

# Murray V Johnston

## List of Publications by Year in descending order

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128  
papers

6,751  
citations

57631

44  
h-index

76769

74  
g-index

139  
all docs

139  
docs citations

139  
times ranked

4536  
citing authors

#	ARTICLE	IF	CITATIONS
1	Reaction Kinetics of Organic Aerosol Studied by Droplet Assisted Ionization: Enhanced Reactivity in Droplets Relative to Bulk Solution. <i>Journal of the American Society for Mass Spectrometry</i> , 2021, 32, 46-54.	1.2	13
2	Ion formation in droplet-assisted ionization. <i>Rapid Communications in Mass Spectrometry</i> , 2021, 35, e8227.	0.7	14
3	Online Characterization of Organic Aerosol by Condensational Growth into Aqueous Droplets Coupled with Droplet-Assisted Ionization. <i>Analytical Chemistry</i> , 2021, 93, 2793-2801.	3.2	8
4	Ion Formation from Rapidly Heated Aqueous Droplets by Droplet-Assisted Ionization. <i>Journal of Physical Chemistry A</i> , 2020, 124, 7313-7321.	1.1	5
5	Temperature effects on sulfuric acid aerosol nucleation and growth: initial results from the TANGENT study. <i>Atmospheric Chemistry and Physics</i> , 2019, 19, 8915-8929.	1.9	13
6	Growth of Aitken mode ammonium sulfate particles by $\alpha$ -pinene ozonolysis. <i>Aerosol Science and Technology</i> , 2019, 53, 406-418.	1.5	12
7	Molecular Characterization of Atmospheric Organic Aerosol by Mass Spectrometry. <i>Annual Review of Analytical Chemistry</i> , 2019, 12, 247-274.	2.8	30
8	Sulfur Dioxide Modifies Aerosol Particle Formation and Growth by Ozonolysis of Monoterpenes and Isoprene. <i>Journal of Geophysical Research D: Atmospheres</i> , 2019, 124, 4800-4811.	1.2	23
9	A seasonal observation on the distribution of engineered nanoparticles in municipal wastewater treatment systems exemplified by TiO <sub>2</sub> and ZnO. <i>Science of the Total Environment</i> , 2018, 625, 1321-1329.	3.9	61
10	Nanoparticle growth by particle-phase chemistry. <i>Atmospheric Chemistry and Physics</i> , 2018, 18, 1895-1907.	1.9	26
11	Impact of Multiphase Chemistry on Nanoparticle Growth and Composition. <i>ACS Symposium Series</i> , 2018, , 9-34.	0.5	0
12	Looking for engineered nanoparticles (ENPs) in wastewater treatment systems: Qualification and quantification aspects. <i>Science of the Total Environment</i> , 2017, 590-591, 809-817.	3.9	36
13	Aqueous Reaction of Dicarbonyls with Ammonia as a Potential Source of Organic Nitrogen in Airborne Nanoparticles. <i>Journal of Physical Chemistry A</i> , 2017, 121, 3720-3727.	1.1	16
14	Aerosol Formation from OH Oxidation of the Volatile Cyclic Methyl Siloxane (cVMS) Decamethylcyclopentasiloxane. <i>Environmental Science &amp; Technology</i> , 2017, 51, 4445-4451.	4.6	41
15	Droplet Assisted Inlet Ionization for Online Analysis of Airborne Nanoparticles. <i>Analytical Chemistry</i> , 2017, 89, 1059-1062.	3.2	33
16	Mechanisms of Atmospherically Relevant Cluster Growth. <i>Accounts of Chemical Research</i> , 2017, 50, 1965-1975.	7.6	34
17	Particle size and chemical composition effects on elemental analysis with the nano aerosol mass spectrometer. <i>Aerosol Science and Technology</i> , 2017, 51, 1135-1143.	1.5	7
18	Particle size dependence of biogenic secondary organic aerosol molecular composition. <i>Atmospheric Chemistry and Physics</i> , 2017, 17, 7593-7603.	1.9	21

