Markus Frey

List of Publications by Year
in descending order

50 papers	3,674 citations	159358 30 h-index	189595 50 g-index
79 all docs	79 docs citations	79 times ranked	3341 citing authors

#	Article	IF	Citations
1	An overview of snow photochemistry: evidence, mechanisms and impacts. Atmospheric Chemistry and Physics, 2007, 7, 4329-4373.	1.9	554
2	A review of airâ€“ice chemical and physical interactions (AICI): liquids, quasi-liquids, and solids in snow. Atmospheric Chemistry and Physics, 2014, 14, 1587-1633.	1.9	235
3	Snowfall-Driven Growth in East Antarctic Ice Sheet Mitigates Recent Sea-Level Rise. Science, 2005, 308, 1898-1901.	6.0	230
4	Hydrograph separations in a mesoscale mountainous basin at event and seasonal timescales. Water Resources Research, 2002, 38, 31-1-31-14.	1.7	197
5	Tracing the Origin and Fate of NO _x in the Arctic Atmosphere Using Stable Isotopes in Nitrate. Science, 2008, 322, 730-732.	6.0	189
6	Photolysis imprint in the nitrate stable isotope signal in snow and atmosphere of East Antarctica and implications for reactive nitrogen cycling. Atmospheric Chemistry and Physics, 2009, 9, 8681-8696.	1.9	157
7	Comprehensive isotopic composition of atmospheric nitrate in the Atlantic Ocean boundary layer from 65Â°S to 79Â°N. Journal of Geophysical Research, 2009, 114, .	3.3	156
8	Overview of the MOSAiC expedition: Atmosphere. Elementa, 2022, 10, .	1.1	121
9	Measurements of hydrogen peroxide and formaldehyde exchange between the atmosphere and surface snow at Summit, Greenland. Atmospheric Environment, 2002, 36, 2619-2628.	1.9	114
10	Impacts of snowpack emissions on deduced levels of OH and peroxy radicals at Summit, Greenland. Atmospheric Environment, 2002, 36, 2523-2534.	1.9	110
11	Airâ€“snow transfer of nitrate on the East Antarctic Plateau â€“ Part 1: Isotopic evidence for a photolytically driven dynamic equilibrium in summer. Atmospheric Chemistry and Physics, 2013, 13, 6403-6419.	1.9	103
12	Snow optical properties at Dome C (Concordia), Antarctica; implications for snow emissions and snow chemistry of reactive nitrogen. Atmospheric Chemistry and Physics, 2011, 11, 9787-9801.	1.9	100
13	Overview of the MOSAiC expedition: Snow and sea ice. Elementa, 2022, 10, .	1.1	91
14	Snow chemistry across Antarctica. Annals of Glaciology, 2005, 41, 167-179.	2.8	90
15	The Carrington event not observed in most ice core nitrate records. Geophysical Research Letters, 2012, 39, .	1.5	85
16	Greenland records of aerosol source and atmospheric lifetime changes from the Eemian to the Holocene. Nature Communications, 2018, 9, 1476.	5.8	74
17	Spatial and temporal variability in snow accumulation at the West Antarctic Ice Sheet Divide over recent centuries. Journal of Geophysical Research, 2008, 113, .	3.3	65
18	Atmospheric hydroperoxides in West Antarctica: Links to stratospheric ozone and atmospheric oxidation capacity. Journal of Geophysical Research, 2005, 110, .	3.3	61

