Sabine Eckhardt

List of Publications by Year
in descending order

109 papers	9,769 citations	38742 50 h-index	43889 91 g-index
177 all docs	177 docs citations	177 times ranked	9702 citing authors

#	Article	IF	Citations
1	Cesium-137 deposition and contamination of Japanese soils due to the Fukushima nuclear accident. Proceedings of the National Academy of Sciences of the United States of America, 2011, 108, 19530-19534.	7.1	551
2	Xenon-133 and caesium-137 releases into the atmosphere from the Fukushima Dai-ichi nuclear power plant: determination of the source term, atmospheric dispersion, and deposition. Atmospheric Chemistry and Physics, 2012, 12, 2313-2343.	4.9	510
3	Atmospheric transport is a major pathway of microplastics to remote regions. Nature Communications, 2020, 11, 3381.	12.8	489
4	Evaluating the climate and air quality impacts of short-lived pollutants. Atmospheric Chemistry and Physics, 2015, 15, 10529-10566.	4.9	365
5	Determination of time- and height-resolved volcanic ash emissions and their use for quantitative ash dispersion modeling: the 2010 EyjafjallajÃ¶kull eruption. Atmospheric Chemistry and Physics, 2011, 11, 4333-4351.	4.9	333
6	Black carbon in the Arctic: the underestimated role of gas flaring and residential combustion emissions. Atmospheric Chemistry and Physics, 2013, 13, 8833-8855.	4.9	330
7	On the pathways and timescales of intercontinental air pollution transport. Journal of Geophysical Research, 2002, 107, ACH 6-1-ACH 6-17.	3.3	305
8	A backward modeling study of intercontinental pollution transport using aircraft measurements. Journal of Geophysical Research, 2003, 108, .	3.3	286
9	A 15-Year Climatology of Warm Conveyor Belts. Journal of Climate, 2004, 17, 218-237.	3.2	267
10	The Lagrangian particle dispersion model FLEXPART version 10.4. Geoscientific Model Development, 2019, 12, 4955-4997.	3.6	238
11	Long-range transport of Saharan dust to northern Europe: The 11-16 October 2001 outbreak observed with EARLINET. Journal of Geophysical Research, 2003, 108, n/a-n/a.	3.3	229
12	The North Atlantic Oscillation controls air pollution transport to the Arctic. Atmospheric Chemistry and Physics, 2003, 3, 1769-1778.	4.9	227
13	Source identification of short-lived air pollutants in the Arctic using statistical analysis of measurement data and particle dispersion model output. Atmospheric Chemistry and Physics, 2010, 10, 669-693.	4.9	218
14	A replacement for simple back trajectory calculations in the interpretation of atmospheric trace substance measurements. Atmospheric Environment, 2002, 36, 4635-4648.	4.1	210
15	An analytical inversion method for determining regional and global emissions of greenhouse gases: Sensitivity studies and application to halocarbons. Atmospheric Chemistry and Physics, 2009, 9, 1597-1620.	4.9	204
16	Estimation of the vertical profile of sulfur dioxide injection into the atmosphere by a volcanic eruption using satellite column measurements and inverse transport modeling. Atmospheric Chemistry and Physics, 2008, 8, 3881-3897.	4.9	175
17	Black carbon physical properties and mixing state in the European megacity Paris. Atmospheric Chemistry and Physics, 2013, 13, 5831-5856.	4.9	174
18	Lead pollution recorded in Greenland ice indicates European emissions tracked plagues, wars, and imperial expansion during antiquity. Proceedings of the National Academy of Sciences of the United States of America, 2018, 115, 5726-5731.	7.1	174