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19	High Sensitivity Analysis of Nanoliter Volumes of Volatile and Nonvolatile Compounds using Matrix Assisted Ionization (MAI) Mass Spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 2016, 27, 1590-1596.	1.2	24
20	Molecular Characterization of Secondary Aerosol from Oxidation of Cyclic Methylsiloxanes. <i>Journal of the American Society for Mass Spectrometry</i> , 2016, 27, 402-409.	1.2	21
21	Ion mobility spectrometry-mass spectrometry examination of the structures, stabilities, and extents of hydration of dimethylamine <sup>+</sup> sulfuric acid clusters. <i>Physical Chemistry Chemical Physics</i> , 2016, 18, 22962-22972.	1.3	40
22	Characterization of Highly Oxidized Molecules in Fresh and Aged Biogenic Secondary Organic Aerosol. <i>Analytical Chemistry</i> , 2016, 88, 4495-4501.	3.2	48
23	Growth of Ammonium Bisulfate Clusters by Adsorption of Oxygenated Organic Molecules. <i>Journal of Physical Chemistry A</i> , 2015, 119, 11191-11198.	1.1	11
24	Activation Barriers in the Growth of Molecular Clusters Derived from Sulfuric Acid and Ammonia. <i>Journal of Physical Chemistry A</i> , 2014, 118, 11547-11554.	1.1	19
25	Silicon is a Frequent Component of Atmospheric Nanoparticles. <i>Environmental Science &amp; Technology</i> , 2014, 48, 11137-11145.	4.6	50
26	Formation and Growth of Molecular Clusters Containing Sulfuric Acid, Water, Ammonia, and Dimethylamine. <i>Journal of Physical Chemistry A</i> , 2014, 118, 5464-5473.	1.1	67
27	Molecular constraints on particle growth during new particle formation. <i>Geophysical Research Letters</i> , 2014, 41, 6045-6054.	1.5	30
28	Origin and impact of particle-to-particle variations in composition measurements with the nano-aerosol mass spectrometer. <i>Analytical and Bioanalytical Chemistry</i> , 2013, 405, 6995-7003.	1.9	9
29	Fragmentation Energetics of Clusters Relevant to Atmospheric New Particle Formation. <i>Journal of the American Chemical Society</i> , 2013, 135, 3276-3285.	6.6	42
30	Quantitative and time-resolved nanoparticle composition measurements during new particle formation. <i>Faraday Discussions</i> , 2013, 165, 25.	1.6	31
31	Direct Observations of Atmospheric Aerosol Nucleation. <i>Science</i> , 2013, 339, 943-946.	6.0	876
32	Thermodynamics of oligomer formation: implications for secondary organic aerosol formation and reactivity. <i>Physical Chemistry Chemical Physics</i> , 2013, 15, 6935.	1.3	45
33	Molecular Transformations Accompanying the Aging of Laboratory Secondary Organic Aerosol. <i>Environmental Science &amp; Technology</i> , 2013, 47, 2230-2237.	4.6	24
34	Identification and quantification of particle growth channels during new particle formation. , 2013, , .		0
35	Fragmentation and growth energetics of clusters relevant to new particle formation. , 2013, , .		0
36	Selective detection and characterization of nanoparticles from motor vehicles. <i>Research Report (health Effects Institute)</i> , 2013, , 3-45.	1.6	1

