Dominik W Brunner

List of Publications by Year
in descending order

110	5,771	81743	98622
papers	citations	39 h-index	67 g-index

184	184	184	5877
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An improved tropospheric NO₂ column retrieval algorithm for the Ozone Monitoring Instrument. Atmospheric Measurement Techniques, 2011, 4, 1905-1928.	1.2	550
2	Online coupled regional meteorology chemistry models in Europe: current status and prospects. Atmospheric Chemistry and Physics, 2014, 14, 317-398.	1.9	271
3	The Lagrangian particle dispersion model FLEXPART version 10.4. Geoscientific Model Development, 2019, 12, 4955-4997.	1.3	238
4	Unprecedented evidence for deep convection hydrating the tropical stratosphere. Geophysical Research Letters, 2008, 35, .	1.5	188
5	Data composites of airborne observations of tropospheric ozone and its precursors. Journal of Geophysical Research, 2000, 105, 20497-20538.	3.3	175
6	Seasonal variations of a mixing layer in the lowermost stratosphere as identified by the CO-O3correlation from in situ measurements. Journal of Geophysical Research, 2002, 107, ACL 1-1-ACL 1-11.	3.3	169
7	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. Atmospheric Environment, 2015, 115, 404-420.	1.9	168
8	Eight-component retrievals from ground-based MAX-DOAS observations. Atmospheric Measurement Techniques, 2011, 4, 1027-1044.	1.2	150
9	Origin and variability of upper tropospheric nitrogen oxides and ozone at northern mid-latitudes. Atmospheric Environment, 2001, 35, 3421-3433.	1.9	145
10	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. Atmospheric Environment, 2015, 115, 421-441.	1.9	133
11	Strong influence of lowermost stratospheric ozone on lower tropospheric background ozone changes over Europe. Geophysical Research Letters, 2007, 34, .	1.5	128
12	The Greenhouse Gas Climate Change Initiative (GHG-CCI): Comparison and quality assessment of near-surface-sensitive satellite-derived CO2 and CH4 global data sets. Remote Sensing of Environment, 2015, 162, 344-362.	4.6	112
13	Validation of the Swiss methane emission inventory by atmospheric observations and inverse modelling. Atmospheric Chemistry and Physics, 2016, 16, 3683-3710.	1.9	103
14	Influence of the choice of gas-phase mechanism on predictions of key gaseous pollutants during the AQMEII phase-2 intercomparison. Atmospheric Environment, 2015, 115, 553-568.	1.9	92
15	Evidence for the effectiveness of the Montreal Protocol to protect the ozone layer. Atmospheric Chemistry and Physics, 2010, 10, 12161-12171.	1.9	90
16	Ground-based and airborne in-situ measurements of the EyjafjallajÃ¶kull volcanic aerosol plume in Switzerland in spring 2010. Atmospheric Chemistry and Physics, 2011, 11, 10011-10030.	1.9	87
17	Changes in OMI tropospheric NO2 columns over Europe from 2004 to 2009 and the influence of meteorological variability. Atmospheric Environment, 2012, 46, 482-495.	1.9	85
18	Comparative analysis of meteorological performance of coupled chemistry-meteorology models in the context of AQMEII phase 2. Atmospheric Environment, 2015, 115, 470-498.	1.9	85

