Frank Keutsch

List of Publications by Year
in descending order

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73	3,272	136950	168389
papers	citations	32 h-index	53 g-index

76	76	76	3721
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Insights into hydroxyl measurements and atmospheric oxidation in a California forest. Atmospheric Chemistry and Physics, 2012, 12, 8009-8020.	4.9	211
2	Formation of Low Volatility Organic Compounds and Secondary Organic Aerosol from Isoprene Hydroxyhydroperoxide Low-NO Oxidation. Environmental Science & Technology, 2015, 49, 10330-10339.	10.0	172
3	Formaldehyde (HCHO) As a Hazardous Air Pollutant: Mapping Surface Air Concentrations from Satellite and Inferring Cancer Risks in the United States. Environmental Science & Technology, 2017, 51, 5650-5657.	10.0	131
4	The Green Ocean Amazon Experiment (GoAmazon2014/5) Observes Pollution Affecting Gases, Aerosols, Clouds, and Rainfall over the Rain Forest. Bulletin of the American Meteorological Society, 2017, 98, 981-997.	3.3	128
5	Formaldehyde production from isoprene oxidation acrossÂNO_{<i>x</i>}Âregimes. Atmospheric Chemistry and Physics, 2016, 16, 2597-2610.	4.9	124
6	Kinetics and Products of the Reaction of the First-Generation Isoprene Hydroxy Hydroperoxide (ISOPOOH) with OH. Journal of Physical Chemistry A, 2016, 120, 1441-1451.	2.5	111
7	Observations of deep convective influence on stratospheric water vapor and its isotopic composition. Geophysical Research Letters, 2007, 34, .	4.0	109
8	Stratospheric solar geoengineering without ozone loss. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 14910-14914.	7.1	108
9	Atmospheric benzenoid emissions from plants rival those from fossil fuels. Scientific Reports, 2015, 5, 12064.	3.3	104
10	Efficient Isoprene Secondary Organic Aerosol Formation from a Non-IEPOX Pathway. Environmental Science & Technology, 2016, 50, 9872-9880.	10.0	100
11	Conversion of hydroperoxides to carbonyls in field and laboratory instrumentation: Observational bias in diagnosing pristine versus anthropogenically controlled atmospheric chemistry. Geophysical Research Letters, 2014, 41, 8645-8651.	4.0	99
12	Airborne measurements of organosulfates over the continental U.S.. Journal of Geophysical Research D: Atmospheres, 2015, 120, 2990-3005.	3.3	96
13	Photolysis, OH reactivity and ozone reactivity of a proxy for isoprene-derived hydroperoxyenals (HPALDs). Physical Chemistry Chemical Physics, 2012, 14, 7276.	2.8	86
14	Isoprene photochemistry over the Amazon rainforest. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 6125-6130.	7.1	85
15	The Essential Role for Laboratory Studies in Atmospheric Chemistry. Environmental Science & Technology, 2017, 51, 2519-2528.	10.0	75
16	Improved aerosol radiative properties as a foundation for solar geoengineering risk assessment. Geophysical Research Letters, 2016, 43, 7758-7766.	4.0	74
17	Contribution of Hydroxymethane Sulfonate to Ambient Particulate Matter: A Potential Explanation for High Particulate Sulfur During Severe Winter Haze in Beijing. Geophysical Research Letters, 2018, 45, 11,969.	4.0	72
18	Modeling Ozone in the Eastern U.S. using a Fuel-Based Mobile Source Emissions Inventory. Environmental Science & Technology, 2018, 52, 7360-7370.	10.0	64

