

Becky Alexander

List of Publications by Citations

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77
papers

3,647
citations

31
h-index

60
g-index

116
ext. papers

4,399
ext. citations

7.4
avg, IF

5.12
L-index

#	Paper	IF	Citations
77	A large atomic chlorine source inferred from mid-continental reactive nitrogen chemistry. <i>Nature</i> , 2010 , 464, 271-4	50.4	471
76	Global distribution of sea salt aerosols: new constraints from in situ and remote sensing observations. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 3137-3157	6.8	393
75	Sulfate formation in sea-salt aerosols: Constraints from oxygen isotopes. <i>Journal of Geophysical Research</i> , 2005 , 110,		265
74	Quantifying atmospheric nitrate formation pathways based on a global model of the oxygen isotopic composition ($\delta^{17}\text{O}$) of atmospheric nitrate. <i>Atmospheric Chemistry and Physics</i> , 2009 , 9, 5043-5056	6.8	181
73	Transpacific transport of Asian anthropogenic aerosols and its impact on surface air quality in the United States. <i>Journal of Geophysical Research</i> , 2006 , 111,		176
72	Impact of mineral dust on nitrate, sulfate, and ozone in transpacific Asian pollution plumes. <i>Atmospheric Chemistry and Physics</i> , 2010 , 10, 3999-4012	6.8	172
71	The Acidity of Atmospheric Particles and Clouds. <i>Atmospheric Chemistry and Physics</i> , 2020 , 20, 4809-4888	6.8	165
70	Transition metal-catalyzed oxidation of atmospheric sulfur: Global implications for the sulfur budget. <i>Journal of Geophysical Research</i> , 2009 , 114,		141
69	The role of chlorine in global tropospheric chemistry. <i>Atmospheric Chemistry and Physics</i> , 2019 , 19, 3981-4003	6.8	96
68	Heterogeneous sulfate aerosol formation mechanisms during wintertime Chinese haze events: air quality model assessment using observations of sulfate oxygen isotopes in Beijing. <i>Atmospheric Chemistry and Physics</i> , 2019 , 19, 6107-6123	6.8	82
67	Factors controlling variability in the oxidative capacity of the troposphere since the Last Glacial Maximum. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 3589-3622	6.8	76
66	Impact of preindustrial biomass-burning emissions on the oxidation pathways of tropospheric sulfur and nitrogen. <i>Journal of Geophysical Research</i> , 2004 , 109,		68
65	Annual distributions and sources of Arctic aerosol components, aerosol optical depth, and aerosol absorption. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014 , 119, 4107-4124	4.4	65
64	DMS oxidation and sulfur aerosol formation in the marine troposphere: a focus on reactive halogen and multiphase chemistry. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 13617-13637	6.8	62
63	The impact of anthropogenic emissions on atmospheric sulfate production pathways, oxidants, and ice core $\delta^{17}\text{O}(\text{SO}_4^{2-})$. <i>Atmospheric Chemistry and Physics</i> , 2011 , 11, 3565-3578	6.8	60
62	Climate driven changes in the oxidation pathways of atmospheric sulfur. <i>Geophysical Research Letters</i> , 2002 , 29, 30-1-30-4	4.9	60
61	Isotopic composition of atmospheric nitrate in a tropical marine boundary layer. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2013 , 110, 17668-73	11.5	59

