Murray V Johnston

List of Publications by Year
in descending order

128	6,751	57631	76769
papers	citations	44 h-index	74 g-index

139	139	139	4536
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Direct Observations of Atmospheric Aerosol Nucleation. Science, 2013, 339, 943-946.	6.0	876
2	Formation of Oligomers in Secondary Organic Aerosol. Environmental Science & Technology, 2004, 38, 1428-1434.	4.6	494
3	Measurement and numerical simulation of soot particle size distribution functions in a laminar premixed ethylene-oxygen-argon flame. Combustion and Flame, 2003, 133, 173-188.	2.8	230
4	Analysis of Soot Nanoparticles in a Laminar Premixed Ethylene Flame by Scanning Mobility Particle Sizer. Aerosol Science and Technology, 2003, 37, 611-620.	1.5	182
5	Chemical species associated with the early stage of soot growth in a laminar premixed ethyleneâ€“oxygenâ€“argon flame. Combustion and Flame, 2005, 142, 364-373.	2.8	167
6	Oligomers in the Early Stage of Biogenic Secondary Organic Aerosol Formation and Growth. Environmental Science & Technology, 2007, 41, 6129-6136.	4.6	147
7	Aerosol mass spectrometry: An introductory review. International Journal of Mass Spectrometry, 2006, 258, 2-12.	0.7	136
8	On-Line Analysis of Organic Components in Fine and Ultrafine Particles by Photoionization Aerosol Mass Spectrometry. Analytical Chemistry, 2004, 76, 253-261.	3.2	117
9	Sampling and analysis of individual particles by aerosol mass spectrometry. , 2000, 35, 585-595.		115
10	Composition Domains in Monoterpene Secondary Organic Aerosol. Environmental Science & Technology, 2009, 43, 7797-7802.	4.6	105
11	Chemical Characterization of Individual, Airborne Sub-10-nm Particles and Molecules. Analytical Chemistry, 2006, 78, 1750-1754.	3.2	98
12	A comparison of particle mass spectrometers during the 1999 Atlanta Supersite Project. Journal of Geophysical Research, 2003, 108, .	3.3	90
13	Oligomer Content of Î±-Pinene Secondary Organic Aerosol. Aerosol Science and Technology, 2011, 45, 37-45.	1.5	90
14	Size and Composition Biases on the Detection of Individual Ultrafine Particles by Aerosol Mass Spectrometry. Environmental Science & Technology, 2000, 34, 4887-4893.	4.6	89
15	Molecular Composition of Monoterpene Secondary Organic Aerosol at Low Mass Loading. Environmental Science & Technology, 2010, 44, 7897-7902.	4.6	87
16	Deliquescence Behavior of Multicomponent Aerosols. Journal of Physical Chemistry A, 1998, 102, 173-180.	1.1	84
17	Application of the ART-2a Algorithm to Laser Ablation Aerosol Mass Spectrometry of Particle Standards. Analytical Chemistry, 2001, 73, 2338-2344.	3.2	81
18	New Particle Formation and Growth in the Troposphere. Analytical Chemistry, 2010, 82, 7871-7878.	3.2	80

