

Birger Bohn

List of Publications by Year in descending order

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97
papers

6,911
citations

70961

41
h-index

71532

76
g-index

161
all docs

161
docs citations

161
times ranked

4319
citing authors

#	ARTICLE	IF	CITATIONS
1	Amplified Trace Gas Removal in the Troposphere. <i>Science</i> , 2009, 324, 1702-1704.	6.0	550
2	Observation and modelling of OH and HO ₂ concentrations in the Pearl River Delta 2006: a missing OH source in a VOC rich atmosphere. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 1541-1569.	1.9	269
3	Aging of biogenic secondary organic aerosol via gas-phase OH radical reactions. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2012, 109, 13503-13508.	3.3	251
4	Radical chemistry at a rural site (Wangdu) in the North China Plain: observation and model calculations of OH, HO ₂ and RO ₂ radicals. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 663-690.	1.9	239
5	Characterisation of the photolytic HONO-source in the atmosphere simulation chamber SAPHIR. <i>Atmospheric Chemistry and Physics</i> , 2005, 5, 2189-2201.	1.9	237
6	Light induced conversion of nitrogen dioxide into nitrous acid on submicron humic acid aerosol. <i>Atmospheric Chemistry and Physics</i> , 2007, 7, 4237-4248.	1.9	234
7	Atmospheric OH reactivities in the Pearl River Delta “China in summer 2006: measurement and model results. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 11243-11260.	1.9	231
8	The photolysis of ortho-nitrophenols: a new gas phase source of HONO. <i>Physical Chemistry Chemical Physics</i> , 2006, 8, 2028.	1.3	221
9	Exploring the atmospheric chemistry of nitrous acid (HONO) at a rural site in Southern China. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 1497-1513.	1.9	211
10	Detection of HO ₂ by laser-induced fluorescence: calibration and interferences from RO ₂ radicals. <i>Atmospheric Measurement Techniques</i> , 2011, 4, 1209-1225.	1.2	199
11	Wildfire particulate matter in Europe during summer 2003: meso-scale modeling of smoke emissions, transport and radiative effects. <i>Atmospheric Chemistry and Physics</i> , 2007, 7, 4043-4064.	1.9	198
12	Missing OH source in a suburban environment near Beijing: observed and modelled OH and HO ₂ concentrations in summer 2006. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 1057-1080.	1.9	188
13	Strong daytime production of OH from HNO ₂ at a rural mountain site. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	185
14	Wintertime photochemistry in Beijing: observations of RO ₂ radical concentrations in the North China Plain during the BEST-ONE campaign. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 12391-12411.	1.9	177
15	Missing Gas-Phase Source of HONO Inferred from Zeppelin Measurements in the Troposphere. <i>Science</i> , 2014, 344, 292-296.	6.0	154
16	Fast Photochemistry in Wintertime Haze: Consequences for Pollution Mitigation Strategies. <i>Environmental Science & Technology</i> , 2019, 53, 10676-10684.	4.6	147
17	Significant concentrations of nitryl chloride sustained in the morning: investigations of the causes and impacts on ozone production in a polluted region of northern China. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 14959-14977.	1.9	146
18	Experimental evidence for efficient hydroxyl radical regeneration in isoprene oxidation. <i>Nature Geoscience</i> , 2013, 6, 1023-1026.	5.4	132

