

# Lynn R. Mazzoleni

Associate Professor of Chemistry  
Department of Chemistry  
Michigan Technological University  
1400 Townsend Drive  
Houghton, Michigan 49931

Phone: 906-487-1853, Email: [lmazzol@mtu.edu](mailto:lmazzol@mtu.edu)

Research Group Webpage: <http://www.chemistry.mtu.edu/~lmazzol/>

## Academic Appointments

Associate Professor, Department of Chemistry, Michigan Technological University	2014 – Present
Visiting Associate Professor and Fulbright U.S. Scholar, Institute of Atmospheric Sciences and Climate, Italian National Research Council (Bologna, Italy)	2015 – 2016
Assistant Professor, Department of Chemistry, Michigan Technological University	2008 – 2014
Postdoctoral Research Associate, Los Alamos National Laboratory	2007 – 2008
Postdoctoral Research Fellow, Colorado State University	2005 – 2007

## Education

PhD in Environmental Sciences & Health, University of Nevada, Reno	2000 – 2005
<ul style="list-style-type: none"><li>Advisor: Dr. Barbara Zielinska, Research Professor, Desert Research Institute</li></ul>	
BS in Environmental Science, Kurtztown University	1994 – 2000
<ul style="list-style-type: none"><li>Degree Concentration: Environmental Chemistry</li></ul>	

## Awards and Honors

Fulbright U.S. Scholar Award	2015 – 2016
Los Alamos National Laboratory, Institute of Geophysics and Planetary Physics Award	2008
Cooperative Institute for Research in the Atmosphere Associate Fellowship	2005 – 2007
Desert Research Institute Research Affairs Council Research Award	2003 – 2004
American Meteorological Society Student Scholarship	2002

## Awards to Student and Postdoctoral Researchers

NASA Earth and Space Science Fellowship to Matthew A. Brege	2015 – 2018
EPA Greater Research Opportunities (GRO) Fellowship to Megan M. Dalbec	2012 – 2014

## Funded Research Projects

1. Mazzoleni, L. R., E. S. Kane, A. R. Minerick and D. Minakata, **MRI: Acquisition of an Ultrahigh Resolution Mass Spectrometer for Interdisciplinary Research and Education**, NSF Major Research Instrumentation Program, 2015-2017.
2. Yatavelli, R. L. N, L. W. A. Chen, L. R. Mazzoleni and A. C. Watts, **Collaborative Research: Nitrogen Partitioning and Evolution of Particular Organic Nitrogen in Peat Fire Emissions**, NSF Atmospheric Chemistry Program, 2015-2017.
3. Cantrell, W., C. Mazzoleni, L. R. Mazzoleni, and R. Shaw, **From Aerosol Particles to Cloud Droplets – Acquisition of a Cloud Condensation Nucleus Counter**, Michigan Technological University Research for Excellence Fund: Institutional Enhancement, 2015 – 2016.
4. Mazzoleni, L. R., D. Minakata, W. Cantrell, C. Mazzoleni and R. Shaw, **Aqueous Phase Secondary Organic Aerosol: Isoprene Oxidation Products and Cloud Processing**, Michigan Technological University Research for Excellence Fund: Research Seed, 2014 – 2015 (Extended to Aug. 2016).
5. Chabalowski, C., L. R. Mazzoleni, D. Minakata, A. Minerick, J. Perlinger and R. Datta, **Acquisition of an Ion Chromatography System for the Analysis of Cations and Anions**, Michigan Technological University Research for Excellence Fund: Institutional Enhancement, 2014 – 2015.
6. Mazzoleni, L. R., C. Mazzoleni, R. C. Owen, N. Urban, S. Olsen, and D. Helmig, **Collaborative Research: Chemical, Physical, and Radiative Properties of North Atlantic Free Tropospheric Aerosol after Long-Range Transport**, NSF Atmospheric Chemistry Program, 2011 – 2014 (Extended to Feb. 2016).
7. Cantrell, W., L. R. Mazzoleni, E. Kane, P. Doskey, K. Paterson and C. Mazzoleni, **Infrastructure Enhancement Request for the Acquisition of a Sunset Laboratory OCEC Instrument for the Determination of Organic and Elemental Carbon**, Michigan Technological University Research for Excellence Fund: Institutional Enhancement, 2011 – 2012.
8. Shaw, R., W. Cantrell, C. Mazzoleni, and L. R. Mazzoleni, **Development of a Turbulent Cloud Chamber**, NSF Major Research Instrumentation, 2010 – 2013 (Extended to 2015).
9. Hallar, A. G., D. H. Lowenthal, B. Zielinska, L. R. Mazzoleni, S. Clegg, D. Collins, **Collaborative Research: Hygroscopic Properties of Aerosol Organics**, NSF Atmospheric Chemistry Program, 2009 – 2012 (Extended to 2013).
10. Rahn, T., L. R. Mazzoleni, R. M. Cory, T. E. Larson, **Isotopic Tracer for Climate-Relevant Secondary Organic Aerosol Components**, Los Alamos National Laboratory, Laboratory Directed Research and Development-Exploratory Research, 2008 – 2011, Subcontracts to Michigan Technological University, 2009–2010 and 2010 – 2011.
11. Cantrell, W., J. Perlinger, L. R. Mazzoleni, and P. V. Doskey, **Ultra Performance Liquid Chromatograph for Studies of Atmospheric Organic Chemistry**, Michigan Technological University Research for Excellence Fund: Institutional Enhancement, 2010 – 2011.
12. Mazzoleni, L. R., **Identification of Atmospheric Organic Matter by Multi-Step Mass Spectrometric Analysis**, Michigan Technological University Research for Excellence Fund: Research Seed, 2009 – 2010.
13. Mazzoleni, L. R., J. Perlinger, and C. Mazzoleni, **A Submicron Aerosol**

