Stefan Reimann

List of Publications by Year
in descending order

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126	7,062	71102	76900
papers	citations	41 h-index	74 g-index

192	192	192	7204
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Atmospheric composition change â€“ global and regional air quality. Atmospheric Environment, 2009, 43, 5268-5350.	4.1	714
2	The shared socio-economic pathway (SSP) greenhouse gas concentrations and their extensions to 2500. Geoscientific Model Development, 2020, 13, 3571-3605.	3.6	539
3	Historical greenhouse gas concentrations for climate modelling (CMIP6). Geoscientific Model Development, 2017, 10, 2057-2116.	3.6	350
4	Evidence for variability of atmospheric hydroxyl radicals over the past quarter century. Geophysical Research Letters, 2005, 32, n/a-n/a.	4.0	267
5	An analytical inversion method for determining regional and global emissions of greenhouse gases: Sensitivity studies and application to halocarbons. Atmospheric Chemistry and Physics, 2009, 9, 1597-1620.	4.9	204
6	History of chemically and radiatively important atmospheric gases from the Advanced Global Atmospheric Gases Experiment (AGAGE). Earth System Science Data, 2018, 10, 985-1018.	9.9	179
7	Measuring atmospheric composition change. Atmospheric Environment, 2009, 43, 5351-5414.	4.1	160
8	Reversal of global atmospheric ethane and propane trends largely due to US oil and natural gas production. Nature Geoscience, 2016, 9, 490-495.	12.9	149
9	Increase in CFC-11 emissions from eastern China based on atmospheric observations. Nature, 2019, 569, 546-550.	27.8	148
10	Radiocarbon (14C)-deduced biogenic and anthropogenic contributions to organic carbon (OC) of urban aerosols from ZÃ¼rich, Switzerland. Atmospheric Environment, 2004, 38, 4035-4044.	4.1	147
11	Preserving Montreal Protocol Climate Benefits by Limiting HFCs. Science, 2012, 335, 922-923.	12.6	139
12	History of atmospheric SF₆ from 1973 to 2008. Atmospheric Chemistry and Physics, 2010, 10, 10305-10320.	4.9	136
13	Modern inhalation anesthetics: Potent greenhouse gases in the global atmosphere. Geophysical Research Letters, 2015, 42, 1606-1611.	4.0	119
14	Robust extraction of baseline signal of atmospheric trace species using local regression. Atmospheric Measurement Techniques, 2012, 5, 2613-2624.	3.1	116
15	The anthropogenic contribution to isoprene concentrations in a rural atmosphere. Atmospheric Environment, 2000, 34, 109-115.	4.1	99
16	Oxygenated volatile organic compounds (OVOCs) at an urban background site in ZÃ¼rich (Europe): Seasonal variation and source allocation. Atmospheric Environment, 2007, 41, 8409-8423.	4.1	93
17	Emissions of ozoneâ€depleting halocarbons from China. Geophysical Research Letters, 2009, 36, .	4.0	85
18	Our changing atmosphere: Evidence based on long-term infrared solar observations at the Jungfraujoch since 1950. Science of the Total Environment, 2008, 391, 184-195.	8.0	82