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19	Long-term trends of black carbon and sulphate aerosol in the Arctic: changes in atmospheric transport and source region emissions. Atmospheric Chemistry and Physics, 2010, 10, 9351-9368.	4.9	169
20	Current model capabilities for simulating black carbon and sulfate concentrations in the Arctic atmosphere: a multi-model evaluation using a comprehensive measurement data set. Atmospheric Chemistry and Physics, 2015, 15, 9413-9433.	4.9	145
21	Sources and mixing state of size-resolved elemental carbon particles in a European megacity: Paris. Atmospheric Chemistry and Physics, 2012, 12, 1681-1700.	4.9	128
22	Microplastics and nanoplastics in the marine-atmosphere environment. Nature Reviews Earth & Environment, 2022, 3, 393-405.	29.7	121
23	Spatial variability of POPs in European background air. Atmospheric Chemistry and Physics, 2011, 11, 1549-1564.	4.9	118
24	Natural iron fertilization by the EyjafjallajÃ¶kull volcanic eruption. Geophysical Research Letters, 2013, 40, 921-926.	4.0	113
25	A 15-year climatology of stratosphereâ€“troposphere exchange with a Lagrangian particle dispersion model 2. Mean climate and seasonal variability. Journal of Geophysical Research, 2003, 108, .	3.3	106
26	Record high peaks in PCB concentrations in the Arctic atmosphere due to long-range transport of biomass burning emissions. Atmospheric Chemistry and Physics, 2007, 7, 4527-4536.	4.9	106
27	Aerosol particle measurements at three stationary sites in the megacity of Paris during summer 2009: meteorology and air mass origin dominate aerosol particle composition and size distribution. Atmospheric Chemistry and Physics, 2013, 13, 933-959.	4.9	101
28	Source apportionment of the summer time carbonaceous aerosol at Nordic rural background sites. Atmospheric Chemistry and Physics, 2011, 11, 13339-13357.	4.9	99
29	Saharan dust over a central European EARLINET-AERONET site: Combined observations with Raman lidar and Sun photometer. Journal of Geophysical Research, 2003, 108, .	3.3	98
30	Lightâ€absorbing properties of ambient black carbon and brown carbon from fossil fuel and biomass burning sources. Journal of Geophysical Research D: Atmospheres, 2015, 120, 6619-6633.	3.3	98
31	Climatological aspects of the extreme European rainfall of August 2002 and a trajectory method for estimating the associated evaporative source regions. Natural Hazards and Earth System Sciences, 2004, 4, 733-746.	3.6	94
32	The influence of cruise ship emissions on air pollution in Svalbard â€“ a harbinger of a more polluted Arctic?. Atmospheric Chemistry and Physics, 2013, 13, 8401-8409.	4.9	94
33	Remote sensing and inverse transport modeling of the Kasatochi eruption sulfur dioxide cloud. Journal of Geophysical Research, 2010, 115, .	3.3	93
34	In situ, satellite measurement and model evidence on the dominant regional contribution to fine particulate matter levels in the Paris megacity. Atmospheric Chemistry and Physics, 2015, 15, 9577-9591.	4.9	92
35	Evidence for Major Emissions of PCBs in the West African Region. Environmental Science & Technology, 2011, 45, 1349-1355.	10.0	90
36	Assessing temporal trends and source regions of per- and polyfluoroalkyl substances (PFASs) in air under the Arctic Monitoring and Assessment Programme (AMAP). Atmospheric Environment, 2018, 172, 65-73.	4.1	87

