

# Markus Kalberer

## List of Publications by Year in descending order

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55  
papers

2,987  
citations

172207

29  
h-index

174990

52  
g-index

79  
all docs

79  
docs citations

79  
times ranked

3468  
citing authors

#	ARTICLE	IF	CITATIONS
1	The Molecular Identification of Organic Compounds in the Atmosphere: State of the Art and Challenges. <i>Chemical Reviews</i> , 2015, 115, 3919-3983.	23.0	417
2	Elemental Composition of HULIS in the Pearl River Delta Region, China: Results Inferred from Positive and Negative Electrospray High Resolution Mass Spectrometric Data. <i>Environmental Science &amp; Technology</i> , 2012, 46, 7454-7462.	4.6	218
3	Secondary Organic Aerosol Formation by Irradiation of 1,3,5-Trimethylbenzene+NO+H <sub>2</sub> O in a New Reaction Chamber for Atmospheric Chemistry and Physics. <i>Environmental Science &amp; Technology</i> , 2005, 39, 2668-2678.	4.6	191
4	Ultrahigh Mass Resolution and Accurate Mass Measurements as a Tool To Characterize Oligomers in Secondary Organic Aerosols. <i>Analytical Chemistry</i> , 2007, 79, 4074-4082.	3.2	168
5	Organosulfates in Humic-like Substance Fraction Isolated from Aerosols at Seven Locations in East Asia: A Study by Ultra-High-Resolution Mass Spectrometry. <i>Environmental Science &amp; Technology</i> , 2012, 46, 13118-13127.	4.6	166
6	Compilation and evaluation of gas phase diffusion coefficients of reactive trace gases in the atmosphere: volume 1. Inorganic compounds. <i>Atmospheric Chemistry and Physics</i> , 2014, 14, 9233-9247.	1.9	115
7	Introduction to the special issue "In-depth study of air pollution sources and processes within Beijing and its surrounding region (APHH-Beijing)". <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 7519-7546.	1.9	95
8	An extractive electrospray ionization time-of-flight mass spectrometer (EESI-TOF) for online measurement of atmospheric aerosol particles. <i>Atmospheric Measurement Techniques</i> , 2019, 12, 4867-4886.	1.2	91
9	Molecular Composition of Boreal Forest Aerosol from Hyytiälä, Finland, Using Ultrahigh Resolution Mass Spectrometry. <i>Environmental Science &amp; Technology</i> , 2013, 47, 4069-4079.	4.6	85
10	Enhanced Volatile Organic Compounds emissions and organic aerosol mass increase the oligomer content of atmospheric aerosols. <i>Scientific Reports</i> , 2016, 6, 35038.	1.6	80
11	Compilation and evaluation of gas phase diffusion coefficients of reactive trace gases in the atmosphere: Volume 2. Diffusivities of organic compounds, pressure-normalised mean free paths, and average Knudsen numbers for gas uptake calculations. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 5585-5598.	1.9	78
12	Molecular composition of organic aerosols in central Amazonia: an ultra-high-resolution mass spectrometry study. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 11899-11913.	1.9	73
13	Toxicity of aged gasoline exhaust particles to normal and diseased airway epithelia. <i>Scientific Reports</i> , 2015, 5, 11801.	1.6	71
14	Fluorescent lifetime imaging of atmospheric aerosols: a direct probe of aerosol viscosity. <i>Faraday Discussions</i> , 2013, 165, 343.	1.6	69
15	Atmospheric Analytical Chemistry. <i>Analytical Chemistry</i> , 2011, 83, 4649-4664.	3.2	62
16	Characterizing an Extractive Electrospray Ionization (EESI) Source for the Online Mass Spectrometry Analysis of Organic Aerosols. <i>Environmental Science &amp; Technology</i> , 2013, 47, 7324-7331.	4.6	58
17	Observations of sesquiterpenes and their oxidation products in central Amazonia during the wet and dry seasons. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 10433-10457.	1.9	53
18	Molecular composition of organic aerosols at urban background and road tunnel sites using ultra-high resolution mass spectrometry. <i>Faraday Discussions</i> , 2016, 189, 51-68.	1.6	50

