David Simpson

List of Publications by Year
in descending order

94 papers	10,209 citations	46918 47 h-index	49773 87 g-index
118 all docs	118 docs citations	118 times ranked	9713 citing authors

#	Article	IF	Citations
1	Atmospheric composition change â€“ global and regional air quality. Atmospheric Environment, 2009, 43, 5268-5350.	1.9	714
2	The EMEP MSC-W chemical transport model â€“ technical description. Atmospheric Chemistry and Physics, 2012, 12, 7825-7865.	1.9	622
3	Atmospheric composition change: Ecosystemsâ€“Atmosphere interactions. Atmospheric Environment, 2009, 43, 5193-5267.	1.9	609
4	Inventorying emissions from nature in Europe. Journal of Geophysical Research, 1999, 104, 8113-8152.	3.3	452
5	Source apportionment of PM2.5 organic aerosol over Europe: Primary/secondary, natural/anthropogenic, and fossil/biogenic origin. Journal of Geophysical Research, 2007, 112, .	3.3	391
6	Impacts of European livestock production: nitrogen, sulphur, phosphorus and greenhouse gas emissions, land-use, water eutrophication and biodiversity. Environmental Research Letters, 2015, 10, 115004.	2.2	332
7	Biogenic emissions in Europe: 1. Estimates and uncertainties. Journal of Geophysical Research, 1995, 100, 22875.	3.3	329
8	Towards a climate-dependent paradigm of ammonia emission and deposition. Philosophical Transactions of the Royal Society B: Biological Sciences, 2013, 368, 20130166.	1.8	328
9	General overview: European Integrated project on Aerosol Cloud Climate and Air Quality interactions (EUCAARI) â€“ integrating aerosol research from nano to global scales. Atmospheric Chemistry and Physics, 2011, 11, 13061-13143.	1.9	278
10	Dry deposition of reactive nitrogen to European ecosystems: a comparison of inferential models across the NitroEurope network. Atmospheric Chemistry and Physics, 2011, 11, 2703-2728.	1.9	254
11	Evidence of widespread effects of ozone on crops and (semi-)natural vegetation in Europe (1990-2006) in relation to AOT40- and flux-based risk maps. Global Change Biology, 2011, 17, 592-613.	4.2	239
12	Secondary organic aerosol reduced by mixture of atmospheric vapours. Nature, 2019, 565, 587-593.	13.7	222
13	New stomatal flux-based critical levels for ozone effects on vegetation. Atmospheric Environment, 2011, 45, 5064-5068.	1.9	215
14	Tropospheric Ozone Assessment Report: Present-day tropospheric ozone distribution and trends relevant to vegetation. Elementa, 2018, 6, .	1.1	212
15	Modelling of organic aerosols over Europe (2002â€“2007) using a volatility basis set (VBS) framework: application of different assumptions regarding the formation of secondary organic aerosol. Atmospheric Chemistry and Physics, 2012, 12, 8499-8527.	1.9	193
16	Particulate emissions from residential wood combustion in Europe â€“ revised estimates and an evaluation. Atmospheric Chemistry and Physics, 2015, 15, 6503-6519.	1.9	193
17	Seasonal trends and possible sources of brown carbon based on 2â€year aerosol measurements at six sites in Europe. Journal of Geophysical Research, 2007, 112, .	3.3	169
18	Effects of global change during the 21st century on the nitrogen cycle. Atmospheric Chemistry and Physics, 2015, 15, 13849-13893.	1.9	168

