

Martijn Schaap

List of Publications by Year in descending order

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95
papers

5,509
citations

94433

37
h-index

91884

69
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108
all docs

108
docs citations

108
times ranked

6345
citing authors

#	ARTICLE	IF	CITATIONS
1	Data assimilation of CrIS NH ₃ and satellite observations for improving spatiotemporal NH ₃ distributions in LOTOS-EUROS. Atmospheric Chemistry and Physics, 2022, 22, 951-972.	4.9	5
2	Forest-atmosphere exchange of reactive nitrogen in a remote region Part I: Measuring temporal dynamics. Biogeosciences, 2022, 19, 389-413.	3.3	4
3	Reactive nitrogen fluxes over peatland and forest ecosystems using micrometeorological measurement techniques. Earth System Science Data, 2022, 14, 743-761.	9.9	2
4	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
5	The impact of temporal variability in prior emissions on the optimization of urban anthropogenic emissions of CO ₂ , CH ₄ and CO using in-situ observations. Atmospheric Environment: X, 2021, 11, 100119.	1.4	2
6	Evaluation of receptor and chemical transport models for PM ₁₀ source apportionment. Atmospheric Environment: X, 2020, 5, 100053.	1.4	41
7	Sources of particulate-matter air pollution and its oxidative potential in Europe. Nature, 2020, 587, 414-419.	27.8	352
8	Prediction of source contributions to urban background PM ₁₀ concentrations in European cities: a case study for an episode in December 2016 using EMEP/MSC-W rv4.15 and LOTOS-EUROS v2.0 Part 1: The country contributions. Geoscientific Model Development, 2020, 13, 1787-1807.	3.6	17
9	Modeling atmospheric ammonia using agricultural emissions with improved spatial variability and temporal dynamics. Atmospheric Chemistry and Physics, 2020, 20, 16055-16087.	4.9	18
10	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
11	Satellite-derived leaf area index and roughness length information for surface-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
12	Deriving ground-level PM _{2.5} concentrations over Germany from satellite column AOD for implementation in a regional air quality model. , 2020, , .		3
13	Impact of synthetic space-borne NO ₂ observations from the Sentinel-4 and Sentinel-5P missions on tropospheric NO ₂ analyses. Atmospheric Chemistry and Physics, 2019, 19, 12811-12833.	4.9	15
14	An evaluation of European nitrogen and sulfur wet deposition and their trends estimated by six chemistry transport models for the period 1990-2010. Atmospheric Chemistry and Physics, 2019, 19, 379-405.	4.9	41
15	NH ₃ emissions from large point sources derived from CrIS and IASI satellite observations. Atmospheric Chemistry and Physics, 2019, 19, 12261-12293.	4.9	89
16	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
17	Analysis of summer O ₃ in the Madrid air basin with the LOTOS-EUROS chemical transport model. Atmospheric Chemistry and Physics, 2019, 19, 14211-14232.	4.9	21
18	Trends of inorganic and organic aerosols and precursor gases in Europe: insights from the EURODELTA multi-model experiment over the 1990-2010 period. Geoscientific Model Development, 2019, 12, 4923-4954.	3.6	29