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37	The Thermal-Stability of Oligomers in Alpha-Pinene Secondary Organic Aerosol. <i>Aerosol Science and Technology</i> , 2012, 46, 983-989.	1.5	28
38	Structure and Energetics of Nanometer Size Clusters of Sulfuric Acid with Ammonia and Dimethylamine. <i>Journal of Physical Chemistry A</i> , 2012, 116, 1030-1040.	1.1	65
39	Online Characterization of Particles and Gases with an Ambient Electrospray Ionization Source. <i>Analytical Chemistry</i> , 2012, 84, 9253-9258.	3.2	22
40	Quantitative Assessment of the Sulfuric Acid Contribution to New Particle Growth. <i>Environmental Science &amp; Technology</i> , 2012, 46, 4365-4373.	4.6	71
41	Single particle chemical analysis of ambient ultrafine aerosol: A review. <i>Journal of Aerosol Science</i> , 2012, 52, 109-120.	1.8	68
42	Nanoparticle chemical composition and diurnal dependence at the CalNex Los Angeles ground site. <i>Journal of Geophysical Research</i> , 2012, 117, .	3.3	21
43	Chemical Composition of Ambient Nanoparticles on a Particle-by-Particle Basis. <i>Analytical Chemistry</i> , 2012, 84, 2253-2259.	3.2	15
44	Oligomer Formation Pathways in Secondary Organic Aerosol from MS and MS/MS Measurements with High Mass Accuracy and Resolving Power. <i>Journal of the American Society for Mass Spectrometry</i> , 2012, 23, 1097-1108.	1.2	68
45	Trapping charged nanoparticles in the nano aerosol mass spectrometer (NAMS). <i>International Journal of Mass Spectrometry</i> , 2012, 311, 64-71.	0.7	23
46	Reactivity of methanesulfonic acid salt clusters relevant to marine air. <i>Journal of Geophysical Research</i> , 2011, 116, .	3.3	31
47	Apportionment of Motor Vehicle Emissions from Fast Changes in Number Concentration and Chemical Composition of Ultrafine Particles Near a Roadway Intersection. <i>Environmental Science &amp; Technology</i> , 2011, 45, 5637-5643.	4.6	23
48	Nanoparticle Chemical Composition During New Particle Formation. <i>Aerosol Science and Technology</i> , 2011, 45, 1041-1048.	1.5	50
49	Oligomer Content of $\alpha$ -Pinene Secondary Organic Aerosol. <i>Aerosol Science and Technology</i> , 2011, 45, 37-45.	1.5	90
50	New Particle Formation and Growth in the Troposphere. <i>Analytical Chemistry</i> , 2010, 82, 7871-7878.	3.2	80
51	Elemental Composition of Nanoparticles with the Nano Aerosol Mass Spectrometer. <i>Analytical Chemistry</i> , 2010, 82, 8034-8038.	3.2	26
52	Ultrafine Particles Near a Roadway Intersection: Origin and Apportionment of Fast Changes in Concentration. <i>Environmental Science &amp; Technology</i> , 2010, 44, 7903-7907.	4.6	28
53	Size-Dependent Reactions of Ammonium Bisulfate Clusters with Dimethylamine. <i>Journal of Physical Chemistry A</i> , 2010, 114, 11638-11644.	1.1	62
54	Molecular Composition of Monoterpene Secondary Organic Aerosol at Low Mass Loading. <i>Environmental Science &amp; Technology</i> , 2010, 44, 7897-7902.	4.6	87

