

Samuel Hall

List of Publications by Year in descending order

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107
papers

5,780
citations

81743

39
h-index

98622

67
g-index

132
all docs

132
docs citations

132
times ranked

4979
citing authors

#	ARTICLE	IF	CITATIONS
1	Emissions from biomass burning in the Yucatan. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 5785-5812.	1.9	433
2	Why do models overestimate surface ozone in the Southeast United States?. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 13561-13577.	1.9	320
3	Airborne measurement of OH reactivity during INTEX-B. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 163-173.	1.9	293
4	Chemistry of hydrogen oxide radicals (HO _x) in the Arctic troposphere in spring. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 5823-5838.	1.9	220
5	Ozone production rates as a function of NO _x abundances and HO _x production rates in the Nashville urban plume. <i>Journal of Geophysical Research</i> , 2002, 107, ACH 7-1.	3.3	207
6	OH and HO ₂ concentrations, sources, and loss rates during the Southern Oxidants Study in Nashville, Tennessee, summer 1999. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	174
7	Rapid cycling of reactive nitrogen in the marine boundary layer. <i>Nature</i> , 2016, 532, 489-491.	13.7	159
8	Direct Measurements of the Convective Recycling of the Upper Troposphere. <i>Science</i> , 2007, 315, 816-820.	6.0	114
9	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
10	High levels of molecular chlorine in the Arctic atmosphere. <i>Nature Geoscience</i> , 2014, 7, 91-94.	5.4	105
11	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
12	Measurements of OH, H ₂ SO ₄ , and MSA at the South Pole during ISCAT. <i>Geophysical Research Letters</i> , 2001, 28, 3629-3632.	1.5	101
13	First direct measurements of formaldehyde flux via eddy covariance: implications for missing in-canopy formaldehyde sources. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 10565-10578.	1.9	101
14	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
15	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
16	Use of proton-transfer-reaction mass spectrometry to characterize volatile organic compound sources at the La Porte super site during the Texas Air Quality Study 2000. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	91
17	Active and widespread halogen chemistry in the tropical and subtropical free troposphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 9281-9286.	3.3	91
18	Detection of iodine monoxide in the tropical free troposphere. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013, 110, 2035-2040.	3.3	88

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19	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
20	Impact of Mexico City emissions on regional air quality from MOZART-4 simulations. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 6195-6212.	1.9	82
21	Constraints on Aerosol Nitrate Photolysis as a Potential Source of HONO and NO _x . <i>Environmental Science & Technology</i> , 2018, 52, 13738-13746.	4.6	79
22	Observations of inorganic bromine (HOBr, BrO, and Br ₂) speciation at Barrow, Alaska, in spring 2009. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	71
23	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
24	Evaluation of HO ₂ and CH ₃ O ₂ sources and cycling using measurement-constrained model calculations in a 2-methyl-3-butene-2-ol (MBO) and monoterpene (MT) dominated ecosystem. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 2031-2044.	1.9	62
25	The POLARCAT Model Intercomparison Project (POLMIP): overview and evaluation with observations. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 6721-6744.	1.9	62
26	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
27	The relative importance of chlorine and bromine radicals in the oxidation of atmospheric mercury at Barrow, Alaska. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	59
28	Impact of clouds and aerosols on photolysis frequencies and photochemistry during TRACE-P: 1. Analysis using radiative transfer and photochemical box models. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	58
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	Missing peroxy radical sources within a summertime ponderosa pine forest. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 4715-4732.	1.9	56
31	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
32	Photolysis frequency of NO ₂ : Measurement and modeling during the International Photolysis Frequency Measurement and Modeling Intercomparison (IPMMI). <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	52
33	Global and regional effects of the photochemistry of CH ₃ O ₂ and NO ₂ : evidence from ARCTAS. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 4209-4219.		
34	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
35	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
36	Cloud System Evolution in the Trades (CSET): Following the Evolution of Boundary Layer Cloud Systems with the NSFâ€”NCAR GV. <i>Bulletin of the American Meteorological Society</i> , 2019, 100, 93-121.	1.7	49