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19	Intercomparison of oxygenated volatile organic compound measurements at the SAPHIR atmosphere simulation chamber. Journal of Geophysical Research, 2008, 113, .	3.3	78
20	A comparison of benzene, toluene and C2-benzenes mixing ratios in automotive exhaust and in the suburban atmosphere during the introduction of catalytic converter technology to the Swiss Car Fleet. Atmospheric Environment, 2000, 34, 3103-3116.	4.1	74
21	Halogenated greenhouse gases at the Swiss High Alpine Site of Jungfraujoch (3580 m asl): Continuous measurements and their use for regional European source allocation. Journal of Geophysical Research, 2004, 109, .	3.3	74
22	Chloroacetic Acids in Rainwater. Environmental Science & Technology, 1996, 30, 2340-2344.	10.0	70
23	Reconciling reported and unreported HFC emissions with atmospheric observations. Proceedings of the National Academy of Sciences of the United States of America, 2015, 112, 5927-5931.	7.1	66
24	Estimation of background concentrations of trace gases at the Swiss Alpine site Jungfraujoch (3580 m) Tj ETQq0 0 0 rgBT /Overlock 10	3.3	65
25	Future Emissions and Atmospheric Fate of HFC-1234yf from Mobile Air Conditioners in Europe. Environmental Science & Technology, 2012, 46, 1650-1658.	10.0	65
26	Residential wood burning in an Alpine valley as a source for oxygenated volatile organic compounds, hydrocarbons and organic acids. Atmospheric Environment, 2008, 42, 8278-8287.	4.1	63
27	The increasing atmospheric burden of the greenhouse gas sulfur hexafluoride (SF₆). Atmospheric Chemistry and Physics, 2020, 20, 7271-7290.	4.9	63
28	Low European methyl chloroform emissions inferred from long-term atmospheric measurements. Nature, 2005, 433, 506-508.	27.8	61
29	A decline in emissions of CFC-11 and related chemicals from eastern China. Nature, 2021, 590, 433-437.	27.8	61
30	In-situ measurements of atmospheric hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) at the Shangdianzi regional background station, China. Atmospheric Chemistry and Physics, 2012, 12, 10181-10193.	4.9	59
31	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.	8.0	56
32	An extended Kalman-filter for regional scale inverse emission estimation. Atmospheric Chemistry and Physics, 2012, 12, 3455-3478.	4.9	56
33	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.	10.0	56
34	Discrepancy between simulated and observed ethane and propane levels explained by underestimated fossil emissions. Nature Geoscience, 2018, 11, 178-184.	12.9	56
35	Large decrease of VOC emissions of Switzerland's car fleet during the past decade: results from a highway tunnel study. Atmospheric Environment, 2005, 39, 1009-1018.	4.1	55
36	â€˜Measurements of OVOCs and NMHCs in a Swiss Highway Tunnel for Estimation of Road Transport Emissions. Environmental Science & Technology, 2007, 41, 7060-7066.	10.0	55

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37	Optimal estimation of the surface fluxes of methyl chloride using a 3-D global chemical transport model. Atmospheric Chemistry and Physics, 2010, 10, 5515-5533.	4.9	51
38	Influence of mountain venting in the Alps on the ozone chemistry of the lower free troposphere and the European pollution export. Journal of Geophysical Research, 2005, 110, .	3.3	50
39	Fiber optic distributed temperature sensing for the determination of the nocturnal atmospheric boundary layer height. Atmospheric Measurement Techniques, 2011, 4, 143-149.	3.1	50
40	Observations of 1,1-difluoroethane (HFC-152a) at AGAGE and SOGE monitoring stations in 1994â€“2004 and derived global and regional emission estimates. Journal of Geophysical Research, 2007, 112, .	3.3	48
41	Atmospheric histories and global emissions of the anthropogenic hydrofluorocarbons HFC-365mfc, HFC-245fa, HFC-227ea, and HFC-236fa. Journal of Geophysical Research, 2011, 116, .	3.3	48
42	European Emissions of Halogenated Greenhouse Gases Inferred from Atmospheric Measurements. Environmental Science & Technology, 2012, 46, 217-225.	10.0	48
43	Current sources of carbon tetrachloride (CCl ₄) in our atmosphere. Environmental Research Letters, 2018, 13, 024004.	5.2	47
44	Road vehicle emissions of molecular hydrogen (H2) from a tunnel study. Atmospheric Environment, 2007, 41, 8355-8369.	4.1	46
45	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.	4.9	45
46	Volatile Organic Compounds in the Global Atmosphere. Eos, 2009, 90, 513-514.	0.1	44
47	Radon as a tracer of atmospheric influences on traffic-related air pollution in a small inland city. Tellus, Series B: Chemical and Physical Meteorology, 2022, 68, 30967.	1.6	43
48	Receptor modeling of C₂â€“C₇ hydrocarbon sources at an urban background site in Zurich, Switzerland: changes between 1993â€“1994 and 2005â€“2006. Atmospheric Chemistry and Physics, 2008, 8, 2313-2332.	4.9	42
49	Growth in stratospheric chlorine from shortâ€lived chemicals not controlled by the Montreal Protocol. Geophysical Research Letters, 2015, 42, 4573-4580.	4.0	42
50	Towards a Universal â€œBaselineâ€•Characterisation of Air Masses for High- and Low-Altitude Observing Stations Using Radon-222. Aerosol and Air Quality Research, 2016, 16, 885-899.	2.1	42
51	Global emissions of HFC-143a (CH₃CF₃) and HFC-32 (CH₂F₂) from in situ and air archive atmospheric observations. Atmospheric Chemistry and Physics, 2014, 14, 9249-9258.	4.9	39
52	The phase-in and phase-out of European emissions of HCFC-141b and HCFC-142b under the Montreal Protocol: Evidence from observations at Mace Head, Ireland and Jungfraujoch, Switzerland from 1994 to 2004. Atmospheric Environment, 2007, 41, 757-767.	4.1	38
53	Perennial observations of molecular hydrogen (H2) at a suburban site in Switzerland. Atmospheric Environment, 2007, 41, 2111-2124.	4.1	38
54	Global and regional emissions of HFCâ€125 (CHF₂CF₃) from in situ and air archive atmospheric observations at AGAGE and SOGE observatories. Journal of Geophysical Research, 2009, 114, .	3.3	38

