

Margaret A Tolbert

List of Publications by Year in descending order

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87
papers

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116194

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3753
citing authors

#	ARTICLE	IF	CITATIONS
1	Trace H ₂ S Promotes Organic Aerosol Production and Organosulfur Compound Formation in Archean Analog Haze Photochemistry Experiments. <i>Geophysical Research Letters</i> , 2022, 49, .	1.5	4
2	Seeded Crystal Growth of Internally Mixed Organic-Inorganic Aerosols: Impact of Organic Phase State. <i>Journal of Physical Chemistry A</i> , 2021, 125, 8668-8679.	1.1	12
3	Probing Heterogeneous Efflorescence of Mars-Relevant Salts with an Optical Levitator. <i>ACS Earth and Space Chemistry</i> , 2020, 4, 1947-1956.	1.2	1
4	Impact of Hydrogen Sulfide on Photochemical Haze Formation in Methane/Nitrogen Atmospheres. <i>ACS Earth and Space Chemistry</i> , 2020, 4, 897-904.	1.2	8
5	The Impact of Molecular Oxygen on Anion Composition in a Hazy Archean Earth Atmosphere. <i>Astrobiology</i> , 2020, 20, 658-669.	1.5	4
6	Brown Carbon Production by Aqueous-Phase Interactions of Glyoxal and SO ₂ . <i>Environmental Science & Technology</i> , 2020, 54, 4781-4789.	4.6	18
7	Changes in Soil Cohesion Due to Water Vapor Exchange: A Proposed Dry-Flow Trigger Mechanism for Recurring Slope Lineae on Mars. <i>Geophysical Research Letters</i> , 2020, 47, e2020GL087618.	1.5	22
8	The Influence of Gas-phase Chemistry on Organic Haze Formation. <i>Astrophysical Journal Letters</i> , 2019, 885, L6.	3.0	15
9	Chemical Composition of Gas-Phase Positive Ions during Laboratory Simulations of Titan's Haze Formation. <i>ACS Earth and Space Chemistry</i> , 2019, 3, 202-211.	1.2	11
10	Constraining the Potential Liquid Water Environment at Gale Crater, Mars. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 1156-1167.	1.5	40
11	Immersion and Contact Efflorescence Induced by Mineral Dust Particles. <i>Journal of Physical Chemistry A</i> , 2018, 122, 1303-1311.	1.1	10
12	Laboratory investigations of Titan haze formation: In situ measurement of gas and particle composition. <i>Icarus</i> , 2018, 301, 136-151.	1.1	37
13	Compositional and Mineralogical Effects on Ice Nucleation Activity of Volcanic Ash. <i>Atmosphere</i> , 2018, 9, 238.	1.0	9
14	Exploring the Atmosphere of Neoproterozoic Earth: The Effect of O ₂ on Haze Formation and Composition. <i>Astrophysical Journal</i> , 2018, 858, 119.	1.6	18
15	The Effect of Oxygen on Organic Haze Properties. <i>Astrophysical Journal Letters</i> , 2018, 859, L2.	3.0	10
16	The Effect of Mars-Relevant Soil Analogs on the Water Uptake of Magnesium Perchlorate and Implications for the Near-Surface of Mars. <i>Journal of Geophysical Research E: Planets</i> , 2018, 123, 2076-2088.	1.5	18
17	Laboratory Investigations on the Survival of <i>Bacillus subtilis</i> Spores in Deliquescent Salt Mars Analog Environments. <i>Astrobiology</i> , 2017, 17, 997-1008.	1.5	20
18	Crystal nucleation initiated by transient ion-surface interactions at aerosol interfaces. <i>Science Advances</i> , 2017, 3, e1700425.	4.7	16

