

# Martin Steinbacher

## List of Publications by Year in descending order

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93  
papers

5,200  
citations

76294

40  
h-index

106281

65  
g-index

144  
all docs

144  
docs citations

144  
times ranked

5552  
citing authors

#	ARTICLE	IF	CITATIONS
1	Atmospheric molecular hydrogen (H <sub>2</sub> ): observations at the high-altitude site Jungfraujoch, Switzerland. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 63, 64.	0.8	16
2	Observation of atmospheric CO <sub>2</sub> and CO at Shangri-La station: results from the only regional station located at southwestern China. <i>Tellus, Series B: Chemical and Physical Meteorology</i> , 2022, 68, 28506.	0.8	19
3	The Integrated Carbon Observation System in Europe. <i>Bulletin of the American Meteorological Society</i> , 2022, 103, E855-E872.	1.7	44
4	Sensitivity of biomass burning emissions estimates to land surface information. <i>Biogeosciences</i> , 2022, 19, 2059-2078.	1.3	5
5	The diurnal and seasonal variability of ice-nucleating particles at the High Altitude Station Jungfraujoch (3580 m a.s.l.), Switzerland. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 7557-7573.	1.9	0
6	Assessing local CO <sub>2</sub> contamination revealed by two near-by high altitude records at Jungfraujoch, Switzerland. <i>Environmental Research Letters</i> , 2021, 16, 044037.	2.2	8
7	Carbonaceous aerosol composition in air masses influenced by large-scale biomass burning: a case study in northwestern Vietnam. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 8293-8312.	1.9	11
8	Toward a definition of Essential Mountain Climate Variables. <i>One Earth</i> , 2021, 4, 805-827.	3.6	26
9	An algorithm to detect non-background signals in greenhouse gas time series from European tall tower and mountain stations. <i>Atmospheric Measurement Techniques</i> , 2021, 14, 6119-6135.	1.2	1
10	Evaluation and optimization of ICOS atmosphere station data as part of the labeling process. <i>Atmospheric Measurement Techniques</i> , 2021, 14, 89-116.	1.2	13
11	Sources and nature of ice-nucleating particles in the free troposphere at Jungfraujoch in winter 2017. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 16925-16953.	1.9	6
12	The contribution of Saharan dust to the ice-nucleating particle concentrations at the High Altitude Station Jungfraujoch (3580 m a.s.l.), Switzerland. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 18029-18053.	1.9	11
13	Zonal Similarity of Long-Term Changes and Seasonal Cycles of Baseline Ozone at Northern Midlatitudes. <i>Journal of Geophysical Research D: Atmospheres</i> , 2020, 125, e2019JD031908.	1.2	27
14	The isotopic composition of atmospheric nitrous oxide observed at the high-altitude research station Jungfraujoch, Switzerland. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 6495-6519.	1.9	11
15	Multi-decadal surface ozone trends at globally distributed remote locations. <i>Elementa</i> , 2020, 8, .	1.1	54
16	A global analysis of climate-relevant aerosol properties retrieved from the network of Global Atmosphere Watch (GAW) near-surface observatories. <i>Atmospheric Measurement Techniques</i> , 2020, 13, 4353-4392.	1.2	65
17	Recent advances in measurement techniques for atmospheric carbon monoxide and nitrous oxide observations. <i>Atmospheric Measurement Techniques</i> , 2019, 12, 5863-5878.	1.2	17
18	Tropospheric Ozone Assessment Report: Tropospheric ozone from 1877 to 2016, observed levels, trends and uncertainties. <i>Elementa</i> , 2019, 7, .	1.1	103