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19	Uncertainties of simulated aerosol optical properties induced by assumptions on aerosol physical and chemical properties: An AQMEII-2 perspective. Atmospheric Environment, 2015, 115, 541-552.	1.9	84
20	The Cabauw Intercomparison campaign for Nitrogen Dioxide measuring Instruments (CINDI): design, execution, and early results. Atmospheric Measurement Techniques, 2012, 5, 457-485.	1.2	83
21	Towards an online-coupled chemistry-climate model: evaluation of trace gases and aerosols in COSMO-ART. Geoscientific Model Development, 2011, 4, 1077-1102.	1.3	78
22	In situ observations of the isotopic composition of methane at the Cabauw tall tower site. Atmospheric Chemistry and Physics, 2016, 16, 10469-10487.	1.9	77
23	Continuous isotopic composition measurements of tropospheric CO₂ at Jungfraujoch (3580 m a.s.l.), Switzerland: real-time observation of regional pollution events. Atmospheric Chemistry and Physics, 2011, 11, 1685-1696.	1.9	72
24	Detectability of CO₂ emission plumes of cities and power plants with the Copernicus Anthropogenic CO₂ Monitoring (CO2M) mission. Atmospheric Measurement Techniques, 2019, 12, 6695-6719.	1.2	66
25	Future Emissions and Atmospheric Fate of HFC-1234yf from Mobile Air Conditioners in Europe. Environmental Science & Technology, 2012, 46, 1650-1658.	4.6	65
26	Analysis of meteorologyâ€“chemistry interactions during air pollution episodes using online coupled models within AQMEII phase-2. Atmospheric Environment, 2015, 115, 527-540.	1.9	61
27	A process-oriented regression model for column ozone. Journal of Geophysical Research, 2007, 112, .	3.3	59
28	Statistical modeling of total ozone: Selection of appropriate explanatory variables. Journal of Geophysical Research, 2007, 112, .	3.3	59
29	Assessment of the MACC reanalysis and its influence as chemical boundary conditions for regional air quality modeling in AQMEII-2. Atmospheric Environment, 2015, 115, 371-388.	1.9	59
30	Nitrogen oxides and ozone in the tropopause region of the northern hemisphere: Measurements from commercial aircraft in 1995/1996 and 1997. Journal of Geophysical Research, 2001, 106, 27673-27699.	3.3	58
31	Improvement and evaluation of the parameterisation of nitrogen oxide production by lightning. Physics and Chemistry of the Earth, Part C: Solar, Terrestrial and Planetary Science, 2001, 26, 577-583.	0.2	58
32	An extended Kalman-filter for regional scale inverse emission estimation. Atmospheric Chemistry and Physics, 2012, 12, 3455-3478.	1.9	56
33	Input Data Requirements for Lagrangian Trajectory Models. Bulletin of the American Meteorological Society, 2013, 94, 1051-1058.	1.7	56
34	First Observations of the Fourth Generation Synthetic Halocarbons HFC-1234yf, HFC-1234ze(E), and HCFC-1233zd(E) in the Atmosphere. Environmental Science & Technology, 2015, 49, 2703-2708.	4.6	56
35	Nanoplastics transport to the remote, high-altitude Alps. Environmental Pollution, 2021, 288, 117697.	3.7	54
36	Accounting for surface reflectance anisotropy in satellite retrievals of tropospheric NO₂. Atmospheric Measurement Techniques, 2010, 3, 1185-1203.	1.2	53

