John E Shilling

List of Publications by Year
in descending order

91 papers	6,356 citations	66343 42 h-index	76900 74 g-index
130 all docs	130 docs citations	130 times ranked	5001 citing authors

#	Article	IF	Citations
1	Recent advances in understanding secondary organic aerosol: Implications for global climate forcing. Reviews of Geophysics, 2017, 55, 509-559.	23.0	548
2	Viscosity of <i>Î±</i> -pinene secondary organic material and implications for particle growth and reactivity. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 8014-8019.	7.1	388
3	Loading-dependent elemental composition of Î±-pinene SOA particles. Atmospheric Chemistry and Physics, 2009, 9, 771-782.	4.9	272
4	Highly functionalized organic nitrates in the southeast United States: Contribution to secondary organic aerosol and reactive nitrogen budgets. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 1516-1521.	7.1	269
5	Molecular characterization of brown carbon (BrC) chromophores in secondary organic aerosol generated from photo-oxidation of toluene. Physical Chemistry Chemical Physics, 2015, 17, 23312-23325.	2.8	210
6	Images reveal that atmospheric particles can undergo liquidâ€"liquid phase separations. Proceedings of the National Academy of Sciences of the United States of America, 2012, 109, 13188-13193.	7.1	205
7	Airborne measurements of western U.S. wildfire emissions: Comparison with prescribed burning and air quality implications. Journal of Geophysical Research D: Atmospheres, 2017, 122, 6108-6129.	3.3	184
8	Particle mass yield in secondary organic aerosol formed by the dark ozonolysis of Î±-pinene. Atmospheric Chemistry and Physics, 2008, 8, 2073-2088.	4.9	175
9	Particle-Phase Chemistry of Secondary Organic Material: Modeled Compared to Measured O:C and H:C Elemental Ratios Provide Constraints. Environmental Science & Technology, 2011, 45, 4763-4770.	10.0	167
10	Hydrolysis of Organonitrate Functional Groups in Aerosol Particles. Aerosol Science and Technology, 2012, 46, 1359-1369.	3.1	153
11	Optical properties and aging of light-absorbing secondary organic aerosol. Atmospheric Chemistry and Physics, 2016, 16, 12815-12827.	4.9	150
12	Characterization of submicron particles influenced by mixed biogenic and anthropogenic emissions using high-resolution aerosol mass spectrometry: results from CARES. Atmospheric Chemistry and Physics, 2012, 12, 8131-8156.	4.9	146
13	Enhanced SOA formation from mixed anthropogenic and biogenic emissions during the CARES campaign. Atmospheric Chemistry and Physics, 2013, 13, 2091-2113.	4.9	146
14	Modeling kinetic partitioning of secondary organic aerosol and size distribution dynamics: representing effects of volatility, phase state, and particle-phase reaction. Atmospheric Chemistry and Physics, 2014, 14, 5153-5181.	4.9	137
15	Urban pollution greatly enhances formation of natural aerosols over the Amazon rainforest. Nature Communications, 2019, 10, 1046.	12.8	131
16	Hygroscopic growth of ammonium sulfate/dicarboxylic acids. Journal of Geophysical Research, 2003, 108, .	3.3	130
17	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
18	Mass Spectral Evidence That Small Changes in Composition Caused by Oxidative Aging Processes Alter Aerosol CCN Properties. Journal of Physical Chemistry A, 2007, 111, 3358-3368.	2.5	103

