Ralf Tillmann

List of Publications by Year
in descending order

90 papers	6,538 citations	87843 38 h-index	79644 73 g-index
166 all docs	166 docs citations	166 times ranked	4641 citing authors

#	Article	IF	Citations
1	MesSBARâ€”Multicopter and Instrumentation for Air Quality Research. Atmosphere, 2022, 13, 629.	1.0	5
2	Air quality observations onboard commercial and targeted Zeppelin flights in Germany â€“ a platform for high-resolution trace-gas and aerosol measurements within the planetary boundary layer. Atmospheric Measurement Techniques, 2022, 15, 3827-3842.	1.2	1
3	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 /Overlock 10	1.4	3
4	Experimental and theoretical study on the impact of a nitrate group on the chemistry of alkoxy radicals. Physical Chemistry Chemical Physics, 2021, 23, 5474-5495.	1.3	20
5	Gas-Particle Partitioning and SOA Yields of Organonitrate Products from NO₃-Initiated Oxidation of Isoprene under Varied Chemical Regimes. ACS Earth and Space Chemistry, 2021, 5, 785-800.	1.2	15
6	Chemical characterisation of benzene oxidation products under high- and low-NO_{<i>x</i>} conditions using chemical ionisation mass spectrometry. Atmospheric Chemistry and Physics, 2021, 21, 3473-3490.	1.9	16
7	Uptake of Waterâ€soluble Gasâ€phase Oxidation Products Drives Organic Particulate Pollution in Beijing. Geophysical Research Letters, 2021, 48, e2020GL091351.	1.5	24
8	Ubiquitous atmospheric production of organic acids mediated by cloud droplets. Nature, 2021, 593, 233-237.	13.7	71
9	Highly oxygenated organic molecule (HOM) formation in the isoprene oxidation by NO₃ radical. Atmospheric Chemistry and Physics, 2021, 21, 9681-9704.	1.9	30
10	Molecular composition and volatility of multi-generation products formed from isoprene oxidation by nitrate radical. Atmospheric Chemistry and Physics, 2021, 21, 10799-10824.	1.9	19
11	Atmospheric photooxidation and ozonolysis of Î”³-carene and 3-caronaldehyde: rate constants and product yields. Atmospheric Chemistry and Physics, 2021, 21, 12665-12685.	1.9	8
12	Zeppelin-led study on the onset of new particle formation in the planetary boundary layer. Atmospheric Chemistry and Physics, 2021, 21, 12649-12663.	1.9	9
13	Theoretical and experimental study of peroxy and alkoxy radicals in the NO₃-initiated oxidation of isoprene. Physical Chemistry Chemical Physics, 2021, 23, 5496-5515.	1.3	22
14	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
15	Highly Oxygenated Organic Nitrates Formed from NO₃ Radical-Initiated Oxidation of Î²-Pinene. Environmental Science & Technology, 2021, 55, 15658-15671.	4.6	17
16	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
17	Multi-generation OH oxidation as a source for highly oxygenated organic molecules from aromatics. Atmospheric Chemistry and Physics, 2020, 20, 515-537.	1.9	78
18	Impact of NO_{<i>x</i>} on secondary organic aerosolÂ(SOA) formation from <i>Î±</i>-pinene and <i>Î²</i>-pinene photooxidation: the role of highly oxygenated organic nitrates. Atmospheric Chemistry and Physics, 2020, 20, 10125-10147.	1.9	40

