Arjo Segers

List of Publications by Year
in descending order

65 papers	2,877 citations	331670 21 h-index	182427 51 g-index
94 all docs	94 docs citations	94 times ranked	4263 citing authors

#	Article	IF	Citations
1	The Global Methane Budget 2000â€“2017. Earth System Science Data, 2020, 12, 1561-1623.	9.9	1,199
2	Sources of particulate-matter air pollution and its oxidative potential in Europe. Nature, 2020, 587, 414-419.	27.8	352
3	Variance Reduced Ensemble Kalman Filtering. Monthly Weather Review, 2001, 129, 1718-1728.	1.4	111
4	Evaluation of the meteorological forcing used for the Air Quality Model Evaluation International Initiative (AQMEII) air quality simulations. Atmospheric Environment, 2012, 53, 15-37.	4.1	111
5	Comparison of two data assimilation methods for assessing PM10 exceedances on the European scale. Atmospheric Environment, 2008, 42, 7122-7134.	4.1	77
6	Simulation of tropospheric chemistry and aerosols with the climate model EC-Earth. Geoscientific Model Development, 2014, 7, 2435-2475.	3.6	62
7	Regional trends and drivers of the global methane budget. Global Change Biology, 2022, 28, 182-200.	9.5	56
8	Source apportionment using LOTOS-EUROS: module description and evaluation. Geoscientific Model Development, 2013, 6, 721-733.	3.6	55
9	The origin of ambient particulate matter concentrations in the Netherlands. Atmospheric Environment, 2013, 69, 289-303.	4.1	47
10	Modeling and prediction of environmental data in space and time using Kalman filtering. Stochastic Environmental Research and Risk Assessment, 2002, 16, 225-240.	4.0	40
11	Assimilation of GOME ozone profiles and a global chemistryâ€“transport model using a Kalman filter with anisotropic covariance. Quarterly Journal of the Royal Meteorological Society, 2005, 131, 477-502.	2.7	40
12	Ensemble forecasts of air quality in eastern China â€“ Part 1: Model description and implementation of the MarcoPoloâ€“Panda prediction system, version 1. Geoscientific Model Development, 2019, 12, 33-67.	3.6	39
13	Geophysical validation of SCIAMACHY Limb Ozone Profiles. Atmospheric Chemistry and Physics, 2006, 6, 197-209.	4.9	34
14	Sudden changes in nitrogen dioxide emissions over Greece due to lockdown after the outbreak of COVID-19. Atmospheric Chemistry and Physics, 2021, 21, 1759-1774.	4.9	32
15	Machine learning for observation bias correction with application to dust storm data assimilation. Atmospheric Chemistry and Physics, 2019, 19, 10009-10026.	4.9	31
16	Estimation of Volcanic Ash Emissions Using Trajectory-Based 4D-Var Data Assimilation. Monthly Weather Review, 2016, 144, 575-589.	1.4	26
17	Data assimilation for volcanic ash plumes using a satellite observational operator: a case study on the 2010 EyjafjallajÃ¶kull volcanic eruption. Atmospheric Chemistry and Physics, 2017, 17, 1187-1205.	4.9	26
18	Comparison of mean age of air in five reanalyses using the BASCOE transport model. Atmospheric Chemistry and Physics, 2018, 18, 14715-14735.	4.9	26

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19	Spatially varying parameter estimation for dust emissions using reduced-tangent-linearization 4DVar. Atmospheric Environment, 2018, 187, 358-373.	4.1	26
20	Multi-model ensemble simulations of olive pollen distribution in Europe in 2014: current status and outlook. Atmospheric Chemistry and Physics, 2017, 17, 12341-12360.	4.9	25
21	Ensemble forecasts of air quality in eastern China â€“ Part 2: Evaluation of the MarcoPoloâ€“Panda prediction system, version 1. Geoscientific Model Development, 2019, 12, 1241-1266.	3.6	25
22	Dynamic model evaluation for secondary inorganic aerosol and its precursors over Europe between 1990 and 2009. Geoscientific Model Development, 2015, 8, 1047-1070.	3.6	24
23	The influence of data assimilation on the age of air calculated with a global chemistry-transport model using ECMWF wind fields. Geophysical Research Letters, 2004, 31, .	4.0	22
24	On the Computation of Mass Fluxes for Eulerian Transport Models from Spectral Meteorological Fields. Lecture Notes in Computer Science, 2002, , 767-776.	1.3	22
25	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
26	Forecasting PM10 and PM2.5 in the AburrÃ¡ Valley (MedellÃn, Colombia) via EnKF based data assimilation. Atmospheric Environment, 2020, 232, 117507.	4.1	21
27	Ozone Forecasts of the Stratospheric Polar Vortexâ€“Splitting Event in September 2002. Journals of the Atmospheric Sciences, 2005, 62, 812-821.	1.7	20
28	Dust Emission Inversion Using Himawariâ€8 AODs Over East Asia: An Extreme Dust Event in May 2017. Journal of Advances in Modeling Earth Systems, 2019, 11, 446-467.	3.8	18
29	Modeling atmospheric ammonia using agricultural emissions with improved spatial variability and temporal dynamics. Atmospheric Chemistry and Physics, 2020, 20, 16055-16087.	4.9	18
30	Impact of spaceborne carbon monoxide observations from the S-5P platform on tropospheric composition analyses and forecasts. Atmospheric Chemistry and Physics, 2017, 17, 1081-1103.	4.9	16
31	Influence of Atmospheric Transport on Estimates of Variability in the Global Methane Burden. Geophysical Research Letters, 2019, 46, 2302-2311.	4.0	16
32	Inverse modeling of the 2021 spring super dust storms in East Asia. Atmospheric Chemistry and Physics, 2022, 22, 6393-6410.	4.9	16
33	A Hybrid Kalman Filter Algorithm for Large-Scale Atmospheric Chemistry Data Assimilation. Monthly Weather Review, 2007, 135, 140-151.	1.4	15
34	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
35	Estimation of volcanic ash emissions through assimilating satellite data and groundâ€based observations. Journal of Geophysical Research D: Atmospheres, 2016, 121, 10,971.	3.3	14
36	Time series of the stratosphere-troposphere exchange of ozone simulated with reanalyzed and operational forecast data. Journal of Geophysical Research, 2006, 111, .	3.3	13

