

# Johannes Flemming

## List of Publications by Year in descending order

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89  
papers

16,012  
citations

94269

37  
h-index

51492

86  
g-index

186  
all docs

186  
docs citations

186  
times ranked

14253  
citing authors

#	ARTICLE	IF	CITATIONS
1	On the use of MOZAIC-IAGOS data to assess the ability of the MACC reanalysis to reproduce the distribution of ozone and CO in the UTLS over Europe. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 67, 27955.	0.8	11
2	Evaluating the assimilation of S5P/TROPOMI near real-time SO <sub>2</sub> columns and layer height data into the CAMS integrated forecasting system (CY47R1), based on a case study of the 2019 Raikoke eruption. <i>Geoscientific Model Development</i> , 2022, 15, 971-994.	1.3	9
3	A stratospheric prognostic ozone for seamless Earth system models: performance, impacts and future. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 4277-4302.	1.9	5
4	Global nature run data with realistic high-resolution carbon weather for the year of the Paris Agreement. <i>Scientific Data</i> , 2022, 9, 160.	2.4	3
5	A process-oriented evaluation of CAMS reanalysis ozone during tropopause folds over Europe for the period 2003–2018. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 6275-6289.	1.9	4
6	Trends in sulfur dioxide over the Indian subcontinent during 2003–2019. <i>Atmospheric Environment</i> , 2022, 284, 119189.	1.9	11
7	Regional evaluation of the performance of the global CAMS chemical modeling system over the United States (IFS cycle 47r1). <i>Geoscientific Model Development</i> , 2022, 15, 4657-4687.	1.3	3
8	Description and evaluation of the tropospheric aerosol scheme in the Integrated Forecasting System (IFS-AER, cycle 47R1) of ECMWF. <i>Geoscientific Model Development</i> , 2022, 15, 4881-4912.	1.3	8
9	Disentangling drivers of air pollutant and health risk changes during the COVID-19 lockdown in China. <i>Npj Climate and Atmospheric Science</i> , 2022, 5, .	2.6	6
10	Contributions of World Regions to the Global Tropospheric Ozone Burden Change From 1980 to 2010. <i>Geophysical Research Letters</i> , 2021, 48, .	1.5	22
11	A Global Climatology of Tropopause Folds in CAMS and MERRA-2 Reanalyses. <i>Journal of Geophysical Research D: Atmospheres</i> , 2021, 126, e2020JD034115.	1.2	12
12	Estimating lockdown-induced European NO <sub>2</sub> changes using satellite and surface observations and air quality models. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 7373-7394.	1.9	55
13	Comprehensive evaluation of the Copernicus Atmosphere Monitoring Service (CAMS) reanalysis against independent observations. <i>Elementa</i> , 2021, 9, .	1.1	11
14	Technical note: AQMEII4 Activity 1: evaluation of wet and dry deposition schemes as an integral part of regional-scale air quality models. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 15663-15697.	1.9	14
15	Exceptionally Low Arctic Stratospheric Ozone in Spring 2020 as Seen in the CAMS Reanalysis. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2020JD033563.	1.2	37
16	The ERA5 global reanalysis. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2020, 146, 1999-2049.	1.0	10,272
17	Evaluation of the CAMS global atmospheric trace gas reanalysis 2003–2016 using aircraft campaign observations. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 4493-4521.	1.9	16
18	An intercomparison of tropospheric ozone reanalysis products from CAMS, CAMS interim, TCR-1, and TCR-2. <i>Geoscientific Model Development</i> , 2020, 13, 1513-1544.	1.3	24