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37	MERIS albedo climatology for FRESCO+ O₂ A-band cloud retrieval. Atmospheric Measurement Techniques, 2011, 4, 463-483.	1.2	52
38	High-resolution NO₂ remote sensing from the Airborne Prism EXperiment (APEX) imaging spectrometer. Atmospheric Measurement Techniques, 2012, 5, 2211-2225.	1.2	52
39	Emission factors from road traffic from a tunnel study (Gubrist tunnel, Switzerland). Part I: concept and first results. Science of the Total Environment, 1995, 169, 141-147.	3.9	51
40	Quantification of methane emissions from UK biogas plants. Waste Management, 2021, 124, 82-93.	3.7	51
41	European Emissions of Halogenated Greenhouse Gases Inferred from Atmospheric Measurements. Environmental Science & Technology, 2012, 46, 217-225.	4.6	48
42	Comparison of four inverse modelling systems applied to the estimation of HFC-125, HFC-134a, and SF₆ emissions over Europe. Atmospheric Chemistry and Physics, 2017, 17, 10651-10674.	1.9	45
43	PathfinderTURB: an automatic boundary layer algorithm. Development, validation and application to study the impact on in situ measurements at the Jungfraujoch. Atmospheric Chemistry and Physics, 2017, 17, 10051-10070.	1.9	41
44	Anthropogenic and natural methane fluxes in Switzerland synthesized within a spatially explicit inventory. Biogeosciences, 2014, 11, 1941-1959.	1.3	39
45	The CarboCount CH sites: characterization of a dense greenhouse gas observation network. Atmospheric Chemistry and Physics, 2015, 15, 11147-11164.	1.9	38
46	Changes in domestic heating fuel use in Greece: effects on atmospheric chemistry and radiation. Atmospheric Chemistry and Physics, 2017, 17, 10597-10618.	1.9	38
47	Measurements of nitrogen oxides at the tropopause: Attribution to convection and correlation with lightning. Journal of Geophysical Research, 2000, 105, 3679-3700.	3.3	37
48	Accounting for the vertical distribution of emissions in atmospheric CO₂ simulations. Atmospheric Chemistry and Physics, 2019, 19, 4541-4559.	1.9	37
49	COSMO-BEP-Tree v1.0: a coupled urban climate model with explicit representation of street trees. Geoscientific Model Development, 2020, 13, 1685-1710.	1.3	37
50	Aircraftâ€based CH₄ flux estimates for validation of emissions from an agriculturally dominated area in Switzerland. Journal of Geophysical Research D: Atmospheres, 2014, 119, 4874-4887.	1.2	35
51	Modulation of tropical convection by breaking Rossby waves. Quarterly Journal of the Royal Meteorological Society, 2009, 135, 125-137.	1.0	34
52	Summertime buildup and decay of lightning NO_x and aged thunderstorm outflow above North America. Journal of Geophysical Research, 2009, 114, .	3.3	34
53	European source and sink areas of CO₂ retrieved from Lagrangian transport model interpretation of combined O₂ and CO₂ measurements at the high alpine research station Jungfraujoch. Atmospheric Chemistry and Physics, 2011, 11, 8017-8036.	1.9	33
54	Integrated equivalent latitude as a proxy for dynamical changes in ozone column. Geophysical Research Letters, 2005, 32, .	1.5	31

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55	Transport of PAN and NOy from different source regions to the Swiss high alpine site Jungfraujoch. Atmospheric Environment, 2013, 64, 103-115.	1.9	31
56	A cost-effective method for simulating city-wide air flow and pollutant dispersion at building resolving scale. Atmospheric Environment, 2017, 158, 181-196.	1.9	31
57	Identification of spikes associated with local sources in continuous time series of atmospheric CO, CO₂ and CH₄. Atmospheric Measurement Techniques, 2018, 11, 1599-1614.	1.2	31
58	Continuous CO₂/CH₄/CO measurements (2012â€“2014) at BeromÃ¼nster tall tower station in Switzerland. Biogeosciences, 2016, 13, 2623-2635.	1.3	30
59	Evidence for underâ€reported western European emissions of the potent greenhouse gas HFCâ€23. Geophysical Research Letters, 2011, 38, .	1.5	29
60	Long-term in situ measurements of NO_x and NO_y at Jungfraujoch 1998â€“2009: time series analysis and evaluation. Atmospheric Chemistry and Physics, 2012, 12, 2551-2566.	1.9	29
61	An Automated System for the Measurement of Nitrogen Oxides and Ozone Concentrations from a Passenger Aircraft:Â Instrumentation and First Results of the NOXAR Project. Environmental Science & Technology, 1998, 32, 3228-3236.	4.6	28
62	History of Lagrangian Stochastic Models for Turbulent Dispersion. Geophysical Monograph Series, 0, , 19-36.	0.1	28
63	Key Issues for Seamless Integrated Chemistryâ€“Meteorology Modeling. Bulletin of the American Meteorological Society, 2017, 98, 2285-2292.	1.7	27
64	Missing Stratospheric Ozone Decrease at Southern Hemisphere Middle Latitudes after Mt. Pinatubo: A Dynamical Perspective. Journals of the Atmospheric Sciences, 2011, 68, 1922-1945.	0.6	25
65	Integration and calibration of non-dispersive infrared (NDIR) CO₂ low-cost sensors and their operation in a sensor network covering Switzerland. Atmospheric Measurement Techniques, 2020, 13, 3815-3834.	1.2	25
66	A Kalman filter reconstruction of the vertical ozone distribution in an equivalent latitudeâ€“potential temperature framework from TOMS/GOME/SBUV total ozone observations. Journal of Geophysical Research, 2006, 111, .	3.3	23
67	An Algorithm for In-Flight Spectral Calibration of Imaging Spectrometers. Remote Sensing, 2016, 8, 1017.	1.8	23
68	Insights into the deterministic skill of air quality ensembles from the analysis of AQMEII data. Atmospheric Chemistry and Physics, 2016, 16, 15629-15652.	1.9	23
69	An advanced scheme for wet scavenging and liquid-phase chemistry in a regional online-coupled chemistry transport model. Atmospheric Chemistry and Physics, 2013, 13, 1177-1192.	1.9	22
70	Evaluation of high-resolution GRAMMâ€“GRAL (v15.12/v14.8) NO_{<i>x</i>} simulations over the city of ZÃ¼rich, Switzerland. Geoscientific Model Development, 2017, 10, 3441-3459.	1.3	21
71	Simulating urban climate at subâ€kilometre scale for representing the intraâ€urban variability of Zurich, Switzerland. International Journal of Climatology, 2020, 40, 458-476.	1.5	21
72	Spatiotemporal patterns of the fossil-fuel CO₂ signal in central Europe: results from a high-resolution atmospheric transport model. Atmospheric Chemistry and Physics, 2017, 17, 14145-14169.	1.9	20

