Martijn Schaap

List of Publications by Year in descending order

Source: https://exaly.com/author-pdf/6778981/publications.pdf

Version: 2024-02-01

95 papers	5,509 citations	94433 37 h-index	91884 69 g-index
108 all docs	108 docs citations	108 times ranked	6345 citing authors

#	Article	IF	Citations
1	Particulate matter, air quality and climate: lessons learned and future needs. Atmospheric Chemistry and Physics, 2015, 15, 8217-8299.	4.9	641
2	Sources of particulate-matter air pollution and its oxidative potential in Europe. Nature, 2020, 587, 414-419.	27.8	352
3	Urban air quality: The challenge of traffic non-exhaust emissions. Journal of Hazardous Materials, 2014, 275, 31-36.	12.4	314
4	A review of operational, regional-scale, chemical weather forecasting models in Europe. Atmospheric Chemistry and Physics, 2012, 12, 1-87.	4.9	265
5	Secondary inorganic aerosol simulations for Europe with special attention to nitrate. Atmospheric Chemistry and Physics, 2004, 4, 857-874.	4.9	223
6	The LOTOS EUROS model: description, validation and latest developments. International Journal of Environment and Pollution, 2008, 32, 270.	0.2	216
7	Operational model evaluation for particulate matter in Europe and North America in the context of AQMEII. Atmospheric Environment, 2012, 53, 75-92.	4.1	214
8	A regional air quality forecasting system over Europe: the MACC-II daily ensemble production. Geoscientific Model Development, 2015, 8, 2777-2813.	3.6	214
9	Interaction between urban heat island and urban pollution island during summer in Berlin. Science of the Total Environment, 2018, 636, 818-828.	8.0	214
10	Exploring the relation between aerosol optical depth and PM_{2.5} at Cabauw, the Netherlands. Atmospheric Chemistry and Physics, 2009, 9, 909-925.	4.9	211
11	Model evaluation and ensemble modelling of surface-level ozone in Europe and North America in the context of AQMEII. Atmospheric Environment, 2012, 53, 60-74.	4.1	192
12	Comparing emission inventories and model-ready emission datasets between Europe and North America for the AQMEII project. Atmospheric Environment, 2012, 53, 4-14.	4.1	156
13	Curriculum vitae of the LOTOSâ€“EUROS (v2.0) chemistry transport model. Geoscientific Model Development, 2017, 10, 4145-4173.	3.6	100
14	Modeling the distribution of ammonia across Europe including bi-directional surfaceâ€“atmosphere exchange. Biogeosciences, 2012, 9, 5261-5277.	3.3	99
15	NH₃ emissions from large point sources derived from CrIS and IASI satellite observations. Atmospheric Chemistry and Physics, 2019, 19, 12261-12293.	4.9	89
16	Comparison of two data assimilation methods for assessing PM10 exceedances on the European scale. Atmospheric Environment, 2008, 42, 7122-7134.	4.1	77
17	Nonseparable dynamic nearest neighbor Gaussian process models for large spatio-temporal data with an application to particulate matter analysis. Annals of Applied Statistics, 2016, 10, 1286-1316.	1.1	73
18	Synergistic use of OMI NO2 tropospheric columns and LOTOSâ€“EUROS to evaluate the NOx emission trends across Europe. Remote Sensing of Environment, 2014, 149, 58-69.	11.0	66