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19	Evolution of NO₃ reactivity during the oxidation of isoprene. Atmospheric Chemistry and Physics, 2020, 20, 10459-10475.	1.9	10
20	Photooxidation of pinonaldehyde at ambient conditions investigated in the atmospheric simulation chamber SAPHIR. Atmospheric Chemistry and Physics, 2020, 20, 13701-13719.	1.9	6
21	New application of direct analysis in real time highâ€resolution mass spectrometry for the untargeted analysis of fresh and aged secondary organic aerosols generated from monoterpenes. Rapid Communications in Mass Spectrometry, 2019, 33, 50-59.	0.7	1
22	Secondary organic aerosol reduced by mixture of atmospheric vapours. Nature, 2019, 565, 587-593.	13.7	222
23	Investigation of the <i>Î±</i>-pinene photooxidation by OH in the atmospheric simulation chamber SAPHIR. Atmospheric Chemistry and Physics, 2019, 19, 11635-11649.	1.9	17
24	Validity and limitations of simple reaction kinetics to calculate concentrations of organic compounds from ion counts in PTR-MS. Atmospheric Measurement Techniques, 2019, 12, 6193-6208.	1.2	53
25	Effects of NO_{<i>x</i>} and SO₂ on the secondary organic aerosol formation from photooxidation of <i>Î±</i>-pinene and limonene. Atmospheric Chemistry and Physics, 2018, 18, 1611-1628.	1.9	110
26	Evaluation of OH and HO₂ concentrations and their budgets during photooxidation of 2-methyl-3-butene-2-ol (MBO) in the atmospheric simulation chamber SAPHIR. Atmospheric Chemistry and Physics, 2018, 18, 11409-11422.	1.9	20
27	Gas-to-particle partitioning of major biogenic oxidation products: a study on freshly formed and aged biogenic SOA. Atmospheric Chemistry and Physics, 2018, 18, 12969-12989.	1.9	18
28	Comparison of three aerosol chemical characterization techniques utilizing PTR-ToF-MS: a study on freshly formed and aged biogenic SOA. Atmospheric Measurement Techniques, 2018, 11, 1481-1500.	1.2	17
29	Investigation of the oxidation of methyl vinyl ketone (MVK) by OH radicals in the atmospheric simulation chamber SAPHIR. Atmospheric Chemistry and Physics, 2018, 18, 8001-8016.	1.9	22
30	Environmental conditions regulate the impact of plants on cloud formation. Nature Communications, 2017, 8, 14067.	5.8	62
31	Ambient and laboratory observations of organic ammonium salts in PM₁. Faraday Discussions, 2017, 200, 331-351.	1.6	14
32	Investigation of the <i>Î²</i>-pinene photooxidation by OH in the atmosphere simulation chamber SAPHIR. Atmospheric Chemistry and Physics, 2017, 17, 6631-6650.	1.9	27
33	Comparison of OH reactivity measurements in the atmospheric simulation chamber SAPHIR. Atmospheric Measurement Techniques, 2017, 10, 4023-4053.	1.2	74
34	A new plant chamber facility, PLUS, coupled to the atmosphere simulation chamber SAPHIR. Atmospheric Measurement Techniques, 2016, 9, 1247-1259.	1.2	15
35	Investigation of potential interferences in the detection of atmospheric RO_{<i>x</i>} radicals by laser-induced fluorescence under dark conditions. Atmospheric Measurement Techniques, 2016, 9, 1431-1447.	1.2	49
36	A chamber study of the influence of boreal BVOC emissions and sulfuric acid on nanoparticle formation rates at ambient concentrations. Atmospheric Chemistry and Physics, 2016, 16, 1955-1970.	1.9	9

