

Paul B Shepson

List of Publications by Year in descending order

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84

papers

6,315

citations

66343

42

h-index

71685

76

g-index

84

all docs

84

docs citations

84

times ranked

5785

citing authors

#	ARTICLE	IF	CITATIONS
1	Assessment of methane emissions from the U.S. oil and gas supply chain. <i>Science</i> , 2018, 361, 186-188.	12.6	519
2	Evidence of NO _x production within or upon ice particles in the Greenland snowpack. <i>Geophysical Research Letters</i> , 1999, 26, 695-698.	4.0	337
3	Toward a better understanding and quantification of methane emissions from shale gas development. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014, 111, 6237-6242.	7.1	296
4	Highly functionalized organic nitrates in the southeast United States: Contribution to secondary organic aerosol and reactive nitrogen budgets. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2016, 113, 1516-1521.	7.1	269
5	High-resolution atmospheric inversion of urban CO ₂ emissions during the dormant season of the Indianapolis Flux Experiment (INFLUX). <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 5213-5236.	3.3	219
6	Reconciling divergent estimates of oil and gas methane emissions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 15597-15602.	7.1	209
7	Nitric acid photolysis on forest canopy surface as a source for tropospheric nitrous acid. <i>Nature Geoscience</i> , 2011, 4, 440-443.	12.9	200
8	Aircraft-Based Estimate of Total Methane Emissions from the Barnett Shale Region. <i>Environmental Science & Technology</i> , 2015, 49, 8124-8131.	10.0	190
9	NMR Investigation of the Quasi-Brine Layer in Ice/Brine Mixtures. <i>Journal of Physical Chemistry B</i> , 2002, 106, 11226-11232.	2.6	187
10	Photochemical production of molecular bromine in Arctic surface snowpacks. <i>Nature Geoscience</i> , 2013, 6, 351-356.	12.9	175
11	Aircraft-Based Measurements of the Carbon Footprint of Indianapolis. <i>Environmental Science & Technology</i> , 2009, 43, 7816-7823.	10.0	167
12	Modeling the Current and Future Roles of Particulate Organic Nitrates in the Southeastern United States. <i>Environmental Science & Technology</i> , 2015, 49, 14195-14203.	10.0	147
13	Toward quantification and source sector identification of fossil fuel CO ₂ emissions from an urban area: Results from the INFLUX experiment. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 292-312.	3.3	140
14	Constructing a Spatially Resolved Methane Emission Inventory for the Barnett Shale Region. <i>Environmental Science & Technology</i> , 2015, 49, 8147-8157.	10.0	133
15	Photochemistry and nature of organic matter in Arctic and Antarctic snow. <i>Global Biogeochemical Cycles</i> , 2004, 18, n/a-n/a.	4.9	123
16	Assessment of uncertainties of an aircraft-based mass balance approach for quantifying urban greenhouse gas emissions. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 9029-9050.	4.9	109
17	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
18	High levels of molecular chlorine in the Arctic atmosphere. <i>Nature Geoscience</i> , 2014, 7, 91-94.	12.9	105

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19	The photochemical production of organic nitrates from α -pinene and loss via acid-dependent particle phase hydrolysis. <i>Atmospheric Environment</i> , 2015, 100, 193-201.	4.1	105
20	Molecular dynamics simulations of ice growth from supercooled water. <i>Molecular Physics</i> , 2005, 103, 2957-2967.	1.7	98
21	Direct Measurement of pH in Individual Particles via Raman Microspectroscopy and Variation in Acidity with Relative Humidity. <i>Journal of Physical Chemistry A</i> , 2016, 120, 911-917.	2.5	95
22	Aircraft-Based Measurements of Point Source Methane Emissions in the Barnett Shale Basin. <i>Environmental Science & Technology</i> , 2015, 49, 7904-7913.	10.0	93
23	Direct and Indirect Measurements and Modeling of Methane Emissions in Indianapolis, Indiana. <i>Environmental Science & Technology</i> , 2016, 50, 8910-8917.	10.0	91
24	Aircraft measurement of HONO vertical profiles over a forested region. <i>Geophysical Research Letters</i> , 2009, 36, .	4.0	77
25	An Airborne and Wind Tunnel Evaluation of a Wind Turbulence Measurement System for Aircraft-Based Flux Measurements*. <i>Journal of Atmospheric and Oceanic Technology</i> , 2006, 23, 1696-1708.	1.3	72
26	Bouncier Particles at Night: Biogenic Secondary Organic Aerosol Chemistry and Sulfate Drive Diel Variations in the Aerosol Phase in a Mixed Forest. <i>Environmental Science & Technology</i> , 2019, 53, 4977-4987.	10.0	72
27	Processing of atmospheric nitrogen by clouds above a forest environment. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	71
28	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
29	An investigation of the interaction of carbonyl compounds with the snowpack. <i>Geophysical Research Letters</i> , 2000, 27, 2241-2244.	4.0	68
30	Direct detection of atmospheric atomic bromine leading to mercury and ozone depletion. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2019, 116, 14479-14484.	7.1	68
31	Active molecular iodine photochemistry in the Arctic. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2017, 114, 10053-10058.	7.1	63
32	Synthesis of the Southeast Atmosphere Studies: Investigating Fundamental Atmospheric Chemistry Questions. <i>Bulletin of the American Meteorological Society</i> , 2018, 99, 547-567.	3.3	62
33	Comparison of the measured and simulated isoprene nitrate distributions above a forest canopy. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	61
34	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
35	A surface-stabilized ozonide triggers bromide oxidation at the aqueous solution-vapour interface. <i>Nature Communications</i> , 2017, 8, 700.	12.8	59
36	The Indianapolis Flux Experiment (INFLUX): A test-bed for developing urban greenhouse gas emission measurements. <i>Elementa</i> , 2017, 5, .	3.2	59