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37	Performance assessment of a volcanic ash transport model miniâ€ensemble used for inverse modeling of the 2010 EyjafjallajÃ¶kull eruption. Journal of Geophysical Research, 2012, 117, .	3.3	83
38	Evidence for a recurring eastern North America upper tropospheric ozone maximum during summer. Journal of Geophysical Research, 2007, 112, .	3.3	81
39	Siberian Arctic black carbon sources constrained by model and observation. Proceedings of the National Academy of Sciences of the United States of America, 2017, 114, E1054-E1061.	7.1	80
40	Long-term monitoring of persistent organic pollutants (POPs) at the Norwegian Troll station in Dronning Maud Land, Antarctica. Atmospheric Chemistry and Physics, 2013, 13, 6983-6992.	4.9	78
41	Quantifying black carbon from biomass burning by means of levoglucosan â€“ a one-year time series at the Arctic observatory Zeppelin. Atmospheric Chemistry and Physics, 2014, 14, 6427-6442.	4.9	71
42	The sources of atmospheric black carbon at a European gateway to the Arctic. Nature Communications, 2016, 7, 12776.	12.8	69
43	A new aerosol wet removal scheme for the Lagrangian particle model FLEXPART v10. Geoscientific Model Development, 2017, 10, 1447-1466.	3.6	68
44	Source apportionment of circum-Arctic atmospheric black carbon from isotopes and modeling. Science Advances, 2019, 5, eaau8052.	10.3	68
45	'SSW to NNE' - North Atlantic Oscillation affects the progress of seasons across Europe. Global Change Biology, 2005, 11, 909-918.	9.5	66
46	Dependence of solar radiative forcing of forest fire aerosol on ageing and state of mixture. Atmospheric Chemistry and Physics, 2003, 3, 881-891.	4.9	65
47	Rapid intercontinental air pollution transport associated with a meteorological bomb. Atmospheric Chemistry and Physics, 2003, 3, 969-985.	4.9	62
48	Transport of mercury in the Arctic atmosphere: Evidence for a springâ€time net sink and summerâ€time source. Geophysical Research Letters, 2009, 36, .	4.0	62
49	Atmospheric polychlorinated biphenyls in Indian cities: Levels, emission sources and toxicity equivalents. Environmental Pollution, 2013, 182, 283-290.	7.5	61
50	Lagrangian transport model forecasts and a transport climatology for the Intercontinental Transport and Chemical Transformation 2002 (ITCT 2K2) measurement campaign. Journal of Geophysical Research, 2004, 109, .	3.3	60
51	Reviews and syntheses: Arctic fire regimes and emissions in the 21st century. Biogeosciences, 2021, 18, 5053-5083.	3.3	59
52	Wildfires in northern Eurasia affect the budget of black carbon in the Arctic â€“ a 12-year retrospective synopsis (2002â€“2013). Atmospheric Chemistry and Physics, 2016, 16, 7587-7604.	4.9	56
53	Arctic air pollution: Challenges and opportunities for the next decade. Elementa, 0, 4, 000104.	3.2	53
54	Pervasive Arctic lead pollution suggests substantial growth in medieval silver production modulated by plague, climate, and conflict. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 14910-14915.	7.1	50

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55	A springtime comparison of tropospheric ozone and transport pathways on the east and west coasts of the United States. Journal of Geophysical Research, 2005, 110, .	3.3	47
56	Open fires in Greenland in summer 2017: transport, deposition and radiative effects of BC, OC and BrC emissions. Atmospheric Chemistry and Physics, 2019, 19, 1393-1411.	4.9	46
57	A 15-year climatology of stratosphere-troposphere exchange with a Lagrangian particle dispersion model: 1. Methodology and validation. Journal of Geophysical Research, 2003, 108, .	3.3	43
58	Black Carbon Sources Constrained by Observations in the Russian High Arctic. Environmental Science & Technology, 2017, 51, 3871-3879.	10.0	43
59	Mixing between a stratospheric intrusion and a biomass burning plume. Atmospheric Chemistry and Physics, 2007, 7, 4229-4235.	4.9	42
60	Lead and Antimony in Basal Ice From Col du Dome (French Alps) Dated With Radiocarbon: A Record of Pollution During Antiquity. Geophysical Research Letters, 2019, 46, 4953-4961.	4.0	41
61	Changes in black carbon emissions over Europe due to COVID-19 lockdowns. Atmospheric Chemistry and Physics, 2021, 21, 2675-2692.	4.9	40
62	Boreal forest fires in 1997 and 1998: a seasonal comparison using transport model simulations and measurement data. Atmospheric Chemistry and Physics, 2004, 4, 1857-1868.	4.9	37
63	Temporal and spatial variability of Icelandic dust emissions and atmospheric transport. Atmospheric Chemistry and Physics, 2017, 17, 10865-10878.	4.9	37
64	Sourceâ€“receptor matrix calculation for deposited mass with the Lagrangian particle dispersion model FLEXPART v10.2 in backward mode. Geoscientific Model Development, 2017, 10, 4605-4618.	3.6	35
65	Summertime buildup and decay of lightning NO_x and aged thunderstorm outflow above North America. Journal of Geophysical Research, 2009, 114, .	3.3	34
66	Lidar measurements of the Kasatochi aerosol plume in August and September 2008 in Nyâ€Ã…lesund, Spitsbergen. Journal of Geophysical Research, 2010, 115, .	3.3	34
67	Sources and fate of atmospheric microplastics revealed from inverse and dispersion modelling: From global emissions to deposition. Journal of Hazardous Materials, 2022, 432, 128585.	12.4	33
68	Uncertainties in the inverse modelling of sulphur dioxide eruption profiles. Geomatics, Natural Hazards and Risk, 2011, 2, 201-216.	4.3	28
69	The dispersion characteristics of air pollution from the world's megacities. Atmospheric Chemistry and Physics, 2013, 13, 9975-9996.	4.9	28
70	Identifying the Research and Infrastructure Needs for the Global Assessment of Hazardous Chemicals Ten Years after Establishing the Stockholm Convention. Environmental Science & Technology, 2011, 45, 7617-7619.	10.0	25
71	CARIBIC aircraft measurements of EyjafjallajÃ¶kull volcanic clouds in April/May 2010. Atmospheric Chemistry and Physics, 2012, 12, 879-902.	4.9	25
72	Aerosol radiative forcing from the 2010 EyjafjallajÃ¶kull volcanic eruptions. Journal of Geophysical Research D: Atmospheres, 2014, 119, 9481-9491.	3.3	24