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37	Canopy-scale flux measurements and bottom-up emission estimates of volatile organic compounds from a mixed oak and hornbeam forest in northern Italy. Atmospheric Chemistry and Physics, 2016, 16, 7149-7170.	1.9	27
38	Cloud condensation nuclei activity, droplet growth kinetics, and hygroscopicity of biogenic and anthropogenic secondary organic aerosol (SOA). Atmospheric Chemistry and Physics, 2016, 16, 1105-1121.	1.9	43
39	Impact of NO_{<i>x</i>} and OH on secondary organic aerosol formation from <i>Î²</i>-pinene photooxidation. Atmospheric Chemistry and Physics, 2016, 16, 11237-11248.	1.9	89
40	Studying the vertical aerosol extinction coefficient by comparing in situ airborne data and elastic backscatter lidar. Atmospheric Chemistry and Physics, 2016, 16, 4539-4554.	1.9	33
41	Characterization of total ecosystem-scale biogenic VOC exchange at a Mediterranean oakâ€“hornbeam forest. Atmospheric Chemistry and Physics, 2016, 16, 7171-7194.	1.9	24
42	Sizeâ€dependent hygroscopicity parameter (Îº) and chemical composition of secondary organic cloud condensation nuclei. Geophysical Research Letters, 2015, 42, 10,920.	1.5	31
43	Secondary organic aerosol formation from hydroxyl radical oxidation and ozonolysis of monoterpenes. Atmospheric Chemistry and Physics, 2015, 15, 991-1012.	1.9	67
44	Modelling the contribution of biogenic volatile organic compounds to new particle formation in the JÃ¼lich plant atmosphere chamber. Atmospheric Chemistry and Physics, 2015, 15, 10777-10798.	1.9	19
45	Response to Comment on â€œMissing gas-phase source of HONO inferred from Zeppelin measurements in the troposphereâ€• Science, 2015, 348, 1326-1326.	6.0	10
46	Intercomparison of Hantzsch and fiber-laser-induced-fluorescence formaldehyde measurements. Atmospheric Measurement Techniques, 2014, 7, 1571-1580.	1.2	24
47	Missing Gas-Phase Source of HONO Inferred from Zeppelin Measurements in the Troposphere. Science, 2014, 344, 292-296.	6.0	154
48	Parameterization of Thermal Properties of Aging Secondary Organic Aerosol Produced by Photo-Oxidation of Selected Terpene Mixtures. Environmental Science & Technology, 2014, 48, 6168-6176.	4.6	14
49	A large source of low-volatility secondary organic aerosol. Nature, 2014, 506, 476-479.	13.7	1,448
50	Suppression of new particle formation from monoterpene oxidation by NO_x. Atmospheric Chemistry and Physics, 2014, 14, 2789-2804.	1.9	63
51	Atmospheric photochemistry of aromatic hydrocarbons: OH budgets during SAPHIR chamber experiments. Atmospheric Chemistry and Physics, 2014, 14, 6941-6952.	1.9	21
52	OH regeneration from methacrolein oxidation investigated in the atmosphere simulation chamber SAPHIR. Atmospheric Chemistry and Physics, 2014, 14, 7895-7908.	1.9	38
53	Experimental evidence for efficient hydroxyl radical regeneration in isoprene oxidation. Nature Geoscience, 2013, 6, 1023-1026.	5.4	132
54	Does the onset of new particle formation occur in the planetary boundary layer?. , 2013, , .		1

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55	Secondary aerosol formation from stress-induced biogenic emissions and possible climate feedbacks. Atmospheric Chemistry and Physics, 2013, 13, 8755-8770.	1.9	96
56	Formation of anthropogenic secondary organic aerosol (SOA) and its influence on biogenic SOA properties. Atmospheric Chemistry and Physics, 2013, 13, 2837-2855.	1.9	73
57	Intercomparison of NO₃ radical detection instruments in the atmosphere simulation chamber SAPHIR. Atmospheric Measurement Techniques, 2013, 6, 1111-1140.	1.2	49
58	Comparison of OH concentration measurements by DOAS and LIF during SAPHIR chamber experiments at high OH reactivity and low NO concentration. Atmospheric Measurement Techniques, 2012, 5, 1611-1626.	1.2	75
59	Comparison of N₂O₅ mixing ratios during NO3Comp 2007 in SAPHIR. Atmospheric Measurement Techniques, 2012, 5, 2763-2777.	1.2	21
60	Aging of biogenic secondary organic aerosol via gas-phase OH radical reactions. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 13503-13508.	3.3	251
61	Isoprene in poplar emissions: effects on new particle formation and OH concentrations. Atmospheric Chemistry and Physics, 2012, 12, 1021-1030.	1.9	47
62	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
63	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
64	Irreversible impacts of heat on the emissions of monoterpenes, sesquiterpenes, phenolic BVOC and green leaf volatiles from several tree species. Biogeosciences, 2012, 9, 5111-5123.	1.3	84
65	Aerosol mass spectrometric measurements of stable crystal hydrates of oxalates and inferred relative ionization efficiency of water. Journal of Aerosol Science, 2011, 42, 11-19.	1.8	24
66	Volatility of secondary organic aerosol during OH radical induced ageing. Atmospheric Chemistry and Physics, 2011, 11, 11055-11067.	1.9	66
67	SOA from limonene: role of NO₃ in its generation and degradation. Atmospheric Chemistry and Physics, 2011, 11, 3879-3894.	1.9	123
68	Isotope effect in the formation of H₂ from H₂CO studied at the atmospheric simulation chamber SAPHIR. Atmospheric Chemistry and Physics, 2010, 10, 5343-5357.	1.9	25
69	Influence of relative humidity and temperature on the production of pinonaldehyde and OH radicals from the ozonolysis of Î±-pinene. Atmospheric Chemistry and Physics, 2010, 10, 7057-7072.	1.9	61
70	The chemical and microphysical properties of secondary organic aerosols from Holm Oak emissions. Atmospheric Chemistry and Physics, 2010, 10, 7253-7265.	1.9	55
71	Novel method of generation of Ca(HCO₃)₂ and CaCO₃ aerosols and first determination of hygroscopic and cloud condensation nuclei activation properties. Atmospheric Chemistry and Physics, 2010, 10, 8601-8616.	1.9	22
72	Intercomparison of measurements of NO₂ concentrations in the atmosphere simulation chamber SAPHIR during the NO3Comp campaign. Atmospheric Measurement Techniques, 2010, 3, 21-37.	1.2	77

