Andrew Ault

List of Publications by Year
in descending order

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80	5,650	53794 45	82547 72
papers	citations	h-index	g-index

98	98	98	5501
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	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
2	The acidity of atmospheric particles and clouds. Atmospheric Chemistry and Physics, 2020, 20, 4809-4888.	4.9	327
3	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
4	Toxicity assessment of zinc oxide nanoparticles using sub-acute and sub-chronic murine inhalation models. Particle and Fibre Toxicology, 2014, 11, 15.	6.2	194
5	Aerosol Mixing State: Measurements, Modeling, and Impacts. Reviews of Geophysics, 2019, 57, 187-249.	23.0	180
6	Size-Dependent Changes in Sea Spray Aerosol Composition and Properties with Different Seawater Conditions. Environmental Science & Technology, 2013, 47, 5603-5612.	10.0	175
7	Impact of Emissions from the Los Angeles Port Region on San Diego Air Quality during Regional Transport Events. Environmental Science & Technology, 2009, 43, 3500-3506.	10.0	136
8	Atmospheric Aerosol Chemistry: Spectroscopic and Microscopic Advances. Analytical Chemistry, 2017, 89, 430-452.	6.5	135
9	Characterization of the Single Particle Mixing State of Individual Ship Plume Events Measured at the Port of Los Angeles. Environmental Science & Technology, 2010, 44, 1954-1961.	10.0	131
10	Effect of the Aerosol-Phase State on Secondary Organic Aerosol Formation from the Reactive Uptake of Isoprene-Derived Epoxydiols (IEPOX). Environmental Science and Technology Letters, 2018, 5, 167-174.	8.7	131
11	Measurements of Isoprene-Derived Organosulfates in Ambient Aerosols by Aerosol Time-of-Flight Mass Spectrometry - Part 1: Single Particle Atmospheric Observations in Atlanta. Environmental Science & Technology, 2011, 45, 5105-5111.	10.0	121
12	Rapid Kinetics of Size and pH-Dependent Dissolution and Aggregation of Silver Nanoparticles in Simulated Gastric Fluid. Journal of Physical Chemistry C, 2015, 119, 20632-20641.	3.1	120
13	Single-Particle SEM-EDX Analysis of Iron-Containing Coarse Particulate Matter in an Urban Environment: Sources and Distribution of Iron within Cleveland, Ohio. Environmental Science & Technology, 2012, 46, 4331-4339.	10.0	119
14	Increasing Isoprene Epoxydiol-to-Inorganic Sulfate Aerosol Ratio Results in Extensive Conversion of Inorganic Sulfate to Organosulfur Forms: Implications for Aerosol Physicochemical Properties. Environmental Science & Technology, 2019, 53, 8682-8694.	10.0	111
15	Raman microspectroscopy and vibrational sum frequency generation spectroscopy as probes of the bulk and surface compositions of size-resolved sea spray aerosol particles. Physical Chemistry Chemical Physics, 2013, 15, 6206.	2.8	103
16	Direct Measurement of pH in Individual Particles via Raman Microspectroscopy and Variation in Acidity with Relative Humidity. Journal of Physical Chemistry A, 2016, 120, 911-917.	2.5	95
17	Detection of Asian dust in California orographic precipitation. Journal of Geophysical Research, 2011, 116, .	3.3	94
18	Direct Determination of Aerosol pH: Size-Resolved Measurements of Submicrometer and Supermicrometer Aqueous Particles. Analytical Chemistry, 2018, 90, 11232-11239.	6.5	91

