William James Bloss

List of Publications by Year
in descending order

107 papers	5,916 citations	57758 44 h-index	91884 69 g-index
142 all docs	142 docs citations	142 times ranked	5099 citing authors

#	Article	IF	Citations
1	Development of a detailed chemical mechanism (MCMv3.1) for the atmospheric oxidation of aromatic hydrocarbons. Atmospheric Chemistry and Physics, 2005, 5, 641-664.	4.9	442
2	Abrupt but smaller than expected changes in surface air quality attributable to COVID-19 lockdowns. Science Advances, 2021, 7, .	10.3	209
3	On the vertical distribution of boundary layer halogens over coastal Antarctica: implications for O₃, HO_x, NO_x and the Hg lifetime. Atmospheric Chemistry and Physics, 2008, 8, 887-900.	4.9	153
4	Free radical modelling studies during the UK TORCH Campaign in Summer 2003. Atmospheric Chemistry and Physics, 2007, 7, 167-181.	4.9	151
5	Iodine-mediated coastal particle formation: an overview of the Reactive Halogens in the Marine Boundary Layer (RHaMBLe) Roscoff coastal study. Atmospheric Chemistry and Physics, 2010, 10, 2975-2999.	4.9	125
6	Source apportionment of fine and coarse particles at a roadside and urban background site in London during the 2012 summer ClearfLo campaign. Environmental Pollution, 2017, 220, 766-778.	7.5	125
7	Atmospheric chemistry and physics in the atmosphere of a developed megacity (London): an overview of the REPARTEE experiment and its conclusions. Atmospheric Chemistry and Physics, 2012, 12, 3065-3114.	4.9	124
8	Rate of Gas Phase Association of Hydroxyl Radical and Nitrogen Dioxide. Science, 2010, 330, 646-649.	12.6	123
9	Ozone photochemistry and elevated isoprene during the UK heatwave of august 2003. Atmospheric Environment, 2006, 40, 7598-7613.	4.1	122
10	Distribution of gaseous and particulate organic composition during dark Î±-pinene ozonolysis. Atmospheric Chemistry and Physics, 2010, 10, 2893-2917.	4.9	122
11	New directions: Air pollution challenges for developing megacities like Delhi. Atmospheric Environment, 2015, 122, 657-661.	4.1	117
12	Kinetics of stabilised Criegee intermediates derived from alkene ozonolysis: reactions with SO2, H2O and decomposition under boundary layer conditions. Physical Chemistry Chemical Physics, 2015, 17, 4076-4088.	2.8	117
13	NO3 radical production from the reaction between the Criegee intermediate CH2OO and NO2. Physical Chemistry Chemical Physics, 2013, 15, 17070.	2.8	116
14	Impact of halogen monoxide chemistry upon boundary layer OH and HO2concentrations at a coastal site. Geophysical Research Letters, 2005, 32, .	4.0	113
15	The oxidative capacity of the troposphere: Coupling of field measurements of OH and a global chemistry transport model. Faraday Discussions, 2005, 130, 425.	3.2	108
16	Kinetics and Products of the IO Self-Reaction. Journal of Physical Chemistry A, 2001, 105, 7840-7854.	2.5	105
17	Meteorology, Air Quality, and Health in London: The ClearfLo Project. Bulletin of the American Meteorological Society, 2015, 96, 779-804.	3.3	105
18	Four-year assessment of ambient particulate matter and trace gases in the Delhi-NCR region of India. Sustainable Cities and Society, 2020, 54, 102003.	10.4	105

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19	Photolysis frequency measurement techniques: results of a comparison within the ACCENT project. Atmospheric Chemistry and Physics, 2008, 8, 5373-5391.	4.9	99
20	Coupling dynamics and chemistry in the air pollution modelling of street canyons: A review. Environmental Pollution, 2016, 214, 690-704.	7.5	96
