Hartwig D Harder

List of Publications by Year
in descending order

90 papers	7,407 citations	61945 43 h-index	66879 78 g-index
167 all docs	167 docs citations	167 times ranked	4481 citing authors

#	Article	IF	Citations
1	Atmospheric oxidation capacity sustained by a tropical forest. Nature, 2008, 452, 737-740.	13.7	864
2	Missing OH Reactivity in a Forest: Evidence for Unknown Reactive Biogenic VOCs. Science, 2004, 304, 722-725.	6.0	431
3	The reaction of Criegee intermediates with NO, RO2, and SO2, and their fate in the atmosphere. Physical Chemistry Chemical Physics, 2012, 14, 14682.	1.3	297
4	OH and HO2 Chemistry in the urban atmosphere of New York City. Atmospheric Environment, 2003, 37, 3639-3651.	1.9	283
5	A benchmark comparison for mantle convection codes. Geophysical Journal International, 1989, 98, 23-38.	1.0	251
6	Atmospheric oxidation capacity in the summer of Houston 2006: Comparison with summer measurements in other metropolitan studies. Atmospheric Environment, 2010, 44, 4107-4115.	1.9	214
7	Ozone production rates as a function of NOxabundances and HOxproduction rates in the Nashville urban plume. Journal of Geophysical Research, 2002, 107, ACH 7-1.	3.3	207
8	A Laser-induced Fluorescence Instrument for Detecting Tropospheric OH and HO2: Characteristics and Calibration. Journal of Atmospheric Chemistry, 2004, 47, 139-167.	1.4	182
9	HOx concentrations and OH reactivity observations in New York City during PMTACS-NY2001. Atmospheric Environment, 2003, 37, 3627-3637.	1.9	175
10	OH and HO2concentrations, sources, and loss rates during the Southern Oxidants Study in Nashville, Tennessee, summer 1999. Journal of Geophysical Research, 2003, 108, .	3.3	174
11	The atmospheric chemistry box model CAABA/MECCA-3.0. Geoscientific Model Development, 2011, 4, 373-380.	1.3	161
12	3-D Convection With Variable Viscosity. Geophysical Journal International, 1991, 104, 213-220.	1.0	159
13	Improved simulation of isoprene oxidation chemistry with the ECHAM5/MESSy chemistry-climate model: lessons from the GABRIEL airborne field campaign. Atmospheric Chemistry and Physics, 2008, 8, 4529-4546.	1.9	158
14	Quantification of the unknown HONO daytime source and its relation to NO₂. Atmospheric Chemistry and Physics, 2011, 11, 10433-10447.	1.9	155
15	The reactions of Criegee intermediates with alkenes, ozone, and carbonyl oxides. Physical Chemistry Chemical Physics, 2014, 16, 4039.	1.3	146
16	Hydroxyl radicals in the tropical troposphere over the Suriname rainforest: airborne measurements. Atmospheric Chemistry and Physics, 2010, 10, 3759-3773.	1.9	122
17	Hydroxyl radicals in the tropical troposphere over the Suriname rainforest: comparison of measurements with the box model MECCA. Atmospheric Chemistry and Physics, 2010, 10, 9705-9728.	1.9	110
18	Observation and modelling of HO_x radicals in a boreal forest. Atmospheric Chemistry and Physics, 2014, 14, 8723-8747.	1.9	109