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19	Significant concentrations of nitryl chloride observed in rural continental Europe associated with the influence of sea salt chloride and anthropogenic emissions. <i>Geophysical Research Letters</i> , 2012, 39, .	1.5	116
20	Maximum efficiency in the hydroxyl-radical-based self-cleansing of the troposphere. <i>Nature Geoscience</i> , 2014, 7, 559-563.	5.4	110
21	Observation and modelling of HO ₂ radicals in a boreal forest. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 8723-8747.	1.9	109
22	Photolysis frequency measurement techniques: results of a comparison within the ACCENT project. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 5373-5391.	1.9	99
23	Experimental budgets of OH, HO ₂ , and RO ₂ radicals and implications for ozone formation in the Pearl River Delta in China 2014. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 7129-7150.	1.9	92
24	Gas-phase reaction of the OH ⁺ benzene adduct with O ₂ : reversibility and secondary formation of HO ₂ . <i>Physical Chemistry Chemical Physics</i> , 1999, 1, 5097-5107.	1.3	91
25	JOYCE: Jülich Observatory for Cloud Evolution. <i>Bulletin of the American Meteorological Society</i> , 2015, 96, 1157-1174.	1.7	87
26	Formation of Peroxy Radicals from OH ⁺ Toluene Adducts and O ₂ . <i>Journal of Physical Chemistry A</i> , 2001, 105, 6092-6101.	1.1	86
27	Actinometric measurements of NO ₂ ; photolysis frequencies in the atmosphere simulation chamber SAPHIR. <i>Atmospheric Chemistry and Physics</i> , 2005, 5, 493-503.	1.9	82
28	Intercomparison of measurements of NO ₂ ; concentrations in the atmosphere simulation chamber SAPHIR during the NO ₃ Comp campaign. <i>Atmospheric Measurement Techniques</i> , 2010, 3, 21-37.	1.2	77
29	Intercomparison of Two Hydroxyl Radical Measurement Techniques at the Atmosphere Simulation Chamber SAPHIR. <i>Journal of Atmospheric Chemistry</i> , 2007, 56, 187-205.	1.4	76
30	Comparison of OH concentration measurements by DOAS and LIF during SAPHIR chamber experiments at high OH reactivity and low NO concentration. <i>Atmospheric Measurement Techniques</i> , 2012, 5, 1611-1626.	1.2	75
31	Comparison of OH reactivity measurements in the atmospheric simulation chamber SAPHIR. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 4023-4053.	1.2	74
32	Formation of anthropogenic secondary organic aerosol (SOA) and its influence on biogenic SOA properties. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 2837-2855.	1.9	73
33	Relationship between the NO ₂ ; photolysis frequency and the solar global irradiance. <i>Atmospheric Measurement Techniques</i> , 2009, 2, 725-739.	1.2	69
34	Daytime formation of nitrous acid at a coastal remote site in Cyprus indicating a common ground source of atmospheric HONO and NO. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 14475-14493.	1.9	69
35	Secondary organic aerosol formation from hydroxyl radical oxidation and ozonolysis of monoterpenes. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 991-1012.	1.9	67
36	The HD(CP) ₂ ; Observational Prototype Experiment (HOPE) – an overview. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 4887-4914.	1.9	67

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37	Volatility of secondary organic aerosol during OH radical induced ageing. Atmospheric Chemistry and Physics, 2011, 11, 11055-11067.	1.9	66
38	OH reactivity at a rural site (Wangdu) in the North China Plain: contributions from OH reactants and experimental OH budget. Atmospheric Chemistry and Physics, 2017, 17, 645-661.	1.9	63
39	Measurements of gaseous H ₂ O ₂ and SO ₂ by AP-ID-CIMS during CAREBeijing 2008 Campaign. Atmospheric Chemistry and Physics, 2011, 11, 7755-7765.	1.9	60
40	Model-aided radiometric determination of photolysis frequencies in a sunlit atmosphere simulation chamber. Atmospheric Chemistry and Physics, 2005, 5, 191-206.	1.9	53
41	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
42	Importance of isomerization reactions for OH radical regeneration from the photo-oxidation of isoprene investigated in the atmospheric simulation chamber SAPHIR. Atmospheric Chemistry and Physics, 2020, 20, 3333-3355.	1.9	44
43	Rate Constants of HO ₂ + NO Covering Atmospheric Conditions. 1. HO ₂ Formed by OH + H ₂ O ₂ . Journal of Physical Chemistry A, 1997, 101, 1488-1493.	1.1	43
44	The TRiple-frequency and Polarimetric radar Experiment for improving process observations of winter precipitation. Earth System Science Data, 2019, 11, 845-863.	3.7	40
45	Predissociation of the NH/ND (a ¹ Δ _v , J ¹ Δ _v) states. Journal of Chemical Physics, 1992, 96, 5059-5068.	1.2	39
46	HO _x budgets during HO _x Comp: A case study of HO _x chemistry under NO _x -limited conditions. Journal of Geophysical Research, 2012, 117, .	3.3	38
47	Missing SO ₂ oxidant in the coastal atmosphere? â€œ observations from high-resolution measurements of OH and atmospheric sulfur compounds. Atmospheric Chemistry and Physics, 2014, 14, 12209-12223.	1.9	38
48	OH regeneration from methacrolein oxidation investigated in the atmosphere simulation chamber SAPHIR. Atmospheric Chemistry and Physics, 2014, 14, 7895-7908.	1.9	38
49	Kinetics of the OH + C ₂ H ₂ reaction in the presence of O ₂ . Journal of the Chemical Society, Faraday Transactions, 1996, 92, 1459.	1.7	37
50	Imidogen (NH/ND) (a ¹ Δ _v) vibrational distributions in the UV photolyses of hydrazoic acid (HN ₃ /DN ₃) and isocyanic acid (HNCO/DNCO). The Journal of Physical Chemistry, 1993, 97, 4891-4898.	2.9	36
51	Evidence for an unidentified non-photochemical ground-level source of formaldehyde in the Po Valley with potential implications for ozone production. Atmospheric Chemistry and Physics, 2015, 15, 1289-1298.	1.9	36
52	Formation of HO ₂ from OH and C ₂ H ₂ in the presence of O ₂ . Journal of the Chemical Society, Faraday Transactions, 1998, 94, 1203-1210.	1.7	35
53	Photolysis frequency of O ₃ to O(1D): Measurements and modeling during the International Photolysis Frequency Measurement and Modeling Intercomparison (IPMMI). Journal of Geophysical Research, 2004, 109, .	3.3	33
54	Comparisons of observed and modeled OH and HO ₂ concentrations during the ambient measurement period of the HO _x Comp field campaign. Atmospheric Chemistry and Physics, 2012, 12, 2567-2585.	1.9	30