#	Article	IF	Citations
19	Illustrating the benefit of using hourly monitoring data on secondary inorganic aerosol and its precursors for model evaluation. Atmospheric Chemistry and Physics, 2011, 11, 11041-11053.	4.9	61
20	Effect of rain events on the mobility of road dust load in two Dutch and Spanish roads. Atmospheric Environment, 2012, 62, 352-358.	4.1	61
21	Evaluating 4 years of atmospheric ammonia (NH₃) over Europe using IASI satellite observations and LOTOSâ€EUROS model results. Journal of Geophysical Research D: Atmospheres, 2014, 119, 9549-9566.	3.3	61
22	Nitrogen as a threat to the European greenhouse balance. , 2011, , 434-462.		58
23	Anthropogenic and natural constituents in particulate matter in the Netherlands. Atmospheric Chemistry and Physics, 2011, 11, 2281-2294.	4.9	57
24	Short-term variability of mineral dust, metals and carbon emission from road dust resuspension. Atmospheric Environment, 2013, 74, 134-140.	4.1	57
25	The European aerosol budget in 2006. Atmospheric Chemistry and Physics, 2011, 11, 1117-1139.	4.9	56
26	An evaluation of IASI-NH₃ with ground-based Fourier transform infrared spectroscopy measurements. Atmospheric Chemistry and Physics, 2016, 16, 10351-10368.	4.9	56
27	The impact of differences in large-scale circulation output from climate models on the regional modeling of ozone and PM. Atmospheric Chemistry and Physics, 2012, 12, 9441-9458.	4.9	54
28	Validation of the CrIS fast physical NH₃ retrieval with ground-based FTIR. Atmospheric Measurement Techniques, 2017, 10, 2645-2667.	3.1	52
29	Quantification of the urban air pollution increment and its dependency on the use of down-scaled and bottom-up city emission inventories. Urban Climate, 2013, 6, 44-62.	5.7	51
30	Sensitivity of air pollution simulations with LOTOS-EUROS to the temporal distribution of anthropogenic emissions. Atmospheric Chemistry and Physics, 2014, 14, 939-955.	4.9	49
31	Modelling the partitioning of ammonium nitrate in the convective boundary layer. Atmospheric Chemistry and Physics, 2012, 12, 3005-3023.	4.9	47
32	The origin of ambient particulate matter concentrations in the Netherlands. Atmospheric Environment, 2013, 69, 289-303.	4.1	47
33	Impact of forest fires on particulate matter and ozone levels during the 2003, 2004 and 2005 fire seasons in Portugal. Science of the Total Environment, 2012, 414, 53-62.	8.0	45
34	Statistical mapping of PM10 concentrations over Western Europe using secondary information from dispersion modeling and MODIS satellite observations. Stochastic Environmental Research and Risk Assessment, 2006, 21, 183-194.	4.0	42
35	The impact of large scale biomass production on ozone air pollution in Europe. Atmospheric Environment, 2013, 71, 352-363.	4.1	42
36	A multi-model comparison of meteorological drivers of surface ozone over Europe. Atmospheric Chemistry and Physics, 2018, 18, 12269-12288.	4.9	42

#	Article	IF	Citations
37	EURODELTA-Trends, a multi-model experiment of air quality hindcast in Europe over 1990â€“2010. Geoscientific Model Development, 2017, 10, 3255-3276.	3.6	41
38	An evaluation of European nitrogen and sulfur wet deposition and their trends estimated by six chemistry transport models for the period 1990â€“2010. Atmospheric Chemistry and Physics, 2019, 19, 379-405.	4.9	41
39	Evaluation of receptor and chemical transport models for PM10 source apportionment. Atmospheric Environment: X, 2020, 5, 100053.	1.4	41
40	Parameterization of oceanic whitecap fraction based on satellite observations. Atmospheric Chemistry and Physics, 2016, 16, 13725-13751.	4.9	38
41	Environmental benefits of reduced electricity use exceed impacts from lead use for perovskite based tandem solar cell. Renewable Energy, 2017, 111, 906-913.	8.9	38
42	Spatial variation of aerosol properties over Europe derived from satellite observations and comparison with model calculations. Atmospheric Chemistry and Physics, 2003, 3, 521-533.	4.9	34
43	New Directions: Understanding interactions of air quality and climate change at regional scales. Atmospheric Environment, 2012, 49, 419-421.	4.1	33
44	Retrieval of ammonia from ground-based FTIR solar spectra. Atmospheric Chemistry and Physics, 2015, 15, 12789-12803.	4.9	32
45	Impact of emission changes on secondary inorganic aerosol episodes across Germany. Atmospheric Chemistry and Physics, 2013, 13, 11675-11693.	4.9	29
46	Trends of inorganic and organic aerosols and precursor gases in Europe: insights from the EURODELTA multi-model experiment over the 1990â€“2010 period. Geoscientific Model Development, 2019, 12, 4923-4954.	3.6	29
47	Bias Correction Techniques to Improve Air Quality Ensemble Predictions: Focus on O3 and PM Over Portugal. Environmental Modeling and Assessment, 2013, 18, 533-546.	2.2	27
48	The Added Value of a Proposed Satellite Imager for Ground Level Particulate Matter Analyses and Forecasts. IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing, 2009, 2, 271-283.	4.9	24
49	Assessing the Sensitivity of the OMI-NO2 Product to Emission Changes across Europe. Remote Sensing, 2013, 5, 4187-4208.	4.0	24
50	MAX-DOAS tropospheric nitrogen dioxide column measurements compared with the Lotos-Euros air quality model. Atmospheric Chemistry and Physics, 2015, 15, 1313-1330.	4.9	23
51	Model evaluation and scale issues in chemical and optical aerosol properties over the greater Milan area (Italy), for June 2001. Atmospheric Research, 2007, 85, 243-267.	4.1	22
52	Modelling and mapping heavy metal and nitrogen concentrations in moss in 2010 throughout Europe by applying Random Forests models. Atmospheric Environment, 2017, 156, 146-159.	4.1	22
53	Atmospheric transport and deposition of reactive nitrogen in Europe. , 2011, , 298-316.		21
54	Analysis of summer O₃ in the Madrid air basin with the LOTOS-EUROS chemical transport model. Atmospheric Chemistry and Physics, 2019, 19, 14211-14232.	4.9	21

