Darin Toohey

List of Publications by Year
in descending order

91 papers	5,181 citations	109321 35 h-index	95266 68 g-index
94 all docs	94 docs citations	94 times ranked	4634 citing authors

#	Article	IF	Citations
1	Emissions from biomass burning in the Yucatan. Atmospheric Chemistry and Physics, 2009, 9, 5785-5812.	4.9	433
2	Removal of Stratospheric O3 by Radicals: In Situ Measurements of OH, HO2, NO, NO2, ClO, and BrO. Science, 1994, 266, 398-404.	12.6	384
3	Free Radicals Within the Antarctic Vortex: The Role of CFCs in Antarctic Ozone Loss. Science, 1991, 251, 39-46.	12.6	375
4	Introducing the concept of Potential Aerosol Mass (PAM). Atmospheric Chemistry and Physics, 2007, 7, 5727-5744.	4.9	269
5	Organic aerosol composition and sources in Pasadena, California, during the 2010 CalNex campaign. Journal of Geophysical Research D: Atmospheres, 2013, 118, 9233-9257.	3.3	231
6	Halogen activation via interactions with environmental ice and snow in the polar lower troposphere and other regions. Atmospheric Chemistry and Physics, 2012, 12, 6237-6271.	4.9	209
7	Emissions from forest fires near Mexico City. Atmospheric Chemistry and Physics, 2007, 7, 5569-5584.	4.9	205
8	Kinetics of O₃ destruction by ClO and BrO within the Antarctic vortex: An analysis based on in situ ERâ€2 data. Journal of Geophysical Research, 1989, 94, 11480-11520.	3.3	199
9	Chlorine Chemistry on Polar Stratospheric Cloud Particles in the Arctic Winter. Science, 1993, 261, 1130-1134.	12.6	150
10	Trace gas and particle emissions from open biomass burning in Mexico. Atmospheric Chemistry and Physics, 2011, 11, 6787-6808.	4.9	133
11	The Potential for Ozone Depletion in the Arctic Polar Stratosphere. Science, 1991, 252, 1260-1266.	12.6	115
12	In situ observations of ClO in the Arctic stratosphere: ERâ€2 aircraft results from 59Â°N TO 80Â°N latitude. Geophysical Research Letters, 1990, 17, 505-508.	4.0	109
13	Dependence of SOA oxidation on organic aerosol mass concentration and OH exposure: experimental PAM chamber studies. Atmospheric Chemistry and Physics, 2011, 11, 1837-1852.	4.9	103
14	Observations of Clouds, Aerosols, Precipitation, and Surface Radiation over the Southern Ocean: An Overview of CAPRICORN, MARCUS, MICRE, and SOCRATES. Bulletin of the American Meteorological Society, 2021, 102, E894-E928.	3.3	103
15	Chemical depletion of Arctic ozone in winter 1999/2000. Journal of Geophysical Research, 2002, 107, SOL 18-1.	3.3	95
16	Properties of air mass mixing and humidity in the subtropics from measurements of the D/H isotope ratio of water vapor at the Mauna Loa Observatory. Journal of Geophysical Research, 2011, 116, n/a-n/a.	3.3	85
17	In Situ Observations of Aerosol and Chlorine Monoxide After the 1991 Eruption of Mount Pinatubo: Effect of Reactions on Sulfate Aerosol. Science, 1993, 261, 1140-1143.	12.6	84
18	Cloud Activating Properties of Aerosol Observed during CELTIC. Journals of the Atmospheric Sciences, 2007, 64, 441-459.	1.7	81

