

Kirk Ullmann

List of Publications by Year in descending order

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Version: 2024-02-01

67
papers

2,620
citations

159358

30
h-index

205818

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. <i>Bulletin of the American Meteorological Society</i> , 2022, 103, E761-E790.	1.7	39
2	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.	1.8	5
3	Observations of atmospheric oxidation and ozone production in South Korea. <i>Atmospheric Environment</i> , 2022, 269, 118854.	1.9	6
4	Field observational constraints on the controllers in glyoxal (CHOCHO) reactive uptake to aerosol. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 805-821.	1.9	5
5	The Role of Snow in Controlling Halogen Chemistry and Boundary Layer Oxidation During Arctic Spring: A 1D Modeling Case Study. <i>Journal of Geophysical Research D: Atmospheres</i> , 2022, 127, .	1.2	6
6	Photochemical evolution of the 2013 California Rim Fire: synergistic impacts of reactive hydrocarbons and enhanced oxidants. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 4253-4275.	1.9	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. <i>Journal of Advances in Modeling Earth Systems</i> , 2022, 14, .	1.3	20
8	Daytime Oxidized Reactive Nitrogen Partitioning in Western U.S. Wildfire Smoke Plumes. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD033484.	1.2	36
9	Chemical Tomography in a Fresh Wildland Fire Plume: A Large Eddy Simulation (LES) Study. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2021JD035203.	1.2	16
10	Observations and Modeling of NO _x Photochemistry and Fate in Fresh Wildfire Plumes. <i>ACS Earth and Space Chemistry</i> , 2021, 5, 2652-2667.	1.2	17
11	Deriving Tropospheric Transit Time Distributions Using Airborne Trace Gas Measurements: Uncertainty and Information Content. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD034358.	1.2	2
12	Evolution of formaldehyde (HCHO) in a plume originating from a petrochemical industry and its volatile organic compounds (VOCs) emission rate estimation. <i>Elementa</i> , 2021, 9, .	1.1	6
13	Rapid cloud removal of dimethyl sulfide oxidation products limits SO ₂ and cloud condensation nuclei production in the marine atmosphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2021, 118, .	3.3	28
14	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.	1.9	34
15	Novel Analysis to Quantify Plume Crosswind Heterogeneity Applied to Biomass Burning Smoke. <i>Environmental Science & Technology</i> , 2021, 55, 15646-15657.	4.6	11
16	Spatially Resolved Photochemistry Impacts Emissions Estimates in Fresh Wildfire Plumes. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL095443.	1.5	7
17	Ozone chemistry in western U.S. wildfire plumes. <i>Science Advances</i> , 2021, 7, eabl3648.	4.7	45
18	Formaldehyde evolution in US wildfire plumes during the Fire Influence on Regional to Global Environments and Air Quality experiment (FIREX-AQ). <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 18319-18331.	1.9	24

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19	Ozone depletion due to dust release of iodine in the free troposphere. <i>Science Advances</i> , 2021, 7, eabj6544.	4.7	5
20	Exploring Oxidation in the Remote Free Troposphere: Insights From Atmospheric Tomography (ATom). <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031685.	1.2	23
21	Global Atmospheric Budget of Acetone: Air–Sea Exchange and the Contribution to Hydroxyl Radicals. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD032553.	1.2	17
22	Quantification of organic aerosol and brown carbon evolution in fresh wildfire plumes. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 29469-29477.	3.3	100
23	Missing OH reactivity in the global marine boundary layer. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 4013-4029.	1.9	25
24	Quantitative detection of iodine in the stratosphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2020, 117, 1860-1866.	3.3	61
25	HONO Emissions from Western U.S. Wildfires Provide Dominant Radical Source in Fresh Wildfire Smoke. <i>Environmental Science & Technology</i> , 2020, 54, 5954-5963.	4.6	51
26	Comprehensive isoprene and terpene gas-phase chemistry improves simulated surface ozone in the southeastern US. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 3739-3776.	1.9	47
27	Constraining remote oxidation capacity with ATom observations. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 7753-7781.	1.9	36
28	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.	1.2	12
29	Mapping hydroxyl variability throughout the global remote troposphere via synthesis of airborne and satellite formaldehyde observations. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 11171-11180.	3.3	58
30	Atmospheric Acetaldehyde: Importance of Air–Sea Exchange and a Missing Source in the Remote Troposphere. <i>Geophysical Research Letters</i> , 2019, 46, 5601-5613.	1.5	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. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 12779-12795.	1.9	24
32	Heterogeneous N ₂ O ₅ 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.	1.2	103
33	Impact of Biomass Burning Plumes on Photolysis Rates and Ozone Formation at the Mount Bachelor Observatory. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 2272-2284.	1.2	36
34	Cloud impacts on photochemistry: building a climatology of photolysis rates from the Atmospheric Tomography mission. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 16809-16828.	1.9	34
35	Wintertime Transport of Reactive Trace Gases From East Asia Into the Deep Tropics. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 12,877.	1.2	5
36	Atmospheric oxidation in the presence of clouds during the Deep Convective Clouds and Chemistry (DC3) study. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 14493-14510.	1.9	18