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55	Constraining the carbon tetrachloride (CCl₄) budget using its global trend and interâ€hemispheric gradient. Geophysical Research Letters, 2014, 41, 5307-5315.	4.0	38
56	Results from the International Halocarbons in Air Comparison Experiment (IHALACE). Atmospheric Measurement Techniques, 2014, 7, 469-490.	3.1	37
57	Continued Emissions of the Ozoneâ€Depleting Substance Carbon Tetrachloride From Eastern Asia. Geophysical Research Letters, 2018, 45, 11423-11430.	4.0	37
58	Atmospheric histories and emissions of chlorofluorocarbons CFC-13 (CClF₃), Î£CFC-114 (C₂Cl₂F<sub>4</sub&amp and CFC-115 (C₂ClF₅). Atmospheric Chemistry and Physics, 2018, 18, 979-1002.	4.9	33
59	Ambient mixing ratios of atmospheric halogenated compounds at five background stations in China. Atmospheric Environment, 2017, 160, 55-69.	4.1	34
60	Recent Trends in Stratospheric Chlorine From Very Shortâ€Lived Substances. Journal of Geophysical Research D: Atmospheres, 2019, 124, 2318-2335.	3.3	34
61	Hydrocarbon concentrations at the Alpine mountain sites Jungfraujoch and Arosa. Atmospheric Environment, 2005, 39, 1113-1127.	4.1	32
62	Renewed and emerging concerns over the production and emission of ozone-depleting substances. Nature Reviews Earth & Environment, 2020, 1, 251-263.	29.7	32
63	Volatile Organic Compounds in the Po Basin. Part A: Anthropogenic VOCs. Journal of Atmospheric Chemistry, 2005, 51, 271-291.	3.2	31
64	European emissions of the powerful greenhouse gases hydrofluorocarbons inferred from atmospheric measurements and their comparison with annual national reports to UNFCCC. Atmospheric Environment, 2017, 158, 85-97.	4.1	31
65	Global and regional emissions estimates of 1,1-difluoroethane (HFC-152a,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 347 Td (CH&a and air archive observations. Atmospheric Chemistry and Physics, 2016, 16, 365-382.	4.9	30
66	Statistical analysis of anthropogenic non-methane VOC variability at a European background location (Jungfraujoch, Switzerland). Atmospheric Chemistry and Physics, 2009, 9, 3445-3459.	4.9	29
67	Analysis of 3-year observations of CFC-11, CFC-12 and CFC-113 from a semi-rural site in China. Atmospheric Environment, 2010, 44, 4454-4462.	4.1	29
68	Evidence for underâ€reported western European emissions of the potent greenhouse gas HFCâ€23. Geophysical Research Letters, 2011, 38, .	4.0	29
69	A new estimation of the recent tropospheric molecular hydrogen budget using atmospheric observations and variational inversion. Atmospheric Chemistry and Physics, 2011, 11, 3375-3392.	4.9	29
70	The determination of a â€œregionalâ€•atmospheric background mixing ratio for anthropogenic greenhouse gases: A comparison of two independent methods. Atmospheric Environment, 2011, 45, 7396-7405.	4.1	29
71	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
72	ACTRIS non-methane hydrocarbon intercomparison experiment in Europe to support WMO GAW and EMEP observation networks. Atmospheric Measurement Techniques, 2015, 8, 2715-2736.	3.1	28