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19	Inside versus Outside: Ion Redistribution in Nitric Acid Reacted Sea Spray Aerosol Particles as Determined by Single Particle Analysis. Journal of the American Chemical Society, 2013, 135, 14528-14531.	13.7	89
20	Impact of marine biogeochemistry on the chemical mixing state and cloud forming ability of nascent sea spray aerosol. Journal of Geophysical Research D: Atmospheres, 2013, 118, 8553-8565.	3.3	84
21	Joint Impacts of Acidity and Viscosity on the Formation of Secondary Organic Aerosol from Isoprene Epoxydiols (IEPOX) in Phase Separated Particles. ACS Earth and Space Chemistry, 2019, 3, 2646-2658.	2.7	80
22	Measurements of Isoprene-Derived Organosulfates in Ambient Aerosols by Aerosol Time-of-Flight Mass Spectrometryâ€"Part 2: Temporal Variability and Formation Mechanisms. Environmental Science & Technology, 2011, 45, 8648-8655.	10.0	79
23	Spectroscopic Determination of Aerosol pH from Acidâ€"Base Equilibria in Inorganic, Organic, and Mixed Systems. Journal of Physical Chemistry A, 2017, 121, 5690-5699.	2.5	79
24	Surface Enhanced Raman Spectroscopy Enables Observations of Previously Undetectable Secondary Organic Aerosol Components at the Individual Particle Level. Analytical Chemistry, 2015, 87, 7510-7514.	6.5	77
25	Harmful Algal Bloom Toxins in Aerosol Generated from Inland Lake Water. Environmental Science & Technology, 2020, 54, 4769-4780.	10.0	74
26	Bouncier Particles at Night: Biogenic Secondary Organic Aerosol Chemistry and Sulfate Drive Diel Variations in the Aerosol Phase in a Mixed Forest. Environmental Science & Technology, 2019, 53, 4977-4987.	10.0	72
27	Indoor Surface Chemistry: Developing a Molecular Picture of Reactions on Indoor Interfaces. CheM, 2020, 6, 3203-3218.	11.7	70
28	Heterogeneous Reactivity of Nitric Acid with Nascent Sea Spray Aerosol: Large Differences Observed between and within Individual Particles. Journal of Physical Chemistry Letters, 2014, 5, 2493-2500.	4.6	66
29	Aerosol Emissions from Great Lakes Harmful Algal Blooms. Environmental Science & Technology, 2018, 52, 397-405.	10.0	66
30	Isoprene-Derived Organosulfates: Vibrational Mode Analysis by Raman Spectroscopy, Acidity-Dependent Spectral Modes, and Observation in Individual Atmospheric Particles. Journal of Physical Chemistry A, 2018, 122, 303-315.	2.5	66
31	Development of a hydrophilic interaction liquid chromatography (HILIC) method for the chemical characterization of water-soluble isoprene epoxydiol (IEPOX)-derived secondary organic aerosol. Environmental Sciences: Processes and Impacts, 2018, 20, 1524-1536.	3.5	66
32	Effects of particle size and coating on toxicologic parameters, fecal elimination kinetics and tissue distribution of acutely ingested silver nanoparticles in a mouse model. Nanotoxicology, 2016, 10, 352-360.	3.0	65
33	Comparison of the mixing state of long-range transported Asian and African mineral dust. Atmospheric Environment, 2015, 115, 19-25.	4.1	62
34	Effect of platinum on the photophysical properties of a series of phenyl-ethynyl oligomers. Journal of Chemical Physics, 2005, 122, 214708.	3.0	60
35	Measurements of Aerosol Chemistry during New Particle Formation Events at a Remote Rural Mountain Site. Environmental Science & Technology, 2011, 45, 8208-8216.	10.0	60
36	Perspectives on Harmful Algal Blooms (HABs) and the Cyberbiosecurity of Freshwater Systems. Frontiers in Bioengineering and Biotechnology, 2019, 7, 128.	4.1	60