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19	Effect of Large-scale Biomass Burning on Aerosol Optical Properties at the GAW Regional Station Pha Din, Vietnam. <i>Aerosol and Air Quality Research</i> , 2019, 19, 1172-1187.	0.9	16
20	Low number concentration of ice nucleating particles in an aged smoke plume. <i>Quarterly Journal of the Royal Meteorological Society</i> , 2018, 144, 1991-1994.	1.0	2
21	Inverse modelling of European CH <sub>4</sub> emissions during 2006–2012 using different inverse models and reassessed atmospheric observations. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 901-920.	1.9	77
22	The MUSICA IASi CH <sub>4</sub> and N <sub>2</sub> O products and their comparison to HIPPO, GAW and NDACC FTIR references. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 4171-4215.	1.2	18
23	Peroxy acetyl nitrate (PAN) measurements at northern midlatitude mountain sites in April: a constraint on continental source–receptor relationships. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 15345-15361.	1.9	3
24	Impact of Air Mass Conditions and Aerosol Properties on Ice Nucleating Particle Concentrations at the High Altitude Research Station Jungfraujoch. <i>Atmosphere</i> , 2018, 9, 363.	1.0	18
25	Adaptive selection of diurnal minimum variation: a statistical strategy to obtain representative atmospheric CO <sub>2</sub> data and its application to European elevated mountain stations. <i>Atmospheric Measurement Techniques</i> , 2018, 11, 1501-1514.	1.2	16
26	Background Free-Tropospheric Ice Nucleating Particle Concentrations at Mixed-Phase Cloud Conditions. <i>Journal of Geophysical Research D: Atmospheres</i> , 2018, 123, 10,506.	1.2	24
27	Inversion Approach to Validate Mercury Emissions Based on Background Air Monitoring at the High Altitude Research Station Jungfraujoch (3580 m). <i>Environmental Science &amp; Technology</i> , 2017, 51, 2846-2853.	4.6	14
28	The Horizontal Ice Nucleation Chamber (HINC): INP measurements at conditions relevant for mixed-phase clouds at the High Altitude Research Station Jungfraujoch. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 15199-15224.	1.9	41
29	Surface ozone in the Southern Hemisphere: 20 years of data from a site with a unique setting in El Tololo, Chile. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 6477-6492.	1.9	15
30	Estimation of the fossil fuel component in atmospheric CO <sub>2</sub> based on radiocarbon measurements at the Beromünster tall tower, Switzerland. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 10753-10766.	1.9	18
31	Tropospheric Ozone Assessment Report: Database and metrics data of global surface ozone observations. <i>Elementa</i> , 2017, 5, .	1.1	172
32	A Review of More than 20 Years of Aerosol Observation at the High Altitude Research Station Jungfraujoch, Switzerland (3580 m asl). <i>Aerosol and Air Quality Research</i> , 2016, 16, 764-788.	0.9	55
33	Assessment of recent advances in measurement techniques for atmospheric carbon dioxide and methane observations. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 4737-4757.	1.2	31
34	Ice Nucleating Particle Measurements at 241 K during Winter Months at 3580 m MSL in the Swiss Alps. <i>Journals of the Atmospheric Sciences</i> , 2016, 73, 2203-2228.	0.6	59
35	Contribution of new particle formation to the total aerosol concentration at the high-altitude site Jungfraujoch (3580 m asl, Switzerland). <i>Journal of Geophysical Research D: Atmospheres</i> , 2016, 121, 11,692.	1.2	21
36	Predicting abundance and variability of ice nucleating particles in precipitation at the high-altitude observatory Jungfraujoch. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 8341-8351.	1.9	16

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37	Validation of the Swiss methane emission inventory by atmospheric observations and inverse modelling. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 3683-3710.	1.9	103
38	Chemical and physical influences on aerosol activation in liquid clouds: a study based on observations from the Jungfraujoch, Switzerland. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 4043-4061.	1.9	14
39	Towards a Universal "Baseline" Characterisation of Air Masses for High- and Low-Altitude Observing Stations Using Radon-222. <i>Aerosol and Air Quality Research</i> , 2016, 16, 885-899.	0.9	42
40	Analysis of long-term aerosol size distribution data from Jungfraujoch with emphasis on free tropospheric conditions, cloud influence, and air mass transport. <i>Journal of Geophysical Research D: Atmospheres</i> , 2015, 120, 9459-9480.	1.2	69
41	Top-down estimates of European CH <sub>4</sub> and N <sub>2</sub> O emissions based on four different inverse models. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 715-736.	1.9	92
42	Fourteen months of on-line measurements of the non-refractory submicron aerosol at the Jungfraujoch (3580 m a.s.l.) " chemical composition, origins and organic aerosol sources. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 11373-11398.	1.9	55
43	Comparison of the regional CO <sub>2</sub> mole fraction filtering approaches at a WMO/GAW regional station in China. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 5301-5313.	1.2	27
44	Comparison of continuous in situ CO <sub>2</sub> observations at Jungfraujoch using two different measurement techniques. <i>Atmospheric Measurement Techniques</i> , 2015, 8, 57-68.	1.2	30
45	Long-term surface ozone variability at Mt. Cimone WMO/GAW global station (2165 m a.s.l., Italy). <i>Atmospheric Environment</i> , 2015, 101, 23-33.	1.9	42
46	Tropospheric CH <sub>4</sub> signals as observed by NDACC FTIR at globally distributed sites and comparison to GAW surface in situ measurements. <i>Atmospheric Measurement Techniques</i> , 2014, 7, 2337-2360.	1.2	38
47	In situ measurement of atmospheric CO <sub>2</sub> at the four WMO/GAW stations in China. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 2541-2554.	1.9	102
48	Long-term changes in lower tropospheric baseline ozone concentrations: Comparing chemistry-climate models and observations at northern midlatitudes. <i>Journal of Geophysical Research D: Atmospheres</i> , 2014, 119, 5719-5736.	1.2	149
49	Retrieval of methane source strengths in Europe using a simple modeling approach to assess the potential of spaceborne lidar observations. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 2625-2637.	1.9	5
50	Analysis of elevated springtime levels of Peroxyacetyl nitrate (PAN) at the high Alpine research sites Jungfraujoch and Zugspitze. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 12553-12571.	1.9	27
51	Surface-to-mountaintop transport characterised by radon observations at the Jungfraujoch. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 12763-12779.	1.9	45
52	TransCom N <sub>2</sub> O model inter-comparison " Part 2: Atmospheric inversion estimates of N <sub>2</sub> O emissions. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 6177-6194.	1.9	49
53	Lower tropospheric ozone at northern midlatitudes: Changing seasonal cycle. <i>Geophysical Research Letters</i> , 2013, 40, 1631-1636.	1.5	95
54	Transport of PAN and NO <sub>y</sub> from different source regions to the Swiss high alpine site Jungfraujoch. <i>Atmospheric Environment</i> , 2013, 64, 103-115.	1.9	31