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37	Inland Sea Spray Aerosol Transport and Incomplete Chloride Depletion: Varying Degrees of Reactive Processing Observed during SOAS. Environmental Science & Technology, 2017, 51, 9533-9542.	10.0	56
38	Assessing the Methane Emissions from Natural Gas-Fired Power Plants and Oil Refineries. Environmental Science & Technology, 2017, 51, 3373-3381.	10.0	55
39	Black Carbon Emissions from Associated Natural Gas Flaring. Environmental Science & Technology, 2016, 50, 2075-2081.	10.0	54
40	Ozone dynamics and snow-atmosphere exchanges during ozone depletion events at Barrow, Alaska. Journal of Geophysical Research, 2012, 117, .	3.3	52
41	Synthesis of Urban CO ₂ Emission Estimates from Multiple Methods from the Indianapolis Flux Project (INFLUX). Environmental Science & Technology, 2019, 53, 287-295.	10.0	50
42	Quantification and source apportionment of the methane emission flux from the city of Indianapolis. Elementa, 2015, 3, .	3.2	50
43	Chlorine and bromine atom ratios in the springtime Arctic troposphere as determined from measurements of halogenated volatile organic compounds. Journal of Geophysical Research, 2006, 111, .	3.3	48
44	Assessing the optimized precision of the aircraft mass balance method for measurement of urban greenhouse gas emission rates through averaging. Elementa, 2017, 5, .	3.2	46
45	A study of the vertical scale of halogen chemistry in the Arctic troposphere during Polar Sunrise at Barrow, Alaska. Journal of Geophysical Research, 2007, 112, .	3.3	45
46	Doppler Lidar Observations of the Mixing Height in Indianapolis Using an Automated Composite Fuzzy Logic Approach. Journal of Atmospheric and Oceanic Technology, 2018, 35, 473-490.	1.3	44
47	Field and satellite observations of the formation and distribution of Arctic atmospheric bromine above a rejuvenated sea ice cover. Journal of Geophysical Research, 2012, 117, .	3.3	43
48	Methane Emissions From the Baltimore-Washington Area Based on Airborne Observations: Comparison to Emissions Inventories. Journal of Geophysical Research D: Atmospheres, 2018, 123, 8869-8882.	3.3	43
49	Analysis of atmospheric inputs of nitrate to a temperate forest ecosystem from $\delta^{17}\text{O}$ isotope ratio measurements. Geophysical Research Letters, 2011, 38, .	4.0	42
50	Spatiotemporal Variability of Methane Emissions at Oil and Natural Gas Operations in the Eagle Ford Basin. Environmental Science & Technology, 2017, 51, 8001-8009.	10.0	42
51	Foliar uptake of atmospheric organic nitrates. Geophysical Research Letters, 2008, 35, .	4.0	39
52	Top-Down Estimates of NO _x and CO Emissions From Washington, D.C.-Baltimore During the WINTER Campaign. Journal of Geophysical Research D: Atmospheres, 2018, 123, 7705-7724.	3.3	35
53	Aerosol production from the surface of the Great Lakes. Geophysical Research Letters, 2010, 37, .	4.0	33
54	Studies of Peroxyacetyl nitrate (PAN) and its interaction with the snowpack at Summit, Greenland. Journal of Geophysical Research, 2002, 107, ACH 6-1-ACH 6-10.	3.3	32