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19	In situ measurements of BrO in the Arctic stratosphere. Geophysical Research Letters, 1990, 17, 513-516.	4.0	70
20	The Seasonal Evolution of Reactive Chlorine in the Northern Hemisphere Stratosphere. Science, 1993, 261, 1134-1136.	12.6	69
21	Potential climate impact of black carbon emitted by rockets. Geophysical Research Letters, 2010, 37, .	4.0	63
22	Haze Aerosols in the Atmosphere of Early Earth: Manna from Heaven. Astrobiology, 2004, 4, 409-419.	3.0	61
23	Limits on the Space Launch Market Related to Stratospheric Ozone Depletion. Astropolitics, 2009, 7, 50-82.	0.5	51
24	Demonstration of a VUV Lamp Photoionization Source for Improved Organic Speciation in an Aerosol Mass Spectrometer. Aerosol Science and Technology, 2007, 41, 828-839.	3.1	50
25	Abundance of fluorescent biological aerosol particles at temperatures conducive to the formation of mixed-phase and cirrus clouds. Atmospheric Chemistry and Physics, 2016, 16, 8205-8225.	4.9	50
26	Validation of UARS Microwave Limb Sounder ClO measurements. Journal of Geophysical Research, 1996, 101, 10091-10127.	3.3	49
27	Characterizing moisture exchange between the Hawaiian convective boundary layer and free troposphere using stable isotopes in water. Journal of Geophysical Research D: Atmospheres, 2013, 118, 8208-8221.	3.3	48
28	Tests of halogen photochemistry using in situ measurements of ClO and BrO in the lower polar stratosphere. Journal of Geophysical Research, 2001, 106, 10411-10421.	3.3	47
29	In Situ Northern Mid-Latitude Observations of ClO, O3, and BrO in the Wintertime Lower Stratosphere. Science, 1988, 242, 558-562.	12.6	41
30	Stratospheric Meteorological Conditions in the Arctic Polar Vortex, 1991 to 1992. Science, 1993, 261, 1143-1146.	12.6	41
31	Balloonâ€borne in situ measurements of CLO and ozone: Implications for heterogeneous chemistry and midâ€latitude ozone loss. Geophysical Research Letters, 1993, 20, 1795-1798.	4.0	40
32	On the occurrence of ClO in cirrus clouds and volcanic aerosol in the tropopause region. Geophysical Research Letters, 1997, 24, 2011-2014.	4.0	40
33	Theoretical investigations of reactions of some radicals with hydroperoxo. 1. Hydrogen abstractions by direct mechanisms. The Journal of Physical Chemistry, 1989, 93, 1049-1058.	2.9	39
34	Low-lying isomers of the chlorine oxide dimer: a theoretical study. The Journal of Physical Chemistry, 1991, 95, 2107-2110.	2.9	37
35	In situ measurements of BrO During AASE II. Geophysical Research Letters, 1995, 22, 831-834.	4.0	37
36	In situ measurements of midlatitude ClO in winter. Geophysical Research Letters, 1991, 18, 21-24.	4.0	35