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19	Follow the Carbon: Isotopic Labeling Studies of Early Earth Aerosol. <i>Astrobiology</i> , 2016, 16, 822-830.	1.5	29
20	The aqueous stability of a Mars salt analog: Instant Mars. <i>Journal of Geophysical Research E: Planets</i> , 2015, 120, 588-598.	1.5	21
21	Deposition and immersion-mode nucleation of ice by three distinct samples of volcanic ash. <i>Atmospheric Chemistry and Physics</i> , 2015, 15, 7523-7536.	1.9	28
22	Contact efflorescence as a pathway for crystallization of atmospherically relevant particles. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2015, 112, 15815-15820.	3.3	45
23	Long Working-Distance Optical Trap for in Situ Analysis of Contact-Induced Phase Transformations. <i>Analytical Chemistry</i> , 2015, 87, 6186-6194.	3.2	33
24	Sensitivity of Aerosol Refractive Index Retrievals Using Optical Spectroscopy. <i>Aerosol Science and Technology</i> , 2014, 48, 1133-1144.	1.5	58
25	THE EFFECT OF CARBON MONOXIDE ON PLANETARY HAZE FORMATION. <i>Astrophysical Journal</i> , 2014, 781, 53.	1.6	34
26	Optical growth of highly viscous organic/sulfate particles. <i>Journal of Atmospheric Chemistry</i> , 2014, 71, 145-156.	1.4	25
27	The role of benzene photolysis in Titan haze formation. <i>Icarus</i> , 2014, 233, 233-241.	1.1	40
28	IN SITU MEASUREMENTS OF THE SIZE AND DENSITY OF TITAN AEROSOL ANALOGS. <i>Astrophysical Journal Letters</i> , 2013, 770, L10.	3.0	52
29	THE INFLUENCE OF BENZENE AS A TRACE REACTANT IN TITAN AEROSOL ANALOGS. <i>Astrophysical Journal Letters</i> , 2013, 766, L4.	3.0	36
30	State transformations and ice nucleation in amorphous (semi-)solid organic aerosol. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 5615-5628.	1.9	82
31	Heterogeneous ice nucleation on phase-separated organic-sulfate particles: effect of liquid vs. glassy coatings. <i>Atmospheric Chemistry and Physics</i> , 2013, 13, 4681-4695.	1.9	73
32	Depositional ice nucleation onto crystalline hydrated NaCl particles: a new mechanism for ice formation in the troposphere. <i>Atmospheric Chemistry and Physics</i> , 2012, 12, 1121-1134.	1.9	107
33	Nitrogen Incorporation in CH ₄ -N ₂ Photochemical Aerosol Produced by Far Ultraviolet Irradiation. <i>Astrobiology</i> , 2012, 12, 315-326.	1.5	54
34	Importance of aerosol composition, mixing state, and morphology for heterogeneous ice nucleation: A combined field and laboratory approach. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	93
35	Potential Climatic Impact of Organic Haze on Early Earth. <i>Astrobiology</i> , 2011, 11, 135-149.	1.5	43
36	Depositional ice nucleation on solid ammonium sulfate and glutaric acid particles. <i>Atmospheric Chemistry and Physics</i> , 2010, 10, 2307-2317.	1.9	94

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37	Optical properties of Titan and early Earth haze laboratory analogs in the mid-visible. <i>Icarus</i> , 2010, 207, 903-913.	1.1	59
38	The Formation of Sulfate and Elemental Sulfur Aerosols under Varying Laboratory Conditions: Implications for Early Earth. <i>Astrobiology</i> , 2010, 10, 773-781.	1.5	29
39	Cooling Enhancement of Aerosol Particles Due to Surfactant Precipitation. <i>Journal of Physical Chemistry A</i> , 2010, 114, 7070-7076.	1.1	12
40	Reduction in Haze Formation Rate on Prebiotic Earth in the Presence of Hydrogen. <i>Astrobiology</i> , 2009, 9, 447-453.	1.5	52
41	Atmospheric condensed-phase reactions of glyoxal with methylamine. <i>Geophysical Research Letters</i> , 2009, 36, .	1.5	147
42	A laboratory investigation of the relative humidity dependence of light extinction by organic compounds from lignin combustion. <i>Environmental Research Letters</i> , 2008, 3, 045003.	2.2	29
43	Nitric acid condensation on ice: 2. Kinetic limitations, a possible "cloud clock" for determining cloud parcel lifetime. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	3
44	Parameterization for the relative humidity dependence of light extinction: Organic ammonium sulfate aerosol. <i>Journal of Geophysical Research</i> , 2007, 112, .	3.3	61
45	Kinetics of acid-catalyzed aldol condensation reactions of aliphatic aldehydes. <i>Atmospheric Environment</i> , 2007, 41, 6212-6224.	1.9	102
46	Key factors influencing the relative humidity dependence of aerosol light scattering. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	53
47	Nitric acid condensation on ice: 1. Non-HNO ₃ constituent of NO _y condensing cirrus particles on upper tropospheric. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	3
48	Heterogeneous uptake of nitric acid on Na-montmorillonite clay as a function of relative humidity. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	40
49	Depositional ice nucleation on crystalline organic and inorganic solids. <i>Journal of Geophysical Research</i> , 2006, 111, .	3.3	69
50	Measurements of the vapor pressure of cubic ice and their implications for atmospheric ice clouds. <i>Geophysical Research Letters</i> , 2006, 33, .	1.5	93
51	Ice nucleation in sulfuric acid/organic aerosols: implications for cirrus cloud formation. <i>Atmospheric Chemistry and Physics</i> , 2006, 6, 3231-3242.	1.9	21
52	Acid-catalyzed reactions of hexanal on sulfuric acid particles: Identification of reaction products. <i>Atmospheric Environment</i> , 2006, 40, 6863-6878.	1.9	56
53	Organic haze on Titan and the early Earth. <i>Proceedings of the National Academy of Sciences of the United States of America</i> , 2006, 103, 18035-18042.	3.3	205
54	Infrared characterization of water uptake by low-temperature Na-montmorillonite: Implications for Earth and Mars. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	49

