

# Alexei F Khalizov

## List of Publications by Year in descending order

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69  
papers

5,045  
citations

172457

29  
h-index

110387

64  
g-index

72  
all docs

72  
docs citations

72  
times ranked

4247  
citing authors

#	ARTICLE	IF	CITATIONS
1	Nucleation and Growth of Nanoparticles in the Atmosphere. <i>Chemical Reviews</i> , 2012, 112, 1957-2011.	47.7	938
2	Variability in morphology, hygroscopicity, and optical properties of soot aerosols during atmospheric processing. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2008, 105, 10291-10296.	7.1	678
3	Atmospheric nanoparticles formed from heterogeneous reactions of organics. <i>Nature Geoscience</i> , 2010, 3, 238-242.	12.9	269
4	Reactions of Gaseous Mercury with Atomic and Molecular Halogens: Kinetics, Product Studies, and Atmospheric Implications. <i>Journal of Physical Chemistry A</i> , 2002, 106, 7310-7320.	2.5	258
5	Formation of nanoparticles of blue haze enhanced by anthropogenic pollution. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2009, 106, 17650-17654.	7.1	244
6	Enhanced Light Absorption and Scattering by Carbon Soot Aerosol Internally Mixed with Sulfuric Acid. <i>Journal of Physical Chemistry A</i> , 2009, 113, 1066-1074.	2.5	200
7	Hydrogen-Bonding Interaction in Molecular Complexes and Clusters of Aerosol Nucleation Precursors. <i>Journal of Physical Chemistry A</i> , 2009, 113, 680-689.	2.5	183
8	Processing of Soot by Controlled Sulphuric Acid and Water Condensation—Mass and Mobility Relationship. <i>Aerosol Science and Technology</i> , 2009, 43, 629-640.	3.1	178
9	New Directions: Light absorbing aerosols and their atmospheric impacts. <i>Atmospheric Environment</i> , 2013, 81, 713-715.	4.1	174
10	Formation of highly hygroscopic soot aerosols upon internal mixing with sulfuric acid vapor. <i>Journal of Geophysical Research</i> , 2009, 114, .	3.3	172
11	Heterogeneous Chemistry of Alkylamines with Sulfuric Acid: Implications for Atmospheric Formation of Alkylammonium Sulfates. <i>Environmental Science &amp; Technology</i> , 2010, 44, 2461-2465.	10.0	130
12	Measurement of atmospheric amines and ammonia using the high resolution time-of-flight chemical ionization mass spectrometry. <i>Atmospheric Environment</i> , 2015, 102, 249-259.	4.1	130
13	Heterogeneous Reactions of Alkylamines with Ammonium Sulfate and Ammonium Bisulfate. <i>Environmental Science &amp; Technology</i> , 2011, 45, 4748-4755.	10.0	113
14	Effects of dicarboxylic acid coating on the optical properties of soot. <i>Physical Chemistry Chemical Physics</i> , 2009, 11, 7869.	2.8	99
15	Effects of Coating of Dicarboxylic Acids on the Mass—Mobility Relationship of Soot Particles. <i>Environmental Science &amp; Technology</i> , 2009, 43, 2787-2792.	10.0	98
16	Heterogeneous Reaction of NO <sub>2</sub> on Fresh and Coated Soot Surfaces. <i>Journal of Physical Chemistry A</i> , 2010, 114, 7516-7524.	2.5	90
17	A Theoretical Study on the Reactions of Hg with Halogens: Atmospheric Implications. <i>Journal of Physical Chemistry A</i> , 2003, 107, 6360-6365.	2.5	88
18	Role of OH-Initiated Oxidation of Isoprene in Aging of Combustion Soot. <i>Environmental Science &amp; Technology</i> , 2013, 47, 2254-2263.	10.0	75