21	Introduction to the special issue â€œIn-depth study of air pollution sources and processes within Beijing and its surrounding region (APHH-Beijing)â€• Atmospheric Chemistry and Physics, 2019, 19, 7519-7546.	4.9	95
22	Concentrations of OH and HO₂ radicals during NAMBLEX: measurements and steady state analysis. Atmospheric Chemistry and Physics, 2006, 6, 1435-1453.	4.9	91
23	Total radical yields from tropospheric ethene ozonolysis. Physical Chemistry Chemical Physics, 2011, 13, 11002.	2.8	90
24	DMS and MSA measurements in the Antarctic Boundary Layer: impact of BrO on MSA production. Atmospheric Chemistry and Physics, 2008, 8, 2985-2997.	4.9	87
25	60 years of UK visibility measurements: impact of meteorology and atmospheric pollutants on visibility. Atmospheric Chemistry and Physics, 2017, 17, 2085-2101.	4.9	86
26	OH and HO₂ chemistry during NAMBLEX: roles of oxygenates, halogen oxides and heterogeneous uptake. Atmospheric Chemistry and Physics, 2006, 6, 1135-1153.	4.9	82
27	Theoretical study of the reactions of Criegee intermediates with ozone, alkylhydroperoxides, and carbon monoxide. Physical Chemistry Chemical Physics, 2015, 17, 23847-23858.	2.8	81
28	Sources and contributions of wood smoke during winter in London: assessing local and regional influences. Atmospheric Chemistry and Physics, 2015, 15, 3149-3171.	4.9	76
29	Chemistry of the Antarctic Boundary Layer and the Interface with Snow: an overview of the CHABLIS campaign. Atmospheric Chemistry and Physics, 2008, 8, 3789-3803.	4.9	73
30	OIO and the atmospheric cycle of iodine. Geophysical Research Letters, 1999, 26, 1857-1860.	4.0	72
31	Peroxy radical chemistry and the control of ozone photochemistry at Mace Head, Ireland during the summer of 2002. Atmospheric Chemistry and Physics, 2006, 6, 2193-2214.	4.9	70
32	Observations of OH and HO₂ radicals in coastal Antarctica. Atmospheric Chemistry and Physics, 2007, 7, 4171-4185.	4.9	69
33	Modelling the dispersion and transport of reactive pollutants in a deep urban street canyon: Using large-eddy simulation. Environmental Pollution, 2015, 200, 42-52.	7.5	68
34	The North Atlantic Marine Boundary Layer Experiment(NAMBLEX). Overview of the campaign held at Mace Head, Ireland, in summer 2002. Atmospheric Chemistry and Physics, 2006, 6, 2241-2272.	4.9	65
35	Night-time chemistry above London: measurements of NO₃ and N₂O₅ from the BT Tower. Atmospheric Chemistry and Physics, 2010, 10, 9781-9795.	4.9	65
36	Evaluating the sensitivity of radical chemistry and ozone formation to ambient VOCs and NO_{<i>x</i>} in Beijing. Atmospheric Chemistry and Physics, 2021, 21, 2125-2147.	4.9	64

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37	Atmospheric isoprene ozonolysis: impacts of stabilised Criegee intermediate reactions with SO₂, H₂O and dimethyl sulfide. Atmospheric Chemistry and Physics, 2015, 15, 9521-9536.	4.9	62
38	Global impact of nitrate photolysis in sea-salt aerosol on NO_{<i>x</i>}, OH, and O₃ in the marine boundary layer. Atmospheric Chemistry and Physics, 2018, 18, 11185-11203.	4.9	62
39	Elevated levels of OH observed in haze events during wintertime in central Beijing. Atmospheric Chemistry and Physics, 2020, 20, 14847-14871.	4.9	62
40	Detection of iodine monoxide radicals in the marine boundary layer using laser induced fluorescence spectroscopy. Journal of Atmospheric Chemistry, 2007, 58, 19-39.	3.2	61
41	Kinetics of the ClO Self-Reaction and 210 nm Absorption Cross Section of the ClO Dimer. Journal of Physical Chemistry A, 2001, 105, 11226-11239.	2.5	57