60	Isotopic constraints on the formation pathways of sulfate aerosol in the marine boundary layer of the subtropical northeast Atlantic Ocean. <i>Journal of Geophysical Research</i> , 2012 , 117, n/a-n/a		58
59	Sulfur and oxygen isotope analysis of sulfate at micromole levels using a pyrolysis technique in a continuous flow system. <i>Analytical Chemistry</i> , 2001 , 73, 4457-62	7.8	56
58	Nitrogen isotopes in ice core nitrate linked to anthropogenic atmospheric acidity change. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2014 , 111, 5808-12	11.5	55
57	Isotopic constraints on heterogeneous sulfate production in Beijing haze. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 5515-5528	6.8	53
56	The influence of snow grain size and impurities on the vertical profiles of actinic flux and associated NO _x emissions on the Antarctic and Greenland ice sheets. <i>Atmospheric Chemistry and Physics</i> , 2013 , 13, 3547-3567	6.8	45
55	Measurements and modeling of $\delta^{17}\text{O}$ of nitrate in snowpits from Summit, Greenland. <i>Journal of Geophysical Research</i> , 2008 , 113,		45
54	East Antarctic ice core sulfur isotope measurements over a complete glacial-interglacial cycle. <i>Journal of Geophysical Research</i> , 2003 , 108, n/a-n/a		45
53	Sulfate production by reactive bromine: Implications for the global sulfur and reactive bromine budgets. <i>Geophysical Research Letters</i> , 2017 , 44, 7069-7078	4.9	43
52	Sulfate sources and oxidation chemistry over the past 230 years from sulfur and oxygen isotopes of sulfate in a West Antarctic ice core. <i>Journal of Geophysical Research</i> , 2010 , 115,		43
51	Global inorganic nitrate production mechanisms: comparison of a global model with nitrate isotope observations. <i>Atmospheric Chemistry and Physics</i> , 2020 , 20, 3859-3877	6.8	40
50	Global impact of nitrate photolysis in sea-salt aerosol on NO _x , OH, and O ₃ in the marine boundary layer. <i>Atmospheric Chemistry and Physics</i> , 2018 , 18, 11185-11203	6.8	38
49	Analysis of atmospheric inputs of nitrate to a temperate forest ecosystem from $\delta^{17}\text{O}$ isotope ratio measurements. <i>Geophysical Research Letters</i> , 2011 , 38,	4.9	37
48	Isotopic constraints on non-photochemical sulfate production in the Arctic winter. <i>Geophysical Research Letters</i> , 2006 , 33,	4.9	36
47	Isotopic constraints on the role of hypohalous acids in sulfate aerosol formation in the remote marine boundary layer. <i>Atmospheric Chemistry and Physics</i> , 2016 , 16, 11433-11450	6.8	33
46	The impact of snow nitrate photolysis on boundary layer chemistry and the recycling and redistribution of reactive nitrogen across Antarctica and Greenland in a global chemical transport model. <i>Atmospheric Chemistry and Physics</i> , 2016 , 16, 2819-2842	6.8	29
45	Investigating the sensitivity of surface-level nitrate seasonality in Antarctica to primary sources using a global model. <i>Atmospheric Environment</i> , 2014 , 89, 757-767	5.3	28
44	Stratospheric CO ₂ isotopic anomalies and SF ₆ and CFC Tracer Concentrations in the Arctic Polar Vortex. <i>Geophysical Research Letters</i> , 2001 , 28, 4103-4106	4.9	28
43	Isotopic evidence of multiple controls on atmospheric oxidants over climate transitions. <i>Nature</i> , 2017 , 546, 133-136	50.4	27

42	WAIS Divide ice core suggests sustained changes in the atmospheric formation pathways of sulfate and nitrate since the 19th century in the extratropical Southern Hemisphere. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 5749-5769	6.8	27
41	Effect of sea salt aerosol on tropospheric bromine chemistry. <i>Atmospheric Chemistry and Physics</i> , 2019 , 19, 6497-6507	6.8	22
40	Paleo-Perspectives on Potential Future Changes in the Oxidative Capacity of the Atmosphere Due to Climate Change and Anthropogenic Emissions. <i>Current Pollution Reports</i> , 2015 , 1, 57-69	7.6	22
39	Oxygen isotope exchange with quartz during pyrolysis of silver sulfate and silver nitrate. <i>Rapid Communications in Mass Spectrometry</i> , 2012 , 26, 2151-7	2.2	22
38	Modeled methanesulfonic acid (MSA) deposition in Antarctica and its relationship to sea ice. <i>Journal of Geophysical Research</i> , 2011 , 116, n/a-n/a		21
37	Sources, transport, and sinks of SO ₂ over the equatorial Pacific during the Pacific Atmospheric Sulfur Experiment. <i>Journal of Atmospheric Chemistry</i> , 2011 , 68, 27-53	3.2	17
36	Analysis of oxygen-17 excess of nitrate and sulfate at sub-micromole levels using the pyrolysis method. <i>Rapid Communications in Mass Spectrometry</i> , 2013 , 27, 2411-9	2.2	16
35	Global Importance of Hydroxymethanesulfonate in Ambient Particulate Matter: Implications for Air Quality. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020 , 125, e2020JD032706	4.4	14
34	Acidity and the multiphase chemistry of atmospheric aqueous particles and clouds. <i>Atmospheric Chemistry and Physics</i> , 2021 , 21,	6.8	14
33	On the origin of the occasional spring nitrate peak in Greenland snow. <i>Atmospheric Chemistry and Physics</i> , 2014 , 14, 13361-13376	6.8	11
32	Uncertainties in isoprene photochemistry and emissions: implications for the oxidative capacity of past and present atmospheres and for climate forcing agents. <i>Atmospheric Chemistry and Physics</i> , 2015 , 15, 7977-7998	6.8	11
31	Assessing the Seasonal Dynamics of Nitrate and Sulfate Aerosols at the South Pole Utilizing Stable Isotopes. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019 , 124, 8161-8177	4.4	10
30	Evaluating the impact of blowing-snow sea salt aerosol on springtime BrO and O ₃ in the Arctic. <i>Atmospheric Chemistry and Physics</i> , 2020 , 20, 7335-7358	6.8	9
29	Effects of postdepositional processing on nitrogen isotopes of nitrate in the Greenland Ice Sheet Project 2 ice core. <i>Geophysical Research Letters</i> , 2015 , 42, 5346-5354	4.9	8
28	The Acidity of Atmospheric Particles and Clouds 2019 ,		8
27	Global tropospheric halogen (Cl, Br, I) chemistry and its impact on oxidants. <i>Atmospheric Chemistry and Physics</i> , 2021 , 21, 13973-13996	6.8	7
26	Stratospheric Ozone in the Last Glacial Maximum. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020 , 125, e2020JD032929	4.4	6
25	The Brewer-Dobson Circulation During the Last Glacial Maximum. <i>Geophysical Research Letters</i> , 2020 , 47, e2019GL086271	4.9	6