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19	OH and HO₂ radical chemistry during PROPHET 2008 and CABINEX 2009 â€“ Part 1: Measurements and model comparison. Atmospheric Chemistry and Physics, 2013, 13, 5403-5423.	4.9	62
20	Complete characterization of the water dimer vibrational ground state and testing the VRT(ASP-W)III, SAPT-5st, and VRT(MCY-5f) surfaces. Molecular Physics, 2003, 101, 3477-3492.	1.7	59
21	Speciation of OH reactivity above the canopy of an isoprene-dominated forest. Atmospheric Chemistry and Physics, 2016, 16, 9349-9359.	4.9	59
22	Instrumentation and measurement strategy for the NOAA SENEX aircraft campaign as part of the Southeast Atmosphere Study 2013. Atmospheric Measurement Techniques, 2016, 9, 3063-3093.	3.1	58
23	A comprehensive organic nitrate chemistry: insights into the lifetime of atmospheric organic nitrates. Atmospheric Chemistry and Physics, 2018, 18, 15419-15436.	4.9	57
24	Analysis of photochemical and dark glyoxal uptake: Implications for SOA formation. Geophysical Research Letters, 2011, 38, n/a-n/a.	4.0	56
25	Missing peroxy radical sources within a summertime ponderosa pine forest. Atmospheric Chemistry and Physics, 2014, 14, 4715-4732.	4.9	56
26	Ozone production chemistry in the presence of urban plumes. Faraday Discussions, 2016, 189, 169-189.	3.2	56
27	Testing Atmospheric Oxidation in an Alabama Forest. Journals of the Atmospheric Sciences, 2016, 73, 4699-4710.	1.7	54
28	Mechanistic study of the formation of ring-retaining and ring-opening products from the oxidation of aromatic compounds under urban atmospheric conditions. Atmospheric Chemistry and Physics, 2019, 19, 15117-15129.	4.9	52
29	Formation and growth of ultrafine particles from secondary sources in Bakersfield, California. Journal of Geophysical Research, 2012, 117, .	3.3	51
30	Observational constraints on glyoxal production from isoprene oxidation and its contribution to organic aerosol over the Southeast United States. Journal of Geophysical Research D: Atmospheres, 2016, 121, 9849-9861.	3.3	48
31	Photochemical modeling of glyoxal at a rural site: observations and analysis from BEARPEX 2007. Atmospheric Chemistry and Physics, 2011, 11, 8883-8897.	4.9	41
32	Emissions of Glyoxal and Other Carbonyl Compounds from Agricultural Biomass Burning Plumes Sampled by Aircraft. Environmental Science & Technology, 2017, 51, 11761-11770.	10.0	38
33	Isoprene suppression of new particle formation: Potential mechanisms and implications. Journal of Geophysical Research D: Atmospheres, 2016, 121, 14,621.	3.3	37
34	Kinetics and Product Yields of the OH Initiated Oxidation of Hydroxymethyl Hydroperoxide. Journal of Physical Chemistry A, 2018, 122, 6292-6302.	2.5	33
35	Using collision-induced dissociation to constrain sensitivity of ammonia chemical ionization mass spectrometry (NH₄⁺) Tj ETQq1 1 0.784314 rg 1861-1870.	3.1	33
36	Sulfate Formation via Cloud Processing from Isoprene Hydroxyl Hydroperoxides (ISOPOOH). Environmental Science & Technology, 2019, 53, 12476-12484.	10.0	31

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37	Isoprene photo-oxidation products quantify the effect of pollution on hydroxyl radicals over Amazonia. Science Advances, 2018, 4, eaar2547.	10.3	28
38	Global Importance of Hydroxymethanesulfonate in Ambient Particulate Matter: Implications for Air Quality. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2020JD032706.	3.3	28
39	Measurement techniques for identifying and quantifying hydroxymethanesulfonate (HMS) in an aqueous matrix and particulate matter using aerosol mass spectrometry and ion chromatography. Atmospheric Measurement Techniques, 2019, 12, 5303-5315.	3.1	23
40	Intercomparison of OH and OH reactivity measurements in a high isoprene and low NO environment during the Southern Oxidant and Aerosol Study (SOAS). Atmospheric Environment, 2018, 174, 227-236.	4.1	22
41	Aqueous-Phase Decomposition of Isoprene Hydroxy Hydroperoxide and Hydroxyl Radical Formation by Fenton-like Reactions with Iron Ions. Journal of Physical Chemistry A, 2020, 124, 5230-5236.	2.5	21
42	Organic Sulfur Products and Peroxy Radical Isomerization in the OH Oxidation of Dimethyl Sulfide. ACS Earth and Space Chemistry, 2021, 5, 2013-2020.	2.7	20
43	Evaluating the Impact of Chemical Complexity and Horizontal Resolution on Tropospheric Ozone Over the Conterminous US With a Global Variable Resolution Chemistry Model. Journal of Advances in Modeling Earth Systems, 2022, 14, .	3.8	20
44	Dimensionality-reduction techniques for complex mass spectrometric datasets: application to laboratory atmospheric organic oxidation experiments. Atmospheric Chemistry and Physics, 2020, 20, 1021-1041.	4.9	19
45	Catalytic role of formaldehyde in particulate matter formation. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	7.1	19
46	What Are the Different Measures of Mobility Telling Us About Surface Transportation CO₂ Emissions During the COVIDâ€19 Pandemic?. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD034664.	3.3	17
47	Airborne measurements of the atmospheric emissions from a fuel ethanol refinery. Journal of Geophysical Research D: Atmospheres, 2015, 120, 4385-4397.	3.3	16
48	Contrasting Reactive Organic Carbon Observations in the Southeast United States (SOAS) and Southern California (CalNex). Environmental Science & Technology, 2020, 54, 14923-14935.	10.0	15
49	Secondary PM_{2.5} decreases significantly less than NO₂ emission reductions during COVID lockdown in Germany. Atmospheric Chemistry and Physics, 2022, 22, 7105-7129.	4.9	15
50	Fettelite, [Ag6As2S7][Ag10HgAs2S8] from Chanarcillo, Chile: Crystal structure, pseudosymmetry, twinning, and revised chemical formula. American Mineralogist, 2009, 94, 609-615.	1.9	14
51	Real-Time Laboratory Measurements of VOC Emissions, Removal Rates, and Byproduct Formation from Consumer-Grade Oxidation-Based Air Cleaners. Environmental Science and Technology Letters, 2021, 8, 1020-1025.	8.7	14
52	Tropospheric NO₂ and O₃ Response to COVIDâ€19 Lockdown Restrictions at the National and Urban Scales in Germany. Journal of Geophysical Research D: Atmospheres, 2021, 126, e2021JD035440.	3.3	13
53	Menchettiite, AgPb2.40Mn1.60Sb3As2S12, a new sulfosalt belonging to the lillianite series from the Uchucchacua polymetallic deposit, Lima Department, Peru. American Mineralogist, 2012, 97, 440-446.	1.9	11
54	Influence of Particle Physical State on the Uptake of Medium-Sized Organic Molecules. Environmental Science & Technology, 2018, 52, 8381-8389.	10.0	11