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19	The hidden cost of using low-resolution concentration data in the estimation of NH ₃ dry deposition fluxes. <i>Scientific Reports</i> , 2018, 8, 969.	3.3	13
20	Evaluating cloud properties in an ensemble of regional online coupled models against satellite observations. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 15183-15199.	4.9	8
21	Modelling spatial patterns of correlations between concentrations of heavy metals in mosses and atmospheric deposition in 2010 across Europe. <i>Environmental Sciences Europe</i> , 2018, 30, 53.	5.5	15
22	Technical note: How are NH ₃ dry deposition estimates affected by combining the LOTOS-EUROS model with IASI-NH ₃ satellite observations?. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 13173-13196.	4.9	12
23	A multi-model comparison of meteorological drivers of surface ozone over Europe. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 12269-12288.	4.9	42
24	Interaction between urban heat island and urban pollution island during summer in Berlin. <i>Science of the Total Environment</i> , 2018, 636, 818-828.	8.0	214
25	Modelling and mapping heavy metal and nitrogen concentrations in moss in 2010 throughout Europe by applying Random Forests models. <i>Atmospheric Environment</i> , 2017, 156, 146-159.	4.1	22
26	Environmental benefits of reduced electricity use exceed impacts from lead use for perovskite based tandem solar cell. <i>Renewable Energy</i> , 2017, 111, 906-913.	8.9	38
27	Validation of the CrIS fast physical NH ₃ retrieval with ground-based FTIR. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 2645-2667.	3.1	52
28	EURODELTA-Trends, a multi-model experiment of air quality hindcast in Europe over 1990–2010. <i>Geoscientific Model Development</i> , 2017, 10, 3255-3276.	3.6	41
29	Curriculum vitae of the LOTOS-EUROS (v2.0) chemistry transport model. <i>Geoscientific Model Development</i> , 2017, 10, 4145-4173.	3.6	100
30	Ozone concentrations and damage for realistic future European climate and air quality scenarios. <i>Atmospheric Environment</i> , 2016, 144, 208-219.	4.1	20
31	Interaction between isoprene and ozone fluxes in a poplar plantation and its impact on air quality at the European level. <i>Scientific Reports</i> , 2016, 6, 32676.	3.3	20
32	Nonseparable dynamic nearest neighbor Gaussian process models for large spatio-temporal data with an application to particulate matter analysis. <i>Annals of Applied Statistics</i> , 2016, 10, 1286-1316.	1.1	73
33	An evaluation of IASI-NH ₃ with ground-based Fourier transform infrared spectroscopy measurements. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 10351-10368.	4.9	56
34	Parameterization of oceanic whitecap fraction based on satellite observations. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 13725-13751.	4.9	38
35	Improving the modeling of road dust levels for Barcelona at urban scale and street level. <i>Atmospheric Environment</i> , 2016, 125, 231-242.	4.1	14
36	LEO: Combination of a Plume and Grid Model in the Netherlands. <i>Springer Proceedings in Complexity</i> , 2016, , 307-311.	0.3	0

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37	Sensitivity of Modelled Land Use Specific Nitrogen Deposition Fluxes to Improved Process Descriptions. Springer Proceedings in Complexity, 2016, , 477-482.	0.3	0
38	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
39	Particulate matter, air quality and climate: lessons learned and future needs. Atmospheric Chemistry and Physics, 2015, 15, 8217-8299.	4.9	641
40	Retrieval of ammonia from ground-based FTIR solar spectra. Atmospheric Chemistry and Physics, 2015, 15, 12789-12803.	4.9	32
41	A regional air quality forecasting system over Europe: the MACC-II daily ensemble production. Geoscientific Model Development, 2015, 8, 2777-2813.	3.6	214
42	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
43	Synergistic use of OMI NO ₂ tropospheric columns and LOTOS-EUROS to evaluate the NO _x emission trends across Europe. Remote Sensing of Environment, 2014, 149, 58-69.	11.0	66
44	Urban air quality: The challenge of traffic non-exhaust emissions. Journal of Hazardous Materials, 2014, 275, 31-36.	12.4	314
45	Evaluating 4 years of atmospheric ammonia (NH ₃) over Europe using IASI satellite observations and LOTOS-EUROS model results. Journal of Geophysical Research D: Atmospheres, 2014, 119, 9549-9566.	3.3	61
46	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
47	Data Assimilation and Air Quality Forecasting. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 189-192.	0.2	2
48	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
49	Synergistic Use of LOTOS-EUROS and NO ₂ Tropospheric Columns to Evaluate the NO _x Emission Trends Over Europe. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 239-245.	0.2	2
50	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
51	Response of SIA Concentrations Across Germany to Emission Changes During PM ₁₀ Episodes in Spring 2009. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 547-552.	0.2	0
52	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
53	The impact of large scale biomass production on ozone air pollution in Europe. Atmospheric Environment, 2013, 71, 352-363.	4.1	42
54	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

