James F Davies

List of Publications by Year
in descending order

42	1,717	304602 22	289141 40
papers	citations	h-index	g-index

47	47	47	1709
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	An interfacial mechanism for cloud droplet formation on organic aerosols. Science, 2016, 351, 1447-1450.	6.0	193
2	Influence of organic films on the evaporation and condensation of water in aerosol. Proceedings of the National Academy of Sciences of the United States of America, 2013, 110, 8807-8812.	3.3	125
3	Water diffusion in atmospherically relevant Î±-pinene secondary organic material. Chemical Science, 2015, 6, 4876-4883.	3.7	116
4	Nanoscale interfacial gradients formed by the reactive uptake of OH radicals onto viscous aerosol surfaces. Chemical Science, 2015, 6, 7020-7027.	3.7	95
5	Measurements of the Sensitivity of Aerosol Hygroscopicity and the Îº Parameter to the O/C Ratio. Journal of Physical Chemistry A, 2013, 117, 14120-14131.	1.1	93
6	Raman Spectroscopy of Isotopic Water Diffusion in Ultraviscous, Glassy, and Gel States in Aerosol by Use of Optical Tweezers. Analytical Chemistry, 2016, 88, 2361-2366.	3.2	89
7	Time-Resolved Measurements of the Evaporation of Volatile Components from Single Aerosol Droplets. Aerosol Science and Technology, 2012, 46, 666-677.	1.5	88
8	Bulk, Surface, and Gas-Phase Limited Water Transport in Aerosol. Journal of Physical Chemistry A, 2012, 116, 10987-10998.	1.1	67
9	Glass formation and unusual hygroscopic growth of iodic acid solution droplets with relevance for iodine mediated particle formation in the marine boundary layer. Atmospheric Chemistry and Physics, 2012, 12, 8575-8587.	1.9	64
10	Exploring Chemistry in Microcompartments Using Guided Droplet Collisions in a Branched Quadrupole Trap Coupled to a Single Droplet, Paper Spray Mass Spectrometer. Analytical Chemistry, 2017, 89, 12511-12519.	3.2	60
11	Evidence for a semisolid phase state of aerosols and droplets relevant to the airborne and surface survival of pathogens. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, .	3.3	47
12	Simultaneous Analysis of the Equilibrium Hygroscopicity and Water Transport Kinetics of Liquid Aerosol. Analytical Chemistry, 2013, 85, 5819-5826.	3.2	46
13	Importance of sulfate radical anion formation and chemistry in heterogeneous OH oxidation of sodium methyl sulfate, the smallest organosulfate. Atmospheric Chemistry and Physics, 2018, 18, 2809-2820.	1.9	42
14	Dynamics of aerosol size during inhalation: Hygroscopic growth of commercial nebulizer formulations. International Journal of Pharmaceutics, 2014, 463, 50-61.	2.6	41
15	Dynamics of Particle Size on Inhalation of Environmental Aerosol and Impact on Deposition Fraction. Environmental Science & Technology, 2015, 49, 14512-14521.	4.6	41
16	Importance of relative humidity in the oxidative ageing of organic aerosols: case study of the ozonolysis of maleic acid aerosol. Atmospheric Chemistry and Physics, 2011, 11, 12181-12195.	1.9	40
17	Ion-molecule interactions enable unexpected phase transitions in organic-inorganic aerosol. Science Advances, 2020, 6, .	4.7	36
18	Mass, charge, and radius of droplets in a linear quadrupole electrodynamic balance. Aerosol Science and Technology, 2019, 53, 309-320.	1.5	34