#	Article	IF	Citations
19	Increased cloud activation potential of secondary organic aerosol for atmospheric mass loadings. Atmospheric Chemistry and Physics, 2009, 9, 2959-2971.	4.9	100
20	Efficient Isoprene Secondary Organic Aerosol Formation from a Non-IEPOX Pathway. Environmental Science & Technology, 2016, 50, 9872-9880.	10.0	100
21	Effects of NO_{<i>x</i>}on the Volatility of Secondary Organic Aerosol from Isoprene Photooxidation. Environmental Science & Technology, 2014, 48, 2253-2262.	10.0	99
22	Overview of the 2010 Carbonaceous Aerosols and Radiative Effects Study (CARES). Atmospheric Chemistry and Physics, 2012, 12, 7647-7687.	4.9	94
23	Measurements of the vapor pressure of cubic ice and their implications for atmospheric ice clouds. Geophysical Research Letters, 2006, 33, .	4.0	93
24	An evaluation of global organic aerosol schemes using airborne observations. Atmospheric Chemistry and Physics, 2020, 20, 2637-2665.	4.9	90
25	Regional Influence of Aerosol Emissions from Wildfires Driven by Combustion Efficiency: Insights from the BBOP Campaign. Environmental Science & Technology, 2016, 50, 8613-8622.	10.0	89
26	Cloud droplet activation of mixed organic-sulfate particles produced by the photooxidation of isoprene. Atmospheric Chemistry and Physics, 2010, 10, 3953-3964.	4.9	86
27	Growth Kinetics and Size Distribution Dynamics of Viscous Secondary Organic Aerosol. Environmental Science & Technology, 2018, 52, 1191-1199.	10.0	85
28	Anthropogenic enhancements to production of highly oxygenated molecules from autoxidation. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 6641-6646.	7.1	78
29	Reactivity of Liquid and Semisolid Secondary Organic Carbon with Chloride and Nitrate in Atmospheric Aerosols. Journal of Physical Chemistry A, 2015, 119, 4498-4508.	2.5	73
30	Molecular composition and volatility of isoprene photochemicalÂoxidationÂsecondaryÂorganic aerosolÂunderÂlow-ÂandÂhigh-NO_{<i>x</i>}Âconditions. Atmospheric Chemistry and Physics, 2017, 17, 159-174.	4.9	70
31	Spherical tarball particles form through rapid chemical and physical changes of organic matter in biomass-burning smoke. Proceedings of the National Academy of Sciences of the United States of America, 2019, 116, 19336-19341.	7.1	70
32	Depositional ice nucleation on crystalline organic and inorganic solids. Journal of Geophysical Research, 2006, 111, .	3.3	69
33	Cloud condensation nucleus activity of secondary organic aerosol particles mixed with sulfate. Geophysical Research Letters, 2007, 34, .	4.0	68
34	Modeling regional aerosol and aerosol precursor variability over California and its sensitivity to emissions and long-range transport during the 2010 CalNex and CARES campaigns. Atmospheric Chemistry and Physics, 2014, 14, 10013-10060.	4.9	62
35	Uptake of Nitric Acid on Ice at Tropospheric Temperatures:Â Implications for Cirrus Cloudsâ€. Journal of Physical Chemistry A, 2002, 106, 9874-9882.	2.5	57
36	Light absorption by secondary organic aerosol from <i>Î±</i>â€pinene: Effects of oxidants, seed aerosol acidity, and relative humidity. Journal of Geophysical Research D: Atmospheres, 2013, 118, 11,741.	3.3	54

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37	Airborne observations reveal elevational gradient in tropical forest isoprene emissions. Nature Communications, 2017, 8, 15541.	12.8	53
38	Isomerization of Second-Generation Isoprene Peroxy Radicals: Epoxide Formation and Implications for Secondary Organic Aerosol Yields. Environmental Science & Technology, 2017, 51, 4978-4987.	10.0	53
39	Chemistry of new particle growth in mixed urban and biogenic emissions â€“ insights from CARES. Atmospheric Chemistry and Physics, 2014, 14, 6477-6494.	4.9	52
40	Isothermal Evaporation of Î±-Pinene Ozonolysis SOA: Volatility, Phase State, and Oligomeric Composition. ACS Earth and Space Chemistry, 2018, 2, 1058-1067.	2.7	49
41	High concentration of ultrafine particles in the Amazon free troposphere produced by organic new particle formation. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 25344-25351.	7.1	49
42	Ice nucleation activity of diesel soot particles at cirrus relevant temperature conditions: Effects of hydration, secondary organics coating, soot morphology, and coagulation. Geophysical Research Letters, 2016, 43, 3580-3588.	4.0	47
43	Influence of urban pollution on the production of organic particulate matter from isoprene epoxydiols in central Amazonia. Atmospheric Chemistry and Physics, 2017, 17, 6611-6629.	4.9	45
44	New particle formation in the remote marine boundary layer. Nature Communications, 2021, 12, 527.	12.8	45
45	Overview of the HI-SCALE Field Campaign: A New Perspective on Shallow Convective Clouds. Bulletin of the American Meteorological Society, 2019, 100, 821-840.	3.3	44
46	Rapid evolution of aerosol particles and their optical properties downwind of wildfires in the western US. Atmospheric Chemistry and Physics, 2020, 20, 13319-13341.	4.9	44
47	Chamber-based insights into the factors controlling epoxydiol (IEPOX) secondary organic aerosol (SOA) yield, composition, and volatility. Atmospheric Chemistry and Physics, 2019, 19, 11253-11265.	4.9	38
48	Particle-Phase Diffusion Modulates Partitioning of Semivolatile Organic Compounds to Aged Secondary Organic Aerosol. Environmental Science & Technology, 2020, 54, 2595-2605.	10.0	37
49	Photolysis Controls Atmospheric Budgets of Biogenic Secondary Organic Aerosol. Environmental Science & Technology, 2020, 54, 3861-3870.	10.0	36
50	Morphology of diesel soot residuals from supercooled water droplets and ice crystals: implications for optical properties. Environmental Research Letters, 2015, 10, 114010.	5.2	35
51	Cloud droplet activation of secondary organic aerosol is mainly controlled by molecular weight, not water solubility. Atmospheric Chemistry and Physics, 2019, 19, 941-954.	4.9	35
52	Sensitivity of biogenic volatile organic compounds to land surface parameterizations and vegetation distributions in California. Geoscientific Model Development, 2016, 9, 1959-1976.	3.6	34
53	The Twoâ€Column Aerosol Project: Phase Iâ€"Overview and impact of elevated aerosol layers on aerosol optical depth. Journal of Geophysical Research D: Atmospheres, 2016, 121, 336-361.	3.3	33
54	Aerosol and Cloud Experiments in the Eastern North Atlantic (ACE-ENA). Bulletin of the American Meteorological Society, 2022, 103, E619-E641.	3.3	33