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73	Quantifying CO2 Emissions of Power Plants With CO2 and NO2 Imaging Satellites. Frontiers in Remote Sensing, 2021, 2, .	1.3	20
74	Importance of satellite observations for high-resolution mapping of near-surface NO2 by machine learning. Remote Sensing of Environment, 2021, 264, 112573.	4.6	20
75	Detection of lightning-produced NO in the midlatitude upper troposphere during STREAM 1998. Journal of Geophysical Research, 2001, 106, 27777-27785.	3.3	19
76	Estimation of the fossil fuel component in atmospheric CO₂ based on radiocarbon measurements at the BeromÃ¼nster tall tower, Switzerland. Atmospheric Chemistry and Physics, 2017, 17, 10753-10766.	1.9	18
77	An assessment of aerosol optical properties from remote-sensing observations and regional chemistryâ€“climate coupled models over Europe. Atmospheric Chemistry and Physics, 2018, 18, 5021-5043.	1.9	18
78	Quantifying CO₂ emissions of a city with the Copernicus Anthropogenic CO₂ Monitoring satellite mission. Atmospheric Measurement Techniques, 2020, 13, 6733-6754.	1.2	18
79	Determination of eddy diffusivity in the lowermost stratosphere. Geophysical Research Letters, 2005, 32, .	1.5	17
80	Characterisation of methane sources in Lutjewad, The Netherlands, using quasi-continuous isotopic composition measurements. Tellus, Series B: Chemical and Physical Meteorology, 2020, 72, 1-20.	0.8	17
81	High-resolution measurements and simulation of stratospheric and tropospheric intrusions in the vicinity of the polar jet stream. Geophysical Research Letters, 2002, 29, 18-1.	1.5	16
82	Measurements of greenhouse gases at BeromÃ¼nster tall-tower station in Switzerland. Atmospheric Measurement Techniques, 2016, 9, 2603-2614.	1.2	16
83	The consolidated European synthesis of CH‹sub›4‹/sub› and N‹sub›2‹/sub›O emissions for the European Union and United Kingdom: 1990â€“2017. Earth System Science Data, 2021, 13, 2307-2362.	3.7	16
84	A CO-based method to determine the regional biospheric signal in atmospheric CO₂. Tellus, Series B: Chemical and Physical Meteorology, 2022, 69, 1353388.	0.8	15
85	The Community Inversion Framework v1.0: a unified system for atmospheric inversion studies. Geoscientific Model Development, 2021, 14, 5331-5354.	1.3	15
86	Regional effects of atmospheric aerosols on temperature: an evaluation of an ensemble of online coupled models. Atmospheric Chemistry and Physics, 2017, 17, 9677-9696.	1.9	14
87	Evaluating the representation of aerosol optical properties using an online coupled model over the Iberian Peninsula. Atmospheric Chemistry and Physics, 2017, 17, 277-296.	1.9	14
88	Controlled-release experiment to investigate uncertainties in UAV-based emission quantification for methane point sources. Atmospheric Measurement Techniques, 2022, 15, 2177-2198.	1.2	14
89	The CO2 Human Emissions (CHE) Project: First Steps Towards a European Operational Capacity to Monitor Anthropogenic CO2 Emissions. Frontiers in Remote Sensing, 2021, 2, .	1.3	13
90	Spatial and temporal representativeness of point measurements for nitrogen dioxide pollution levels in cities. Atmospheric Chemistry and Physics, 2020, 20, 13241-13251.	1.9	13