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19	Radical Formation by Fine Particulate Matter Associated with Highly Oxygenated Molecules. <i>Environmental Science &amp; Technology</i> , 2019, 53, 12506-12518.	4.6	45
20	Effect of Atmospheric Aging on Soot Particle Toxicity in Lung Cell Models at the Air-Liquid Interface: Differential Toxicological Impacts of Biogenic and Anthropogenic Secondary Organic Aerosols (SOAs). <i>Environmental Health Perspectives</i> , 2022, 130, 27003.	2.8	44
21	An automated online instrument to quantify aerosol-bound reactive oxygen species (ROS) for ambient measurement and health-relevant aerosol studies. <i>Atmospheric Measurement Techniques</i> , 2016, 9, 4891-4900.	1.2	43
22	A light-driven burst of hydroxyl radicals dominates oxidation chemistry in newly activated cloud droplets. <i>Science Advances</i> , 2019, 5, eaav7689.	4.7	41
23	Responses of lung cells to realistic exposure of primary and aged carbonaceous aerosols. <i>Atmospheric Environment</i> , 2013, 68, 143-150.	1.9	40
24	Impact of anthropogenic and biogenic sources on the seasonal variation in the molecular composition of urban organic aerosols: a field and laboratory study using ultra-high-resolution mass spectrometry. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 5973-5991.	1.9	40
25	Seasonal differences of urban organic aerosol composition – an ultra-high resolution mass spectrometry study. <i>Environmental Chemistry</i> , 2012, 9, 298.	0.7	39
26	Atmospheric conditions and composition that influence PM <sub>2.5</sub> oxidative potential in Beijing, China. <i>Atmospheric Chemistry and Physics</i> , 2021, 21, 5549-5573.	1.9	38
27	Dynamic viscosity mapping of the oxidation of squalene aerosol particles. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 30385-30393.	1.3	37
28	Multiphase composition changes and reactive oxygen species formation during limonene oxidation in the new Cambridge Atmospheric Simulation Chamber (CASC). <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 9853-9868.	1.9	34
29	The effect of humidity on the ozonolysis of unsaturated compounds in aerosol particles. <i>Physical Chemistry Chemical Physics</i> , 2012, 14, 8023.	1.3	31
30	Are reactive oxygen species (ROS) a suitable metric to predict toxicity of carbonaceous aerosol particles?. <i>Atmospheric Chemistry and Physics</i> , 2022, 22, 1793-1809.	1.9	30
31	Online Quantification of Criegee Intermediates of $\alpha$ -Pinene Ozonolysis by Stabilization with Spin Traps and Proton-Transfer Reaction Mass Spectrometry Detection. <i>Journal of the American Chemical Society</i> , 2017, 139, 3999-4008.	6.6	29
32	A new processing scheme for ultra-high resolution direct infusion mass spectrometry data. <i>Atmospheric Environment</i> , 2018, 178, 129-139.	1.9	26
33	Formation of metal-organic ligand complexes affects solubility of metals in airborne particles at an urban site in the Po valley. <i>Chemosphere</i> , 2020, 241, 125025.	4.2	26
34	Quantification of Particle-Bound Organic Radicals in Secondary Organic Aerosol. <i>Environmental Science &amp; Technology</i> , 2019, 53, 6729-6737.	4.6	25
35	Observations of sesquiterpenes and their oxidation products in central Amazonia during the wet and dry seasons. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 10433-10457.	1.9	22
36	Mass Spectrometry Characterization of Peroxycarboxylic Acids as Proxies for Reactive Oxygen Species and Highly Oxygenated Molecules in Atmospheric Aerosols. <i>Analytical Chemistry</i> , 2017, 89, 2873-2879.	3.2	19

