Ryan C Sullivan

List of Publications by Year
in descending order

68 papers	4,886 citations	147801 31 h-index	98798 67 g-index
94 all docs	94 docs citations	94 times ranked	5550 citing authors

#	Article	IF	Citations
1	Dust and Biological Aerosols from the Sahara and Asia Influence Precipitation in the Western U.S.. Science, 2013, 339, 1572-1578.	12.6	482
2	Bringing the ocean into the laboratory to probe the chemical complexity of sea spray aerosol. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 7550-7555.	7.1	439
3	Brownness of organics in aerosols from biomass burning linked to their black carbon content. Nature Geoscience, 2014, 7, 647-650.	12.9	407
4	Sea spray aerosol as a unique source of ice nucleating particles. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 5797-5803.	7.1	323
5	Integrating laboratory and field data to quantify the immersion freezing ice nucleation activity of mineral dust particles. Atmospheric Chemistry and Physics, 2015, 15, 393-409.	4.9	315
6	Characterization of Asian Dust during ACE-Asia. Global and Planetary Change, 2006, 52, 23-56.	3.5	190
7	Trace gas emissions from combustion of peat, crop residue, domestic biofuels, grasses, and other fuels: configuration and Fourier transform infrared (FTIR) component of the fourth Fire Lab at Missoula Experiment (FLAME-4). Atmospheric Chemistry and Physics, 2014, 14, 9727-9754.	4.9	188
8	Recent Advances in Our Understanding of Atmospheric Chemistry and Climate Made Possible by On-Line Aerosol Analysis Instrumentation. Analytical Chemistry, 2005, 77, 3861-3886.	6.5	175
9	Irreversible loss of ice nucleation active sites in mineral dust particles caused by sulphuric acid condensation. Atmospheric Chemistry and Physics, 2010, 10, 11471-11487.	4.9	175
10	Investigations of the Diurnal Cycle and Mixing State of Oxalic Acid in Individual Particles in Asian Aerosol Outflow. Environmental Science & Technology, 2007, 41, 8062-8069.	10.0	167
11	Representativeness of Eddy-Covariance flux footprints for areas surrounding AmeriFlux sites. Agricultural and Forest Meteorology, 2021, 301-302, 108350.	4.8	125
12	The International Soil Moisture Network: serving Earth system science for over a decade. Hydrology and Earth System Sciences, 2021, 25, 5749-5804.	4.9	116
13	Mineral dust is a sink for chlorine in the marine boundary layer. Atmospheric Environment, 2007, 41, 7166-7179.	4.1	113
14	Influence of Functional Groups on Organic Aerosol Cloud Condensation Nucleus Activity. Environmental Science & Technology, 2014, 48, 10182-10190.	10.0	99
15	Mixing of secondary organic aerosols versus relative humidity. Proceedings of the National Academy of Sciences of the United States of America, 2016, 113, 12649-12654.	7.1	93
16	Timescale for hygroscopic conversion of calcite mineral particles through heterogeneous reaction with nitric acid. Physical Chemistry Chemical Physics, 2009, 11, 7826.	2.8	82
17	FLUXNET-CH₄: a global, multi-ecosystem dataset and analysis of methane seasonality from freshwater wetlands. Earth System Science Data, 2021, 13, 3607-3689.	9.9	79
18	Experimental study of the role of physicochemical surface processing on the IN ability of mineral dust particles. Atmospheric Chemistry and Physics, 2011, 11, 11131-11144.	4.9	70