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73	Origin of elemental carbon in snow from western Siberia and northwestern European Russia during winterâ€“spring 2014, 2015 and 2016. Atmospheric Chemistry and Physics, 2018, 18, 963-977.	4.9	24
74	Atmospheric composition in the European Arctic and 30Âyears of the Zeppelin Observatory, Ny-Ã…lesund. Atmospheric Chemistry and Physics, 2022, 22, 3321-3369.	4.9	24
75	Source attribution using FLEXPART and carbon monoxide emission inventories: SOFT-IO version 1.0. Atmospheric Chemistry and Physics, 2017, 17, 15271-15292.	4.9	23
76	Source regions of some persistent organic pollutants measured in the atmosphere at Birkenes, Norway. Atmospheric Chemistry and Physics, 2009, 9, 6597-6610.	4.9	22
77	Effects of long-range aerosol transport on the microphysical properties of low-level liquid clouds in the Arctic. Atmospheric Chemistry and Physics, 2016, 16, 4661-4674.	4.9	22
78	Rainfall drives atmospheric ice-nucleating particles in the coastal climate of southern Norway. Atmospheric Chemistry and Physics, 2017, 17, 11065-11073.	4.9	22
79	10-year satellite-constrained fluxes of ammonia improve performance of chemistry transport models. Atmospheric Chemistry and Physics, 2021, 21, 4431-4451.	4.9	21
80	The EMEP Intensive Measurement Period campaign, 2008â€“2009: characterizing carbonaceous aerosol at nine rural sites in Europe. Atmospheric Chemistry and Physics, 2019, 19, 4211-4233.	4.9	20
81	Uncovering transport, deposition and impact of radionuclides released after the early spring 2020 wildfires in the Chernobyl Exclusion Zone. Scientific Reports, 2020, 10, 10655.	3.3	20
82	Black Carbon Emission Reduction Due to COVIDâ€19 Lockdown in China. Geophysical Research Letters, 2021, 48, e2021GL093243.	4.0	20
83	Hemispheric black carbon increase after the 13th-century MÄori arrival in New Zealand. Nature, 2021, 598, 82-85.	27.8	20
84	Long-term trends in aerosol and precipitation composition over the western North Atlantic Ocean at Bermuda. Atmospheric Chemistry and Physics, 2014, 14, 8119-8135.	4.9	19
85	Methane at Svalbard and over the European Arctic Ocean. Atmospheric Chemistry and Physics, 2018, 18, 17207-17224.	4.9	19
86	Sampling of an STT event over the Eastern Mediterranean region by lidar and electrochemical sonde. Annales Geophysicae, 2005, 23, 2039-2050.	1.6	16
87	Aerosol indirect effects on the nighttime Arctic Ocean surface from thin, predominantly liquid clouds. Atmospheric Chemistry and Physics, 2017, 17, 7311-7332.	4.9	16
88	Model evaluation of short-lived climate forcers for the Arctic Monitoring and Assessment Programme: a multi-species, multi-model study. Atmospheric Chemistry and Physics, 2022, 22, 5775-5828.	4.9	15
89	A satellite-based estimate of combustion aerosol cloud microphysical effects over the Arctic Ocean. Atmospheric Chemistry and Physics, 2018, 18, 14949-14964.	4.9	14
90	Cadmium Pollution From Zincâ€Smelters up to Fourfold Higher Than Expected in Western Europe in the 1980s as Revealed by Alpine Ice. Geophysical Research Letters, 2020, 47, e2020GL087537.	4.0	13