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55	Haze Aerosols in the Atmosphere of Early Earth: Manna from Heaven. <i>Astrobiology</i> , 2004, 4, 409-419.	1.5	61
56	Uptake of Acetic Acid on Thin Ammonium Nitrate Films as a Function of Temperature and Relative Humidity. <i>Journal of Physical Chemistry A</i> , 2004, 108, 11314-11320.	1.1	10
57	Heterogeneous Reaction of Gaseous Nitric Acid on γ -Phase Iron(III) Oxide. <i>Journal of Physical Chemistry A</i> , 2004, 108, 1560-1566.	1.1	31
58	Polar stratospheric clouds during SOLVE/THESEO: Comparison of lidar observations with in situ measurements. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	11
59	Ice nucleation in internally mixed ammonium sulfate/dicarboxylic acid particles. <i>Journal of Geophysical Research</i> , 2004, 109, .	3.3	22
60	Chemical composition of Titan's haze: Are PAHs present?. <i>Geophysical Research Letters</i> , 2004, 31, n/a-n/a.	1.5	30
61	Uptake of reactive nitrogen on cirrus cloud particles in the upper troposphere and lowermost stratosphere. <i>Geophysical Research Letters</i> , 2003, 30, .	1.5	32
62	Phase changes in internally mixed maleic acid/ammonium sulfate aerosols. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	66
63	Measurements of large stratospheric particles in the Arctic polar vortex. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	15
64	Solubility and freezing effects of Fe ²⁺ and Mg ²⁺ in H ₂ SO ₄ solutions representative of upper tropospheric and lower stratospheric sulfate particles. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	16
65	Hygroscopic growth of ammonium sulfate/dicarboxylic acids. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	130
66	Infrared spectroscopic study of the low-temperature phase behavior of ammonium sulfate. <i>Journal of Geophysical Research</i> , 2002, 107, AAC 4-1-AAC 4-9.	3.3	19
67	An analysis of large HNO ₃ -containing particles sampled in the Arctic stratosphere during the winter of 1999/2000. <i>Journal of Geophysical Research</i> , 2002, 107, SOL 41-1.	3.3	55
68	Deliquescence behavior of organic/ammonium sulfate aerosol. <i>Geophysical Research Letters</i> , 2002, 29, 23-1-23-4.	1.5	152
69	The Interaction of Methanol, Acetone, and Acetaldehyde with Ice and Nitric Acid-Doped Ice: Implications for Cirrus Clouds. <i>Journal of Physical Chemistry A</i> , 2002, 106, 2882-2888.	1.1	66
70	Studies of Polar Stratospheric Cloud Formation. <i>Accounts of Chemical Research</i> , 2001, 34, 545-553.	7.6	20
71	Laboratory studies of ice nucleation in sulfate particles: Implications for cirrus clouds. <i>AIP Conference Proceedings</i> , 2000, , .	0.3	0
72	Phase changes in internally mixed organic/sulfate aerosols. <i>AIP Conference Proceedings</i> , 2000, , .	0.3	0

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73	CHEMISTRY ANDMICROPHYSICS OFPOLARSTRATOSPHERICCLOUDS ANDCIRRUSCLOUDS. Annual Review of Physical Chemistry, 2000, 51, 473-499.	4.8	109
74	Variation of the infrared spectra of nitric acid hydrates with formation conditions: Impact on PSC identification. Geophysical Research Letters, 1999, 26, 707-710.	1.5	26
75	Impact of nitric acid on ice evaporation rates. Geophysical Research Letters, 1999, 26, 823-826.	1.5	15
76	Interaction of HCl with Ice:Â Investigation of the Predicted Trihydrate, Hexahydrate, and Monolayer Regimes. Journal of Physical Chemistry A, 1997, 101, 4979-4986.	1.1	67
77	Surface Sensitive Studies of the Reactive Uptake of Chlorine Nitrate on Ice. Journal of Physical Chemistry A, 1997, 101, 9954-9963.	1.1	31
78	Heterogeneous interaction of formaldehyde with cold sulfuric acid: Implications for the upper troposphere and lower stratosphere. Journal of Geophysical Research, 1997, 102, 16099-16107.	3.3	76
79	Uptake of HNO ₃ on ice under upper tropospheric conditions. Geophysical Research Letters, 1997, 24, 1391-1394.	1.5	99
80	Evaporation studies of model polar stratospheric cloud films. Geophysical Research Letters, 1996, 23, 2145-2148.	1.5	27
81	UV absorption spectra of H ₂ O/HNO ₃ films. Geophysical Research Letters, 1996, 23, 2757-2760.	1.5	10
82	Polar Clouds and Sulfate Aerosols. Science, 1996, 272, 1597-0.	6.0	35
83	Spectroscopic evidence against nitric acid trihydrate in polar stratospheric clouds. Nature, 1995, 375, 218-221.	13.7	89
84	FTIR studies of low temperature sulfuric acid aerosols. Geophysical Research Letters, 1995, 22, 1105-1108.	1.5	70
85	Heterogeneous Reactions of Chlorine Nitrate and Dinitrogen Pentoxide on Sulfuric Acid Surfaces Representative of Global Stratospheric Aerosol Particles. Israel Journal of Chemistry, 1994, 34, 355-363.	1.0	7
86	Growth of nitric acid hydrates on thin sulfuric acid films. Geophysical Research Letters, 1994, 21, 867-870.	1.5	39
87	Formation of model polar stratospheric cloud films. Geophysical Research Letters, 1992, 19, 2417-2420.	1.5	28