#	Article	IF	Citations
55	Development of an atmospheric chemistry model coupled to the PALM model system 6.0: implementation and first applications. Geoscientific Model Development, 2021, 14, 1171-1193.	3.6	21
56	Ozone concentrations and damage for realistic future European climate and air quality scenarios. Atmospheric Environment, 2016, 144, 208-219.	4.1	20
57	Interaction between isoprene and ozone fluxes in a poplar plantation and its impact on air quality at the European level. Scientific Reports, 2016, 6, 32676.	3.3	20
58	Modeling atmospheric ammonia using agricultural emissions with improved spatial variability and temporal dynamics. Atmospheric Chemistry and Physics, 2020, 20, 16055-16087.	4.9	18
59	An Observing System Simulation Experiment (OSSE) for Aerosol Optical Depth from Satellites. Journal of Atmospheric and Oceanic Technology, 2009, 26, 2673-2682.	1.3	17
60	Prediction of source contributions to urban background PM₁₀ concentrations in European cities: a case study for an episode in December 2016 using EMEP/MSC-W rv4.15 and LOTOS-EUROS v2.0 â€“ Part 1: The country contributions. Geoscientific Model Development, 2020, 13, 1787-1807.	3.6	17
61	Modelling spatial patterns of correlations between concentrations of heavy metals in mosses and atmospheric deposition in 2010 across Europe. Environmental Sciences Europe, 2018, 30, 53.	5.5	15
62	Impact of synthetic space-borne NO₂ observations from the Sentinel-4 and Sentinel-5P missions on tropospheric NO₂ analyses. Atmospheric Chemistry and Physics, 2019, 19, 12811-12833.	4.9	15
63	Sensitivity studies with the regional climate model COSMO-CLM 5.0 over the CORDEX Central Asia Domain. Geoscientific Model Development, 2019, 12, 5229-5249.	3.6	15
64	Improving the modeling of road dust levels for Barcelona at urban scale and street level. Atmospheric Environment, 2016, 125, 231-242.	4.1	14
65	Modelling of the Atmospheric Transport and Deposition of Ammonia at a National and Regional Scale. , 2009, , 301-358.		14
66	The hidden cost of using low-resolution concentration data in the estimation of NH3 dry deposition fluxes. Scientific Reports, 2018, 8, 969.	3.3	13
67	Technical note: How are NH₃ dry deposition estimates affected by combining the LOTOS-EUROS model with IASI-NH₃ satellite observations?. Atmospheric Chemistry and Physics, 2018, 18, 13173-13196.	4.9	12
68	Six-day PM10 air quality forecasts for the Netherlands with the chemistry transport model Lotos-Euros. Atmospheric Environment, 2011, 45, 5586-5594.	4.1	11
69	Road Traffic: A Major Source of Particulate Matter in Europe. Handbook of Environmental Chemistry, 2013, , 165-193.	0.4	9
70	A shift in emission time profiles of fossil fuel combustion due to energy transitions impacts source receptor matrices for air quality. Environmental Sciences: Processes and Impacts, 2015, 17, 510-524.	3.5	8
71	Evaluating cloud properties in an ensemble of regional online coupled models against satellite observations. Atmospheric Chemistry and Physics, 2018, 18, 15183-15199.	4.9	8
72	Nitrogen deposition shows no consistent negative nor positive effect on the response of forest productivity to drought across European FLUXNET forest sites.. Environmental Research Communications, 0, , .	2.3	6