#	Article	IF	Citations
19	Tropospheric Ozone Assessment Report: Present-day ozone distribution and trends relevant to human health. Elementa, 2018, 6, .	1.1	167
20	Uncertainties in the relationship between atmospheric nitrogen deposition and forest carbon sequestration. Global Change Biology, 2008, 14, 2057-2063.	4.2	166
21	Ozone pollution will compromise efforts to increase global wheat production. Global Change Biology, 2018, 24, 3560-3574.	4.2	163
22	Closing the global ozone yield gap: Quantification and cobenefits for multistress tolerance. Global Change Biology, 2018, 24, 4869-4893.	4.2	163
23	Measuring atmospheric composition change. Atmospheric Environment, 2009, 43, 5351-5414.	1.9	160
24	Modelling surface ozone during the 2003 heat-wave in the UK. Atmospheric Chemistry and Physics, 2010, 10, 7963-7978.	1.9	159
25	Deposition of sulphur and nitrogen in Europe 1900â€“2050. Model calculations and comparison to historical observations. Tellus, Series B: Chemical and Physical Meteorology, 2022, 69, 1328945.	0.8	147
26	Biogenic emissions in Europe: 2. Implications for ozone control strategies. Journal of Geophysical Research, 1995, 100, 22891.	3.3	129
27	Impact of excess NO _x emissions from diesel cars on air quality, public health and eutrophication in Europe. Environmental Research Letters, 2017, 12, 094017.	2.2	120
28	Advances in understanding, models and parameterizations of biosphere-atmosphere ammonia exchange. Biogeosciences, 2013, 10, 5183-5225.	1.3	116
29	A multi-model study of impacts of climate change on surface ozone in Europe. Atmospheric Chemistry and Physics, 2012, 12, 10423-10440.	1.9	113
30	Photochemical model calculations over Europe for two extended summer periods: 1985 and 1989. Model results and comparison with observations. Atmospheric Environment Part A General Topics, 1993, 27, 921-943.	1.3	106
31	Secondary organic aerosol formation in northern Europe: A model study. Journal of Geophysical Research, 2001, 106, 7357-7374.	3.3	103
32	Impacts of climate and emission changes on nitrogen deposition in Europe: a multi-model study. Atmospheric Chemistry and Physics, 2014, 14, 6995-7017.	1.9	103
33	Nitrogen deposition is the most important environmental driver of growth of pure, even-aged and managed European forests. Forest Ecology and Management, 2020, 458, 117762.	1.4	102
34	Ozone â€" the persistent menace: interactions with the N cycle and climate change. Current Opinion in Environmental Sustainability, 2014, 9-10, 9-19.	3.1	100
35	Source apportionment of the summer time carbonaceous aerosol at Nordic rural background sites. Atmospheric Chemistry and Physics, 2011, 11, 13339-13357.	1.9	99
36	Performance of European chemistry transport models as function of horizontal resolution. Atmospheric Environment, 2015, 112, 90-105.	1.9	85

#	Article	IF	Citations
37	DO₃SE modelling of soil moisture to determine ozone flux to forest trees. Atmospheric Chemistry and Physics, 2012, 12, 5537-5562.	1.9	83
38	Spatial variation of modelled total, dry and wet nitrogen deposition to forests at global scale. Environmental Pollution, 2018, 243, 1287-1301.	3.7	83
39	Future air quality in Europe: a multi-model assessment of projected exposure to ozone. Atmospheric Chemistry and Physics, 2012, 12, 10613-10630.	1.9	81
40	Source apportionment of carbonaceous aerosol in southern Sweden. Atmospheric Chemistry and Physics, 2011, 11, 11387-11400.	1.9	77
41	Governing processes for reactive nitrogen compounds in the European atmosphere. Biogeosciences, 2012, 9, 4921-4954.	1.3	77
42	Source apportionment of the carbonaceous aerosol in Norway â€“ quantitative estimates based on ¹⁴C, thermal-optical and organic tracer analysis. Atmospheric Chemistry and Physics, 2011, 11, 9375-9394.	1.9	75
43	Comparison of the chemical schemes of the EMEP MSC-W and IVL photochemical trajectory models. Atmospheric Environment, 1999, 33, 1111-1129.	1.9	71
44	Modeling historical longâ€term trends of sulfate, ammonium, and elemental carbon over Europe: A comparison with ice core records in the Alps. Journal of Geophysical Research, 2007, 112, .	3.3	67
45	Integrating nitrogen fluxes at the European scale. , 0, , 345-376.		65
46	Nitrogen as a threat to the European greenhouse balance. , 2011, , 434-462.		58
47	Lessons learnt from the first EMEP intensive measurement periods. Atmospheric Chemistry and Physics, 2012, 12, 8073-8094.	1.9	58
48	Photochemical smog in China: scientific challenges and implications for air-quality policies. National Science Review, 2016, 3, 401-403.	4.6	58
49	Modelling ozone fluxes to forests for risk assessment: status and prospects. Annals of Forest Science, 2009, 66, 401-401.	0.8	54
50	Chlorine oxidation of VOCs at a semi-rural site in Beijing: significant chlorine liberation from ClNO₂ and subsequent gas- and particle-phase Clâ€“VOC production. Atmospheric Chemistry and Physics, 2018, 18, 13013-13030.	1.9	54
51	Carbon monoxide (CO) and ethane (C₂H₆) trends from ground-based solar FTIR measurements at six European stations, comparison and sensitivity analysis with the EMEP model. Atmospheric Chemistry and Physics, 2011, 11, 9253-9269.	1.9	53
52	Impact of forest fires, biogenic emissions and high temperatures on the elevated Eastern Mediterranean ozone levels during the hot summer of 2007. Atmospheric Chemistry and Physics, 2012, 12, 8727-8750.	1.9	52
53	Composition and sources of carbonaceous aerosols in Northern Europe during winter. Atmospheric Environment, 2018, 173, 127-141.	1.9	52
54	Light-absorbing carbon in Europe â€“ measurement and modelling, with a focus on residential wood combustion emissions. Atmospheric Chemistry and Physics, 2013, 13, 8719-8738.	1.9	51