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37	Comparison of tropospheric NO₂ columns from MAX-DOAS retrievals and regional air quality model simulations. Atmospheric Chemistry and Physics, 2020, 20, 2795-2823.	4.9	12
38	Benefit of ozone observations from Sentinel-5P and future Sentinel-4 missions on tropospheric composition. Atmospheric Measurement Techniques, 2020, 13, 131-152.	3.1	12
39	Urban Air Quality Modeling Using Low-Cost Sensor Network and Data Assimilation in the AburrÃ¡ Valley, Colombia. Atmosphere, 2021, 12, 91.	2.3	12
40	Machine learning based bias correction for numerical chemical transport models. Atmospheric Environment, 2021, 248, 118022.	4.1	12
41	Evaluation of the LOTOS-EUROS NO₂ simulations using ground-based measurements and S5P/TROPOMI observations over Greece. Atmospheric Chemistry and Physics, 2021, 21, 5269-5288.	4.9	12
42	Validation of IFE-1.6 SCIAMACHY limb ozone profiles. Atmospheric Chemistry and Physics, 2005, 5, 3045-3052.	4.9	11
43	Model-based aviation advice on distal volcanic ash clouds by assimilating aircraft in situ measurements. Atmospheric Chemistry and Physics, 2016, 16, 9189-9200.	4.9	10
44	Three-dimensional methane distribution simulated with FLEXPART 8-CTM-1.1 constrained with observation data. Geoscientific Model Development, 2018, 11, 4469-4487.	3.6	10
45	Source backtracking for dust storm emission inversion using an adjoint method: case study of Northeast China. Atmospheric Chemistry and Physics, 2020, 20, 15207-15225.	4.9	10
46	Accelerating volcanic ash data assimilation using a mask-state algorithm based on an ensemble Kalman filter: a case study with the LOTOS-EUROS model (version 1.10). Geoscientific Model Development, 2017, 10, 1751-1766.	3.6	7
47	An efficient ensemble Kalman Filter implementation via shrinkage covariance matrix estimation: exploiting prior knowledge. Computational Geosciences, 2021, 25, 985-1003.	2.4	7
48	Changes in Power Plant NOx Emissions over Northwest Greece Using a Data Assimilation Technique. Atmosphere, 2021, 12, 900.	2.3	5
49	Position correction in dust storm forecasting using LOTOS-EUROS v2.1: grid-distorted data assimilation v1.0. Geoscientific Model Development, 2021, 14, 5607-5622.	3.6	5
50	A New Separation Methodology for the Maritime Sector Emissions over the Mediterranean and Black Sea Regions. Atmosphere, 2021, 12, 1478.	2.3	5
51	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
52	Estimating NOx LOTOS-EUROS CTM Emission Parameters over the Northwest of South America through 4DEnVar TROPOMI NO2 Assimilation. Atmosphere, 2021, 12, 1633.	2.3	3
53	A Knowledge-Aided Robust Ensemble Kalman Filter Algorithm for Non-Linear and Non-Gaussian Large Systems. Frontiers in Applied Mathematics and Statistics, 2022, 8, .	1.3	3
54	Nonlinear Kalman filters for atmospheric chemistry models. Geophysical Monograph Series, 2000, , 139-146.	0.1	2

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55	Evaluation Criteria on the Design for Assimilating Remote Sensing Data Using Variational Approaches. Monthly Weather Review, 2017, 145, 2165-2175.	1.4	2
56	Data Assimilation and Air Quality Forecasting. NATO Science for Peace and Security Series C: Environmental Security, 2014, , 189-192.	0.2	2
57	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
58	An Observing System Simulation Experiment (OSSE) for Aerosols. NATO Security Through Science Series C: Environmental Security, 2008, , 287-295.	0.1	1
59	The Role of Emission Sources and Atmospheric Sink in the Seasonal Cycle of CH4 and Î´13-CH4: Analysis Based on the Atmospheric Chemistry Transport Model TM5. Atmosphere, 2022, 13, 888.	2.3	1
60	Order of magnitude wall time improvement of variational methane inversions by physical parallelization: a demonstration using TM5-4DVAR. Geoscientific Model Development, 2022, 15, 4555-4567.	3.6	1
61	Data Assimilation as a Tool to Improve Chemical Transport Models Performance in Developing Countries. , 0, , .		0
62	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
63	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
64	Can We Explain the Observed Decrease in Secondary Inorganic Aerosol and Its Precursors Between 1990 and 2009 over Europe Using LOTOS-EUROS?. Springer Proceedings in Complexity, 2014, , 481-488.	0.3	0
65	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