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19	Soot Aging from OH-Initiated Oxidation of Toluene. <i>Environmental Science &amp; Technology</i> , 2012, 46, 9464-9472.	10.0	73
20	Frequency Dependent Complex Refractive Indices of Supercooled Liquid Water and Ice Determined from Aerosol Extinction Spectra. <i>Journal of Physical Chemistry A</i> , 2005, 109, 2760-2764.	2.5	68
21	Volume nucleation rates for homogeneous freezing in supercooled water microdroplets: results from a combined experimental and modelling approach. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 7945-7961.	4.9	62
22	Measurements of submicron aerosols in Houston, Texas during the 2009 SHARP field campaign. <i>Journal of Geophysical Research D: Atmospheres</i> , 2013, 118, 10,518.	3.3	56
23	Heterogeneous Reactions of Epoxides in Acidic Media. <i>Journal of Physical Chemistry A</i> , 2012, 116, 6078-6090.	2.5	42
24	Size dependence of volume and surface nucleation rates for homogeneous freezing of supercooled water droplets. <i>Atmospheric Chemistry and Physics</i> , 2011, 11, 2853-2861.	4.9	40
25	Rapid modification of cloudâ€nucleating ability of aerosols by biogenic emissions. <i>Geophysical Research Letters</i> , 2013, 40, 6293-6297.	4.0	40
26	Role of stabilized Criegee Intermediate in secondary organic aerosol formation from the ozonolysis of Î±-cedrene. <i>Atmospheric Environment</i> , 2014, 94, 448-457.	4.1	40
27	Atmospheric Pressure-Ion Drift Chemical Ionization Mass Spectrometry for Detection of Trace Gas Species. <i>Analytical Chemistry</i> , 2010, 82, 7302-7308.	6.5	39
28	A Novel, One-Pot Synthesis of Novel 3F, 5F, and 8F Aromatic Polymers. <i>Macromolecular Rapid Communications</i> , 2007, 28, 183-187.	3.9	38
29	Superacid-Catalyzed Polycondensation of Acenaphthenequinone with Aromatic Hydrocarbons. <i>Macromolecules</i> , 2005, 38, 6005-6014.	4.8	34
30	Laboratory Investigation on the Role of Organics in Atmospheric Nanoparticle Growth. <i>Journal of Physical Chemistry A</i> , 2011, 115, 8940-8947.	2.5	34
31	Local order and dynamics in supercooled water: A study by IR spectroscopy and molecular dynamic simulations. <i>Journal of Chemical Physics</i> , 2004, 121, 6941-6947.	3.0	31
32	Characterization of Soot Aerosol Produced from Combustion of Propane in a Shock Tube. <i>Aerosol Science and Technology</i> , 2012, 46, 925-936.	3.1	26
33	An unexpected restructuring of combustion soot aggregates by subnanometer coatings of polycyclic aromatic hydrocarbons. <i>Geophysical Research Letters</i> , 2016, 43, 11,080.	4.0	25
34	Sizeâ€resolved measurements of mixing state and cloudâ€nucleating ability of aerosols in Nanjing, China. <i>Journal of Geophysical Research D: Atmospheres</i> , 2017, 122, 9430-9450.	3.3	22
35	Characterization of atmospheric aerosols from infrared measurements: simulations, testing, and applications. <i>Applied Optics</i> , 2004, 43, 5503.	2.1	20
36	Single Parameter for Predicting the Morphology of Atmospheric Black Carbon. <i>Environmental Science &amp; Technology</i> , 2018, 52, 14169-14179.	10.0	19

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37	Retrieval of aerosol physical and chemical properties from mid-infrared extinction spectra. <i>Journal of Quantitative Spectroscopy and Radiative Transfer</i> , 2007, 107, 294-305.	2.3	18
38	High Sensitivity of Diesel Soot Morphological and Optical Properties to Combustion Temperature in a Shock Tube. <i>Environmental Science &amp; Technology</i> , 2014, 48, 6444-6452.	10.0	18
39	Complexes of chlorine dioxide with nitroxyl radicals. <i>Tetrahedron Letters</i> , 1999, 40, 4737-4740.	1.4	16
40	Development and characterization of a laminar aerosol flow tube. <i>Review of Scientific Instruments</i> , 2006, 77, 033102.	1.3	12
41	Direct detection of gas-phase mercuric chloride by ion drift - Chemical ionization mass spectrometry. <i>Atmospheric Environment</i> , 2020, 238, 117687.	4.1	12
42	Vapor Condensation and Coating Evaporation Are Both Responsible for Soot Aggregate Restructuring. <i>Environmental Science &amp; Technology</i> , 2021, 55, 8622-8630.	10.0	12
43	Adamantylhydrotrioxide formation during ozonation of adamantane on silica gel. <i>Mendeleev Communications</i> , 1997, 7, 227-228.	1.6	11
44	Formation of hydrotrioxides during ozonation of hydrocarbons on silica gel. Decomposition of hydrotrioxides. <i>Journal of Physical Organic Chemistry</i> , 2000, 13, 87-96.	1.9	11
45	Complex of chlorine dioxide with TEMPO and its conversion into oxoammonium salt. <i>Journal of Physical Organic Chemistry</i> , 2001, 14, 38-42.	1.9	10
46	Modeling of flow dynamics in laminar aerosol flow tubes. <i>Journal of Aerosol Science</i> , 2006, 37, 1174-1187.	3.8	10
47	ESR studies of radical breakdown for di- <i>t</i> -butyl trioxide. <i>Reaction Kinetics and Catalysis Letters</i> , 1994, 52, 249-254.	0.6	9
48	Effect of organic coatings derived from the OH-initiated oxidation of amines on soot morphology and cloud activation. <i>Atmospheric Research</i> , 2020, 239, 104905.	4.1	8
49	Chemiluminescence in the thermal decomposition of di( <i>tert</i> -butyl) trioxide. <i>Russian Chemical Bulletin</i> , 1993, 42, 1968-1971.	1.5	6
50	The Impact of Sampling Medium and Environment on Particle Morphology. <i>Atmosphere</i> , 2017, 8, 162.	2.3	6
51	Exchange Reactions Alter Molecular Speciation of Gaseous Oxidized Mercury. <i>ACS Earth and Space Chemistry</i> , 2021, 5, 1842-1853.	2.7	6
52	Induced decomposition of di( <i>tert</i> -butyl)trioxide. <i>Russian Chemical Bulletin</i> , 1997, 46, 884-887.	1.5	5
53	Stability of XSO <sub>2</sub> (X=F, Cl, and Br) radical: impact of the basis set on X-S bonding energy in ab initio and DFT calculations. <i>Chemical Physics Letters</i> , 2001, 350, 173-180.	2.6	5
54	Thermal Stability of Particle-Phase Monoethanolamine Salts. <i>Environmental Science &amp; Technology</i> , 2018, 52, 2409-2417.	10.0	5