#	Article	IF	Citations
73	Progress in the determination of the sea spray source function using satellite data. Journal of Integrative Environmental Sciences, 2010, 7, 159-166.	2.5	5
74	Exploring the parameter space of the COSMO-CLM v5.0 regional climate model for the Central Asia CORDEX domain. Geoscientific Model Development, 2020, 13, 5779-5797.	3.6	5
75	Satellite-derived leaf area index and roughness length information for surfaceâ€“atmosphere exchange modelling: a case study for reactive nitrogen deposition in north-western Europe using LOTOS-EUROS v2.0. Geoscientific Model Development, 2020, 13, 2451-2474.	3.6	5
76	Data assimilation of CrIS NH₃ satellite observations for improving spatiotemporal NH₃ distributions in LOTOS-EUROS. Atmospheric Chemistry and Physics, 2022, 22, 951-972.	4.9	5
77	Investigating Differences in Air Quality Between Urban and Rural Regions Under Current and Future Climate Conditions. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 19-23.	0.2	4
78	Forestâ€“atmosphere exchange of reactive nitrogen in a remote regionÂâ€“ PartÂI: Measuring temporal dynamics. Biogeosciences, 2022, 19, 389-413.	3.3	4
79	Deriving ground-level PM2.5 concentrations over Germany from satellite column AOD for implementation in a regional air quality model. , 2020, , .		3
80	Chapter 5.10 On the direct aerosol forcing of nitrate over Europe: Simulations with the new LOTOS-EUROS model. Developments in Environmental Science, 2007, 6, 582-591.	0.5	2
81	The impact of temporal variability in prior emissions on the optimization of urban anthropogenic emissions of CO2, CH4 and CO using in-situ observations. Atmospheric Environment: X, 2021, 11, 100119.	1.4	2
82	Data Assimilation and Air Quality Forecasting. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 189-192.	0.2	2
83	Synergistic Use of LOTOS-EUROS and NO2 Tropospheric Columns to Evaluate the NOX Emission Trends Over Europe. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 239-245.	0.2	2
84	Reactive nitrogen fluxes over peatland and forest ecosystems using micrometeorological measurement techniques. Earth System Science Data, 2022, 14, 743-761.	9.9	2
85	Measuring and Modeling Wet Deposition Fluxes in the Netherlands and Europe. NATO Science for Peace and Security Series C: Environmental Security, 2011, , 193-198.	0.2	1
86	An Observing System Simulation Experiment (OSSE) for Aerosols. NATO Security Through Science Series C: Environmental Security, 2008, , 287-295.	0.1	1
87	Chapter 3.5 Estimation of sulphur emissions using ensemble smoothers. Developments in Environmental Science, 2007, 6, 301-317.	0.5	0
88	An OSSE for aerosols. , 2007, , .		0
89	Air Quality Forecasting with LOTOS-EUROS in the Context of the MACC Project. NATO Science for Peace and Security Series C: Environmental Security, 2011, , 221-226.	0.2	0
90	Sensitivity of PM Assimilation Results to Key Parameters in the Ensemble Kalman Filter. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 199-203.	0.2	0

#	Article	IF	Citations
91	Response of SIA Concentrations Across Germany to Emission Changes During PM10 Episodes in Spring 2009. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 547-552.	0.2	0
92	Source Apportionment in the LOTOS-EUROS Air Quality Model. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 387-390.	0.2	0
93	LEO: Combination of a Plume and Grid Model in the Netherlands. Springer Proceedings in Complexity, 2016, , 307-311.	0.3	0
94	Sensitivity of Modelled Land Use Specific Nitrogen Deposition Fluxes to Improved Process Descriptions. Springer Proceedings in Complexity, 2016, , 477-482.	0.3	0
95	Comparison of Data Assimilation Methods for Assessing PM10 Exceedances on the European Scale. NATO Security Through Science Series C: Environmental Security, 2008, , 278-286.	0.1	0