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55	High accuracy measurements of dry mole fractions of carbon dioxide and methane in humid air. Atmospheric Measurement Techniques, 2013, 6, 837-860.	1.2	151
56	Towards better error statistics for atmospheric inversions of methane surface fluxes. Atmospheric Chemistry and Physics, 2013, 13, 7115-7132.	1.9	37
57	Reassessing the variability in atmospheric H <sub>2</sub> using the two-way nested TM5 model. Journal of Geophysical Research D: Atmospheres, 2013, 118, 3764-3780.	1.2	26
58	Selective measurements of NO, NO <sub>2</sub> and NO <sub>y</sub> in the free troposphere using quantum cascade laser spectroscopy. Atmospheric Measurement Techniques, 2013, 6, 927-936.	1.2	47
59	Robust extraction of baseline signal of atmospheric trace species using local regression. Atmospheric Measurement Techniques, 2012, 5, 2613-2624.	1.2	116
60	Evaluation of new laser spectrometer techniques for in-situ carbon monoxide measurements. Atmospheric Measurement Techniques, 2012, 5, 2555-2567.	1.2	51
61	Long-term in situ measurements of NO <sub>x</sub> and NO <sub>y</sub> at Jungfraujoch 1998–2009: time series analysis and evaluation. Atmospheric Chemistry and Physics, 2012, 12, 2551-2566.	1.9	29
62	Long-term changes in lower tropospheric baseline ozone concentrations at northern mid-latitudes. Atmospheric Chemistry and Physics, 2012, 12, 11485-11504.	1.9	260
63	Molecular hydrogen (H <sub>2</sub> ) combustion emissions and their isotope (D/H) signatures from domestic heaters, diesel vehicle engines, waste incinerator plants, and biomass burning. Atmospheric Chemistry and Physics, 2012, 12, 6275-6289.	1.9	13
64	Changes in ozone over Europe: Analysis of ozone measurements from sondes, regular aircraft (MOZAIC) and alpine surface sites. Journal of Geophysical Research, 2012, 117, .	3.3	139
65	Free tropospheric ozone changes over Europe as observed at Jungfraujoch (1990–2008): An analysis based on backward trajectories. Journal of Geophysical Research, 2011, 116, .	3.3	56
66	A new estimation of the recent tropospheric molecular hydrogen budget using atmospheric observations and variational inversion. Atmospheric Chemistry and Physics, 2011, 11, 3375-3392.	1.9	29
67	Aerosol climatology and planetary boundary influence at the Jungfraujoch analyzed by synoptic weather types. Atmospheric Chemistry and Physics, 2011, 11, 5931-5944.	1.9	92
68	Continuous isotopic composition measurements of tropospheric CO <sub>2</sub> 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
69	Evaluation of in situ measurements of atmospheric carbon monoxide at Mount Waliguan, China. Atmospheric Chemistry and Physics, 2011, 11, 5195-5206.	1.9	44
70	1997–2007 CO trend at the high Alpine site Jungfraujoch: a comparison between NDIR surface in situ and FTIR remote sensing observations. Atmospheric Chemistry and Physics, 2011, 11, 6735-6748.	1.9	20
71	Inverse modelling of European N <sub>2</sub> O emissions: assimilating observations from different networks. Atmospheric Chemistry and Physics, 2011, 11, 2381-2398.	1.9	63
72	Ozone, carbon monoxide and nitrogen oxides time series at four alpine GAW mountain stations in central Europe. Atmospheric Chemistry and Physics, 2010, 10, 12295-12316.	1.9	98