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73	Soluble mass, hygroscopic growth, and droplet activation of coated soot particles during LACIS Experiment in November (LExNo). Journal of Geophysical Research, 2010, 115, .	3.3	40
74	Examination of laboratoryâ€generated coated soot particles: An overview of the LACIS Experiment in November (LExNo) campaign. Journal of Geophysical Research, 2010, 115, .	3.3	25
75	New particle formation in forests inhibited by isoprene emissions. Nature, 2009, 461, 381-384.	13.7	253
76	Aerosol Mass Spectrometric Features of Biogenic SOA: Observations from a Plant Chamber and in Rural Atmospheric Environments. Environmental Science & Technology, 2009, 43, 8166-8172.	4.6	75
77	Temperature dependence of the rate coefficient for the Î±-pinene reaction with ozone in the range between 243 K and 303 K. Physical Chemistry Chemical Physics, 2009, 11, 2323.	1.3	4
78	Stable carbon isotope composition of secondary organic aerosol from Î²â€pinene oxidation. Journal of Geophysical Research, 2009, 114, .	3.3	51
79	Organic nitrate and secondary organic aerosol yield from NO₃ oxidation of Î²-pinene evaluated using a gas-phase kinetics/aerosol partitioning model. Atmospheric Chemistry and Physics, 2009, 9, 1431-1449.	1.9	277
80	Temperature dependence of yields of secondary organic aerosols from the ozonolysis of <i>Î±</i>-pinene and limonene. Atmospheric Chemistry and Physics, 2009, 9, 1551-1577.	1.9	190
81	Isoprene oxidation by nitrate radical: alkyl nitrate and secondary organic aerosol yields. Atmospheric Chemistry and Physics, 2009, 9, 6685-6703.	1.9	208
82	Photochemical production of aerosols from real plant emissions. Atmospheric Chemistry and Physics, 2009, 9, 4387-4406.	1.9	133
83	Intercomparison of oxygenated volatile organic compound measurements at the SAPHIR atmosphere simulation chamber. Journal of Geophysical Research, 2008, 113, .	3.3	78
84	Technical Note: Intercomparison of formaldehyde measurements at the atmosphere simulation chamber SAPHIR. Atmospheric Chemistry and Physics, 2008, 8, 2189-2200.	1.9	97
85	Investigation of the formaldehyde differential absorption cross section at high and low spectral resolution in the simulation chamber SAPHIR. Atmospheric Chemistry and Physics, 2007, 7, 3579-3586.	1.9	25
86	Simulation chamber investigation of the reactions of ozone with shortâ€chained alkenes. Journal of Geophysical Research, 2007, 112, .	3.3	83
87	Intercomparison of Two Hydroxyl Radical Measurement Techniques at the Atmosphere Simulation Chamber SAPHIR. Journal of Atmospheric Chemistry, 2007, 56, 187-205.	1.4	76
88	OH-initiated degradation of several hydrocarbons in the atmosphere simulation chamber SAPHIR. Journal of Atmospheric Chemistry, 2007, 57, 203-214.	1.4	18
89	Size dependent partitioning of organic material: evidence for the formation of organic coatings on aqueous aerosols. Journal of Atmospheric Chemistry, 2007, 57, 215-237.	1.4	38
90	On the Reactive Uptake of Gaseous Compounds by Organic-Coated Aqueous Aerosols:Â Theoretical Analysis and Application to the Heterogeneous Hydrolysis of N2O5. Journal of Physical Chemistry A, 2006, 110, 10435-10443.	1.1	168