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19	An aerosol climatology for global models based on the tropospheric aerosol scheme in the Integrated Forecasting System of ECMWF. <i>Geoscientific Model Development</i> , 2020, 13, 1007-1034.	1.3	40
20	Study of SO <sub>2</sub> Pollution in the Middle East Using MERRA-2, CAMS Data Assimilation Products, and High-Resolution WRF-Chem Simulations. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031993.	1.2	26
21	Global Climate. <i>Bulletin of the American Meteorological Society</i> , 2020, 101, S9-S128.	1.7	61
22	A complex aerosol transport event over Europe during the 2017 Storm Ophelia in CAMS forecast systems: analysis and evaluation. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 13557-13578.	1.9	19
23	Assessment of natural and anthropogenic aerosol air pollution in the Middle East using MERRA-2, CAMS data assimilation products, and high-resolution WRF-Chem model simulations. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 9281-9310.	1.9	71
24	Ensemble forecasts of air quality in eastern China – Part 2: Evaluation of the MarcoPolo-Panda prediction system, version 1. <i>Geoscientific Model Development</i> , 2019, 12, 1241-1266.	1.3	25
25	Quantifying uncertainties due to chemistry modelling – evaluation of tropospheric composition simulations in the CAMS model (cycle 43R1). <i>Geoscientific Model Development</i> , 2019, 12, 1725-1752.	1.3	33
26	Surface ozone in the Doon Valley of the Himalayan foothills during spring. <i>Environmental Science and Pollution Research</i> , 2019, 26, 19155-19170.	2.7	23
27	A benchmark for testing the accuracy and computational cost of shortwave top-of-atmosphere reflectance calculations in clear-sky aerosol-laden atmospheres. <i>Geoscientific Model Development</i> , 2019, 12, 805-827.	1.3	5
28	The CAMS reanalysis of atmospheric composition. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 3515-3556.	1.9	524
29	Ensemble forecasts of air quality in eastern China – Part 1: Model description and implementation of the MarcoPolo-Panda prediction system, version 1. <i>Geoscientific Model Development</i> , 2019, 12, 33-67.	1.3	39
30	Monitoring and assimilation tests with TROPOMI data in the CAMS system: near-real-time total column ozone. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 3939-3962.	1.9	20
31	Description and evaluation of the tropospheric aerosol scheme in the European Centre for Medium-Range Weather Forecasts (ECMWF) Integrated Forecasting System (IFS-AER, cycle 45R1). <i>Geoscientific Model Development</i> , 2019, 12, 4627-4659.	1.3	71
32	Impacts of different characterizations of large-scale background on simulated regional-scale ozone over the continental United States. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 3839-3864.	1.9	45
33	A deep stratosphere-to-troposphere ozone transport event over Europe simulated in CAMS global and regional forecast systems: analysis and evaluation. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 15515-15534.	1.9	34
34	Cloud impacts on photochemistry: building a climatology of photolysis rates from the Atmospheric Tomography mission. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 16809-16828.	1.9	34
35	Two-scale multi-model ensemble: is a hybrid ensemble of opportunity telling us more?. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 8727-8744.	1.9	10
36	The impact of future emission policies on tropospheric ozone using a parameterised approach. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 8953-8978.	1.9	47