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91	Arctic haze over Central Europe. Tellus, Series B: Chemical and Physical Meteorology, 2003, 55, 796-807.	1.6	12
92	Flow climatology for physicochemical properties of dichotomous aerosol over the western North Atlantic Ocean at Bermuda. Atmospheric Chemistry and Physics, 2014, 14, 691-717.	4.9	12
93	Low concentrations of persistent organic pollutants (POPs) in air at Cape Verde. Science of the Total Environment, 2018, 612, 129-137.	8.0	12
94	Trends, composition, and sources of carbonaceous aerosol at the Birkenes Observatory, northern Europe, 2001â€“2018. Atmospheric Chemistry and Physics, 2021, 21, 7149-7170.	4.9	12
95	Constraints on oceanic methane emissions west of Svalbard from atmospheric in situ measurements and Lagrangian transport modeling. Journal of Geophysical Research D: Atmospheres, 2016, 121, 14188-14200.	3.3	10
96	Top-down estimates of black carbon emissions at high latitudes using an atmospheric transport model and a Bayesian inversion framework. Atmospheric Chemistry and Physics, 2018, 18, 15307-15327.	4.9	10
97	Alpine Iceâ€Core Evidence of a Large Increase in Vanadium and Molybdenum Pollution in Western Europe During the 20th Century. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD033211.	3.3	10
98	Simulation of SEVIRI infrared channels: a case study from the EyjafjallajÃ¶kull April/May 2010 eruption. Atmospheric Measurement Techniques, 2013, 6, 649-660.	3.1	9
99	Observed and Modeled Black Carbon Deposition and Sources in the Western Russian Arctic 1800â€“2014. Environmental Science & Technology, 2021, 55, 4368-4377.	10.0	9
100	Characterization of the atmospheric environment during extreme precipitation events associated with atmospheric rivers in Norway - Seasonal and regional aspects. Weather and Climate Extremes, 2021, 34, 100370.	4.1	9
101	What caused a record high PM₁₀ episode in northern Europe in October 2020?. Atmospheric Chemistry and Physics, 2022, 22, 3789-3810.	4.9	8
102	Thallium Pollution in Europe Over the Twentieth Century Recorded in Alpine Ice: Contributions From Coal Burning and Cement Production. Geophysical Research Letters, 2022, 49, .	4.0	8
103	Backscatter lidar observation of the aerosol stratification in the lower troposphere during winter Bise: a case study. Meteorologische Zeitschrift, 2005, 14, 663-669.	1.0	6
104	Forecasting long-range atmospheric transport episodes of polychlorinated biphenyls using FLEXPART. Atmospheric Environment, 2013, 71, 335-339.	4.1	6
105	Correction for Yasunari et al., Cesium-137 deposition and contamination of Japanese soils due to the Fukushima nuclear accident. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 7525-7528.	7.1	6
106	Main sources controlling atmospheric burdens of persistent organic pollutants on a national scale. Ecotoxicology and Environmental Safety, 2021, 217, 112172.	6.0	5
107	Arctic haze over Central Europe. Tellus, Series B: Chemical and Physical Meteorology, 2022, 55, 796.	1.6	4
108	Introducing a nested multimedia fate and transport model for organic contaminants (NEM). Environmental Sciences: Processes and Impacts, 2021, 23, 1146-1157.	3.5	4

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109	Uncertainties in the inverse modelling of sulphur dioxide eruption profiles. Geomatics, Natural Hazards and Risk, 2012, 3, 97-97.	4.3	0