

Kirk Ullmann

List of Publications by Year in descending order

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Version: 2024-02-01

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	Why do models overestimate surface ozone in the Southeast United States?. Atmospheric Chemistry and Physics, 2016, 16, 13561-13577.	4.9	320
2	Rapid cycling of reactive nitrogen in the marine boundary layer. Nature, 2016, 532, 489-491.	27.8	159
3	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
4	High levels of molecular chlorine in the Arctic atmosphere. Nature Geoscience, 2014, 7, 91-94.	12.9	105
5	Heterogeneous N ₂ O ₅ 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
6	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
7	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. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7383-7414.	3.3	93
8	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
9	Nitrous acid (HONO) during polar spring in Barrow, Alaska: A net source of OH radicals?. Journal of Geophysical Research, 2011, 116, .	3.3	69
10	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
11	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
12	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
13	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
14	The Convective Transport of Active Species in the Tropics (CONTRAST) Experiment. Bulletin of the American Meteorological Society, 2017, 98, 106-128.	3.3	50
15	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
16	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
17	Ozone chemistry in western U.S. wildfire plumes. Science Advances, 2021, 7, eabl3648.	10.3	45
18	Atmospheric Acetaldehyde: Importance of Air-Sea Exchange and a Missing Source in the Remote Troposphere. Geophysical Research Letters, 2019, 46, 5601-5613.	4.0	41

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19	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
20	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
21	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
22	Stratospheric Injection of Brominated Very Short-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
23	Daytime Oxidized Reactive Nitrogen Partitioning in Western U.S. Wildfire Smoke Plumes. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033484.	3.3	36
24	Constraining remote oxidation capacity with ATom observations. Atmospheric Chemistry and Physics, 2020, 20, 7753-7781.	4.9	36
25	Measurements of $\text{CH}_3\text{O}_2\text{NO}_2$ in the upper troposphere. Atmospheric Measurement Techniques, 2015, 8, 987-997.		
26	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
27	Observed NO/NO_2 Ratios in the Upper Troposphere Imply Errors in $\text{NO}_2 \rightarrow \text{O}_3$ Cycling Kinetics or an Unaccounted NO_x Reservoir. Geophysical Research Letters, 2018, 45, 4466-4474.	4.0	34
28	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
29	A pervasive role for biomass burning in tropical high ozone/low water structures. Nature Communications, 2016, 7, 10267.	12.8	33
30	BrO and inferred Br profiles over the western Pacific: relevance of inorganic bromine sources and a Br minimum in the aged tropical tropopause layer. Atmospheric Chemistry and Physics, 2017, 17, 15245-15270.	4.9	33
31	Formaldehyde in the Tropical Western Pacific: Chemical Sources and Sinks, Convective Transport, and Representation in CAM-Chem and the CCM1 Models. Journal of Geophysical Research D: Atmospheres, 2017, 122, 11201-11226.	3.3	32
32	ClNO_2 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
33	Chemistry-turbulence interactions and mesoscale variability influence the cleansing efficiency of the atmosphere. Geophysical Research Letters, 2015, 42, 10,894.	4.0	30
34	Interactions of bromine, chlorine, and iodine photochemistry during ozone depletions in Barrow, Alaska. Atmospheric Chemistry and Physics, 2015, 15, 9651-9679.	4.9	29
35	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
36	Missing OH reactivity in the global marine boundary layer. Atmospheric Chemistry and Physics, 2020, 20, 4013-4029.	4.9	25

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37	Integration of airborne and ground observations of nitril 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.	4.9	24
38	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.	4.9	24
39	The NO ₂ dependence of bromine chemistry in the Arctic atmospheric boundary layer. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 10799-10809.	4.9	23
40	Observational Constraints on the Oxidation of NO _x in the Upper Troposphere. <i>Journal of Physical Chemistry A</i> , 2016, 120, 1468-1478.	2.5	23
41	Tropospheric sources and sinks of gas-phase acids in the Colorado Front Range. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 12315-12327.	4.9	23
42	Exploring Oxidation in the Remote Free Troposphere: Insights From Atmospheric Tomography (ATom). <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031685.	3.3	23
43	Tropospheric HONO distribution and chemistry in the southeastern US. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 9107-9120.	4.9	22
44	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, .	3.8	20
45	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.	3.3	18
46	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.	4.9	18
47	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.	3.3	17
48	Observations and Modeling of NO _x Photochemistry and Fate in Fresh Wildfire Plumes. <i>ACS Earth and Space Chemistry</i> , 2021, 5, 2652-2667.	2.7	17
49	Arctic springtime observations of volatile organic compounds during the OASIS-2009 campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 9789-9813.	3.3	16
50	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.	3.3	16
51	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.	3.3	16
52	PTR-MS observations of photo-enhanced VOC release from Arctic and midlatitude snow. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	13
53	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.	3.3	12
54	Improved modeling of cloudy-sky actinic flux using satellite cloud retrievals. <i>Geophysical Research Letters</i> , 2017, 44, 1592-1600.	4.0	11

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55	Novel Analysis to Quantify Plume Crosswind Heterogeneity Applied to Biomass Burning Smoke. Environmental Science & Technology, 2021, 55, 15646-15657.	10.0	11
56	Low-ozone bubbles observed in the tropical tropopause layer during the TC4 campaign in 2007. Journal of Geophysical Research, 2010, 115, .	3.3	9
57	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
58	Spatially Resolved Photochemistry Impacts Emissions Estimates in Fresh Wildfire Plumes. Geophysical Research Letters, 2021, 48, e2021GL095443.	4.0	7
59	In-flight validation of Aura MLS ozone with CAFS partial ozone columns. Journal of Geophysical Research, 2008, 113, .	3.3	6
60	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
61	Observations of atmospheric oxidation and ozone production in South Korea. Atmospheric Environment, 2022, 269, 118854.	4.1	6
62	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
63	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
64	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
65	Field observational constraints on the controllers in glyoxal (CHOCHO) reactive uptake to aerosol. Atmospheric Chemistry and Physics, 2022, 22, 805-821.	4.9	5
66	Ozone depletion due to dust release of iodine in the free troposphere. Science Advances, 2021, 7, eabj6544.	10.3	5
67	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