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55	Insights into HO ₂ and RO ₂ chemistry in the boreal forest via measurement of peroxyacetic acid, peroxyacetic nitric anhydride (PAN) and hydrogen peroxide. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 13457-13479.	1.9	28
56	Investigation of the γ -pinene photooxidation by OH in the atmosphere simulation chamber SAPHIR. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 6631-6650.	1.9	27
57	Measurement of atmospheric O ₃ (¹ D) photolysis frequencies using filterradiometry. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	26
58	Isotope effect in the formation of H ₂ from H ₂ CO studied at the atmospheric simulation chamber SAPHIR. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 5343-5357.	1.9	25
59	HO ₂ formation from the OH + benzene reaction in the presence of O ₂ . <i>Physical Chemistry Chemical Physics</i> , 2011, 13, 10699.	1.3	25
60	Influence of clouds on the spectral actinic flux density in the lower troposphere (INSPECTRO): overview of the field campaigns. <i>Atmospheric Chemistry and Physics</i> , 2008, 8, 1789-1812.	1.9	24
61	Theoretical Study on the Formation of H- and O-Atoms, HONO, OH, NO ₂ from the Lowest Lying Singlet and Triplet States in <i>ortho</i> -Nitrophenol Photolysis. <i>International Journal of Chemical Kinetics</i> , 2016, 48, 785-795.	1.0	24
62	Factors affecting O ₃ and NO ₂ photolysis frequencies measured in the eastern Mediterranean during the five-year period 2002–2006. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	23
63	Chemical Mechanism Development: Laboratory Studies and Model Applications. <i>Journal of Atmospheric Chemistry</i> , 2002, 42, 323-357.	1.4	22
64	Calibration and evaluation of CCD spectroradiometers for ground-based and airborne measurements of spectral actinic flux densities. <i>Atmospheric Measurement Techniques</i> , 2017, 10, 3151-3174.	1.2	22
65	Investigation of the oxidation of methyl vinyl ketone (MVK) by OH radicals in the atmospheric simulation chamber SAPHIR. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 8001-8016.	1.9	22
66	Atmospheric photochemistry of aromatic hydrocarbons: OH budgets during SAPHIR chamber experiments. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 6941-6952.	1.9	21
67	Evaluation of OH and HO ₂ concentrations and their budgets during photooxidation of 2-methyl-3-butene-2-ol (MBO) in the atmospheric simulation chamber SAPHIR. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 11409-11422.	1.9	20
68	Kinetics and mechanism of the reaction of OH with the trimethylbenzenes – experimental evidence for the formation of adduct isomers. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 13933.	1.3	19
69	Influence of local surface albedo variability and ice crystal shape on passive remote sensing of thin cirrus. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 1943-1958.	1.9	18
70	Reversible addition of the OH radical to <i>p</i> -cymene in the gas phase: multiple adduct formation. Part 2. <i>Physical Chemistry Chemical Physics</i> , 2014, 16, 17315-17326.	1.3	17
71	Investigation of the γ -pinene photooxidation by OH in the atmospheric simulation chamber SAPHIR. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 11635-11649.	1.9	17
72	Vibrational relaxation of NO(¹ Σ^+) and NO ₂ (0,0,1) with atmospheric gases. <i>Physical Chemistry Chemical Physics</i> , 1999, 1, 1833-1842.	1.3	16