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91	An online emission module for atmospheric chemistry transport models: implementation in COSMO-GHG v5.6a and COSMO-ART v5.1-3.1. Geoscientific Model Development, 2020, 13, 2379-2392.	1.3	12
92	Studying atmospheric transport through Lagrangian models. Eos, 2011, 92, 177-178.	0.1	11
93	Estimating European Halocarbon Emissions Using Lagrangian Backward Transport Modeling and in Situ Measurements at the Jungfraujoch High-Alpine Site. Geophysical Monograph Series, 0, , 207-222.	0.1	10
94	Three-dimensional radiative transfer effects on airborne and ground-based trace gas remote sensing. Atmospheric Measurement Techniques, 2020, 13, 4277-4293.	1.2	10
95	Evaluating cloud properties in an ensemble of regional online coupled models against satellite observations. Atmospheric Chemistry and Physics, 2018, 18, 15183-15199.	1.9	8
96	Observations of Atmospheric Methane and Carbon Dioxide Mixing Ratios: Tall-Tower or Mountain-Top Stations?. Boundary-Layer Meteorology, 2017, 164, 135-159.	1.2	6
97	Impact of 3D radiative transfer on airborne NO₂ imaging remote sensing over cities with buildings. Atmospheric Measurement Techniques, 2021, 14, 6469-6482.	1.2	6
98	Atmospheric Chemistry in Lagrangian Models-Overview. Geophysical Monograph Series, 0, , 224-234.	0.1	4
99	Global-Scale Tropospheric Lagrangian Particle Models With Linear Chemistry. Geophysical Monograph Series, 0, , 235-250.	0.1	3
100	Global nature run data with realistic high-resolution carbon weather for the year of the Paris Agreement. Scientific Data, 2022, 9, 160.	2.4	3
101	Analyzing Local Carbon Dioxide and Nitrogen Oxide Emissions From Space Using the Divergence Method: An Application to the Synthetic SMARTCARB Dataset. Frontiers in Remote Sensing, 0, 3, .	1.3	3
102	The Lagrangian Atmospheric Radionuclide Transport Model (ARTM) â€" development, description and sensitivity analysis. Air Quality, Atmosphere and Health, 0, , .	1.5	3
103	Mapping of high resolution nitrogen dioxide vertical column densities with the Airborne Prism EXperiment (APEX) imaging spectrometer over Zurich, Switzerland. , 2012, , .		2
104	Long-term Observations of Atmospheric Halogenated Organic Trace Gases. Chimia, 2020, 74, 136.	0.3	2
105	Data Quality and Validation of Satellite Measurements of Tropospheric Composition. Physics of Earth and Space Environments, 2011, , 315-364.	0.5	2
106	Aviation and Climate Protection Flugverkehr und Klimaschutz â€" Ein Äœberblick Ã¼ber die Erfassung und Regulierung der Klimawirkun gen des Flugverkehrs. Gaia, 2009, 18, 32-40.	0.3	1
107	Improving and applying Lagrangian models of the atmosphere. Eos, 2012, 93, 32-32.	0.1	1
108	Mapping the spatial distribution of NO₂ with in situ and remote sensing instruments during the Munich NO₂ imaging campaign. Atmospheric Measurement Techniques, 2022, 15, 1609-1629.	1.2	1

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109	Assessing the Impact of Atmospheric CO2 and NO2 Measurements From Space on Estimating City-Scale Fossil Fuel CO2 Emissions in a Data Assimilation System. Frontiers in Remote Sensing, 2022, 3, .	1.3	1
110	Applications of top-down methods to anthropogenic GHG emission estimation. , 2022, , 455-481.		0