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55	A comparison of isoprene nitrate concentrations at two forest-impacted sites. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	32
56	A study of the NO _x dependence of isoprene oxidation. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	31
57	Loss of isoprene and sources of nighttime OH radicals at a rural site in the United States: Results from photochemical models. <i>Journal of Geophysical Research</i> , 2002, 107, ACH 2-1-ACH 2-14.	3.3	30
58	Constraints on Arctic Atmospheric Chlorine Production through Measurements and Simulations of Cl ₂ and ClO. <i>Environmental Science & Technology</i> , 2016, 50, 12394-12400.	10.0	30
59	Springtime Nitrogen Oxide-Influenced Chlorine Chemistry in the Coastal Arctic. <i>Environmental Science & Technology</i> , 2019, 53, 8057-8067.	10.0	28
60	Reconciling the differences between a bottom-up and inverse-estimated FF _{CO2} emissions estimate in a large US urban area. <i>Elementa</i> , 2017, 5, .	3.2	28
61	Investigation of the role of the snowpack on atmospheric formaldehyde chemistry at Summit, Greenland. <i>Journal of Geophysical Research</i> , 2002, 107, ACH 9-1.	3.3	27
62	Peroxyacetyl nitrate photochemistry and interactions with the Arctic surface. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	27
63	Methane Emissions from the Marcellus Shale in Southwestern Pennsylvania and Northern West Virginia Based on Airborne Measurements. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 1862-1878.	3.3	26
64	The production of organic nitrates from various anthropogenic volatile organic compounds. <i>International Journal of Chemical Kinetics</i> , 2005, 37, 675-685.	1.6	25
65	Wintertime CO ₂ , CH ₄ , and CO Emissions Estimation for the Washington, DC–Baltimore Metropolitan Area Using an Inverse Modeling Technique. <i>Environmental Science & Technology</i> , 2020, 54, 2606-2614.	10.0	25
66	Measurement of wet deposition of inorganic and organic nitrogen in a forest environment. <i>Journal of Geophysical Research</i> , 2005, 110, n/a-n/a.	3.3	22
67	The production of organic nitrates from atmospheric oxidation of ethers and glycol ethers. <i>International Journal of Chemical Kinetics</i> , 2005, 37, 686-699.	1.6	19
68	Observations of Methane Emissions from Natural Gas-Fired Power Plants. <i>Environmental Science & Technology</i> , 2019, 53, 8976-8984.	10.0	19
69	Urban emissions of water vapor in winter. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 9467-9484.	3.3	18
70	Vertical profile observations of water vapor deuterium excess in the lower troposphere. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 11525-11543.	4.9	17
71	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
72	Chemical Imaging of Fine Mode Atmospheric Particles Collected from a Research Aircraft over Agricultural Fields. <i>ACS Earth and Space Chemistry</i> , 2020, 4, 2171-2184.	2.7	16

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73	Field measurements and modeling to resolve m ² to km ² CH ₄ emissions for a complex urban source: An Indiana landfill study. <i>Elementa</i> , 2017, 5, .	3.2	14
74	Proton affinity of peroxyacetyl nitrate sampled by membrane introduction mass spectrometry. , 1998, 12, 328-334.		11
75	Lake Spray Aerosol Incorporated into Great Lakes Clouds. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 2765-2774.	2.7	11
76	Fluxes of Atmospheric Greenhouse Gases in Maryland (FLAGG-MD): Emissions of Carbon Dioxide in the Baltimore, MD-Washington, D.C. Area. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD032004.	3.3	11
77	Chemical characterization of Î±-pinene secondary organic aerosol constituents using gas chromatography, liquid chromatography, and paper spray-based mass spectrometry techniques. <i>Rapid Communications in Mass Spectrometry</i> , 2016, 30, 1627-1638.	1.5	9
78	Bromine Chloride in the Coastal Arctic: Diel Patterns and Production Mechanisms. <i>ACS Earth and Space Chemistry</i> , 2020, 4, 620-630.	2.7	9
79	Arctic Reactive Bromine Events Occur in Two Distinct Sets of Environmental Conditions: A Statistical Analysis of 6 Years of Observations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD032139.	3.3	9
80	New York City greenhouse gas emissions estimated with inverse modeling of aircraft measurements. <i>Elementa</i> , 2022, 10, .	3.2	8
81	Relative flux measurements of biogenic and natural gas-derived methane for seven U.S. cities. <i>Elementa</i> , 2021, 9, .	3.2	7
82	Carbon Monoxide Emissions from the Washington, DC, and Baltimore Metropolitan Area: Recent Trend and COVID-19 Anomaly. <i>Environmental Science & Technology</i> , 2022, 56, 2172-2180.	10.0	7
83	Fluxes of Atmospheric Greenhouse-Gases in Maryland (FLAGG-MD): Emissions of Carbon Dioxide in the Baltimore, MD-Washington, D.C. area. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, .	3.3	0
84	A spatially explicit inventory scaling approach to estimate urban CO ₂ emissions. <i>Elementa</i> , 2022, 10, .	3.2	0