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19	Simultaneous detection of ions and neutrals produced by matrix-assisted laser desorption. Rapid Communications in Mass Spectrometry, 1993, 7, 569-575.	0.7	79
20	Source characterization and identification by real-time single particle mass spectrometry. Atmospheric Environment, 2007, 41, 9397-9409.	1.9	76
21	Chemistry of Particle Inception and Growth during Î±-Pinene Ozonolysis. Environmental Science & Technology, 2006, 40, 1843-1848.	4.6	72
22	Reactive Uptake of Nitric Acid onto Sodium Chloride Aerosols Across a Wide Range of Relative Humidities. Journal of Physical Chemistry A, 2006, 110, 7614-7620.	1.1	72
23	Quantitative Assessment of the Sulfuric Acid Contribution to New Particle Growth. Environmental Science & Technology, 2012, 46, 4365-4373.	4.6	71
24	Quantitation of Ionic Species in Single Microdroplets by Online Laser Desorption/Ionization. Analytical Chemistry, 1994, 66, 3681-3687.	3.2	68
25	Single particle chemical analysis of ambient ultrafine aerosol: A review. Journal of Aerosol Science, 2012, 52, 109-120.	1.8	68
26	Oligomer Formation Pathways in Secondary Organic Aerosol from MS and MS/MS Measurements with High Mass Accuracy and Resolving Power. Journal of the American Society for Mass Spectrometry, 2012, 23, 1097-1108.	1.2	68
27	Formation and Growth of Molecular Clusters Containing Sulfuric Acid, Water, Ammonia, and Dimethylamine. Journal of Physical Chemistry A, 2014, 118, 5464-5473.	1.1	67
28	Reactive Uptake of Trimethylamine into Ammonium Nitrate Particles. Journal of Physical Chemistry A, 2009, 113, 4840-4843.	1.1	65
29	Structure and Energetics of Nanometer Size Clusters of Sulfuric Acid with Ammonia and Dimethylamine. Journal of Physical Chemistry A, 2012, 116, 1030-1040.	1.1	65
30	Ion formation mechanism in laser desorption ionization of individual nanoparticles. Journal of the American Society for Mass Spectrometry, 2008, 19, 389-399.	1.2	63
31	Real-Time Monitoring of the Surface and Total Composition of Aerosol Particles. Aerosol Science and Technology, 1997, 26, 291-300.	1.5	62
32	Protein Characterization by On-Line Capillary Isoelectric Focusing, Reversed-Phase Liquid Chromatography, and Mass Spectrometry. Analytical Chemistry, 2004, 76, 2734-2740.	3.2	62
33	Size-Dependent Reactions of Ammonium Bisulfate Clusters with Dimethylamine. Journal of Physical Chemistry A, 2010, 114, 11638-11644.	1.1	62
34	Mass Spectrometry of Individual Particles between 50 and 750 nm in Diameter at the Baltimore Supersite. Environmental Science & Technology, 2003, 37, 3268-3274.	4.6	61
35	A seasonal observation on the distribution of engineered nanoparticles in municipal wastewater treatment systems exemplified by TiO2 and ZnO. Science of the Total Environment, 2018, 625, 1321-1329.	3.9	61
36	Size-resolved ultrafine particle composition analysis 2. Houston. Journal of Geophysical Research, 2003, 108, .	3.3	60

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37	Airborne nanoparticle characterization with a digital ion trapâ€“reflectron time of flight mass spectrometer. International Journal of Mass Spectrometry, 2006, 258, 50-57.	0.7	58
38	On-line analysis of aqueous aerosols by laser desorption ionization. International Journal of Mass Spectrometry and Ion Processes, 1997, 163, 29-37.	1.9	57
39	Matrix-Assisted Laser Desorption/Ionization of Size- and Composition-Selected Aerosol Particles. Analytical Chemistry, 1996, 68, 3595-3601.	3.2	53
40	Laser desorption/ionization of ultrafine aerosol particles. Rapid Communications in Mass Spectrometry, 1997, 11, 993-996.	0.7	53
41	Reactive Uptake of Nitric Acid into Aqueous Sodium Chloride Droplets Using Real-Time Single-Particle Mass Spectrometry. Journal of Physical Chemistry A, 2004, 108, 2659-2665.	1.1	53
42	Number concentrations of fine and ultrafine particles containing metals. Atmospheric Environment, 2004, 38, 3263-3273.	1.9	50
43	Nanoparticle Chemical Composition During New Particle Formation. Aerosol Science and Technology, 2011, 45, 1041-1048.	1.5	50
44	Silicon is a Frequent Component of Atmospheric Nanoparticles. Environmental Science & Technology, 2014, 48, 11137-11145.	4.6	50
45	Oligonucleotide Sequence and Composition Determined by Matrix-Assisted Laser Desorption/Ionization. Analytical Chemistry, 1996, 68, 2141-2146.	3.2	49
46	Characterization of Highly Oxidized Molecules in Fresh and Aged Biogenic Secondary Organic Aerosol. Analytical Chemistry, 2016, 88, 4495-4501.	3.2	48
47	What Have We Learned from Highly Time-Resolved Measurements during EPAâ€™s Supersites Program and Related Studies?. Journal of the Air and Waste Management Association, 2008, 58, 303-319.	0.9	45
48	Thermodynamics of oligomer formation: implications for secondary organic aerosol formation and reactivity. Physical Chemistry Chemical Physics, 2013, 15, 6935.	1.3	45
49	Sulfur speciation in individual aerosol particles. Journal of Geophysical Research, 1996, 101, 18701-18707.	3.3	44
50	Speciation of size-resolved individual ultrafine particles in Pittsburgh, Pennsylvania. Journal of Geophysical Research, 2005, 110, .	3.3	43
51	Fragmentation Energetics of Clusters Relevant to Atmospheric New Particle Formation. Journal of the American Chemical Society, 2013, 135, 3276-3285.	6.6	42
52	Nanoparticle Detection by Aerosol Mass Spectrometry. Aerosol Science and Technology, 2001, 34, 520-527.	1.5	41
53	Intact Protein Profiling ofChlorobium tepidumby Capillary Isoelectric Focusing, Reversed-Phase Liquid Chromatography, and Mass Spectrometry. Analytical Chemistry, 2007, 79, 7145-7153.	3.2	41
54	Aerosol Formation from OH Oxidation of the Volatile Cyclic Methyl Siloxane (cVMS) Decamethylcyclopentasiloxane. Environmental Science & Technology, 2017, 51, 4445-4451.	4.6	41