24	The magnitude of the snow-sourced reactive nitrogen flux to the boundary layer in the Uintah Basin, Utah, USA. <i>Atmospheric Chemistry and Physics</i> , 2016 , 16, 13837-13851	6.8	6
23	Isotopic evidence for acidity-driven enhancement of sulfate formation after SO emission control. <i>Science Advances</i> , 2021 , 7,	14.3	6
22	Global distribution of sea salt aerosols: new constraints from in situ and remote sensing observations		5
21	Heterogeneous Nitrate Production Mechanisms in Intense Haze Events in the North China Plain. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021 , 126, e2021JD034688	4.4	5
20	Isotopic constraints on atmospheric sulfate formation pathways in the Mt. Everest region, southern Tibetan Plateau. <i>Atmospheric Chemistry and Physics</i> , 2021 , 21, 8357-8376	6.8	4
19	Acidity and the multiphase chemistry of atmospheric aqueous particles and clouds		4
18	Effects of Sea Salt Aerosol Emissions for Marine Cloud Brightening on Atmospheric Chemistry: Implications for Radiative Forcing. <i>Geophysical Research Letters</i> , 2020 , 47, e2019GL085838	4.9	3
17	WAIS Divide ice core suggests sustained changes in the atmospheric formation pathways of sulfate and nitrate since the 19th century in the extratropical Southern Hemisphere		3
16	Quantifying atmospheric nitrate formation pathways based on a global model of the oxygen isotopic composition ($\delta^{17}\text{O}$) of atmospheric nitrate		3
15	Impact of mineral dust on nitrate, sulfate, and ozone in transpacific Asian pollution plumes		3
14	Regional Characteristics of Atmospheric Sulfate Formation in East Antarctica Imprinted on ^{17}O -Excess Signature. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021 , 126, e2020JD033583	4.4	3
13	Global inorganic nitrate production mechanisms: Comparison of a global model with nitrate isotope observations 2019 ,		2
12	The sensitivity of the oxygen isotopes of ice core sulfate to changing oxidant concentrations since the preindustrial		2
11	Uncertainties in isoprene photochemistry and emissions: implications for the oxidative capacity of past and present atmospheres and for trends in climate forcing agents		2
10	Factors controlling variability in the oxidative capacity of the troposphere since the Last Glacial Maximum		2
9	Global tropospheric halogen (Cl, Br, I) chemistry and its impact on oxidants		2
8	Anthropogenic Impacts on Tropospheric Reactive Chlorine Since the Preindustrial. <i>Geophysical Research Letters</i> , 2021 , 48, e2021GL093808	4.9	2
7	Heterogeneous sulfate aerosol formation mechanisms during wintertime Chinese haze events: Air quality model assessment using observations of sulfate oxygen isotopes in Beijing 2019 ,		2

6	Correction to Stratospheric CO ₂ isotopic anomalies and SF ₆ and CFC tracer concentrations in the Arctic polar vortex <i>Geophysical Research Letters</i> , 2002 , 29, 13-1-13-4	4.9	1
5	Quasi-Biennial Oscillation and Sudden Stratospheric Warmings during the Last Glacial Maximum. <i>Atmosphere</i> , 2020 , 11, 943	2.7	1
4	Seasonally Resolved Holocene Sea Ice Variability Inferred From South Pole Ice Core Chemistry. <i>Geophysical Research Letters</i> , 2021 , 48, e2020GL091602	4.9	1
3	The role of chlorine in tropospheric chemistry 2018 ,		1
2	Effect of sea-salt aerosol on tropospheric bromine chemistry 2018 ,		1
1	Impacts of the photo-driven post-depositional processing on snow nitrate and its isotopes at Summit, Greenland: a model-based study. <i>Cryosphere</i> , 2021 , 15, 4207-4220	5.5	0