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19	Surface modification of mineral dust particles by sulphuric acid processing: implications for ice nucleation abilities. Atmospheric Chemistry and Physics, 2011, 11, 7839-7858.	4.9	60
20	Emulsified and Liquidâ€“Liquid Phase-Separated States of Î±-Pinene Secondary Organic Aerosol Determined Using Aerosol Optical Tweezers. Environmental Science & Technology, 2017, 51, 12154-12163.	10.0	57
21	Aerosol Optical Tweezers Constrain the Morphology Evolution of Liquid-Liquid Phase-Separated Atmospheric Particles. CheM, 2020, 6, 204-220.	11.7	53
22	The unstable ice nucleation properties of SnomaxÂ® bacterial particles. Journal of Geophysical Research D: Atmospheres, 2016, 121, 11,666.	3.3	50
23	Biomass burning as a potential source for atmospheric ice nuclei: Western wildfires and prescribed burns. Geophysical Research Letters, 2012, 39, .	4.0	49
24	Cleaning up our water: reducing interferences from nonhomogeneous freezing of â€œpureâ€• water in droplet freezing assays of ice-nucleating particles. Atmospheric Measurement Techniques, 2018, 11, 5315-5334.	3.1	48
25	Impact of Particle Generation Method on the Apparent Hygroscopicity of Insoluble Mineral Particles. Aerosol Science and Technology, 2010, 44, 830-846.	3.1	44
26	Advanced aerosol optical tweezers chamber design to facilitate phase-separation and equilibration timescale experiments on complex droplets. Aerosol Science and Technology, 2016, 50, 1327-1341.	3.1	43
27	Production of N₂O₅ and ClNO₂ through Nocturnal Processing of Biomass-Burning Aerosol. Environmental Science & Technology, 2018, 52, 550-559.	10.0	42
28	Spatial Variability of Sources and Mixing State of Atmospheric Particles in a Metropolitan Area. Environmental Science & Technology, 2018, 52, 6807-6815.	10.0	42
29	Heterogeneous ice nucleation properties of natural desert dust particles coated with a surrogate of secondary organic aerosol. Atmospheric Chemistry and Physics, 2019, 19, 5091-5110.	4.9	40
30	In Situ pH Measurements of Individual Levitated Microdroplets Using Aerosol Optical Tweezers. Analytical Chemistry, 2020, 92, 1089-1096.	6.5	37
31	Atmospheric aging enhances the ice nucleation ability of biomass-burning aerosol. Science Advances, 2021, 7, .	10.3	35
32	Gap-filling eddy covariance methane fluxes: Comparison of machine learning model predictions and uncertainties at FLUXNET-CH4 wetlands. Agricultural and Forest Meteorology, 2021, 308-309, 108528.	4.8	33
33	Effect of secondary organic aerosol coating thickness on the real-time detection and characterization of biomass-burning soot by two particle mass spectrometers. Atmospheric Measurement Techniques, 2016, 9, 6117-6137.	3.1	31
34	Integrating continuous atmospheric boundary layer and tower-based flux measurements to advance understanding of land-atmosphere interactions. Agricultural and Forest Meteorology, 2021, 307, 108509.	4.8	31
35	The common occurrence of highly supercooled drizzle and rain near the coastal regions of the western United States. Journal of Geophysical Research D: Atmospheres, 2013, 118, 9819-9833.	3.3	30
36	Aerosol Optical Tweezers Elucidate the Chemistry, Acidity, Phase Separations, and Morphology of Atmospheric Microdroplets. Accounts of Chemical Research, 2020, 53, 2498-2509.	15.6	28

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37	Much stronger tundra methane emissions during autumn freeze than spring thaw. Global Change Biology, 2021, 27, 376-387.	9.5	28
38	Evaluating the skill of high-resolution WRF-Chem simulations in describing drivers of aerosol direct climate forcing on the regional scale. Atmospheric Chemistry and Physics, 2016, 16, 397-416.	4.9	27
39	Biomass combustion produces ice-active minerals in biomass-burning aerosol and bottom ash. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 21928-21937.	7.1	27
40	Quantifying spatiotemporal variability of fine particles in an urban environment using combined fixed and mobile measurements. Atmospheric Environment, 2014, 89, 664-671.	4.1	26
41	Effect of particle surface area on ice active site densities retrieved from droplet freezing spectra. Atmospheric Chemistry and Physics, 2016, 16, 13359-13378.	4.9	23
42	Aerosolâ€"Ice Formation Closure: A Southern Great Plains Field Campaign. Bulletin of the American Meteorological Society, 2021, 102, E1952-E1971.	3.3	20
43	The impact of resolution on meteorological, chemical and aerosol properties in regional simulations with WRF-Chem. Atmospheric Chemistry and Physics, 2017, 17, 1511-1528.	4.9	19
44	Differences in Eddyâ€Correlation and Energyâ€Balance Surface Turbulent Heat Flux Measurements and Their Impacts on the Largeâ€Scale Forcing Fields at the ARM SGP Site. Journal of Geophysical Research D: Atmospheres, 2019, 124, 3301-3318.	3.3	19
45	Spatiotemporal coherence of mean and extreme aerosol particle events over eastern North America as observed from satellite. Atmospheric Environment, 2015, 112, 126-135.	4.1	18
46	Sensitivity of Simulated Aerosol Properties Over Eastern North America to WRFâ€Chem Parameterizations. Journal of Geophysical Research D: Atmospheres, 2019, 124, 3365-3383.	3.3	18
47	Development and characterization of a â€œstore and createâ€• microfluidic device to determine the heterogeneous freezing properties of ice nucleating particles. Aerosol Science and Technology, 2020, 54, 79-93.	3.1	18
48	Empirical estimates of size-resolved precipitation scavenging coefficients for ultrafine particles. Atmospheric Environment, 2016, 143, 133-138.	4.1	17
49	New particle formation leads to cloud dimming. Npj Climate and Atmospheric Science, 2018, 1, .	6.8	17
50	Quantifying the Roles of Changing Albedo, Emissivity, and Energy Partitioning in the Impact of Irrigation on Atmospheric Heat Content. Journal of Applied Meteorology and Climatology, 2016, 55, 1699-1706.	1.5	16
51	A new multicomponent heterogeneous ice nucleation model and its application to Snomax bacterial particles and a Snomaxâ€"illite mineral particle mixture. Atmospheric Chemistry and Physics, 2017, 17, 13545-13557.	4.9	15
52	Emerging investigator series: determination of biphasic coreâ€"shell droplet properties using aerosol optical tweezers. Environmental Sciences: Processes and Impacts, 2018, 20, 1512-1523.	3.5	15
53	Developing and diagnosing climate change indicators of regional aerosol optical properties. Scientific Reports, 2017, 7, 18093.	3.3	14
54	Recovering Evapotranspiration Trends from Biased CMIP5 Simulations and Sensitivity to Changing Climate over North America. Journal of Hydrometeorology, 2019, 20, 1619-1633.	1.9	14