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73	Overview: On the transport and transformation of pollutants in the outflow of major population centres – observational data from the EMERGE European intensive operational period in summer 2017. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 5877-5924.	1.9	16
74	Prompt HO ₂ Formation Following the Reaction of OH with Aromatic Compounds under Atmospheric Conditions. <i>Journal of Physical Chemistry A</i> , 2012, 116, 6015-6026.	1.1	15
75	The generation of CH(X ² Σ ⁺ , N ²) fragments in the photolysis of CH ₂ (1 ³ B ₁) radicals. <i>Journal of Chemical Physics</i> , 1995, 102, 8842-8845.	1.2	14
76	Parameterization of Thermal Properties of Aging Secondary Organic Aerosol Produced by Photo-Oxidation of Selected Terpene Mixtures. <i>Environmental Science & Technology</i> , 2014, 48, 6168-6176.	4.6	14
77	Modification of a conventional photolytic converter for improving aircraft measurements of NO ₂ via chemiluminescence. <i>Atmospheric Measurement Techniques</i> , 2021, 14, 6759-6776.	1.2	14
78	Temperature dependence of the rate constants of the reactions of oxygen atoms with trans-2-butene, cis-2-butene, 2-methylpropene, 2-methyl-2-butene, and 2,3-dimethyl-2-butene. <i>International Journal of Chemical Kinetics</i> , 1995, 27, 277-285.	1.0	13
79	Central role of nitric oxide in ozone production in the upper tropical troposphere over the Atlantic Ocean and western Africa. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 8195-8211.	1.9	12
80	Measurement report: Photochemical production and loss rates of formaldehyde and ozone across Europe. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 18413-18432.	1.9	11
81	Quenching and relaxation of vibrational levels of imidogen (NH/ND)(a ₁ Δ _v). <i>The Journal of Physical Chemistry</i> , 1993, 97, 7234-7238.	2.9	10
82	Kinetic and mechanistic study of the reaction of OH radicals with methylated benzenes: 1,4-dimethyl-, 1,3,5-trimethyl-, 1,2,4,5-, 1,2,3,5- and 1,2,3,4-tetramethyl-, pentamethyl-, and hexamethylbenzene. <i>Physical Chemistry Chemical Physics</i> , 2015, 17, 13053-13065.	1.3	10
83	Response to Comment on “Missing gas-phase source of HONO inferred from Zeppelin measurements in the troposphere”. <i>Science</i> , 2015, 348, 1326-1326.	6.0	10
84	Characterisation and improvement of O ₁ D filter radiometers. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 3455-3466.	1.2	10
85	Rate constants of the reaction oxygen atom (3P) + acetylene at low temperatures. <i>The Journal of Physical Chemistry</i> , 1990, 94, 8010-8011.	2.9	8
86	Seasonal variations and profile measurements of photolysis frequencies j(O ₁ D) and j(NO ₂) at the ECHO forest field site. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	8
87	Seasonal measurements of OH, NO _x , and J(O ₁ D) at Mace Head, Ireland. <i>Geophysical Research Letters</i> , 2013, 40, 1659-1663.	1.5	8
88	Atmospheric photooxidation and ozonolysis of ³ -carene and 3-caronaldehyde: rate constants and product yields. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 12665-12685.	1.9	8
89	Impact of the South Asian monsoon outflow on atmospheric hydroperoxides in the upper troposphere. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 12655-12673.	1.9	8
90	Solar spectral actinic flux and photolysis frequency measurements in a deciduous forest. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	7

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91	Photooxidation of pinonaldehyde at ambient conditions investigated in the atmospheric simulation chamber SAPHIR. Atmospheric Chemistry and Physics, 2020, 20, 13701-13719.	1.9	6
92	Chemical Mechanism Development: Laboratory Studies and Model Applications. , 2002, , 323-357.		4
93	Atmospheric photo-oxidation of myrcene: OH reaction rate constant, gas-phase oxidation products and radical budgets. Atmospheric Chemistry and Physics, 2021, 21, 16067-16091.	1.9	4
94	Formation of O ₂ (b ¹ .SIGMA.g ⁺) in the Reaction of NH/ND(a ¹ .DELTA.,v) with O ₂ . The Journal of Physical Chemistry, 1995, 99, 965-969.	2.9	3
95	Investigation of the limonene photooxidation by OH at different NO concentrations in the atmospheric simulation chamber SAPHIR (Simulation of Atmospheric PHotochemistry In a large) Tj ETQq1 1 0.784314 rgBT /@verlock	1.4	1
96	Gas-Phase Reaction Kinetics of the Ortho and Ipso Adducts 1,2,4,5-Tetramethylbenzeneâ€“OH with O ₂ . ACS Earth and Space Chemistry, 2021, 5, 2243-2251.	1.2	2
97	Influence of surface albedo inhomogeneities on passive remote sensing of cirrus properties. , 2013, , .		1