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19	The summertime Boreal forest field measurement intensive (HUMPPA-COPEC-2010): an overview of meteorological and chemical influences. Atmospheric Chemistry and Physics, 2011, 11, 10599-10618.	1.9	108
20	Direct observation of OH formation from stabilised Criegee intermediates. Physical Chemistry Chemical Physics, 2014, 16, 19941-19951.	1.3	108
21	Direct measurements of urban OH reactivity during Nashville SOS in summer 1999. Journal of Environmental Monitoring, 2003, 5, 68-74.	2.1	106
22	Technical Note: Formal blind intercomparison of OH measurements: results from the international campaign HOxComp. Atmospheric Chemistry and Physics, 2009, 9, 7923-7948.	1.9	98
23	First profile measurements of tropospheric BrO. Geophysical Research Letters, 2000, 27, 2921-2924.	1.5	95
24	Isoprene and its oxidation products, methacrolein and methylvinyl ketone, at an urban forested site during the 1999 Southern Oxidants Study. Journal of Geophysical Research, 2001, 106, 8035-8046.	3.3	93
25	The South Asian monsoonâ€"pollution pump and purifier. Science, 2018, 361, 270-273.	6.0	85
26	Direct observations of daytime NO3: Implications for urban boundary layer chemistry. Journal of Geophysical Research, 2003, 108, .	3.3	84
27	Characterisation of an inlet pre-injector laser-induced fluorescence instrument for the measurement of atmospheric hydroxyl radicals. Atmospheric Measurement Techniques, 2014, 7, 3413-3430.	1.2	83
28	Estimating the atmospheric concentration of Criegee intermediates and their possible interference in a FAGE-LIF instrument. Atmospheric Chemistry and Physics, 2017, 17, 7807-7826.	1.9	82
29	Constraints on instantaneous ozone production rates and regimes during DOMINO derived using in-situ OH reactivity measurements. Atmospheric Chemistry and Physics, 2012, 12, 7269-7283.	1.9	81
30	Surface and boundary layer exchanges of volatile organic compounds, nitrogen oxides and ozone during the GABRIEL campaign. Atmospheric Chemistry and Physics, 2008, 8, 6223-6243.	1.9	76
31	Comparison of OH reactivity measurements in the atmospheric simulation chamber SAPHIR. Atmospheric Measurement Techniques, 2017, 10, 4023-4053.	1.2	74
32	A reevaluation of airborne HOxobservations from NASA field campaigns. Journal of Geophysical Research, 2006, 111, n/a-n/a.	3.3	72
33	Testing fast photochemical theory during TRACE-P based on measurements of OH, HO2, and CH2O. Journal of Geophysical Research, 2004, 109, .	3.3	71
34	Stratospheric BrO profiles measured at different latitudes and seasons: Atmospheric observations. Geophysical Research Letters, 1998, 25, 3843-3846.	1.5	70
35	Daytime formation of nitrous acid at a coastal remote site in Cyprus indicating a common ground source of atmospheric HONO and NO. Atmospheric Chemistry and Physics, 2016, 16, 14475-14493.	1.9	69
36	Ground-based measurements of peroxycarboxylic nitric anhydrides (PANs) during the 1999 Southern Oxidants Study Nashville Intensive. Journal of Geophysical Research, 2002, 107, ACH 1-1-ACH 1-10.	3.3	68

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37	Oxidation photochemistry in the Southern Atlantic boundary layer: unexpected deviations of photochemical steady state. Atmospheric Chemistry and Physics, 2011, 11, 8497-8513.	1.9	68
38	A new method to simulate convection with strongly temperature- and pressure-dependent viscosity in a spherical shell: Applications to the Earth's mantle. Physics of the Earth and Planetary Interiors, 2006, 157, 223-249.	0.7	66
39	Flux estimates of isoprene, methanol and acetone from airborne PTR-MS measurements over the tropical rainforest during the GABRIEL 2005 campaign. Atmospheric Chemistry and Physics, 2009, 9, 4207-4227.	1.9	64
40	Interference Testing for Atmospheric HOxMeasurements by Laser-induced Fluorescence. Journal of Atmospheric Chemistry, 2004, 47, 169-190.	1.4	59
41	Distribution of hydrogen peroxide and formaldehyde over Central Europe during the HOOVER project. Atmospheric Chemistry and Physics, 2011, 11, 4391-4410.	1.9	55
42	Upper limits of stratospheric IO and OIO inferred from center-to-limb-darkening-corrected balloon-borne solar occultation visible spectra: Implications for total gaseous iodine and stratospheric ozone. Journal of Geophysical Research, 2003, 108, .	3.3	54
43	The community atmospheric chemistry box model CAABA/MECCA-4.0. Geoscientific Model Development, 2019, 12, 1365-1385.	1.3	54
44	A comparison of HONO budgets for two measurement heights at a field station within the boreal forest in Finland. Atmospheric Chemistry and Physics, 2015, 15, 799-813.	1.9	52
45	Summary of measurement intercomparisons during TRACE-P. Journal of Geophysical Research, 2003, 108, .	3.3	51
46	Chemistry, transport and dry deposition of trace gases in the boundary layer over the tropical Atlantic Ocean and the Guyanas during the GABRIEL field campaign. Atmospheric Chemistry and Physics, 2007, 7, 3933-3956.	1.9	47
47	Differential optical absorption spectroscopy instrument for stratospheric balloonborne trace-gas studies. Applied Optics, 2000, 39, 2377.	2.1	46
48	Application of a sequential reaction model to PANs and aldehyde measurements in two urban areas. Geophysical Research Letters, 2001, 28, 4583-4586.	1.5	45
49	Peroxy radical behavior during the Transport and Chemical Evolution over the Pacific (TRACE-P) campaign as measured aboard the NASA P-3B aircraft. Journal of Geophysical Research, 2003, 108, .	3.3	44
50	Nighttime isoprene trends at an urban forested site during the 1999 Southern Oxidant Study. Journal of Geophysical Research, 2002, 107, ACH 7-1.	3.3	43
51	Net ozone production and its relationship to nitrogen oxides and volatile organic compounds in the marine boundary layer around the Arabian Peninsula. Atmospheric Chemistry and Physics, 2020, 20, 6769-6787.	1.9	43
52	Comparison of measured and modeled stratospheric BrO: Implications for the total amount of stratospheric bromine. Geophysical Research Letters, 2000, 27, 3695-3698.	1.5	42
53	First atmospheric profile measurements of UV/visible O4absorption band intensities: Implications for the spectroscopy, and the formation enthalpy of the O2-O2dimer. Geophysical Research Letters, 2001, 28, 4595-4598.	1.5	41
54	Technical Note: Formal blind intercomparison of HO₂ measurements in the atmosphere simulation chamber SAPHIR during the HOxComp campaign. Atmospheric Chemistry and Physics, 2010, 10, 12233-12250.	1.9	38