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55	Exploring dimethyl sulfide (DMS) oxidation and implications for global aerosol radiative forcing. Atmospheric Chemistry and Physics, 2022, 22, 1549-1573.	4.9	33
56	Aircraft observations of the chemical composition and aging of aerosol in the Manaus urban plume during GoAmazon 2014/5. Atmospheric Chemistry and Physics, 2018, 18, 10773-10797.	4.9	32
57	Urban influence on the concentration and composition of submicron particulate matter in central Amazonia. Atmospheric Chemistry and Physics, 2018, 18, 12185-12206.	4.9	30
58	Effect of Hydrophilic Organic Seed Aerosols on Secondary Organic Aerosol Formation from Ozonolysis of Î±-Pinene. Environmental Science & Technology, 2011, 45, 7323-7329.	10.0	21
59	Simultaneous retrieval of effective refractive index and density from size distribution and light-scattering data: weakly absorbing aerosol. Atmospheric Measurement Techniques, 2014, 7, 3247-3261.	3.1	21
60	Infrared spectroscopic study of the low-temperature phase behavior of ammonium sulfate. Journal of Geophysical Research, 2002, 107, AAC 4-1-AAC 4-9.	3.3	19
61	Resolving Ambient Organic Aerosol Formation and Aging Pathways with Simultaneous Molecular Composition and Volatility Observations. ACS Earth and Space Chemistry, 2020, 4, 391-402.	2.7	19
62	Aircraft measurements of aerosol and trace gas chemistry in the eastern North Atlantic. Atmospheric Chemistry and Physics, 2021, 21, 7983-8002.	4.9	19
63	Rapid growth of anthropogenic organic nanoparticles greatly alters cloud life cycle in the Amazon rainforest. Science Advances, 2022, 8, eabj0329.	10.3	19
64	Photochemical Aging Alters Secondary Organic Aerosol Partitioning Behavior. ACS Earth and Space Chemistry, 2019, 3, 2704-2716.	2.7	18
65	Droplet activation, separation, and compositional analysis: laboratory studies and atmospheric measurements. Atmospheric Measurement Techniques, 2011, 4, 2333-2343.	3.1	16
66	Airborne Aerosol in Situ Measurements during TCAP: A Closure Study of Total Scattering. Atmosphere, 2015, 6, 1069-1101.	2.3	16
67	A Near-Explicit Mechanistic Evaluation of Isoprene Photochemical Secondary Organic Aerosol Formation and Evolution: Simulations of Multiple Chamber Experiments with and without Added NO_{<i>x</i>}. ACS Earth and Space Chemistry, 2020, 4, 1161-1181.	2.7	16
68	Future changes in isoprene-epoxydiol-derived secondary organic aerosol (IEPOX SOA) under the Shared Socioeconomic Pathways: the importance of physicochemical dependency. Atmospheric Chemistry and Physics, 2021, 21, 3395-3425.	4.9	16
69	Aerosol characteristics at the Southern Great Plains site during the HI-SCALE campaign. Atmospheric Chemistry and Physics, 2021, 21, 5101-5116.	4.9	16
70	Model representations of aerosol layers transported from North America over the Atlantic Ocean during the Twoâ€Column Aerosol Project. Journal of Geophysical Research D: Atmospheres, 2016, 121, 9814-9848.	3.3	15
71	New SOA Treatments Within the Energy Exascale Earth System Model (E3SM): Strong Production and Sinks Govern Atmospheric SOA Distributions and Radiative Forcing. Journal of Advances in Modeling Earth Systems, 2020, 12, e2020MS002266.	3.8	15
72	Efficient Nighttime Biogenic SOA Formation in a Polluted Residual Layer. Journal of Geophysical Research D: Atmospheres, 2020, 125, e2019JD031583.	3.3	14