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37	Protein corona-induced modification of silver nanoparticle aggregation in simulated gastric fluid. Environmental Science: Nano, 2016, 3, 1510-1520.	4.3	59
38	On the Role of Particle Inorganic Mixing State in the Reactive Uptake of N₂O₅ to Ambient Aerosol Particles. Environmental Science & Technology, 2014, 48, 1618-1627.	10.0	58
39	Transition Metal Associations with Primary Biological Particles in Sea Spray Aerosol Generated in a Wave Channel. Environmental Science & Technology, 2014, 48, 1324-1333.	10.0	58
40	Atomic Force Microscopy-Infrared Spectroscopy of Individual Atmospheric Aerosol Particles: Subdiffraction Limit Vibrational Spectroscopy and Morphological Analysis. Analytical Chemistry, 2017, 89, 8594-8598.	6.5	58
41	Influence of crustal dust and sea spray supermicron particle concentrations and acidity on inorganic NO₃^{â^'} aerosol during the 2013 Southern Oxidant and Aerosol Study. Atmospheric Chemistry and Physics, 2015, 15, 10669-10685.	4.9	56
42	Inland Sea Spray Aerosol Transport and Incomplete Chloride Depletion: Varying Degrees of Reactive Processing Observed during SOAS. Environmental Science & Technology, 2017, 51, 9533-9542.	10.0	56
43	Secondary sulfate is internally mixed with sea spray aerosol and organic aerosol in the winter Arctic. Atmospheric Chemistry and Physics, 2018, 18, 3937-3949.	4.9	56
44	The diverse chemical mixing state of aerosol particles in the southeastern United States. Atmospheric Chemistry and Physics, 2018, 18, 12595-12612.	4.9	55
45	Size-Resolved Sea Spray Aerosol Particles Studied by Vibrational Sum Frequency Generation. Journal of Physical Chemistry A, 2013, 117, 6589-6601.	2.5	50
46	Wintertime Arctic Sea Spray Aerosol Composition Controlled by Sea Ice Lead Microbiology. ACS Central Science, 2019, 5, 1760-1767.	11.3	47
47	Simultaneous Optical Photothermal Infrared (O-PTIR) and Raman Spectroscopy of Submicrometer Atmospheric Particles. Analytical Chemistry, 2020, 92, 9932-9939.	6.5	47
48	Ubiquitous influence of wildfire emissions and secondary organic aerosol on summertime atmospheric aerosol in the forested Great Lakes region. Atmospheric Chemistry and Physics, 2018, 18, 3701-3715.	4.9	44
49	Heterogeneous Hydroxyl Radical Oxidation of Isoprene-Epoxydiol-Derived Methyltetrol Sulfates: Plausible Formation Mechanisms of Previously Unexplained Organosulfates in Ambient Fine Aerosols. Environmental Science and Technology Letters, 2020, 7, 460-468.	8.7	43
50	Evaluation of aerosol mixing state classes in the GISS modelEâ€MATRIX climate model using singleâ€particle mass spectrometry measurements. Journal of Geophysical Research D: Atmospheres, 2013, 118, 9834-9844.	3.3	42
51	Aerosol Acidity: Novel Measurements and Implications for Atmospheric Chemistry. Accounts of Chemical Research, 2020, 53, 1703-1714.	15.6	41
52	Impact of interannual variations in sources of insoluble aerosol species on orographic precipitation over California's central Sierra Nevada. Atmospheric Chemistry and Physics, 2015, 15, 6535-6548.	4.9	38
53	Computer-controlled Raman microspectroscopy (CC-Raman): A method for the rapid characterization of individual atmospheric aerosol particles. Aerosol Science and Technology, 2017, 51, 1099-1112.	3.1	37
54	Lake spray aerosol generation: a method for producing representative particles from freshwater wave breaking. Atmospheric Measurement Techniques, 2016, 9, 4311-4325.	3.1	36