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55	HO_x budgets during HOxComp: A case study of HO_x chemistry under NO_xâ€limited conditions. Journal of Geophysical Research, 2012, 117, .	3.3	38
56	Case study of the diurnal variability of chemically active species with respect to boundary layer dynamics during DOMINO. Atmospheric Chemistry and Physics, 2012, 12, 5329-5341.	1.9	35
57	Volatile organic compounds (VOCs) in photochemically aged air from the eastern and western Mediterranean. Atmospheric Chemistry and Physics, 2017, 17, 9547-9566.	1.9	35
58	Oxidation processes in the eastern Mediterranean atmosphere: evidence from the modelling of HO_{<i>x</i>} measurements over Cyprus. Atmospheric Chemistry and Physics, 2018, 18, 10825-10847.	1.9	35
59	Influence of vessel characteristics and atmospheric processes on the gas and particle phase of ship emission plumes: in situ measurements in the Mediterranean Sea and around the Arabian Peninsula. Atmospheric Chemistry and Physics, 2020, 20, 4713-4734.	1.9	35
60	Comparisons of observed and modeled OH and HO₂ concentrations during the ambient measurement period of the HO_xComp field campaign. Atmospheric Chemistry and Physics, 2012, 12, 2567-2585.	1.9	30
61	Stratospheric BrO profiles measured at different latitudes and seasons: Instrument description, spectral analysis and profile retrieval. Geophysical Research Letters, 1998, 25, 3847-3850.	1.5	29
62	Insights into HO_{<i>x</i>} and RO_{<i>x</i>} chemistry in the boreal forest via measurement of peroxyacetic acid, peroxyacetic nitric anhydride (PAN) and hydrogen peroxide. Atmospheric Chemistry and Physics, 2018, 18, 13457-13479.	1.9	28
63	Clouds and trace gas distributions during TRACE-P. Journal of Geophysical Research, 2003, 108, .	3.3	27
64	Measuring atmospheric naphthalene with laser-induced fluorescence. Atmospheric Chemistry and Physics, 2004, 4, 563-569.	1.9	27
65	Intercomparison of measured and modelled BrO slant column amounts for the Arctic winter and spring 1994/95. Geophysical Research Letters, 1999, 26, 1861-1864.	1.5	25
66	Influence of corona discharge on the ozone budget in the tropical free troposphere: a case study of deep convection during GABRIEL. Atmospheric Chemistry and Physics, 2014, 14, 8917-8931.	1.9	25
67	Shipborne measurements of ClNO₂ in the Mediterranean Sea and around the Arabian Peninsula during summer. Atmospheric Chemistry and Physics, 2019, 19, 12121-12140.	1.9	23
68	In situ observations of ClO near the winter polar tropopause. Journal of Geophysical Research, 2003, 108, .	3.3	22
69	Chemical processes related to net ozone tendencies in the free troposphere. Atmospheric Chemistry and Physics, 2017, 17, 10565-10582.	1.9	21
70	HO_x measurements in the summertime upper troposphere over Europe: a comparison of observations to a box model and a 3-D model. Atmospheric Chemistry and Physics, 2013, 13, 10703-10720.	1.9	19
71	Shipborne measurements of methane and carbon dioxide in the Middle East and Mediterranean areas and the contribution from oil and gas emissions. Atmospheric Chemistry and Physics, 2021, 21, 12443-12462.	1.9	16
72	Polycyclic aromatic hydrocarbons (PAHs) and their alkylated, nitrated and oxygenated derivatives in the atmosphere over the Mediterranean and Middle East seas. Atmospheric Chemistry and Physics, 2022, 22, 8739-8766.	1.9	16