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73	Vertical profiles of trace gas and aerosol properties over the eastern North Atlantic: variations with season and synoptic condition. Atmospheric Chemistry and Physics, 2021, 21, 11079-11098.	4.9	14
74	Uptake of Small Oxygenated Organic Molecules onto Ammonium Nitrate under Upper Tropospheric Conditionsâ€. Journal of Physical Chemistry A, 2006, 110, 6687-6695.	2.5	12
75	Comparison of aircraft measurements during GoAmazon2014/5 and ACRIDICON-CHUVA. Atmospheric Measurement Techniques, 2020, 13, 661-684.	3.1	12
76	Impact of Urban Pollution on Organic-Mediated New-Particle Formation and Particle Number Concentration in the Amazon Rainforest. Environmental Science & Technology, 2021, 55, 4357-4367.	10.0	12
77	Tight Coupling of Surface and In-Plant Biochemistry and Convection Governs Key Fine Particulate Components over the Amazon Rainforest. ACS Earth and Space Chemistry, 2022, 6, 380-390.	2.7	11
78	Uptake of Acetic Acid on Thin Ammonium Nitrate Films as a Function of Temperature and Relative Humidity. Journal of Physical Chemistry A, 2004, 108, 11314-11320.	2.5	10
79	Understanding Composition, Formation, and Aging of Organic Aerosols in Wildfire Emissions via Combined Mountain Top and Airborne Measurements. ACS Symposium Series, 2018, , 363-385.	0.5	10
80	Exploration of oxidative chemistry and secondary organic aerosol formation in the Amazon during the wet season: explicit modeling of the Manaus urban plume with GECKO-A. Atmospheric Chemistry and Physics, 2020, 20, 5995-6014.	4.9	9
81	A robust clustering algorithm for analysis of composition-dependent organic aerosol thermal desorption measurements. Atmospheric Chemistry and Physics, 2020, 20, 2489-2512.	4.9	9
82	Pathways to Highly Oxidized Products in the Î”3-Carene + OH System. Environmental Science & Technology, 2022, 56, 2213-2224.	10.0	8
83	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
84	What do correlations tell us about anthropogenicâ€“biogenic interactions and SOA formation in the Sacramento plume during CARES?. Atmospheric Chemistry and Physics, 2016, 16, 1729-1746.	4.9	6
85	Novel Application of Machine Learning Techniques for Rapid Source Apportionment of Aerosol Mass Spectrometer Datasets. ACS Earth and Space Chemistry, 2022, 6, 932-942.	2.7	6
86	The response of the Amazon ecosystem to the photosynthetically active radiation fields: integrating impacts of biomass burning aerosol and clouds in the NASA GEOS Earth system model. Atmospheric Chemistry and Physics, 2021, 21, 14177-14197.	4.9	5
87	Parameterized Yields of Semivolatile Products from Isoprene Oxidation under Different NO_{<i>x</i>} Levels: Impacts of Chemical Aging and Wall-Loss of Reactive Gases. Environmental Science & Technology, 2018, 52, 9225-9234.	10.0	3
88	Earth System Model Aerosolâ€“Cloud Diagnostics (ESMAC Diags) package, version 1: assessing E3SM aerosol predictions using aircraft, ship, and surface measurements. Geoscientific Model Development, 2022, 15, 4055-4076.	3.6	3
89	A Closure Study of Total Scattering Using Airborne In Situ Measurements from the Winter Phase of TCAP. Atmosphere, 2018, 9, 228.	2.3	2
90	Observed Relationships between Cloud Droplet Effective Radius and Biogenic Gas Concentrations in Summertime Marine Stratocumulus over the Eastern North Atlantic. Earth and Space Science, 0, , .	2.6	2

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91	Field and laboratory studies of reactions between atmospheric water soluble organic acids and inorganic particles. , 2013, , .		0