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55	Organic aerosol source apportionment from highly time-resolved molecular composition measurements. <i>Atmospheric Environment</i> , 2009, 43, 2901-2910.	1.9	22
56	Online deposition of nano-aerosol for matrix-assisted laser desorption/ionization mass spectrometry. <i>Rapid Communications in Mass Spectrometry</i> , 2009, 23, 3963-3968.	0.7	8
57	An IT-TOF mass spectrometer for the analysis of organic aerosol. <i>International Journal of Mass Spectrometry</i> , 2009, 281, 8-14.	0.7	8
58	Reactive Uptake of Trimethylamine into Ammonium Nitrate Particles. <i>Journal of Physical Chemistry A</i> , 2009, 113, 4840-4843.	1.1	65
59	Composition Domains in Monoterpene Secondary Organic Aerosol. <i>Environmental Science &amp; Technology</i> , 2009, 43, 7797-7802.	4.6	105
60	Ion formation mechanism in laser desorption ionization of individual nanoparticles. <i>Journal of the American Society for Mass Spectrometry</i> , 2008, 19, 389-399.	1.2	63
61	Interactions between boreal wildfire and urban emissions. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	35
62	Extratropical waves transport boreal wildfire emissions and drive regional air quality dynamics. <i>Journal of Geophysical Research</i> , 2008, 113, .	3.3	7
63	Time-Resolved Chemical Composition of Individual Nanoparticles in Urban Air. <i>Environmental Science &amp; Technology</i> , 2008, 42, 6631-6636.	4.6	35
64	Abiotic formation of RNA-like oligomers by montmorillonite catalysis: part II. <i>International Journal of Astrobiology</i> , 2008, 7, 1-7.	0.9	10
65	Rapid Sampling of Individual Organic Aerosol Species in Ambient Air with the Photoionization Aerosol Mass Spectrometer. <i>Aerosol Science and Technology</i> , 2008, 42, 18-27.	1.5	27
66	What Have We Learned from Highly Time-Resolved Measurements during EPA's Supersites Program and Related Studies?. <i>Journal of the Air and Waste Management Association</i> , 2008, 58, 303-319.	0.9	45
67	Supplemental Material to "Advances in Integrated and Continuous Measurements for Particle Mass and Chemical Composition". <i>Journal of the Air and Waste Management Association</i> , 2008, 58, .	0.2	0
68	Supplemental Material to "Source Apportionment: Findings from the U.S. Supersites Program". <i>Journal of the Air and Waste Management Association</i> , 2008, 58, .	0.2	0
69	Intact Protein Profiling of <i>Chlorobium tepidum</i> by Capillary Isoelectric Focusing, Reversed-Phase Liquid Chromatography, and Mass Spectrometry. <i>Analytical Chemistry</i> , 2007, 79, 7145-7153.	3.2	41
70	Oligomers in the Early Stage of Biogenic Secondary Organic Aerosol Formation and Growth. <i>Environmental Science &amp; Technology</i> , 2007, 41, 6129-6136.	4.6	147
71	Source characterization and identification by real-time single particle mass spectrometry. <i>Atmospheric Environment</i> , 2007, 41, 9397-9409.	1.9	76
72	Chemical Characterization of Individual, Airborne Sub-10-nm Particles and Molecules. <i>Analytical Chemistry</i> , 2006, 78, 1750-1754.	3.2	98

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73	Chemistry of Particle Inception and Growth during $\alpha$ -Pinene Ozonolysis. <i>Environmental Science &amp; Technology</i> , 2006, 40, 1843-1848.	4.6	72
74	Reactive Uptake of Nitric Acid onto Sodium Chloride Aerosols Across a Wide Range of Relative Humidities. <i>Journal of Physical Chemistry A</i> , 2006, 110, 7614-7620.	1.1	72
75	Nanoparticle Mass Spectrometry: Pushing the Limit of Single Particle Analysis. <i>Applied Spectroscopy</i> , 2006, 60, 264A-272A.	1.2	20
76	Airborne nanoparticle characterization with a digital ion trap—reflectron time of flight mass spectrometer. <i>International Journal of Mass Spectrometry</i> , 2006, 258, 50-57.	0.7	58
77	Aerosol mass spectrometry: An introductory review. <i>International Journal of Mass Spectrometry</i> , 2006, 258, 2-12.	0.7	136
78	Identification of sources of atmospheric PM at the Pittsburgh Supersite, Part I: Single particle analysis and filter-based positive matrix factorization. <i>Atmospheric Environment</i> , 2006, 40, 411-423.	1.9	40
79	Identification of sources of atmospheric PM at the Pittsburgh Supersite—Part II: Quantitative comparisons of single particle, particle number, and particle mass measurements. <i>Atmospheric Environment</i> , 2006, 40, 424-444.	1.9	38
80	Characterization of Short-Term Particulate Matter Events by Real-Time Single Particle Mass Spectrometry. <i>Aerosol Science and Technology</i> , 2006, 40, 873-882.	1.5	8
81	Protein profiling by capillary isoelectric focusing, reversed-phase liquid chromatography, and mass spectrometry. <i>Electrophoresis</i> , 2005, 26, 1383-1388.	1.3	32
82	Chemical species associated with the early stage of soot growth in a laminar premixed ethylene—oxygen—argon flame. <i>Combustion and Flame</i> , 2005, 142, 364-373.	2.8	167
83	Contemporary Moral Problems in Chemistry: Effect of Peer Presentations on Students' Awareness of Science and Society Issues. <i>Journal of Chemical Education</i> , 2005, 82, 1570.	1.1	8
84	Size-resolved fine and ultrafine particle composition in Baltimore, Maryland. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	40
85	Speciation of size-resolved individual ultrafine particles in Pittsburgh, Pennsylvania. <i>Journal of Geophysical Research</i> , 2005, 110, .	3.3	43
86	The character of single particle sulfate in Baltimore. <i>Atmospheric Environment</i> , 2004, 38, 5311-5320.	1.9	21
87	Number concentrations of fine and ultrafine particles containing metals. <i>Atmospheric Environment</i> , 2004, 38, 3263-3273.	1.9	50
88	Ultrafine nitrate particle events in Baltimore observed by real-time single particle mass spectrometry. <i>Atmospheric Environment</i> , 2004, 38, 3215-3223.	1.9	35
89	Generating protein sequence tags by combining cone and conventional collision induced dissociation in a quadrupole time-of-flight mass spectrometer. <i>Journal of the American Society for Mass Spectrometry</i> , 2004, 15, 1478-1486.	1.2	34
90	Formation of Oligomers in Secondary Organic Aerosol. <i>Environmental Science &amp; Technology</i> , 2004, 38, 1428-1434.	4.6	494