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73	Single particle characterization of black carbon aerosols at a tropospheric alpine site in Switzerland. Atmospheric Chemistry and Physics, 2010, 10, 7389-7407.	1.9	109
74	Molecular hydrogen (H <sub>2</sub> ) emissions from gasoline and diesel vehicles. Science of the Total Environment, 2010, 408, 3596-3606.	3.9	17
75	An evaluation of the current radiative forcing benefit of the Montreal Protocol at the high-Alpine site Jungfraujoch. Science of the Total Environment, 2008, 391, 217-223.	3.9	8
76	Observations of long-lived anthropogenic halocarbons at the high-Alpine site of Jungfraujoch (Switzerland) for assessment of trends and European sources. Science of the Total Environment, 2008, 391, 224-231.	3.9	56
77	Measurements of organic trace gases including oxygenated volatile organic compounds at the high alpine site Jungfraujoch (Switzerland): Seasonal variation and source allocations. Journal of Geophysical Research, 2008, 113, .	3.3	28
78	Ground-level nitrogen dioxide concentrations inferred from the satellite-borne Ozone Monitoring Instrument. Journal of Geophysical Research, 2008, 113, .	3.3	288
79	Estimation of background concentrations of trace gases at the Swiss Alpine site Jungfraujoch (3580 m) Tj ETQq1 1,0,784314,rgBT /Ove	3.3	65
80	Measurements of OVOCs and NMHCs in a Swiss Highway Tunnel for Estimation of Road Transport Emissions. Environmental Science & Technology, 2007, 41, 7060-7066.	4.6	55
81	Nitrogen oxide measurements at rural sites in Switzerland: Bias of conventional measurement techniques. Journal of Geophysical Research, 2007, 112, .	3.3	220
82	Road vehicle emissions of molecular hydrogen (H <sub>2</sub> ) from a tunnel study. Atmospheric Environment, 2007, 41, 8355-8369.	1.9	46
83	Comparison of 7 years of satellite-borne and ground-based tropospheric NO <sub>2</sub> measurements around Milan, Italy. Journal of Geophysical Research, 2006, 111, .	3.3	62
84	Volatile Organic Compounds in the Po Basin. Part A: Anthropogenic VOCs. Journal of Atmospheric Chemistry, 2005, 51, 271-291.	1.4	31
85	Volatile Organic Compounds in the Po Basin. Part B: Biogenic VOCs. Journal of Atmospheric Chemistry, 2005, 51, 293-315.	1.4	26
86	Secondary organic aerosols from anthropogenic and biogenic precursors. Faraday Discussions, 2005, 130, 265.	1.6	245
87	Secondary Organic Aerosol Formation by Irradiation of 1,3,5-Trimethylbenzene~NOx~H <sub>2</sub> O in a New Reaction Chamber for Atmospheric Chemistry and Physics. Environmental Science & Technology, 2005, 39, 2668-2678.	4.6	191
88	Nocturnal trans-alpine transport of ozone and its effects on air quality on the Swiss Plateau. Atmospheric Environment, 2004, 38, 4539-4550.	1.9	15
89	Vertical transport and degradation of polycyclic aromatic hydrocarbons in an Alpine Valley. Atmospheric Environment, 2004, 38, 6447-6456.	1.9	24
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91	Performance characteristics of a proton-transfer-reaction mass spectrometer (PTR-MS) derived from laboratory and field measurements. International Journal of Mass Spectrometry, 2004, 239, 117-128.	0.7	96
92	Application of PTR-MS for measurements of biogenic VOC in a deciduous forest. International Journal of Mass Spectrometry, 2004, 239, 87-101.	0.7	68
93	The Global Atmosphere Watch reactive gases measurement network. Elementa, 0, 3, .	1.1	63