#	Article	IF	Citations
55	Future scenarios of N2O and NO emissions from European forest soils. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	50
56	Long-term measurements and model calculations of formaldehyde at rural European monitoring sites. Atmospheric Environment, 2001, 35, 195-207.	1.9	48
57	Large but decreasing effect of ozone on the European carbon sink. Biogeosciences, 2018, 15, 4245-4269.	1.3	44
58	Hydrocarbon reactivity and ozone formation in Europe. Journal of Atmospheric Chemistry, 1995, 20, 163-177.	1.4	40
59	Biotic stress: a significant contributor to organic aerosol in Europe?. Atmospheric Chemistry and Physics, 2014, 14, 13643-13660.	1.9	40
60	Modelling long-term impacts of changes in climate, nitrogen deposition and ozone exposure on carbon sequestration of European forest ecosystems. Science of the Total Environment, 2017, 605-606, 1097-1116.	3.9	40
61	Ozone impacts of gasâ€“aerosol uptake in global chemistry transport models. Atmospheric Chemistry and Physics, 2018, 18, 3147-3171.	1.9	36
62	Nitrogen processes in the atmosphere. , 2011, , 177-208.		35
63	Impact of regional climate change and future emission scenarios on surface O₃ and PM_{2.5} over India. Atmospheric Chemistry and Physics, 2018, 18, 103-127.	1.9	34
64	High-resolution biogenic global emission inventory for the time period 2000â€“2019 for air quality modelling. Earth System Science Data, 2022, 14, 251-270.	3.7	32
65	Comparisons of Measured and Modelled Ozone Deposition to Forests in Northern Europe. Water, Air and Soil Pollution, 2001, 1, 263-274.	0.8	31
66	The CRI v2.2 reduced degradation scheme for isoprene. Atmospheric Environment, 2019, 212, 172-182.	1.9	29
67	Availability, accessibility, quality and comparability of monitoring data for European forests for use in air pollution and climate change science. IForest, 2011, 4, 162-166.	0.5	28
68	Towards a transnational system of supersites for forest monitoring and research in Europe - an overview on present state and future recommendations. IForest, 2011, 4, 167-171.	0.5	23
69	Uncertainties in assessing the environmental impact of amine emissions from a CO₂ capture plant. Atmospheric Chemistry and Physics, 2014, 14, 8533-8557.	1.9	23
70	Comparison of modelled and measured ozone concentrations and meteorology for a site in south-west Sweden: Implications for ozone uptake calculations. Environmental Pollution, 2008, 155, 99-111.	3.7	22
71	Atmospheric transport and deposition of reactive nitrogen in Europe. , 2011, , 298-316.		21
72	Carbonâ€“nitrogen interactions in European forests and semi-natural vegetation â€“ Part 1: Fluxes and budgets of carbon, nitrogen and greenhouse gases from ecosystem monitoring and modelling. Biogeosciences, 2020, 17, 1583-1620.	1.3	21