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55	Thermogravimetryâ€"Photoionization Mass Spectrometry of Different Rank Coals. Energy & Fuels, 1999, 13, 1097-1104.	2.5	40
56	Size-resolved fine and ultrafine particle composition in Baltimore, Maryland. Journal of Geophysical Research, 2005, 110, .	3.3	40
57	Identification of sources of atmospheric PM at the Pittsburgh Supersite, Part I: Single particle analysis and filter-based positive matrix factorization. Atmospheric Environment, 2006, 40, 411-423.	1.9	40
58	Ion mobility spectrometry-mass spectrometry examination of the structures, stabilities, and extents of hydration of dimethylamineâ€"sulfuric acid clusters. Physical Chemistry Chemical Physics, 2016, 18, 22962-22972.	1.3	40
59	Identification of sources of atmospheric PM at the Pittsburgh Supersiteâ€"Part II: Quantitative comparisons of single particle, particle number, and particle mass measurements. Atmospheric Environment, 2006, 40, 424-444.	1.9	38
60	Looking for engineered nanoparticles (ENPs) in wastewater treatment systems: Qualification and quantification aspects. Science of the Total Environment, 2017, 590-591, 809-817.	3.9	36
61	Ultrafine nitrate particle events in Baltimore observed by real-time single particle mass spectrometry. Atmospheric Environment, 2004, 38, 3215-3223.	1.9	35
62	Interactions between boreal wildfire and urban emissions. Journal of Geophysical Research, 2008, 113, .	3.3	35
63	Time-Resolved Chemical Composition of Individual Nanoparticles in Urban Air. Environmental Science & Technology, 2008, 42, 6631-6636.	4.6	35
64	Bond-selective photodissociation of aliphatic disulfides. Journal of the American Society for Mass Spectrometry, 1995, 6, 872-876.	1.2	34
65	Generating protein sequence tags by combining cone and conventional collision induced dissociation in a quadrupole time-of-flight mass spectrometer. Journal of the American Society for Mass Spectrometry, 2004, 15, 1478-1486.	1.2	34
66	Mechanisms of Atmospherically Relevant Cluster Growth. Accounts of Chemical Research, 2017, 50, 1965-1975.	7.6	34
67	Droplet Assisted Inlet Ionization for Online Analysis of Airborne Nanoparticles. Analytical Chemistry, 2017, 89, 1059-1062.	3.2	33
68	Protein profiling by capillary isoelectric focusing, reversed-phase liquid chromatography, and mass spectrometry. Electrophoresis, 2005, 26, 1383-1388.	1.3	32
69	Determination of Polymer Type and Comonomer Content in Polyethylenes by Pyrolysisâ€"Photoionization Mass Spectrometry. Analytical Chemistry, 1999, 71, 866-872.	3.2	31
70	Reactivity of methanesulfonic acid salt clusters relevant to marine air. Journal of Geophysical Research, 2011, 116, .	3.3	31
71	Quantitative and time-resolved nanoparticle composition measurements during new particle formation. Faraday Discussions, 2013, 165, 25.	1.6	31
72	Molecular constraints on particle growth during new particle formation. Geophysical Research Letters, 2014, 41, 6045-6054.	1.5	30