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37	Development of a Physiologically Relevant Online Chemical Assay To Quantify Aerosol Oxidative Potential. <i>Analytical Chemistry</i> , 2019, 91, 13088-13095.	3.2	19
38	Direct target and non-target analysis of urban aerosol sample extracts using atmospheric pressure photoionisation high-resolution mass spectrometry. <i>Chemosphere</i> , 2019, 224, 786-795.	4.2	18
39	Exposure to naphthalene and $\beta$ -pinene-derived secondary organic aerosol induced divergent changes in transcript levels of BEAS-2B cells. <i>Environment International</i> , 2022, 166, 107366.	4.8	18
40	Direct Surface Analysis Coupled to High-Resolution Mass Spectrometry Reveals Heterogeneous Composition of the Cuticle of <i>Hibiscus trionum</i> Petals. <i>Analytical Chemistry</i> , 2015, 87, 9900-9907.	3.2	17
41	Heterogeneous reaction of ClONO <sub>2</sub> with TiO <sub>2</sub> and SiO <sub>2</sub> aerosol particles: implications for stratospheric particle injection for climate engineering. <i>Atmospheric Chemistry and Physics</i> , 2016, 16, 15397-15412.	1.9	16
42	Factors Affecting the Ambient Physicochemical Properties of Cerium-Containing Particles Generated by Nanoparticle Diesel Fuel Additive Use. <i>Aerosol Science and Technology</i> , 2015, 49, 371-380.	1.5	15
43	Online molecular characterisation of organic aerosols in an atmospheric chamber using extractive electrospray ionisation mass spectrometry. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 14485-14500.	1.9	15
44	Synthesis and characterisation of peroxydic acids as proxies for highly oxygenated molecules (HOMs) in secondary organic aerosol. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 10973-10983.	1.9	15
45	Differences in the composition of organic aerosols between winter and summer in Beijing: a study by direct-infusion ultrahigh-resolution mass spectrometry. <i>Atmospheric Chemistry and Physics</i> , 2020, 20, 13303-13318.	1.9	15
46	Cloud Processing of Secondary Organic Aerosol from Isoprene and Methacrolein Photooxidation. <i>Journal of Physical Chemistry A</i> , 2017, 121, 7641-7654.	1.1	14
47	1064 nm Dispersive Raman Microspectroscopy and Optical Trapping of Pharmaceutical Aerosols. <i>Analytical Chemistry</i> , 2018, 90, 8838-8844.	3.2	14
48	Particulate mass sensing with piezoelectric bulk acoustic mode resonators. , 2016, , .		11
49	Measuring Aerosol Phase Changes and Hygroscopicity with a Microresonator Mass Sensor. <i>Analytical Chemistry</i> , 2018, 90, 9716-9724.	3.2	8
50	Ultra-fine Particulate Detection using Mode-localized MEMS Resonators. , 2019, , .		7
51	Direct Injection Liquid Chromatography High-Resolution Mass Spectrometry for Determination of Primary and Secondary Terrestrial and Marine Biomarkers in Ice Cores. <i>Analytical Chemistry</i> , 2019, 91, 5051-5057.	3.2	6
52	Direct Depolymerization Coupled to Liquid Extraction Surface Analysis-High-Resolution Mass Spectrometry for the Characterization of the Surface of Plant Tissues. <i>Analytical Chemistry</i> , 2019, 91, 8326-8333.	3.2	5
53	A new method for the determination of primary and secondary terrestrial and marine biomarkers in ice cores using liquid chromatography high-resolution mass spectrometry. <i>Talanta</i> , 2019, 194, 233-242.	2.9	5
54	Compositional Analysis of Adsorbed Organic Aerosol on a Microresonator Mass Sensor. <i>Aerosol Science and Engineering</i> , 2018, 2, 118-129.	1.1	3

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55	Extending the Lifetime of Resonant Atmospheric Particulate Mass Sensors With Solvent Rinses. , 2017, 1, 1-4.		2