#	Article	IF	Citations
73	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.	1.9	20
74	Development and evaluation of an ozone deposition scheme for coupling to a terrestrial biosphere model. Biogeosciences, 2017, 14, 45-71.	1.3	18
75	Have ozone effects on carbon sequestration been overestimated? A new biomass response function for wheat. Biogeosciences, 2014, 11, 4521-4528.	1.3	17
76	Air Pollution Risks to Northern European Forests in a Changing Climate. Developments in Environmental Science, 2013, , 77-99.	0.5	16
77	Emissions of Carbonaceous Particulate Matter and Ultrafine Particles from Vehiclesâ€"A Scientific Review in a Cross-Cutting Context of Air Pollution and Climate Change. Applied Sciences (Switzerland), 2022, 12, 3623.	1.3	15
78	On the boundary between man-made and natural emissions: Problems in defining European ecosystems. Journal of Geophysical Research, 1999, 104, 8153-8159.	3.3	14
79	Impacts of tropospheric ozone and climate change on Mexico wheat production. Climatic Change, 2019, 155, 157-174.	1.7	14
80	Ozone Exposure and Impacts on Vegetation in the Nordic and Baltic Countries. Ambio, 2009, 38, 402-405.	2.8	13
81	Improving the spatial resolution of air-quality modelling at a European scale â€" development and evaluation of the Air Quality Re-gridder Model (AQR v1.1). Geoscientific Model Development, 2016, 9, 4475-4489.	1.3	13
82	GenChem v1.0 â€" a chemical pre-processing and testing system for atmospheric modelling. Geoscientific Model Development, 2020, 13, 6447-6465.	1.3	13
83	Trends, composition, and sources of carbonaceous aerosol at the Birkenes Observatory, northern Europe, 2001â€"2018. Atmospheric Chemistry and Physics, 2021, 21, 7149-7170.	1.9	12
84	Title is missing!. Journal of Atmospheric Chemistry, 1998, 30, 241-271.	1.4	9
85	European VOC Emission Estimates Evaluated by Measurements and Model Calculations. Journal of Atmospheric Chemistry, 1997, 28, 173-193.	1.4	8
86	An aerodynamic correction for the European ozone risk assessment methodology. Atmospheric Environment, 2008, 42, 8371-8381.	1.9	7
87	Towards the use of dynamic growing seasons in a chemical transport model. Biogeosciences, 2012, 9, 5161-5179.	1.3	6
88	Good Agreement Between Modeled and Measured Sulfur and Nitrogen Deposition in Europe, in Spite of Marked Differences in Some Sites. Frontiers in Environmental Science, 2021, 9, .	1.5	6
89	Humidity parameters from temperature: test of a simple methodology for European conditions. International Journal of Climatology, 2008, 28, 961-972.	1.5	5
90	The EMEP MSC-W Modelling Programme: Its Relationship to Policy Support, Current Challenges and Future Perspectives. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 265-271.	0.1	3

#	Article	IF	Citations
91	Regional Modelling of Tropospheric Ozone. , 2000, , 83-97.		2
92	Comment on â€˜Anav <i>etÂ al</i>. (2016) Comparing concentrationâ€based (AOT40) and stomatal uptake (PODY) metrics for ozone risk assessment to European forestsâ€™ Global Change Biology, 22(4), 1608â€“1627, doi:10.1111/gcb.13138. Global Change Biology, 2016, 22, 3257-3258.	4.2	1
93	Characteristics of an Ozone Deposition Module. , 2001, , 253-262.		0
94	Modelling of Ozone and Secondary Organic Aerosol across Europe: Results from the EMEP models. , 2002, , 51-56.		0