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37	Modeled deposition of nitrogen and sulfur in Europe estimated by 14 air quality model systems: evaluation, effects of changes in emissions and implications for habitat protection. Atmospheric Chemistry and Physics, 2018, 18, 10199-10218.	1.9	47
38	Status and future of numerical atmospheric aerosol prediction with a focus on data requirements. Atmospheric Chemistry and Physics, 2018, 18, 10615-10643.	1.9	64
39	The effects of intercontinental emission sources on European air pollution levels. Atmospheric Chemistry and Physics, 2018, 18, 13655-13672.	1.9	34
40	Source contributions to sulfur and nitrogen deposition – an HTAP II multi-model study on hemispheric transport. Atmospheric Chemistry and Physics, 2018, 18, 12223-12240.	1.9	21
41	Multi-model study of HTAP II on sulfur and nitrogen deposition. Atmospheric Chemistry and Physics, 2018, 18, 6847-6866.	1.9	49
42	HTAP2 multi-model estimates of premature human mortality due to intercontinental transport of air pollution and emission sectors. Atmospheric Chemistry and Physics, 2018, 18, 10497-10520.	1.9	54
43	Assessment and economic valuation of air pollution impacts on human health over Europe and the United States as calculated by a multi-model ensemble in the framework of AQMEII3. Atmospheric Chemistry and Physics, 2018, 18, 5967-5989.	1.9	68
44	Influence of anthropogenic emissions and boundary conditions on multi-model simulations of major air pollutants over Europe and North America in the framework of AQMEII3. Atmospheric Chemistry and Physics, 2018, 18, 8929-8952.	1.9	32
45	Coordinated Airborne Studies in the Tropics (CAST). Bulletin of the American Meteorological Society, 2017, 98, 145-162.	1.7	25
46	Quantifying the causes of differences in tropospheric OH within global models. Journal of Geophysical Research D: Atmospheres, 2017, 122, 1983-2007.	1.2	27
47	Key Issues for Seamless Integrated Chemistry–Meteorology Modeling. Bulletin of the American Meteorological Society, 2017, 98, 2285-2292.	1.7	27
48	Impact of intercontinental pollution transport on North American ozone air pollution: an HTAP phase 2 multi-model study. Atmospheric Chemistry and Physics, 2017, 17, 5721-5750.	1.9	51
49	The CAMS interim Reanalysis of Carbon Monoxide, Ozone and Aerosol for 2003–2015. Atmospheric Chemistry and Physics, 2017, 17, 1945-1983.	1.9	127
50	An Assessment of Near Surface Ozone Over Europe from the Global CAMS Interim Reanalysis. Springer Atmospheric Sciences, 2017, , 969-974.	0.4	0
51	C-IFS-CB05-BASCOE: stratospheric chemistry in the Integrated Forecasting System of ECMWF. Geoscientific Model Development, 2016, 9, 3071-3091.	1.3	24
52	An observationally constrained evaluation of the oxidative capacity in the tropical western Pacific troposphere. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7461-7488.	1.2	18
53	Fire carbon emissions over maritime southeast Asia in 2015 largest since 1997. Scientific Reports, 2016, 6, 26886.	1.6	270
54	Global and regional radiative forcing from 20% reductions in BC, OC and SO <sub>2</sub> – an HTAP2 multi-model study. Atmospheric Chemistry and Physics, 2016, 16, 13579-13599.	1.9	42

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55	Insights into the deterministic skill of air quality ensembles from the analysis of AQMEII data. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 15629-15652.	1.9	23
56	Assessment of the MACC reanalysis and its influence as chemical boundary conditions for regional air quality modeling in AQMEII-2. <i>Atmospheric Environment</i> , 2015, 115, 371-388.	1.9	59
57	Feedbacks of dust and boundary layer meteorology during a dust storm in the eastern Mediterranean. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 12909-12933.	1.9	43
58	Data assimilation of satellite-retrieved ozone, carbon monoxide and nitrogen dioxide with ECMWF's Composition-IFS. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 5275-5303.	1.9	109
59	The ENSO signal in atmospheric composition fields: emission-driven versus dynamically induced changes. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 9083-9097.	1.9	30
60	Evaluation of the MACC operational forecast system – potential and challenges of global near-real-time modelling with respect to reactive gases in the troposphere. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 14005-14030.	1.9	21
61	Copernicus stratospheric ozone service, 2009–2012: validation, system intercomparison and roles of input data sets. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 2269-2293.	1.9	27
62	Multi-model study of chemical and physical controls on transport of anthropogenic and biomass burning pollution to the Arctic. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 3575-3603.	1.9	83
63	Data assimilation in atmospheric chemistry models: current status and future prospects for coupled chemistry meteorology models. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 5325-5358.	1.9	201
64	Biomass burning influence on high-latitude tropospheric ozone and reactive nitrogen in summer 2008: a multi-model analysis based on POLMIP simulations. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 6047-6068.	1.9	43
65	The POLARCAT Model Intercomparison Project (POLMIP): overview and evaluation with observations. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 6721-6744.	1.9	62
66	Evaluation of near-surface ozone over Europe from the MACC reanalysis. <i>Geoscientific Model Development</i> , 2015, 8, 2299-2314.	1.3	34
67	Quantifying Emerging Local Anthropogenic Emissions in the Arctic Region: The ACCESS Aircraft Campaign Experiment. <i>Bulletin of the American Meteorological Society</i> , 2015, 96, 441-460.	1.7	60
68	Tropospheric chemistry in the Integrated Forecasting System of ECMWF. <i>Geoscientific Model Development</i> , 2015, 8, 975-1003.	1.3	204
69	Evaluation of operational on-line-coupled regional air quality models over Europe and North America in the context of AQMEII phase 2. Part I: Ozone. <i>Atmospheric Environment</i> , 2015, 115, 404-420.	1.9	168
70	Evaluation of operational online-coupled regional air quality models over Europe and North America in the context of AQMEII phase 2. Part II: Particulate matter. <i>Atmospheric Environment</i> , 2015, 115, 421-441.	1.9	133
71	Online coupled regional meteorology chemistry models in Europe: current status and prospects. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 317-398.	1.9	271
72	Global mass fixer algorithms for conservative tracer transport in the ECMWF model. <i>Geoscientific Model Development</i> , 2014, 7, 965-979.	1.3	37