42	Coupling of HO_x, NO_x and halogen chemistry in the antarctic boundary layer. Atmospheric Chemistry and Physics, 2010, 10, 10187-10209.	4.9	56
43	Effect of aerosol composition on the performance of low-cost optical particle counter correction factors. Atmospheric Measurement Techniques, 2020, 13, 1181-1193.	3.1	56
44	Validity and limitations of simple reaction kinetics to calculate concentrations of organic compounds from ion counts in PTR-MS. Atmospheric Measurement Techniques, 2019, 12, 6193-6208.	3.1	53
45	Urban street canyons: Coupling dynamics, chemistry and within-canyon chemical processing of emissions. Atmospheric Environment, 2013, 68, 127-142.	4.1	50
46	Novel measurements of atmospheric iodine species by resonance fluorescence. Journal of Atmospheric Chemistry, 2008, 60, 51-70.	3.2	47
47	Evidence for renoxification in the tropical marine boundary layer. Atmospheric Chemistry and Physics, 2017, 17, 4081-4092.	4.9	47
48	Design of and initial results from a Highly Instrumented Reactor for Atmospheric Chemistry (HIRAC). Atmospheric Chemistry and Physics, 2007, 7, 5371-5390.	4.9	46
49	Intercomparison of nitrous acid (HONO) measurement techniques in a megacity (Beijing). Atmospheric Measurement Techniques, 2019, 12, 6449-6463.	3.1	44
50	A Multidimensional Study of the Reaction CH₂I+O₂: Products and Atmospheric Implications. ChemPhysChem, 2010, 11, 3928-3941.	2.1	43
51	Effects of halogens on European air-quality. Faraday Discussions, 2017, 200, 75-100.	3.2	43
52	Insights into the Formation and Evolution of Individual Compounds in the Particulate Phase during Aromatic Photo-Oxidation. Environmental Science & Technology, 2015, 49, 13168-13178.	10.0	42
53	Evaluation of EDAR vehicle emissions remote sensing technology. Science of the Total Environment, 2017, 609, 1464-1474.	8.0	42
54	AtChem (version 1), an open-source box model for the Master Chemical Mechanism. Geoscientific Model Development, 2020, 13, 169-183.	3.6	42

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55	Uncertainties in gas-phase atmospheric iodine chemistry. Atmospheric Environment, 2012, 57, 219-232.	4.1	41
56	Radical Product Yields from the Ozonolysis of Short Chain Alkenes under Atmospheric Boundary Layer Conditions. Journal of Physical Chemistry A, 2013, 117, 12468-12483.	2.5	39
57	Application of a compact all solid-state laser system to the in situ detection of atmospheric OH, HO2, NO and IO by laser-induced fluorescence. Journal of Environmental Monitoring, 2003, 5, 21-28.	2.1	38
58	Atmospheric conditions and composition that influence PM_{2.5} oxidative potential in Beijing, China. Atmospheric Chemistry and Physics, 2021, 21, 5549-5573.	4.9	38
59	Large eddy simulation of reactive pollutants in a deep urban street canyon: Coupling dynamics with O3-NO -VOC chemistry. Environmental Pollution, 2017, 224, 171-184.	7.5	37
60	Summertime NO_x measurements during the CHABLIS campaign: can source and sink estimates unravel observed diurnal cycles?. Atmospheric Chemistry and Physics, 2012, 12, 989-1002.	4.9	36
61	The atmospheric impacts of monoterpene ozonolysis on global stabilised Criegee intermediate budgets and SO₂ oxidation: experiment, theory and modelling. Atmospheric Chemistry and Physics, 2018, 18, 6095-6120.	4.9	36
62	Validation of the calibration of a laser-induced fluorescence instrument for the measurement of OH radicals in the atmosphere. Atmospheric Chemistry and Physics, 2004, 4, 571-583.	4.9	35