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73	Diurnal variability, photochemical production and loss processes of hydrogen peroxide in the boundary layer over Europe. Atmospheric Chemistry and Physics, 2019, 19, 11953-11968.	1.9	14
74	Modification of a conventional photolytic converter for improving aircraft measurements of NO₂ via chemiluminescence. Atmospheric Measurement Techniques, 2021, 14, 6759-6776.	1.2	14
75	Comparison of measured and modeled stratospheric UV/Visible actinic fluxes at large solar zenith angles. Geophysical Research Letters, 2001, 28, 1179-1182.	1.5	12
76	Laser-induced fluorescence-based detection of atmospheric nitrogen dioxide and comparison of different techniques during the PARADEÂ2011 field campaign. Atmospheric Measurement Techniques, 2019, 12, 1461-1481.	1.2	12
77	Reactive nitrogen around the Arabian Peninsula and in the Mediterranean Sea during the 2017 AQABA ship campaign. Atmospheric Chemistry and Physics, 2021, 21, 7473-7498.	1.9	12
78	Central role of nitric oxide in ozone production in the upper tropical troposphere over the Atlantic Ocean and western Africa. Atmospheric Chemistry and Physics, 2021, 21, 8195-8211.	1.9	12
79	Meteorology during the DOMINO campaign and its connection with trace gases and aerosols. Atmospheric Chemistry and Physics, 2014, 14, 2325-2342.	1.9	11
80	Calibration of an airborne HO_{<i>x</i>} instrument using the All Pressure Altitude-based Calibrator for HO_{<i>x</i>} Experimentation (APACHE). Atmospheric Measurement Techniques, 2020, 13, 2711-2731.	1.2	11
81	Measurement report: Photochemical production and loss rates of formaldehyde and ozone across Europe. Atmospheric Chemistry and Physics, 2021, 21, 18413-18432.	1.9	11
82	Variability of active chlorine in the lowermost Arctic stratosphere. Journal of Geophysical Research, 2005, 110, .	3.3	10
83	Diel peroxy radicals in a semi-industrial coastal area: nighttime formation of free radicals. Atmospheric Chemistry and Physics, 2013, 13, 5731-5749.	1.9	10
84	Assumptions about footprint layer heights influence the quantification of emission sources: aÂcase study for Cyprus. Atmospheric Chemistry and Physics, 2017, 17, 10955-10967.	1.9	8
85	The influence of deep convection on HCHO and H₂O₂ in the upper troposphere over Europe. Atmospheric Chemistry and Physics, 2017, 17, 11835-11848.	1.9	8
86	Impact of the South Asian monsoon outflow on atmospheric hydroperoxides in the upper troposphere. Atmospheric Chemistry and Physics, 2020, 20, 12655-12673.	1.9	8
87	Tropospheric ozone production and chemical regime analysis during the COVID-19 lockdown over Europe. Atmospheric Chemistry and Physics, 2022, 22, 6151-6165.	1.9	6
88	Measurement report: In situ observations of deep convection without lightning during the tropical cyclone Florence 2018. Atmospheric Chemistry and Physics, 2021, 21, 7933-7945.	1.9	4
89	Measurement report: Observation-based formaldehyde production rates and their relation to OH reactivity around the Arabian Peninsula. Atmospheric Chemistry and Physics, 2021, 21, 17373-17388.	1.9	3
90	<i>Editorial Note</i> "A novel Whole Air Sample Profiler (WASP) for the quantification of volatile organic compounds in the boundary layer" published in Atmos. Meas. Tech., 6, 2703â€“2712, 2013. Atmospheric Measurement Techniques, 2015, 8, 3405-3406.	1.2	0