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73	Molecular Characterization of Atmospheric Organic Aerosol by Mass Spectrometry. Annual Review of Analytical Chemistry, 2019, 12, 247-274.	2.8	30
74	Ultrafine Particles Near a Roadway Intersection: Origin and Apportionment of Fast Changes in Concentration. Environmental Science & Technology, 2010, 44, 7903-7907.	4.6	28
75	The Thermal-Stability of Oligomers in Alpha-Pinene Secondary Organic Aerosol. Aerosol Science and Technology, 2012, 46, 983-989.	1.5	28
76	Rapid Sampling of Individual Organic Aerosol Species in Ambient Air with the Photoionization Aerosol Mass Spectrometer. Aerosol Science and Technology, 2008, 42, 18-27.	1.5	27
77	Composition and Microstructure of Acrylonitrileâ˜'Butadiene Copolymers by Pyrolysis-Photoionization Mass Spectrometry. Analytical Chemistry, 1997, 69, 3791-3795.	3.2	26
78	Elemental Composition of Nanoparticles with the Nano Aerosol Mass Spectrometerâ€. Analytical Chemistry, 2010, 82, 8034-8038.	3.2	26
79	Nanoparticle growth by particle-phase chemistry. Atmospheric Chemistry and Physics, 2018, 18, 1895-1907.	1.9	26
80	Molecular Transformations Accompanying the Aging of Laboratory Secondary Organic Aerosol. Environmental Science & Technology, 2013, 47, 2230-2237.	4.6	24
81	High Sensitivity Analysis of Nanoliter Volumes of Volatile and Nonvolatile Compounds using Matrix Assisted Ionization (MAI) Mass Spectrometry. Journal of the American Society for Mass Spectrometry, 2016, 27, 1590-1596.	1.2	24
82	Apportionment of Motor Vehicle Emissions from Fast Changes in Number Concentration and Chemical Composition of Ultrafine Particles Near a Roadway Intersection. Environmental Science & Technology, 2011, 45, 5637-5643.	4.6	23
83	Trapping charged nanoparticles in the nano aerosol mass spectrometer (NAMS). International Journal of Mass Spectrometry, 2012, 311, 64-71.	0.7	23
84	Sulfur Dioxide Modifies Aerosol Particle Formation and Growth by Ozonolysis of Monoterpenes and Isoprene. Journal of Geophysical Research D: Atmospheres, 2019, 124, 4800-4811.	1.2	23
85	Enhancing the Detection of Sulfate Particles for Laser Ablation Aerosol Mass Spectrometry. Analytical Chemistry, 2001, 73, 5365-5369.	3.2	22
86	Organic aerosol source apportionment from highly time-resolved molecular composition measurements. Atmospheric Environment, 2009, 43, 2901-2910.	1.9	22
87	Online Characterization of Particles and Gases with an Ambient Electrospray Ionization Source. Analytical Chemistry, 2012, 84, 9253-9258.	3.2	22
88	Detection of Negative Ions from Individual Ultrafine Particles. Analytical Chemistry, 2002, 74, 2092-2096.	3.2	21
89	The character of single particle sulfate in Baltimore. Atmospheric Environment, 2004, 38, 5311-5320.	1.9	21
90	Nanoparticle chemical composition and diurnal dependence at the CalNex Los Angeles ground site. Journal of Geophysical Research, 2012, 117, .	3.3	21

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91	Molecular Characterization of Secondary Aerosol from Oxidation of Cyclic Methylsiloxanes. Journal of the American Society for Mass Spectrometry, 2016, 27, 402-409.	1.2	21
92	Particle size dependence of biogenic secondary organic aerosol molecular composition. Atmospheric Chemistry and Physics, 2017, 17, 7593-7603.	1.9	21
93	Nanoparticle Mass Spectrometry: Pushing the Limit of Single Particle Analysis. Applied Spectroscopy, 2006, 60, 264A-272A.	1.2	20
94	Activation Barriers in the Growth of Molecular Clusters Derived from Sulfuric Acid and Ammonia. Journal of Physical Chemistry A, 2014, 118, 11547-11554.	1.1	19
95	Microstructures of Butadiene Copolymers Determined by Ozonolysis/MALDI Mass Spectrometry. Macromolecules, 2000, 33, 1664-1670.	2.2	17
96	Aqueous Reaction of Dicarbonyls with Ammonia as a Potential Source of Organic Nitrogen in Airborne Nanoparticles. Journal of Physical Chemistry A, 2017, 121, 3720-3727.	1.1	16
97	Chemical Composition of Ambient Nanoparticles on a Particle-by-Particle Basis. Analytical Chemistry, 2012, 84, 2253-2259.	3.2	15
98	Ion formation in dropletâ€assisted ionization. Rapid Communications in Mass Spectrometry, 2021, 35, e8227.	0.7	14
99	Unimolecular photochemistry of n-alkenes studied by photodissociation- photoionization mass spectrometry. Journal of the American Society for Mass Spectrometry, 1993, 4, 65-72.	1.2	13
100	Temperature effects on sulfuric acid aerosol nucleation and growth: initial results from the TANGENT study. Atmospheric Chemistry and Physics, 2019, 19, 8915-8929.	1.9	13
101	Reaction Kinetics of Organic Aerosol Studied by Droplet Assisted Ionization: Enhanced Reactivity in Droplets Relative to Bulk Solution. Journal of the American Society for Mass Spectrometry, 2021, 32, 46-54.	1.2	13
102	Identification of single stranded regions of DNA by enzymatic digestion with matrix-assisted laser desorption/ionization analysis. Journal of the American Society for Mass Spectrometry, 1999, 10, 521-528.	1.2	12
103	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
104	Growth of Aitken mode ammonium sulfate particles by Î±-pinene ozonolysis. Aerosol Science and Technology, 2019, 53, 406-418.	1.5	12
105	Structural identification of alkene isomers by photodissociation-photoionization mass spectrometry. Organic Mass Spectrometry, 1992, 27, 949-954.	1.3	11
106	Growth of Ammonium Bisulfate Clusters by Adsorption of Oxygenated Organic Molecules. Journal of Physical Chemistry A, 2015, 119, 11191-11198.	1.1	11
107	Abiotic formation of RNA-like oligomers by montmorillonite catalysis: part II. International Journal of Astrobiology, 2008, 7, 1-7.	0.9	10
108	A Study of Deuterium Distribution in Deuterated Polyolefins by Pyrolysisâ^'Photoionization Mass Spectrometry. Macromolecules, 2000, 33, 5388-5394.	2.2	9