63	Communicating the value of atmospheric services. Meteorological Applications, 2010, 17, 243-250.	2.1	31
64	Long-term trends in air quality in major cities in the UK and India: a view from space. Atmospheric Chemistry and Physics, 2021, 21, 6275-6296.	4.9	31
65	Nitrous acid (HONO) emissions under real-world driving conditions from vehicles in a UK road tunnel. Atmospheric Chemistry and Physics, 2020, 20, 5231-5248.	4.9	31
66	Rapid rise in premature mortality due to anthropogenic air pollution in fast-growing tropical cities from 2005 to 2018. Science Advances, 2022, 8, eabm4435.	10.3	31
67	Night-time radical chemistry during the NAMBLEX campaign. Atmospheric Chemistry and Physics, 2007, 7, 587-598.	4.9	28
68	In situ ozone production is highly sensitive to volatile organic compounds in Delhi, India. Atmospheric Chemistry and Physics, 2021, 21, 13609-13630.	4.9	28
69	Rate coefficient for the BrOâ€‰+â€‰HO2 reaction at 298 K. Physical Chemistry Chemical Physics, 2002, 4, 3639-3647.	2.8	27
70	Presenting SAPUSS: Solving Aerosol Problem by Using Synergistic Strategies in Barcelona, Spain. Atmospheric Chemistry and Physics, 2013, 13, 8991-9019.	4.9	27
71	Kinetics and Products of the IO + BrO Reaction. Journal of Physical Chemistry A, 2001, 105, 7855-7864.	2.5	26
72	Alkyl nitrate photochemistry during the tropospheric organic chemistry experiment. Atmospheric Environment, 2010, 44, 773-785.	4.1	26

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73	Iodine monoxide at a clean marine coastal site: observations of high frequency variations and inhomogeneous distributions. Atmospheric Chemistry and Physics, 2011, 11, 6721-6733.	4.9	26
74	Investigation of vehicle cold start primary NO2 emissions inferred from ambient monitoring data in the UK and their implications for urban air quality. Atmospheric Environment, 2019, 199, 402-414.	4.1	26
75	Chemical source profiles of fine particles for five different sources in Delhi. Chemosphere, 2021, 274, 129913.	8.2	25
76	Measurement and interpretation of gas phase formaldehyde concentrations obtained during the CHABLIS campaign in coastal Antarctica. Atmospheric Chemistry and Physics, 2008, 8, 4085-4093.	4.9	23
77	On the interpretation of in situ HONO observations via photochemical steady state. Faraday Discussions, 2016, 189, 191-212.	3.2	20
78	Measurements of iodine monoxide at a semi polluted coastal location. Atmospheric Chemistry and Physics, 2010, 10, 3645-3663.	4.9	19
79	Modelling segregation effects of heterogeneous emissions on ozone levels in idealised urban street canyons: Using photochemical box models. Environmental Pollution, 2014, 188, 132-143.	7.5	18
80	HONO measurement by differential photolysis. Atmospheric Measurement Techniques, 2016, 9, 2483-2495.	3.1	15
81	Size-dependent chemical ageing of oleic acid aerosol under dry and humidified conditions. Atmospheric Chemistry and Physics, 2016, 16, 15561-15579.	4.9	15
82	Enhanced wintertime oxidation of VOCs via sustained radical sources in the urban atmosphere. Environmental Pollution, 2021, 274, 116563.	7.5	15
83	Remember, remember the 5th ofâ€‰November; gunpowder, particles and smog. Weather, 2015, 70, 320-324.	0.7	14
84	Is the ocean surface a source of nitrous acid (HONO) in the marine boundary layer?. Atmospheric Chemistry and Physics, 2021, 21, 18213-18225.	4.9	14
85	Evaluating the real changes of air quality due to clean air actions using a machine learning technique: Results from 12 Chinese mega-cities during 2013â€“2020. Chemosphere, 2022, 300, 134608.	8.2	14