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37	The response of ClO radical concentrations to variations in NO2radical concentrations in the lower stratosphere. Geophysical Research Letters, 1994, 21, 2543-2546.	4.0	35
38	Impacts of aerosol particles on the microphysical and radiative properties of stratocumulus clouds over the southeast Pacific Ocean. Atmospheric Chemistry and Physics, 2013, 13, 2541-2562.	4.9	34
39	Cloudâ€Nucleating Particles Over the Southern Ocean in a Changing Climate. Earth's Future, 2021, 9, e2020EF001673.	6.3	33
40	The evolution of CLO and NO along air parcel trajectories. Geophysical Research Letters, 1993, 20, 2511-2514.	4.0	32
41	An Investigation of ClO Photchemistry in the Chemically Perturbed Arctic Vortex. Journal of Atmospheric Chemistry, 1999, 32, 61-81.	3.2	32
42	Influences of Recent Particle Formation on Southern Ocean Aerosol Variability and Low Cloud Properties. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033529.	3.3	32
43	In situ measurements of CLO at midâ€latitudes: Is there an effect from Mt. Pinatubo?. Geophysical Research Letters, 1993, 20, 2519-2522.	4.0	30
44	A study of aerosol properties based on observations of particulate matter from the U.S. Embassy in Beijing, China. Earth's Future, 2016, 4, 381-395.	6.3	30
45	A wintertime in situ profile of BrO between 17 and 27 km in the Arctic vortex. Geophysical Research Letters, 1997, 24, 853-856.	4.0	29
46	Formation of bromine chloride(3.PI.0+) in the reaction of bromine monoxide with chlorine monoxide. The Journal of Physical Chemistry, 1988, 92, 1705-1708.	2.9	28
47	Observation of stratospheric ozone depletion associated with Delta II rocket emissions. Geophysical Research Letters, 2000, 27, 2209-2212.	4.0	28
48	The O2/N2 Ratio and CO2 Airborne Southern Ocean Study. Bulletin of the American Meteorological Society, 2018, 99, 381-402.	3.3	28
49	Ice particles in the upper anvil regions of midlatitude continental thunderstorms: the case for frozen-drop aggregates. Atmospheric Chemistry and Physics, 2014, 14, 1973-1985.	4.9	27
50	Microphysical Properties of Generating Cells Over the Southern Ocean: Results From SOCRATES. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032237.	3.3	27
51	In situ measurements of bromine oxide at two high-latitude boundary layer sites: Implications of variability. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	26
52	Rate constant for the reaction Br + O3 ? BrO + O2 from 248 to 418 K: Kinetics and mechanism. International Journal of Chemical Kinetics, 1988, 20, 131-144.	1.6	24
53	Measurements and Simulations of Aerosol Released while Singing and Playing Wind Instruments. ACS Environmental Au, 2021, 1, 71-84.	7.0	24
54	Observations of Ice Nucleating Particles in the Free Troposphere From Western US Wildfires. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033752.	3.3	24

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55	The sunrise and sunset variation of ClO in the lower stratosphere. Geophysical Research Letters, 1990, 17, 509-512.	4.0	23
56	Measurements of ClO and O₃ from 21Â°N to 61Â°N in the lower stratosphere during February 1988: Implications for heterogeneous chemistry. Geophysical Research Letters, 1991, 18, 2273-2276.	4.0	22
57	In situ observations of ClO near the winter polar tropopause. Journal of Geophysical Research, 2003, 108, .	3.3	22
58	Chlorine activation near the midlatitude tropopause. Journal of Geophysical Research, 2007, 112, .	3.3	22
59	The production of O(3P) and ground state OH in the reaction of hydrogen atoms with ozone. Journal of Chemical Physics, 1981, 74, 4533-4543.	3.0	21
60	Constraining the Surface Flux of Sea Spray Particles From the Southern Ocean. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032026.	3.3	20
61	Vertical profiles of activated ClO and ozone loss in the Arctic vortex in January and March 2000: In situ observations and model simulations. Journal of Geophysical Research, 2003, 108, .	3.3	19
62	The performance of a new instrument for in situ measurements of ClO in the lower stratosphere. Geophysical Research Letters, 1993, 20, 1791-1794.	4.0	18
63	In situ measurements of the ClO/HCl ratio: Heterogeneous processing on sulfate aerosols and polar stratospheric clouds. Geophysical Research Letters, 1993, 20, 2523-2526.	4.0	18
64	Ultrafine and Fine Particulate Matter Inside and Outside of Mechanically Ventilated Buildings. International Journal of Environmental Research and Public Health, 2017, 14, 128.	2.6	17
65	High ice concentration observed in tropical maritime stratiform mixed-phase clouds with top temperatures warmer than â^'8â€¯Â°C. Atmospheric Research, 2020, 233, 104719.	4.1	17
66	Mechanism and kinetics of Br + HO2 .fwdarw. HBr + O2 and Br + H2O2 .fwdarw. products over the temperature range 260-390 K. The Journal of Physical Chemistry, 1987, 91, 1215-1222.	2.9	16
67	The polar stratospheric cloud event of January 24: Part 2, PHotochemistry. Geophysical Research Letters, 1990, 17, 541-544.	4.0	15
68	Measurements of quantum yields of bromine atoms in the photolysis of bromoform from 266 to 324 nm. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	15
69	The emission and chemistry of reactive nitrogen species in the plume of an Athena II solid-fuel rocket motor. Geophysical Research Letters, 2002, 29, 34-1-34-4.	4.0	13
70	Size-resolved particle emission indices in the stratospheric plume of an Athena II rocket. Journal of Geophysical Research, 2003, 108, .	3.3	13
71	Organic composition of three different size ranges of aerosol particles over the Southern Ocean. Aerosol Science and Technology, 2021, 55, 268-288.	3.1	13
72	Biomass Burning Smoke and Its Influence on Clouds Over the Western U. S.. Geophysical Research Letters, 2021, 48, e2021GL094224.	4.0	13