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91	Reactive Uptake of Nitric Acid into Aqueous Sodium Chloride Droplets Using Real-Time Single-Particle Mass Spectrometry. <i>Journal of Physical Chemistry A</i> , 2004, 108, 2659-2665.	1.1	53
92	Protein Characterization by On-Line Capillary Isoelectric Focusing, Reversed-Phase Liquid Chromatography, and Mass Spectrometry. <i>Analytical Chemistry</i> , 2004, 76, 2734-2740.	3.2	62
93	On-Line Analysis of Organic Components in Fine and Ultrafine Particles by Photoionization Aerosol Mass Spectrometry. <i>Analytical Chemistry</i> , 2004, 76, 253-261.	3.2	117
94	Measurement and numerical simulation of soot particle size distribution functions in a laminar premixed ethylene-oxygen-argon flame. <i>Combustion and Flame</i> , 2003, 133, 173-188.	2.8	230
95	A comparison of particle mass spectrometers during the 1999 Atlanta Supersite Project. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	90
96	Size-resolved ultrafine particle composition analysis 2. Houston. <i>Journal of Geophysical Research</i> , 2003, 108, .	3.3	60
97	Mass Spectrometry of Individual Particles between 50 and 750 nm in Diameter at the Baltimore Supersite. <i>Environmental Science &amp; Technology</i> , 2003, 37, 3268-3274.	4.6	61
98	Analysis of Soot Nanoparticles in a Laminar Premixed Ethylene Flame by Scanning Mobility Particle Sizer. <i>Aerosol Science and Technology</i> , 2003, 37, 611-620.	1.5	182
99	Detection of Negative Ions from Individual Ultrafine Particles. <i>Analytical Chemistry</i> , 2002, 74, 2092-2096.	3.2	21
100	Pyrolysis-photoionization mass spectrometry of ethylene-methyl acrylate copolymers. <i>Journal of Analytical and Applied Pyrolysis</i> , 2002, 64, 305-312.	2.6	8
101	Application of the ART-2a Algorithm to Laser Ablation Aerosol Mass Spectrometry of Particle Standards. <i>Analytical Chemistry</i> , 2001, 73, 2338-2344.	3.2	81
102	Nanoparticle Detection by Aerosol Mass Spectrometry. <i>Aerosol Science and Technology</i> , 2001, 34, 520-527.	1.5	41
103	Enhancing the Detection of Sulfate Particles for Laser Ablation Aerosol Mass Spectrometry. <i>Analytical Chemistry</i> , 2001, 73, 5365-5369.	3.2	22
104	Characterizing DNA photo-oxidation reactions by high-resolution mass measurements with matrix-assisted laser desorption/ionization time-of-flight mass spectrometry. , 2000, 35, 408-416.		12
105	Sampling and analysis of individual particles by aerosol mass spectrometry. , 2000, 35, 585-595.		115
106	Coating ambient particles for enhanced detection by mass spectrometry. <i>AIP Conference Proceedings</i> , 2000, , .	0.3	0
107	Size and Composition Biases on the Detection of Individual Ultrafine Particles by Aerosol Mass Spectrometry. <i>Environmental Science &amp; Technology</i> , 2000, 34, 4887-4893.	4.6	89
108	Senior Seminar Focusing on Societal Issues Related to Chemistry and Biochemistry. <i>Journal of Chemical Education</i> , 2000, 77, 1590.	1.1	7