#	Article	IF	Citations
19	First direct observation of sea salt aerosol production from blowing snow above sea ice. Atmospheric Chemistry and Physics, 2020, 20, 2549-2578.	1.9	61
20	The diurnal variability of atmospheric nitrogen oxides (NO and) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 707 Td (NO<sub>2 stability and snow emissions. Atmospheric Chemistry and Physics, 2013, 13, 3045-3062.	1.9	52
21	Measurements of OH and RO₂ radicals at Dome C, East Antarctica. Atmospheric Chemistry and Physics, 2014, 14, 12373-12392.	1.9	50
22	High-resolution ice cores from US ITASE (West Antarctica): development and validation of chronologies and determination of precision and accuracy. Annals of Glaciology, 2005, 41, 77-84.	2.8	48
23	The International Trans-Antarctic Scientific Expedition (ITASE): an overview. Annals of Glaciology, 2005, 41, 180-185.	2.8	47
24	Large mixing ratios of atmospheric nitrous acid (HONO) at Concordia (East Antarctic Plateau) in summer: a strong source from surface snow?. Atmospheric Chemistry and Physics, 2014, 14, 9963-9976.	1.9	47
25	Climate sensitivity of the century-scale hydrogen peroxide (H2O2) record preserved in 23 ice cores from West Antarctica. Journal of Geophysical Research, 2006, 111, .	3.3	46
26	Atmospheric nitrogen oxides (NO and NO₂) at Dome C, East Antarctica, during the OPALE campaign. Atmospheric Chemistry and Physics, 2015, 15, 7859-7875.	1.9	43
27	Characterization of the boundary layer at Dome C (East Antarctica) during the OPALE summer campaign. Atmospheric Chemistry and Physics, 2015, 15, 6225-6236.	1.9	38
28	Sea ice as a source of sea salt aerosol to Greenland ice cores: a model-based study. Atmospheric Chemistry and Physics, 2017, 17, 9417-9433.	1.9	38
29	Airâ€“snow transfer of nitrate on the East Antarctic Plateau â€“ Part 2: An isotopic model for the interpretation of deep ice-core records. Atmospheric Chemistry and Physics, 2015, 15, 12079-12113.	1.9	33
30	Sea salt aerosol production via sublimating wind-blown saline snow particles over sea ice: parameterizations and relevant microphysical mechanisms. Atmospheric Chemistry and Physics, 2019, 19, 8407-8424.	1.9	33
31	Inter-annual variability of surface ozone at coastal (Dumont d'Urville, 2004â€“2014) and inland (Concordia, 2007â€“2014) sites in East Antarctica. Atmospheric Chemistry and Physics, 2016, 16, 8053-8069.	1.9	29
32	Investigation of the role of the snowpack on atmospheric formaldehyde chemistry at Summit, Greenland. Journal of Geophysical Research, 2002, 107, ACH 9-1.	3.3	27
33	Oxygen isotope mass balance of atmospheric nitrate at Dome C, East Antarctica, during the OPALE campaign. Atmospheric Chemistry and Physics, 2016, 16, 2659-2673.	1.9	26
34	Contrasting atmospheric boundary layer chemistry of methylhydroperoxide (CH₃OOH) and hydrogen peroxide (H₂O₂) above polar snow. Atmospheric Chemistry and Physics, 2009, 9, 3261-3276.	1.9	25
35	An overview of air-snow exchange at Summit, Greenland: Recent experiments and findings. Atmospheric Environment, 2007, 41, 4995-5006.	1.9	23
36	Implementation and Impacts of Surface and Blowing Snow Sources of Arctic Bromine Activation Within WRFâ€Chem 4.1.1. Journal of Advances in Modeling Earth Systems, 2021, 13, e2020MS002391.	1.3	23

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37	Deposition, recycling, and archival of nitrate stable isotopes between the airâ€“snow interface: comparison between Dronning Maud Land and Dome C, Antarctica. Atmospheric Chemistry and Physics, 2020, 20, 5861-5885.	1.9	18
38	A network of autonomous surface ozone monitors in Antarctica: technical description and first results. Atmospheric Measurement Techniques, 2011, 4, 645-658.	1.2	17
39	Snow Property Controls on Modeled Ku-Band Altimeter Estimates of First-Year Sea Ice Thickness: Case Studies From the Canadian and Norwegian Arctic. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2020, 13, 1082-1096.	2.3	17
40	Snowfall and snow accumulation during the MOSAiC winter and spring seasons. Cryosphere, 2022, 16, 2373-2402.	1.5	17
41	Atmospheric nitric oxide and ozone at the WAIS Divide deep coring site: a discussion of local sources and transport in West Antarctica. Atmospheric Chemistry and Physics, 2013, 13, 8857-8877.	1.9	14
42	Stratospheric Ozone Changes From Explosive Tropical Volcanoes: Modeling and Ice Core Constraints. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD032290.	1.2	14
43	Formaldehyde (HCHO) in air, snow, and interstitial air at Concordia (East Antarctic Plateau) in summer. Atmospheric Chemistry and Physics, 2015, 15, 6689-6705.	1.9	12
44	Comment on â€œLow time resolution analysis of polar ice cores cannot detect impulsive nitrate eventsâ€• by D.F. Smart et al.. Journal of Geophysical Research: Space Physics, 2016, 121, 1920-1924.	0.8	12
45	Geographic variability of nitrate deposition and preservation over the Greenland Ice Sheet. Journal of Geophysical Research, 2009, 114, .	3.3	9
46	Modelling the physical multiphase interactions of HNO₃ between snow and air on the Antarctic Plateau (DomeÂC) and coast (Halley). Atmospheric Chemistry and Physics, 2018, 18, 1507-1534.	1.9	8
47	New Estimation of the NO_x Snowâ€Source on the Antarctic Plateau. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD035062.	1.2	8
48	The impact of parameterising light penetration into snow on the photochemical production of NO_{<i>x</i>} and OH radicals in snow. Atmospheric Chemistry and Physics, 2015, 15, 7913-7927.	1.9	7
49	Fostering multidisciplinary research on interactions between chemistry, biology, and physics within the coupled cryosphere-atmosphere system. Elementa, 2019, 7, .	1.1	6
50	Measurement of gas-phase OH radical oxidation and film thickness of organic films at the airâ€“water interface using material extracted from urban, remote and wood smoke aerosol. Environmental Science Atmospheres, 2022, 2, 574-590.	0.9	3