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37	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.	1.2	31
38	Tropospheric sources and sinks of gas-phase acids in the Colorado Front Range. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 12315-12327.	1.9	23
39	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.	1.2	36
40	Tropospheric HONO distribution and chemistry in the southeastern US. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 9107-9120.	1.9	22
41	Observed NO/NO ₂ Ratios in the Upper Troposphere Imply Errors in NO ₂ ↔O ₃ Cycling Kinetics or an Unaccounted NO _x Reservoir. <i>Geophysical Research Letters</i> , 2018, 45, 4466-4474.	1.5	34
42	The Convective Transport of Active Species in the Tropics (CONTRAST) Experiment. <i>Bulletin of the American Meteorological Society</i> , 2017, 98, 106-128.	1.7	50
43	Improved modeling of cloudy-sky actinic flux using satellite cloud retrievals. <i>Geophysical Research Letters</i> , 2017, 44, 1592-1600.	1.5	11
44	Formaldehyde in the Tropical Western Pacific: Chemical Sources and Sinks, Convective Transport, and Representation in CAM-Chem and the CCMI Models. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 11201-11226.	1.2	32
45	BrO and inferred Br profiles over the western Pacific: relevance of inorganic bromine sources and a minimum in the aged tropical tropopause layer. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 15245-15270.	1.9	33
46	Observational constraints on glyoxal production from isoprene oxidation and its contribution to organic aerosol over the Southeast United States. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 9849-9861.	1.2	48
47	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.	1.2	18
48	Rapid cycling of reactive nitrogen in the marine boundary layer. <i>Nature</i> , 2016, 532, 489-491.	13.7	159
49	Influence of oil and gas emissions on summertime ozone in the Colorado Northern Front Range. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 8712-8729.	1.2	86
50	Arctic springtime observations of volatile organic compounds during the OASIS-2009 campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 9789-9813.	1.2	16
51	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.	1.2	16
52	Why do models overestimate surface ozone in the Southeast United States?. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 13561-13577.	1.9	320
53	Agricultural fires in the southeastern U.S. during SEAC ⁴ RS: Emissions of trace gases and particles and evolution of ozone, reactive nitrogen, and organic aerosol. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 7383-7414.	1.2	93
54	A pervasive role for biomass burning in tropical high ozone/low water structures. <i>Nature Communications</i> , 2016, 7, 10267.	5.8	33

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55	Observational Constraints on the Oxidation of NO _x in the Upper Troposphere. <i>Journal of Physical Chemistry A</i> , 2016, 120, 1468-1478.	1.1	23
56	Interactions of bromine, chlorine, and iodine photochemistry during ozone depletions in Barrow, Alaska. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 9651-9679.	1.9	29
57	Chemistry-turbulence interactions and mesoscale variability influence the cleansing efficiency of the atmosphere. <i>Geophysical Research Letters</i> , 2015, 42, 10,894.	1.5	30
58	The NO _x dependence of bromine chemistry in the Arctic atmospheric boundary layer. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 10799-10809.	1.9	23
59	Quantifying sources and sinks of reactive gases in the lower atmosphere using airborne flux observations. <i>Geophysical Research Letters</i> , 2015, 42, 8231-8240.	1.5	53
60	Measurements of CH ₃ O ₂ NO ₂ in the upper troposphere. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 987-997.	1.9	23
61	High levels of molecular chlorine in the Arctic atmosphere. <i>Nature Geoscience</i> , 2014, 7, 91-94.	5.4	105
62	An analysis of fast photochemistry over high northern latitudes during spring and summer using in-situ observations from ARCTAS and TOPSE. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 6799-6825.	1.9	38
63	PTR-MS observations of photo-enhanced VOC release from Arctic and midlatitude snow. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	13
64	Nitrous acid (HONO) during polar spring in Barrow, Alaska: A net source of OH radicals?. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	69
65	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, .	3.3	105
66	Low-ozone bubbles observed in the tropical tropopause layer during the TC4 campaign in 2007. <i>Journal of Geophysical Research</i> , 2010, 115, .	3.3	9
67	In-flight validation of Aura MLS ozone with CAFS partial ozone columns. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	6