircraft Observations in the Western Pacific and Representation in Global Models. Journal of Geophysical Research D: Atmospheres, 2018, 123, 5690-5719.	3.3	36
40	Tropospheric HONO distribution and chemistry in the southeastern US. Atmospheric Chemistry and Physics, 2018, 18, 9107-9120.	4.9	22
41	Observed NO/NO₂ Ratios in the Upper Troposphere Imply Errors in NOâ€NO₂â€O₃ Cycling Kinetics or an Unaccounted NO_x Reservoir. Geophysical Research Letters, 2018, 45, 4466-4474.	4.0	34
42	The Convective Transport of Active Species in the Tropics (CONTRAST) Experiment. Bulletin of the American Meteorological Society, 2017, 98, 106-128.	3.3	50
43	Improved modeling of cloudyâ€sky actinic flux using satellite cloud retrievals. Geophysical Research Letters, 2017, 44, 1592-1600.	4.0	11
44	Formaldehyde in the Tropical Western Pacific: Chemical Sources and Sinks, Convective Transport, and Representation in CAMâ€Chem and the CCMI Models. Journal of Geophysical Research D: Atmospheres, 2017, 122, 11201-11226.	3.3	32
45	BrO and inferred Br_{<i>y</i>} profiles over the western Pacific: relevance of inorganic bromine sources and a Br_{<i>y</i>} minimum in the aged tropical tropopause layer. Atmospheric Chemistry and Physics, 2017, 17, 15245-15270.	4.9	33
46	Observational constraints on glyoxal production from isoprene oxidation and its contribution to organic aerosol over the Southeast United States. Journal of Geophysical Research D: Atmospheres, 2016, 121, 9849-9861.	3.3	48
47	An observationally constrained evaluation of the oxidative capacity in the tropical western Pacific troposphere. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7461-7488.	3.3	18
48	Rapid cycling of reactive nitrogen in the marine boundary layer. Nature, 2016, 532, 489-491.	27.8	159
49	Influence of oil and gas emissions on summertime ozone in the Colorado Northern Front Range. Journal of Geophysical Research D: Atmospheres, 2016, 121, 8712-8729.	3.3	86
50	Arctic springtime observations of volatile organic compounds during the OASISâ€2009 campaign. Journal of Geophysical Research D: Atmospheres, 2016, 121, 9789-9813.	3.3	16
51	Airborne measurements of BrO and the sum of HOBr and Br₂ over the Tropical West Pacific from 1 to 15â€‰km during the CONvective TRansport of Active Species in the Tropics (CONTRAST) experiment. Journal of Geophysical Research D: Atmospheres, 2016, 121, 12,560.	3.3	16
52	Why do models overestimate surface ozone in the Southeast United States?. Atmospheric Chemistry and Physics, 2016, 16, 13561-13577.	4.9	320
53	Agricultural fires in the southeastern U.S. during SEAC⁴RS: Emissions of trace gases and particles and evolution of ozone, reactive nitrogen, and organic aerosol. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7383-7414.	3.3	93
54	A pervasive role for biomass burning in tropical high ozone/low water structures. Nature Communications, 2016, 7, 10267.	12.8	33

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55	Observational Constraints on the Oxidation of NOx in the Upper Troposphere. Journal of Physical Chemistry A, 2016, 120, 1468-1478.	2.5	23
56	Interactions of bromine, chlorine, and iodine photochemistry during ozone depletions in Barrow, Alaska. Atmospheric Chemistry and Physics, 2015, 15, 9651-9679.	4.9	29
57	Chemistryâ€turbulence interactions and mesoscale variability influence the cleansing efficiency of the atmosphere. Geophysical Research Letters, 2015, 42, 10,894.	4.0	30
58	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
59	Quantifying sources and sinks of reactive gases in the lower atmosphere using airborne flux observations. Geophysical Research Letters, 2015, 42, 8231-8240.	4.0	53
60	Measurements of CH₃O₂NO<sub>2</sub&a in the upper troposphere. Atmospheric Measurement Techniques, 2015, 8, 987-997.	3.1	35
61	High levels of molecular chlorine in the Arctic atmosphere. Nature Geoscience, 2014, 7, 91-94.	12.9	105
62	An analysis of fast photochemistry over high northern latitudes during spring and summer using in-situ observations from ARCTAS and TOPSE. Atmospheric Chemistry and Physics, 2012, 12, 6799-6825.	4.9	38
63	PTRâ€MS observations of photoâ€enhanced VOC release from Arctic and midlatitude snow. Journal of Geophysical Research, 2012, 117, .	3.3	13
64	Nitrous acid (HONO) during polar spring in Barrow, Alaska: A net source of OH radicals?. Journal of Geophysical Research, 2011, 116, .	3.3	69
65	A comparison of Arctic BrO measurements by chemical ionization mass spectrometry and long path-differential optical absorption spectroscopy. Journal of Geophysical Research, 2011, 116, .	3.3	105
66	Lowâ€ozone bubbles observed in the tropical tropopause layer during the TC4 campaign in 2007. Journal of Geophysical Research, 2010, 115, .	3.3	9
67	Inâ€flight validation of Aura MLS ozone with CAFS partial ozone columns. Journal of Geophysical Research, 2008, 113, .	3.3	6