#	Article	IF	Citations
19	Simultaneous Retrieval of the Size and Refractive Index of Suspended Droplets in a Linear Quadrupole Electrodynamic Balance. Journal of Physical Chemistry A, 2020, 124, 1811-1820.	1.1	34
20	Technical note: The role of evolving surface tension in the formation of cloud droplets. Atmospheric Chemistry and Physics, 2019, 19, 2933-2946.	1.9	32
21	Effects of Relative Humidity and Particle Phase Water on the Heterogeneous OH Oxidation of 2-Methylglutaric Acid Aqueous Droplets. Journal of Physical Chemistry A, 2017, 121, 1666-1674.	1.1	30
22	Temperature dependence of the vapor pressure and evaporation coefficient of supercooled water. Journal of Geophysical Research D: Atmospheres, 2014, 119, 10,931-10,940.	1.2	26
23	Heterogeneous OH oxidation of isoprene-epoxydiol-derived organosulfates: kinetics, chemistry and formation of inorganic sulfate. Atmospheric Chemistry and Physics, 2019, 19, 2433-2440.	1.9	26
24	Accounting for Changes in Particle Charge, Dry Mass and Composition Occurring During Studies of Single Levitated Particles. Journal of Physical Chemistry A, 2012, 116, 9941-9953.	1.1	23
25	Molecular insight into the lower critical solution temperature transition of aqueous alkyl phosphonium benzene sulfonates. Communications Chemistry, 2019, 2, .	2.0	22
26	Measuring the Chemical Evolution of Levitated Particles: A Study on the Evaporation of Multicomponent Organic Aerosol. Analytical Chemistry, 2021, 93, 12472-12479.	3.2	21
27	The influence of the surface composition of mixed monolayer films on the evaporation coefficient of water. Physical Chemistry Chemical Physics, 2016, 18, 19847-19858.	1.3	19
28	The frequency-dependent response of single aerosol particles to vapour phase oscillations and its application in measuring diffusion coefficients. Physical Chemistry Chemical Physics, 2017, 19, 3922-3931.	1.3	19
29	Chemical Transformation of Methanesulfonic Acid and Sodium Methanesulfonate through Heterogeneous OH Oxidation. ACS Earth and Space Chemistry, 2018, 2, 895-903.	1.2	18
30	Compositional evolution of particle-phase reaction products and water in the heterogeneous OH oxidation of model aqueous organic aerosols. Atmospheric Chemistry and Physics, 2017, 17, 14415-14431.	1.9	17
31	Control over hygroscopic growth of saline aqueous aerosol using Pluronic polymer additives. International Journal of Pharmaceutics, 2013, 443, 183-192.	2.6	16
32	Effects of liquidâ€“liquid phase separation and relative humidity on the heterogeneous OH oxidation of inorganicâ€“organic aerosols: insights from methylglutaric acid and ammonium sulfate particles. Atmospheric Chemistry and Physics, 2021, 21, 2053-2066.	1.9	16
33	Hygroscopic growth of simulated lung fluid aerosol particles under ambient environmental conditions. Chemical Communications, 2021, 57, 3243-3246.	2.2	13
34	An Open Port Sampling Interface for the Chemical Characterization of Levitated Microparticles. Analytical Chemistry, 2022, 94, 3441-3445.	3.2	12
35	Effect of inorganic-to-organic mass ratio on the heterogeneous OH reaction rates of erythritol: implications for atmospheric chemical stability of 2-methyltetrols. Atmospheric Chemistry and Physics, 2020, 20, 3879-3893.	1.9	10
36	Effects of inorganic salts on the heterogeneous OH oxidation of organic compounds: insights from methylglutaric acidâ€“ammonium sulfate. Atmospheric Chemistry and Physics, 2019, 19, 9581-9593.	1.9	9

#	Article	IF	Citations
37	Multicomponent diffusion in atmospheric aerosol particles. Environmental Science Atmospheres, 2021, 1, 45-55.	0.9	9
38	Hygroscopic Growth, Phase Morphology, and Optical Properties of Model Aqueous Brown Carbon Aerosol. Environmental Science & Technology, 2022, 56, 3941-3951.	4.6	9
39	Paper spray mass spectrometry for the analysis of picoliter droplets. Analyst, The, 2020, 145, 2639-2648.	1.7	8
40	A dual-droplet approach for measuring the hygroscopicity of aqueous aerosol. Atmospheric Measurement Techniques, 2021, 14, 5001-5013.	1.2	6
41	Optical manipulation of aerosol particle arrays. Proceedings of SPIE, 2011, , .	0.8	1
42	Heterogeneous Reactions in Aerosol. , 2018, , 403-433.		1