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73	Relative rate constants for removal of vibrationally excited OH(X2?i)v=9 by some small molecules at room temperature. International Journal of Chemical Kinetics, 1983, 15, 151-165.	1.6	12
74	Sunset observations of ClO in the Arctic Polar Vortex and implications for ozone loss. Geophysical Research Letters, 2001, 28, 4183-4186.	4.0	12
75	In situ measurements of carbon dioxide, 0.37â€“4.0 Î¼m particles, and water vapor in the stratospheric plumes of small rockets. Journal of Geophysical Research, 2002, 107, AAC 8-1.	3.3	10
76	Variability of active chlorine in the lowermost Arctic stratosphere. Journal of Geophysical Research, 2005, 110, .	3.3	10
77	A fiber-coupled laser hygrometer for airborne total water measurement. Atmospheric Measurement Techniques, 2014, 7, 215-223.	3.1	10
78	Characterization of aerosol plumes from singing and playing wind instruments associated with the risk of airborne virus transmission. Indoor Air, 2022, 32, .	4.3	8
79	Quantifying uptake of HNO3and H2O by alumina particles in Athena-2 rocket plume. Journal of Geophysical Research, 2003, 108, .	3.3	7
80	Aviation and Chemistry and Transport Processes in the Upper Troposphere and Lower Stratosphere. Bulletin of the American Meteorological Society, 2010, 91, 485-490.	3.3	7
81	The Coming Surge of Rocket Emissions. Eos, 2019, 100, .	0.1	7
82	A critical review of stratospheric chemistry research in the U.S.: 1991-1994. Reviews of Geophysics, 1995, 33, 759-773.	23.0	6
83	Correlated measurements of ozone and particulates in the Ross Island region, Antarctica. Geophysical Research Letters, 2013, 40, 6319-6323.	4.0	6
84	Midlatitude ClO during the maximum atmospheric chlorine burden: in situ balloon measurements and model simulations. Atmospheric Chemistry and Physics, 2005, 5, 1623-1638.	4.9	5
85	Chemical processing within and above a loblolly pine forest in North Carolina, USA. Journal of Atmospheric Chemistry, 2015, 72, 235-259.	3.2	5
86	Aircraft measurements of water vapor heavy isotope ratios in the marine boundary layer and lower troposphere during ORACLES. Earth System Science Data, 2022, 14, 1811-1829.	9.9	3
87	Kinetics of interaction of vibrationally excited OH(X2?i)v=9 with simple hydrocarbons at room temperature. International Journal of Chemical Kinetics, 1985, 17, 613-628.	1.6	0
88	35 P 03 In-situ aerosol measurements and evaluation on heterogeneous chemistry in the lower stratosphere. Journal of Aerosol Science, 1993, 24, S385-S386.	3.8	0
89	On the review process: Editors speak. Eos, 2003, 84, 575.	0.1	0
90	My Year as a Jefferson Science Fellow. Eos, 2014, 95, 15-15.	0.1	0

#	Article	IF	Citations
91	STRATOSPHERIC CHEMISTRY TOPICS | Halogens. , 2015, , 215-220.		0