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109	Origin and impact of particle-to-particle variations in composition measurements with the nano-aerosol mass spectrometer. Analytical and Bioanalytical Chemistry, 2013, 405, 6995-7003.	1.9	9
110	Pyrolysis-photoionization mass spectrometry of ethylene-methyl acrylate copolymers. Journal of Analytical and Applied Pyrolysis, 2002, 64, 305-312.	2.6	8
111	Contemporary Moral Problems in Chemistry: Effect of Peer Presentations on Students' Awareness of Science and Society Issues. Journal of Chemical Education, 2005, 82, 1570.	1.1	8
112	Characterization of Short-Term Particulate Matter Events by Real-Time Single Particle Mass Spectrometry. Aerosol Science and Technology, 2006, 40, 873-882.	1.5	8
113	Online deposition of nanoâ€aerosol for matrixâ€assisted laser desorption/ionization mass spectrometry. Rapid Communications in Mass Spectrometry, 2009, 23, 3963-3968.	0.7	8
114	An IT-TOF mass spectrometer for the analysis of organic aerosol. International Journal of Mass Spectrometry, 2009, 281, 8-14.	0.7	8
115	Online Characterization of Organic Aerosol by Condensational Growth into Aqueous Droplets Coupled with Droplet-Assisted Ionization. Analytical Chemistry, 2021, 93, 2793-2801.	3.2	8
116	Senior Seminar Focusing on Societal Issues Related to Chemistry and Biochemistry. Journal of Chemical Education, 2000, 77, 1590.	1.1	7
117	Extratropical waves transport boreal wildfire emissions and drive regional air quality dynamics. Journal of Geophysical Research, 2008, 113, .	3.3	7
118	Particle size and chemical composition effects on elemental analysis with the nano aerosol mass spectrometer. Aerosol Science and Technology, 2017, 51, 1135-1143.	1.5	7
119	Ion Formation from Rapidly Heated Aqueous Droplets by Droplet-Assisted Ionization. Journal of Physical Chemistry A, 2020, 124, 7313-7321.	1.1	5
120	Laser desorption/ionization of ultrafine aerosol particles. , 1997, 11, 993.		1
121	Selective detection and characterization of nanoparticles from motor vehicles. Research Report (health Effects Institute), 2013, , 3-45.	1.6	1
122	Coating ambient particles for enhanced detection by mass spectrometry. AIP Conference Proceedings, 2000, , .	0.3	0
123	Identification and quantification of particle growth channels during new particle formation. , 2013, , .		0
124	Fragmentation and growth energetics of clusters relevant to new particle formation. , 2013, , .		0
125	Impact of Multiphase Chemistry on Nanoparticle Growth and Composition. ACS Symposium Series, 2018, , 9-34.	0.5	0
126	Supplemental Material to "Advances in Integrated and Continuous Measurements for Particle Mass and Chemical Composition". Journal of the Air and Waste Management Association, 2008, 58, .	0.2	0

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127	Supplemental Material to "Source Apportionment: Findings from the U.S. Supersites Program". Journal of the Air and Waste Management Association, 2008, 58, .	0.2	0
128	Hypersensitive Measurement of Proteins by Capillary Isoelectric Focusing and Liquid Chromatography-Mass Spectrometry. , 0, , 67-86.		0