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55	Response to Comment on â€œMissing gas-phase source of HONO inferred from Zeppelin measurements in the troposphereâ€• Science, 2015, 348, 1326-1326.	12.6	10
56	PetÅ™ÃÄekite, CuSe2, a New Member of the Marcasite Group from the PÅ™edboÅ™ice Deposit, Central Bohemia Region, Czech Republic. Minerals (Basel, Switzerland), 2016, 6, 33.	2.0	10
57	A new laser-based and ultra-portable gas sensor for indoor and outdoor formaldehyde (HCHO) monitoring. Atmospheric Measurement Techniques, 2019, 12, 6079-6089.	3.1	10
58	Experimental reaction rates constrain estimates of ozone response to calcium carbonate geoengineering. Communications Earth & Environment, 2020, 1, .	6.8	10
59	Hydrocarbon Removal in Power Plant Plumes Shows Nitrogen Oxide Dependence of Hydroxyl Radicals. Geophysical Research Letters, 2019, 46, 7752-7760.	4.0	9
60	Investigation of a potential HCHO measurement artifact from ISOPOOH. Atmospheric Measurement Techniques, 2016, 9, 4561-4568.	3.1	8
61	Manganoquadratite, AgMnAsS3, a new manganese-bearing sulfosalt from the Uchucchacua polymetallic deposit, Lima Department, Peru: Description and crystal structure. American Mineralogist, 2012, 97, 1199-1205.	1.9	6
62	Similarities in STXM-NEXAFS Spectra of Atmospheric Particles and Secondary Organic Aerosol Generated from Glyoxal, Î±-Pinene, Isoprene, 1,2,4-Trimethylbenzene, and d-Limonene. Aerosol Science and Technology, 2013, 47, 543-555.	3.1	6
63	Spryite, $${ext{Ag}}_{8}left({{ext{As}}_{0.5}^{3 +} {ext{As}}_{0.5}^{5 +}}ight){ext{S}}_{6}$$ Ag 8 As 0.5 3 + As 0.5 5 + S 6 : structure determination and inferred absence of superionic conduction of the first As3+-bearing argyrodite. Physics and Chemistry of Minerals, 2017, 44, 75-82.	0.8	6
64	High resolution nanoscale chemical analysis of bitumen surface microstructures. Scientific Reports, 2021, 11, 13554.	3.3	6
65	Reconciling Observed and Predicted Tropical Rainforest OH Concentrations. Journal of Geophysical Research D: Atmospheres, 2022, 127, .	3.3	6
66	Polloneite, a new complex Pb(-Ag)-As-Sb sulfosalt from the Pollone mine, Apuan Alps, Tuscany, Italy. Mineralogical Magazine, 2017, 81, 1303-1322.	1.4	5
67	Old defined minerals with complex, still unresolved structures: the case of stÃ¼tzite, Ag_{5â^’x} Te₃. Zeitschrift Fur Kristallographie - Crystalline Materials, 2018, 233, 247-253.	0.8	5
68	Oyonite, Ag3Mn2Pb4Sb7As4S24, a New Member of the Lillianite Homologous Series from the Uchucchacua Base-Metal Deposit, Oyon District, Peru. Minerals (Basel, Switzerland), 2018, 8, 192.	2.0	5
69	Competition of Partitioning and Reaction Controls Brown Carbon Formation from Butenedial in Particles. Environmental Science & Technology, 2021, 55, 11549-11556.	10.0	4
70	Composition Dependence of Stratospheric Aerosol Shortwave Radiative Forcing in Northern Midâ€latitudes. Geophysical Research Letters, 0, , e2021GL094427.	4.0	4
71	Structural and chemical study of weishanite, (Au,Ag,Hg), from the Keystone mine, Colorado, USA.. Mineralogical Magazine, 2018, 82, 1141-1145.	1.4	2
72	Reply to Comment on â€œHydroxycarboxylic Acid-Derived Organosulfates: Synthesis, Stability and Quantification in Ambient Aerosolâ€• Environmental Science & Technology, 2011, 45, 9111-9111.	10.0	1

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73	Agmantinite, Ag2MnSnS4, a new mineral with a wurtzite derivative structure from the Uchucchacua polymetallic deposit, Lima Department, Peru. Mineralogical Magazine, 2019, 83, 233-238.	1.4	1