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37	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
38	International Photolysis Frequency Measurement and Model Intercomparison (IPMMI): Spectral actinic solar flux measurements and modeling. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	47
39	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
40	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. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 11867-11894.	1.9	46
41	Ozone chemistry in western U.S. wildfire plumes. <i>Science Advances</i> , 2021, 7, eabl3648.	4.7	45
42	Light penetration in the snowpack at Summit, Greenland: Part 2 Nitrate photolysis. <i>Atmospheric Environment</i> , 2007, 41, 5091-5100.	1.9	44
43	Comparison of airborne measured and calculated spectral actinic flux and derived photolysis frequencies during the PEM Tropics B mission. <i>Journal of Geophysical Research</i> , 2003, 108, PEM 6-1.	3.3	42
44	Spectral absorption of biomass burning aerosol determined from retrieved single scattering albedo during ARCTAS. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 10505-10518.	1.9	41
45	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
46	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
47	Light penetration in the snowpack at Summit, Greenland: Part 1. <i>Atmospheric Environment</i> , 2007, 41, 5077-5090.	1.9	38
48	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
49	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
50	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
51	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
52	Constraining remote oxidation capacity with ATom observations. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 7753-7781.	1.9	36
53	Role of convection in redistributing formaldehyde to the upper troposphere over North America and the North Atlantic during the summer 2004 INTEX campaign. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	35
54	Measurements of CH ₃ O ₂ and NO ₂ in the upper troposphere. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 987-997.		

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55	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
56	Observed NO ₂ /NO ₃ Ratios in the Upper Troposphere Imply Errors in NO ₂ Cycling Kinetics or an Unaccounted NO _x Reservoir. <i>Geophysical Research Letters</i> , 2018, 45, 4466-4474.	1.5	34
57	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
58	Photolysis frequency of O ₃ to O(1D): Measurements and modeling during the International Photolysis Frequency Measurement and Modeling Intercomparison (IPMMI). <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	33
59	Impact of the deep convection of isoprene and other reactive trace species on radicals and ozone in the upper troposphere. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 1135-1150.	1.9	33
60	A pervasive role for biomass burning in tropical high ozone/low water structures. <i>Nature Communications</i> , 2016, 7, 10267.	5.8	33
61	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
62	Characteristics of the NO-NO ₂ -O ₃ system in different chemical regimes during the MIRAGE-Mex field campaign. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 7153-7164.	1.9	32
63	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.	1.2	32
64	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, .	1.1	32
65	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
66	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
67	Calculations of solar shortwave heating rates due to black carbon and ozone absorption using in situ measurements. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	28
68	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
69	Ultraviolet actinic flux in clear and cloudy atmospheres: model calculations and aircraft-based measurements. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 5457-5469.	1.9	26
70	Missing OH reactivity in the global marine boundary layer. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 4013-4029.	1.9	25
71	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
72	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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73	An overview of air-snow exchange at Summit, Greenland: Recent experiments and findings. <i>Atmospheric Environment</i> , 2007, 41, 4995-5006.	1.9	23
74	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
75	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
76	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
77	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
78	Tropospheric HONO distribution and chemistry in the southeastern US. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 9107-9120.	1.9	22
79	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
80	Effect of aerosols and NO ₂ concentration on ultraviolet actinic flux near Mexico City during MILAGRO: measurements and model calculations. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 1011-1022.	1.9	19
81	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
82	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
83	Photolysis frequency measurements at the South Pole during ISCAT-98. <i>Geophysical Research Letters</i> , 2001, 28, 3637-3640.	1.5	17
84	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
85	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
86	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
87	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
88	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
89	Comparison of airborne NO ₂ photolysis frequency measurements during PEM-Tropics B. <i>Journal of Geophysical Research</i> , 2001, 106, 32645-32656.	3.3	14
90	PTR-MS observations of photo-enhanced VOC release from Arctic and midlatitude snow. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	13

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91	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
92	Improved modeling of cloudy-sky actinic flux using satellite cloud retrievals. <i>Geophysical Research Letters</i> , 2017, 44, 1592-1600.	1.5	11
93	Novel Analysis to Quantify Plume Crosswind Heterogeneity Applied to Biomass Burning Smoke. <i>Environmental Science & Technology</i> , 2021, 55, 15646-15657.	4.6	11
94	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
95	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
96	Use of Airborne In Situ VOC Measurements to Estimate Transit Time Spectrum: An Observation-Based Diagnostic of Convective Transport. <i>Geophysical Research Letters</i> , 2018, 45, 13,150.	1.5	8
97	Spatially Resolved Photochemistry Impacts Emissions Estimates in Fresh Wildfire Plumes. <i>Geophysical Research Letters</i> , 2021, 48, e2021GL095443.	1.5	7
98	Column ozone and aerosol optical properties retrieved from direct solar irradiance measurements during SOLVE II. <i>Atmospheric Chemistry and Physics</i> , 2005, 5, 611-622.	1.9	6
99	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
100	Observations of atmospheric oxidation and ozone production in South Korea. <i>Atmospheric Environment</i> , 2022, 269, 118854.	1.9	6
101	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
102	The Impact of Smoke on the Ultraviolet and Visible Radiative Forcing Under Different Fire Regimes. <i>Air, Soil and Water Research</i> , 2018, 11, 117862211877480.	1.2	5
103	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
104	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
105	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
106	Ozone depletion due to dust release of iodine in the free troposphere. <i>Science Advances</i> , 2021, 7, eabj6544.	4.7	5
107	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