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73	Recent increases in the atmospheric growth rate and emissions of HFC-23 (CHF₃) and the link to HCFC-22 (CHClF₂) production. Atmospheric Chemistry and Physics, 2018, 18, 4153-4169.	4.9	27
74	Volatile Organic Compounds in the Po Basin. Part B: Biogenic VOCs. Journal of Atmospheric Chemistry, 2005, 51, 293-315.	3.2	26
75	Reassessing the variability in atmospheric H₂ using the twoâ€way nested TM5 model. Journal of Geophysical Research D: Atmospheres, 2013, 118, 3764-3780.	3.3	26
76	European Emissions of HFC-365mfc, a Chlorine-Free Substitute for the Foam Blowing Agents HCFC-141b and CFC-11. Environmental Science & Technology, 2007, 41, 1145-1151.	10.0	25
77	Estimates of European emissions of methyl chloroform using a Bayesian inversion method. Atmospheric Chemistry and Physics, 2014, 14, 9755-9770.	4.9	25
78	Emissions of the Refrigerants HFC-134a, HCFC-22, and CFC-12 from Road Traffic:Â Results from a Tunnel Study (Gubrist Tunnel, Switzerland). Environmental Science & Technology, 2004, 38, 1998-2004.	10.0	24
79	Atmospheric histories and global emissions of halons Hâ€1211 (CBrClF₂), Hâ€1301 (CBrF₃), and Hâ€2402 (CBrF₂CBrF₂). Journal of Geophysical Research D: Atmospheres, 2016, 121, 3663-3686.	3.3	24
80	Chinaâ€™s Hydrofluorocarbon Emissions for 2011â€“2017 Inferred from Atmospheric Measurements. Environmental Science and Technology Letters, 2019, 6, 479-486.	8.7	24
81	Perfluorocyclobutane (PFC-318,) Tj ETQq1 1 0.784314 rgBT /Overlock 10 Tf 50 427 Td (<i>c</i>-C&am in the global atmosphere. Atmospheric Chemistry and Physics, 2019, 19, 10335-10359.	4.9	22
82	A photochemical modeling study of ozone and formaldehyde generation and budget in the Po basin. Journal of Geophysical Research, 2007, 112, .	3.3	21
83	Emissions of anthropogenic hydrogen to the atmosphere during the potential transition to an increasingly H2-intensive economy. International Journal of Hydrogen Energy, 2011, 36, 1122-1135.	7.1	20
84	Adjustment of the wastewater matrix for optimization of membrane systems applied for water reuse in breweries. Journal of Membrane Science, 2014, 465, 68-77.	8.2	20
85	First appearance and rapid growth of anthropogenic HFC-245fa (CHF2CH2CF3) in the atmosphere. Geophysical Research Letters, 2006, 33, .	4.0	19
86	Ambient measurements of aromatic and oxidized VOCs by PTR-MS and GC-MS: intercomparison between four instruments in a boreal forest in Finland. Atmospheric Measurement Techniques, 2015, 8, 4453-4473.	3.1	19
87	Localization of source regions of selected hydrofluorocarbons combining data collected at two European mountain stations. Science of the Total Environment, 2008, 391, 232-240.	8.0	18
88	THE CLASS OF NONLINEAR STOCHASTIC MODELS AS A BACKGROUND FOR THE BURSTY BEHAVIOR IN FINANCIAL MARKETS. International Journal of Modeling, Simulation, and Scientific Computing, 2012, 15, 1250071.	1.4	18
89	A study of four-year HCFC-22 and HCFC-142b in-situ measurements at the Shangdianzi regional background station in China. Atmospheric Environment, 2012, 63, 43-49.	4.1	18
90	Molecular hydrogen (H2) emissions from gasoline and diesel vehicles. Science of the Total Environment, 2010, 408, 3596-3606.	8.0	17