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109	A Study of Deuterium Distribution in Deuterated Polyolefins by Pyrolysis-Photoionization Mass Spectrometry. <i>Macromolecules</i> , 2000, 33, 5388-5394.	2.2	9
110	Microstructures of Butadiene Copolymers Determined by Ozonolysis/MALDI Mass Spectrometry. <i>Macromolecules</i> , 2000, 33, 1664-1670.	2.2	17
111	Identification of single stranded regions of DNA by enzymatic digestion with matrix-assisted laser desorption/ionization analysis. <i>Journal of the American Society for Mass Spectrometry</i> , 1999, 10, 521-528.	1.2	12
112	Determination of Polymer Type and Comonomer Content in Polyethylenes by Pyrolysis-Photoionization Mass Spectrometry. <i>Analytical Chemistry</i> , 1999, 71, 866-872.	3.2	31
113	Thermogravimetry-Photoionization Mass Spectrometry of Different Rank Coals. <i>Energy &amp; Fuels</i> , 1999, 13, 1097-1104.	2.5	40
114	Deliquescence Behavior of Multicomponent Aerosols. <i>Journal of Physical Chemistry A</i> , 1998, 102, 173-180.	1.1	84
115	Real-Time Monitoring of the Surface and Total Composition of Aerosol Particles. <i>Aerosol Science and Technology</i> , 1997, 26, 291-300.	1.5	62
116	Composition and Microstructure of Acrylonitrile-Butadiene Copolymers by Pyrolysis-Photoionization Mass Spectrometry. <i>Analytical Chemistry</i> , 1997, 69, 3791-3795.	3.2	26
117	On-line analysis of aqueous aerosols by laser desorption ionization. <i>International Journal of Mass Spectrometry and Ion Processes</i> , 1997, 163, 29-37.	1.9	57
118	Laser desorption/ionization of ultrafine aerosol particles. <i>Rapid Communications in Mass Spectrometry</i> , 1997, 11, 993-996.	0.7	53
119	Laser desorption/ionization of ultrafine aerosol particles. , 1997, 11, 993.		1
120	Matrix-Assisted Laser Desorption/Ionization of Size- and Composition-Selected Aerosol Particles. <i>Analytical Chemistry</i> , 1996, 68, 3595-3601.	3.2	53
121	Oligonucleotide Sequence and Composition Determined by Matrix-Assisted Laser Desorption/Ionization. <i>Analytical Chemistry</i> , 1996, 68, 2141-2146.	3.2	49
122	Sulfur speciation in individual aerosol particles. <i>Journal of Geophysical Research</i> , 1996, 101, 18701-18707.	3.3	44
123	Bond-selective photodissociation of aliphatic disulfides. <i>Journal of the American Society for Mass Spectrometry</i> , 1995, 6, 872-876.	1.2	34
124	Quantitation of Ionic Species in Single Microdroplets by Online Laser Desorption/Ionization. <i>Analytical Chemistry</i> , 1994, 66, 3681-3687.	3.2	68
125	Unimolecular photochemistry of n-alkenes studied by photodissociation- photoionization mass spectrometry. <i>Journal of the American Society for Mass Spectrometry</i> , 1993, 4, 65-72.	1.2	13
126	Simultaneous detection of ions and neutrals produced by matrix-assisted laser desorption. <i>Rapid Communications in Mass Spectrometry</i> , 1993, 7, 569-575.	0.7	79



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127	Structural identification of alkene isomers by photodissociation-photoionization mass spectrometry. <i>Organic Mass Spectrometry</i> , 1992, 27, 949-954.	1.3	11
128	Hypersensitive Measurement of Proteins by Capillary Isoelectric Focusing and Liquid Chromatography-Mass Spectrometry. , 0, , 67-86.		0