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73	Volcanic sulfur dioxide plume forecasts based on UV satellite retrievals for the 2011 GrÃmsvÃ¶tn and the 2010 EyjafjallajÃ¶kull eruption. Journal of Geophysical Research D: Atmospheres, 2013, 118, 10,172.	1.2	43
74	The MACC reanalysis: an 8 yr data set of atmospheric composition. Atmospheric Chemistry and Physics, 2013, 13, 4073-4109.	1.9	424
75	Global reactive gases forecasts and reanalysis in the MACC project. Journal of Integrative Environmental Sciences, 2012, 9, 57-70.	1.0	59
76	Hindcast experiments of tropospheric composition during the summer 2010 fires over western Russia. Atmospheric Chemistry and Physics, 2012, 12, 4341-4364.	1.9	62
77	3-D evaluation of tropospheric ozone simulations by an ensemble of regional Chemistry Transport Model. Atmospheric Chemistry and Physics, 2012, 12, 3219-3240.	1.9	44
78	Volcanic SO <sub>2</sub> , BrO and plume height estimations using GOME-2 satellite measurements during the eruption of EyjafjallajÃ¶kull in May 2010. Journal of Geophysical Research, 2012, 117, .	3.3	85
79	Trace gas/aerosol boundary concentrations and their impacts on continental-scale AQMEII modeling domains. Atmospheric Environment, 2012, 53, 38-50.	1.9	72
80	Forecasts and assimilation experiments of the Antarctic ozone hole 2008. Atmospheric Chemistry and Physics, 2011, 11, 1961-1977.	1.9	33
81	Comparison of OMI NO <sub>2</sub> tropospheric columns with an ensemble of global and European regional air quality models. Atmospheric Chemistry and Physics, 2010, 10, 3273-3296.	1.9	165
82	Global model simulations of air pollution during the 2003 European heat wave. Atmospheric Chemistry and Physics, 2010, 10, 789-815.	1.9	67
83	Current status of the ability of the GEMS/MACC models to reproduce the tropospheric CO vertical distribution as measured by MOZAIC. Geoscientific Model Development, 2010, 3, 501-518.	1.3	56
84	Coupling Global Atmospheric Chemistry Transport Models to ECMWF Integrated Forecasts System for Forecast and Data Assimilation Within GEMS. , 2010, , 109-123.		3
85	Coupling global chemistry transport models to ECMWF's integrated forecast system. Geoscientific Model Development, 2009, 2, 253-265.	1.3	145
86	The impact of reducing the maximum speed limit on motorways in Switzerland to 80km h <sup>-1</sup> on emissions and peak ozone. Environmental Modelling and Software, 2008, 23, 322-332.	1.9	26
87	TOWARD A MONITORING AND FORECASTING SYSTEM FOR ATMOSPHERIC COMPOSITION. Bulletin of the American Meteorological Society, 2008, 89, 1147-1164.	1.7	253
88	A new air quality regime classification scheme for O, NO, SO and PM10 observations sites. Atmospheric Environment, 2005, 39, 6121-6129.	1.9	76
89	Modeling an extreme dust deposition event to the French alpine seasonal snowpack in April 2018: Meteorological context and predictions of dust deposition. Journal of Geophysical Research D: Atmospheres, 0, , .	1.2	2