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55	Chemiluminescent studies for the kinetics of decomposition of Di-(tert-butyl)-trioxide. Reaction Kinetics and Catalysis Letters, 1993, 51, 389-392.	0.6	4
56	Absorption and scattering of light by soot aggregates with uniform and pendular ring coatings. Journal of Aerosol Science, 2020, 147, 105583.	3.8	4
57	Kinetic model for competitive condensation of vapor between concave and convex surfaces in a soot aggregate. Aerosol Science and Technology, 2021, 55, 302-315.	3.1	4
58	Kinetics of radical decomposition of di(tert-butyl) trioxide. Russian Chemical Bulletin, 1999, 48, 61-65.	1.5	3
59	Free-radical chain decomposition of ozone initiated by di(tert-butyl) trioxide. Russian Chemical Bulletin, 2001, 50, 63-67.	1.5	3
60	Heterogeneous Chemistry of Mercuric Chloride on Inorganic Salt Surfaces. Journal of Physical Chemistry A, 2021, 125, 3943-3952.	2.5	3
61	Effect of the medium on the decomposition rate of di-t-butyl trioxide. Reaction Kinetics and Catalysis Letters, 1995, 54, 427-430.	0.6	2
62	Kinetics and Products of Oxidation of 2-Isopropyl-1,3-Dioxolane by Chlorine Dioxide. Reaction Kinetics and Catalysis Letters, 2000, 70, 177-182.	0.6	2
63	Radiatively driven NH <sub>3</sub> release from agricultural field during wintertime slack season. Atmospheric Environment, 2021, 247, 118228.	4.1	2
64	Chemiluminescence in the decomposition of di(tert-butyl) trioxide (CH <sub>3</sub> ) <sub>3</sub> C-OOO-C(CH <sub>3</sub> ) <sub>3</sub> . Russian Chemical Bulletin, 1993, 42, 1609-1610.	1.5	1
65	Effect of medium on the rate constant of decomposition of di(tert-butyl)trioxide. Russian Chemical Bulletin, 1995, 44, 1127-1128.	1.5	1
66	Chemiluminescence during ozonation of adamantane on silica gel. Reaction Kinetics and Catalysis Letters, 1996, 58, 403-406.	0.6	1
67	Molecular Simulation of Benzene Adsorption in Graphitic and Amorphous Carbon Slit Pores. Journal of Chemical & Engineering Data, 2022, 67, 1765-1778.	1.9	1
68	Interaction of singlet oxygen with biomolecules, 2.1O <sub>2</sub> quenching by glycyrrhizic acid derivatives. Reaction Kinetics and Catalysis Letters, 1998, 63, 279-282.	0.6	0
69	A Theoretical Study on the Reactions of Hg with Halogens: Atmospheric Implications.. ChemInform, 2003, 34, no.	0.0	0