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55	Lake Spray Aerosol: A Chemical Signature from Individual Ambient Particles. Environmental Science & Technology, 2016, 50, 9835-9845.	10.0	36
56	Unexpected Contributions of Sea Spray and Lake Spray Aerosol to Inland Particulate Matter. Environmental Science and Technology Letters, 2018, 5, 405-412.	8.7	36
57	Reactive Uptake of Isoprene Epoxydiols Increases the Viscosity of the Core of Phase-Separated Aerosol Particles. ACS Earth and Space Chemistry, 2019, 3, 1402-1414.	2.7	35
58	As We Drink and Breathe: Adverse Health Effects of Microcystins and Other Harmful Algal Bloom Toxins in the Liver, Gut, Lungs and Beyond. Life, 2022, 12, 418.	2.4	35
59	Elevated Concentrations of Lead in Particulate Matter on the Neighborhood-Scale in Delhi, India As Determined by Single Particle Analysis. Environmental Science & Technology, 2016, 50, 4961-4970.	10.0	34
60	Chemical properties of insoluble precipitation residue particles. Journal of Aerosol Science, 2014, 76, 13-27.	3.8	31
61	Quantitative Investigations of Biodiesel Fuel Using Infrared Spectroscopy: An Instrumental Analysis Experiment for Undergraduate Chemistry Students. Journal of Chemical Education, 2012, 89, 243-247.	2.3	26
62	Changes in precipitating snow chemistry with location and elevation in the California Sierra Nevada. Journal of Geophysical Research D: Atmospheres, 2016, 121, 7296-7309.	3.3	22
63	Transported Mineral Dust Deposition Case Study at a Hydrologically Sensitive Mountain Site: Size and Composition Shifts in Ambient Aerosol and Snowpack. Aerosol and Air Quality Research, 2016, 16, 555-567.	2.1	21
64	Î±-Pinene-Derived organic coatings on acidic sulfate aerosol impacts secondary organic aerosol formation from isoprene in a box model. Atmospheric Environment, 2019, 213, 456-462.	4.1	21
65	Aerosol Acidity Sensing via Polymer Degradation. Analytical Chemistry, 2020, 92, 6502-6511.	6.5	17
66	Seasonal Contribution of Isoprene-Derived Organosulfates to Total Water-Soluble Fine Particulate Organic Sulfur in the United States. ACS Earth and Space Chemistry, 2021, 5, 2419-2432.	2.7	16
67	Extending surface enhanced Raman spectroscopy (SERS) of atmospheric aerosol particles to the accumulation mode (150â€“800 nm). Environmental Sciences: Processes and Impacts, 2018, 20, 1570-1580.	3.5	15
68	An In Situ Method for Sizing Insoluble Residues in Precipitation and Other Aqueous Samples. Aerosol Science and Technology, 2015, 49, 24-34.	3.1	13
69	Atmospheric Transport of North African Dustâ€Bearing Supermicron Freshwater Diatoms to South America: Implications for Iron Transport to the Equatorial North Atlantic Ocean. Geophysical Research Letters, 2021, 48, e2020GL090476.	4.0	12
70	Lake Spray Aerosol Incorporated into Great Lakes Clouds. ACS Earth and Space Chemistry, 2019, 3, 2765-2774.	2.7	11
71	Solid organic-coated ammonium sulfate particles at high relative humidity in the summertime Arctic atmosphere. Proceedings of the National Academy of Sciences of the United States of America, 2022, 119, e2104496119.	7.1	11
72	Morphology and Viscosity Changes after Reactive Uptake of Isoprene Epoxydiols in Submicrometer Phase Separated Particles with Secondary Organic Aerosol Formed from Different Volatile Organic Compounds. ACS Earth and Space Chemistry, 2022, 6, 871-882.	2.7	11

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73	Nanoparticle Digestion Simulator Reveals pH-Dependent Aggregation in the Gastrointestinal Tract. Analytical Chemistry, 2020, 92, 12257-12264.	6.5	10
74	Initial pH Governs Secondary Organic Aerosol Phase State and Morphology after Uptake of Isoprene Epoxydiols (IEPOX). Environmental Science & Technology, 2022, 56, 10596-10607.	10.0	9
75	Emerging investigator series: influence of marine emissions and atmospheric processing on individual particle composition of summertime Arctic aerosol over the Bering Strait and Chukchi Sea. Environmental Sciences: Processes and Impacts, 2020, 22, 1201-1213.	3.5	8
76	Aerosol Acidity: Direct Measurement from a Spectroscopic Method. ACS Symposium Series, 2018, , 171-191.	0.5	7
77	Particle growth in an isoprene-rich forest: Influences of urban, wildfire, and biogenic air masses. Atmospheric Environment, 2018, 178, 255-264.	4.1	6
78	Lake Spray Aerosol Emissions Alter Nitrogen Partitioning in the Great Lakes Region. Geophysical Research Letters, 2021, 48, e2021GL093727.	4.0	3
79	The rapid acidification of sea spray aerosols. Physics Today, 2022, 75, 58-59.	0.3	3
80	Laboratory measurements of ice nuclei concentrations from ocean water spray. , 2013, , .		2