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55	Role of Feldspar and Pyroxene Minerals in the Ice Nucleating Ability of Three Volcanic Ashes. ACS Earth and Space Chemistry, 2019, 3, 626-636.	2.7	14
56	N₂O₅reactive uptake kinetics and chlorine activation on authentic biomass-burning aerosol. Environmental Sciences: Processes and Impacts, 2019, 21, 1684-1698.	3.5	14
57	Metallic and Crustal Elements in Biomass-Burning Aerosol and Ash: Prevalence, Significance, and Similarity to Soil Particles. ACS Earth and Space Chemistry, 2021, 5, 136-148.	2.7	14
58	Single-particle elemental analysis of vacuum bag dust samples collected from the International Space Station by SEM/EDX and sp-ICP-ToF-MS. Aerosol Science and Technology, 2021, 55, 571-585.	3.1	13
59	Mass accommodation coefficients of fresh and aged biomass-burning emissions. Aerosol Science and Technology, 2018, 52, 300-309.	3.1	10
60	Modeling the contributions of global air temperature, synoptic-scale phenomena and soil moisture to near-surface static energy variability using artificial neural networks. Atmospheric Chemistry and Physics, 2017, 17, 14457-14471.	4.9	8
61	Morphology of Organic Carbon Coatings on Biomass-Burning Particles and Their Role in Reactive Gas Uptake. ACS Earth and Space Chemistry, 2021, 5, 2184-2195.	2.7	8
62	Using satelliteâ€based measurements to explore spatiotemporal scales and variability of drivers of new particle formation. Journal of Geophysical Research D: Atmospheres, 2016, 121, 12217-12235.	3.3	5
63	Response of the Reaction Probability of N₂O₅ with Authentic Biomass-Burning Aerosol to High Relative Humidity. ACS Earth and Space Chemistry, 2021, 5, 2587-2598.	2.7	5
64	Volcanic ash ice nucleation activity is variably reduced by aging in water and sulfuric acid: the effects of leaching, dissolution, and precipitation. Environmental Science Atmospheres, 2022, 2, 85-99.	2.4	5
65	Dynamic and chemical controls on new particle formation occurrence and characteristics from in situ and satellite-based measurements. Atmospheric Environment, 2016, 127, 316-325.	4.1	4
66	Improved Spatiotemporal Representativeness and Bias Reduction of Satelliteâ€Based Evapotranspiration Retrievals via Use of In Situ Meteorology and Constrained Canopy Surface Resistance. Journal of Geophysical Research G: Biogeosciences, 2019, 124, 342-352.	3.0	3
67	Quantifying errors in the aerosol mixing-state index based on limited particle sample size. Aerosol Science and Technology, 2020, 54, 1527-1541.	3.1	2
68	Using Ionic Liquids To Study the Migration of Semivolatile Organic Vapors in Smog Chamber Experiments. Journal of Physical Chemistry A, 2019, 123, 3887-3892.	2.5	0