86	Secondary organic aerosol formation and composition from the photo-oxidation of methyl chavicol (estragole). Atmospheric Chemistry and Physics, 2014, 14, 5349-5368.	4.9	13
87	Quantification of within-vehicle exposure to NOx and particles: Variation with outside air quality, route choice and ventilation options. Atmospheric Environment, 2020, 240, 117810.	4.1	13
88	Modelling photochemical pollutants in a deep urban street canyon: Application of a coupled two-box model approximation. Atmospheric Environment, 2016, 143, 86-107.	4.1	11
89	Surfaceâ€“atmosphere exchange of inorganic water-soluble gases and associated ions in bulk aerosol above agricultural grassland pre- and postfertilisation. Atmospheric Chemistry and Physics, 2018, 18, 16953-16978.	4.9	11
90	Implications of regional surface ozone increases on visibility degradation in southeast China. Tellus, Series B: Chemical and Physical Meteorology, 2022, 64, 19625.	1.6	10

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91	Mapping gas-phase organic reactivity and concomitant secondary organic aerosol formation: chemometric dimension reduction techniques for the deconvolution of complex atmospheric data sets. Atmospheric Chemistry and Physics, 2015, 15, 8077-8100.	4.9	10
92	Interference from alkenes in chemiluminescent NO_{<i>x</i>} measurements. Atmospheric Measurement Techniques, 2020, 13, 5977-5991.	3.1	10
93	Insights into air pollution chemistry and sulphate formation from nitrous acid (HONO) measurements during haze events in Beijing. Faraday Discussions, 2021, 226, 223-238.	3.2	9
94	Using Task Farming to Optimise a Street-Scale Resolution Air Quality Model of the West Midlands (UK). Atmosphere, 2021, 12, 983.	2.3	9
95	Suppression of anthropogenic secondary organic aerosol formation by isoprene. Npj Climate and Atmospheric Science, 2022, 5, .	6.8	9
96	Modelling the Impact of National vs. Local Emission Reduction on PM2.5 in the West Midlands, UK Using WRF-CMAQ. Atmosphere, 2022, 13, 377.	2.3	9
97	Modelling atmospheric composition in urban street canyons. Weather, 2011, 66, 106-110.	0.7	7
98	Field Calibration and Evaluation of an Internet-of-Things-Based Particulate Matter Sensor. Frontiers in Environmental Science, 2022, 9, .	3.3	5
99	A nocturnal atmospheric loss of CH2I2 in the remote marine boundary layer. Journal of Atmospheric Chemistry, 2017, 74, 145-156.	3.2	4
100	An instrument for in situ measurement of total ozone reactivity. Atmospheric Measurement Techniques, 2020, 13, 1655-1670.	3.1	4
101	Observations of speciated isoprene nitrates in Beijing: implications for isoprene chemistry. Atmospheric Chemistry and Physics, 2021, 21, 6315-6330.	4.9	4
102	Chemical characteristics and source apportionment of particulate matter (PM2.5) in Dammam, Saudi Arabia: Impact of dust storms. Atmospheric Environment: X, 2022, 14, 100164.	1.4	3
103	Chemical complexity of the urban atmosphere and its consequences: general discussion. Faraday Discussions, 2016, 189, 137-167.	3.2	1
104	Urban case studies: general discussion. Faraday Discussions, 2016, 189, 473-514.	3.2	1
105	Timescales of mixing and of chemistry: general discussion. Faraday Discussions, 2016, 189, 253-276.	3.2	0
106	Insights into HONO sources from observations during a solar eclipse. Environmental Science Atmospheres, 2021, 1, 395-405.	2.4	0
107	Using routing apps to model realâ€time road traffic emissions. Weather, 2020, 75, 341-346.	0.7	0