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91	Evidence of a recent decline in UKÂemissions of hydrofluorocarbons determined by the InTEM inverse model and atmospheric measurements. Atmospheric Chemistry and Physics, 2021, 21, 12739-12755.	4.9	17
92	Atmospheric molecular hydrogen (H₂): observations at the high-altitude site Jungfraujoch, Switzerland. Tellus, Series B: Chemical and Physical Meteorology, 2022, 63, 64.	1.6	16
93	Toward resolving the budget discrepancy of ozone-depleting carbon tetrachlorideÂ(CCl₄): an analysis of top-down emissions from China. Atmospheric Chemistry and Physics, 2018, 18, 11729-11738.	4.9	16
94	Changes in HCFC Emissions in China During 2011â€“2017. Geophysical Research Letters, 2019, 46, 10034-10042.	4.0	16
95	Unexpected nascent atmospheric emissions of three ozone-depleting hydrochlorofluorocarbons. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, .	7.1	16
96	Severe Aromatic Hydrocarbon Pollution in the Arctic Town of Longyearbyen (Svalbard) Caused by Snowmobile Emissions. Environmental Science & Technology, 2009, 43, 4791-4795.	10.0	15
97	Optimized approach to retrieve information on atmospheric carbonyl sulfide (OCS) above the Jungfraujoch station and change in its abundance since 1995. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 186, 81-95.	2.3	15
98	Emissions of carbon tetrachloride from Europe. Atmospheric Chemistry and Physics, 2016, 16, 12849-12859.	4.9	14
99	Regional Emissions of Anthropogenic Halocarbons Derived from Continuous Measurements of Ambient Air in Switzerland. Chimia, 2003, 57, 522-528.	0.6	13
100	Peroxy radicals in the summer free troposphere: seasonality and potential for heterogeneous loss. Atmospheric Chemistry and Physics, 2009, 9, 1989-2006.	4.9	13
101	Molecular hydrogen (H₂) 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.	4.9	13
102	HFC-43-10mee atmospheric abundances and global emission estimates. Geophysical Research Letters, 2014, 41, 2228-2235.	4.0	12
103	First observations, trends, and emissions of <scp>HCFCâ€31 (CH₂ClF)</scp> in the global atmosphere. Geophysical Research Letters, 2015, 42, 7817-7824.	4.0	12
104	Abrupt reversal in emissions and atmospheric abundance of HCFC-133a (CF₃) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 222 To	4.0	12
105	Abundance and sources of atmospheric halocarbons in the Eastern Mediterranean. Atmospheric Chemistry and Physics, 2018, 18, 4069-4092.	4.9	12
106	Dynamicâ€“gravimetric preparation of metrologically traceable primary calibration standards for halogenated greenhouse gases. Atmospheric Measurement Techniques, 2018, 11, 3351-3372.	3.1	12
107	Global trends and European emissions of tetrafluoromethane (CF₄), hexafluoroethane (C₂F₆) and octafluoropropane (C₃F₈). Atmospheric Chemistry and Physics, 2021, 21, 2149-2164.	4.9	12
108	Swiss halocarbon emissions for 2019 to 2020 assessed from regional atmospheric observations. Atmospheric Chemistry and Physics, 2022, 22, 2447-2466.	4.9	11

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109	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
110	Retrieval of HCFC-142b (CH 3 CClF 2) from ground-based high-resolution infrared solar spectra: Atmospheric increase since 1989 and comparison with surface and satellite measurements. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 186, 96-105.	2.3	10
111	Observing the atmospheric evolution of ozone-depleting substances. Comptes Rendus - Geoscience, 2018, 350, 384-392.	1.2	10
112	Growing Atmospheric Emissions of Sulfuryl Fluoride. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2020JD034327.	3.3	10
113	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.	8.0	8
114	Spectrometric monitoring of atmospheric carbon tetrafluoride (CF₄) above the Jungfraujoch station since 1989: evidence of continued increase but at a slowing rate. Atmospheric Measurement Techniques, 2014, 7, 333-344.	3.1	7
115	Long-term evolution and seasonal modulation of methanol above Jungfraujoch (46.5Â° N, 8.0Â° E): optimisation of the retrieval strategy, comparison with model simulations and independent observations. Atmospheric Measurement Techniques, 2014, 7, 3861-3872.	3.1	5
116	Comparison of halocarbon measurements in an atmospheric dry whole air sample. Elementa, 2015, 3, .	3.2	5
117	The Î±-beauty contest: Choosing numbers, thinking intervals. Games and Economic Behavior, 2008, 64, 470-486.	0.8	4
118	Abundances, emissions, and loss processes of the long-lived and potent greenhouse gas octafluorooxolane (octafluorotetrahydrofuran,) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 382 Td (<i>c</i>-C₄F₈O) in the atmosphere. Atmospheric Chemistry and Physics, 2019, 19, 3481-3492.	4.9	4
119	Atmospheric CH3CCl3 observations in China: Historical trends and implications. Atmospheric Research, 2020, 231, 104658.	4.1	4
120	Automated fragment formula annotation for electron ionisation, high resolution mass spectrometry: application to atmospheric measurements of halocarbons. Journal of Cheminformatics, 2021, 13, 78.	6.1	4
121	Global-Scale Tropospheric Lagrangian Particle Models With Linear Chemistry. Geophysical Monograph Series, 0, , 235-250.	0.1	3
122	Low number concentration of ice nucleating particles in an aged smoke plume. Quarterly Journal of the Royal Meteorological Society, 2018, 144, 1991-1994.	2.7	2
123	Long-term Observations of Atmospheric Halogenated Organic Trace Gases. Chimia, 2020, 74, 136.	0.6	2
124	Tracking New Halogenated Alkenes in the Atmosphere. Chimia, 2016, 70, 365.	0.6	2
125	Price dynamics from a simple multiplicative random process model. European Physical Journal B, 2007, 56, 381-394.	1.5	0
126	Final report on CCQM-P151: Halocarbons in dry whole air. Metrologia, 2014, 51, 08014-08014.	1.2	0