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55	Road Traffic: A Major Source of Particulate Matter in Europe. Handbook of Environmental Chemistry, 2013, , 165-193.	0.4	9
56	Short-term variability of mineral dust, metals and carbon emission from road dust resuspension. Atmospheric Environment, 2013, 74, 134-140.	4.1	57
57	The origin of ambient particulate matter concentrations in the Netherlands. Atmospheric Environment, 2013, 69, 289-303.	4.1	47
58	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
59	Impact of emission changes on secondary inorganic aerosol episodes across Germany. Atmospheric Chemistry and Physics, 2013, 13, 11675-11693.	4.9	29
60	Assessing the Sensitivity of the OMI-NO2 Product to Emission Changes across Europe. Remote Sensing, 2013, 5, 4187-4208.	4.0	24
61	A review of operational, regional-scale, chemical weather forecasting models in Europe. Atmospheric Chemistry and Physics, 2012, 12, 1-87.	4.9	265
62	Modelling the partitioning of ammonium nitrate in the convective boundary layer. Atmospheric Chemistry and Physics, 2012, 12, 3005-3023.	4.9	47
63	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
64	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
65	Modeling the distribution of ammonia across Europe including bi-directional surface-atmosphere exchange. Biogeosciences, 2012, 9, 5261-5277.	3.3	99
66	New Directions: Understanding interactions of air quality and climate change at regional scales. Atmospheric Environment, 2012, 49, 419-421.	4.1	33
67	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
68	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
69	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
70	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
71	Atmospheric transport and deposition of reactive nitrogen in Europe. , 2011, , 298-316.		21
72	Nitrogen as a threat to the European greenhouse balance. , 2011, , 434-462.		58

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73	The European aerosol budget in 2006. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 1117-1139.	4.9	56
74	Anthropogenic and natural constituents in particulate matter in the Netherlands. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 2281-2294.	4.9	57
75	Six-day PM10 air quality forecasts for the Netherlands with the chemistry transport model Lotos-Euros. <i>Atmospheric Environment</i> , 2011, 45, 5586-5594.	4.1	11
76	Illustrating the benefit of using hourly monitoring data on secondary inorganic aerosol and its precursors for model evaluation. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 11041-11053.	4.9	61
77	Measuring and Modeling Wet Deposition Fluxes in the Netherlands and Europe. <i>NATO Science for Peace and Security Series C: Environmental Security</i> , 2011, , 193-198.	0.2	1
78	Air Quality Forecasting with LOTOS-EUROS in the Context of the MACC Project. <i>NATO Science for Peace and Security Series C: Environmental Security</i> , 2011, , 221-226.	0.2	0
79	Progress in the determination of the sea spray source function using satellite data. <i>Journal of Integrative Environmental Sciences</i> , 2010, 7, 159-166.	2.5	5
80	An Observing System Simulation Experiment (OSSE) for Aerosol Optical Depth from Satellites. <i>Journal of Atmospheric and Oceanic Technology</i> , 2009, 26, 2673-2682.	1.3	17
81	The Added Value of a Proposed Satellite Imager for Ground Level Particulate Matter Analyses and Forecasts. <i>IEEE Journal of Selected Topics in Applied Earth Observations and Remote Sensing</i> , 2009, 2, 271-283.	4.9	24
82	Exploring the relation between aerosol optical depth and PM _{2.5} at Cabauw, the Netherlands. <i>Atmospheric Chemistry and Physics</i> , 2009, 9, 909-925.	4.9	211
83	Modelling of the Atmospheric Transport and Deposition of Ammonia at a National and Regional Scale. , 2009, , 301-358.		14
84	Comparison of two data assimilation methods for assessing PM10 exceedances on the European scale. <i>Atmospheric Environment</i> , 2008, 42, 7122-7134.	4.1	77
85	The LOTOS EUROS model: description, validation and latest developments. <i>International Journal of Environment and Pollution</i> , 2008, 32, 270.	0.2	216
86	Comparison of Data Assimilation Methods for Assessing PM10 Exceedances on the European Scale. <i>NATO Security Through Science Series C: Environmental Security</i> , 2008, , 278-286.	0.1	0
87	An Observing System Simulation Experiment (OSSE) for Aerosols. <i>NATO Security Through Science Series C: Environmental Security</i> , 2008, , 287-295.	0.1	1
88	Chapter 3.5 Estimation of sulphur emissions using ensemble smoothers. <i>Developments in Environmental Science</i> , 2007, 6, 301-317.	0.5	0
89	Chapter 5.10 On the direct aerosol forcing of nitrate over Europe: Simulations with the new LOTOS-EUROS model. <i>Developments in Environmental Science</i> , 2007, 6, 582-591.	0.5	2
90	Model evaluation and scale issues in chemical and optical aerosol properties over the greater Milan area (Italy), for June 2001. <i>Atmospheric Research</i> , 2007, 85, 243-267.	4.1	22

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91	An OSSE for aerosols. , 2007, , .		0
92	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
93	Secondary inorganic aerosol simulations for Europe with special attention to nitrate. Atmospheric Chemistry and Physics, 2004, 4, 857-874.	4.9	223
94	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
95	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