**Generator for Interdisciplinary Research Applications**, Century II Campaign Endowed Equipment Fund, 2009.

14. Zielinska, B. and L. R. Rinehart (Mazzoleni), **Evaluation of PM<sub>2.5</sub> Emissions in Washoe County, NV: During the 2004 Wildfire Season**, Washoe County Health Department Air Quality Management Division, 2004.

## Peer Reviewed Publications

### \* *Student / Post-doc Authors*

1. Schum\*, S. K., L. E. Brown, L. R. Mazzoleni: MFAssignR: Molecular Formula Assignment Software for Ultrahigh Resolution Mass Spectrometry Analysis of Environmental Complex Mixtures, *Analytical Chemistry*, 2019, in preparation.
2. Bhandari, J., S. China, K. K. Chandrakar, G. Kinney, W. Cantrell, R. A. Shaw, L. R. Mazzoleni, G. Giroto, N. Sharma, K. Gorkowski, S. Gilardoni, S. Decesari, M. C. Facchini, N. Zanca, G. Pavese, F. Esposito, M. Dubey, A. C. Aiken, R. K. Chakrabarty, H. Moomüller, T. Onasch, R. A. Zaveri, B. V. Scarnato, P. Fialho, C. Mazzoleni, **Compaction of Soot Particles during Cloud Processing: Field and Laboratory Observations**, *Scientific Reports*, 2019, In Review.
3. Clegg, S. L., L. R. Mazzoleni, V. Samburova, N. F. Taylor, D. R. Collins, S. K. Schum, A. G. Hallar, Modelling the hygroscopic growth factors of aerosol material containing a large water-soluble organic fraction, collected at the Storm Peak Laboratory, *Atmospheric Environment*, 2019, In Press.
4. Schum\*, S. K., B. Zhang, K. Dzepina, D. Helmig, P. Fialho, C. Mazzoleni, and L. R. Mazzoleni, **Molecular and Physical Characteristics of Aerosol at a Remote Free Troposphere Site: Implications for Atmospheric Aging**, *Atmospheric Chemistry and Physics*, 18, 14017-14036, doi.org/10.5194/acp-18-14017-2018, 2018.
5. Brege\*, M. A., M. Paglione, S. Gilardoni, S. Decesari, M. C. Facchini, and L. R. Mazzoleni, Molecular Insights on Aging and Aqueous Phase Processing from Ambient Biomass Burning Emissions-Influenced Po Valley Fog and Aerosol, *Atmospheric Chemistry and Physics*, 18, 13197-13214, doi.org/10.5194/acp-18-13197-2018, 2018.
6. Sengupta, D., V. Samburova, C. Bhattarai, E. Kirillova\*, L. Mazzoleni, M. Iaukea-Lum, A. Watts, H. Moosmüller, A. Khlystov, **Light Absorption by Polar and Non-Polar Aerosol Compounds from Laboratory Biomass Combustion**, *Atmospheric Chemistry and Physics*, 18, 10849-10867, doi.org/10.5194/acp-18-10849-2018, 2018.
7. Khaksari, M., L. R. Mazzoleni, C. Ruan, P. Song, N. D. Hershey, R. T. Kennedy, M. A. Burns, and A. R. Minerick. **Detection and Quantification of Vitamins in Microliter Volumes of Biological Samples by LC-MS for Clinical Screening**, *AIChE Journal*, 64(10), doi.org/10.1002/aic.16345, 2018.
8. Varanasi, L., E. Coscarelli, M. Khaksari, L. Mazzoleni, and D. Minakata, Transformations of Dissolved Organic Matter Induced by UV Photolysis, Hydroxyl Radicals, Chlorine Radicals, and Sulfate Radicals in Aqueous-Phase UV-Based Advanced Oxidation Processes, *Water Research*, 135: 22-30, doi.org/10.1016/j.watres.2018.02.015, 2018.
9. Schultz, M. G., S. Schröder, O. Lyapina, O. Cooper, I. Galbally, I. Petropavlovskikh, E. von Schneidemesser, H. Tanimoto, Y. Elshorbany, M. Naja, R.J. Seguel, U. Dauert, P. Eckhardt, S. Feigenspan, M. Fiebig, A.-G. Hjellbrekke

- Y.-D. Hong, P.C. Kjeld, H. Koide, G. Lear, D. Tarasick, M. Ueno, M. Wallasch, D. Baumgardner, M.-T. Chuang, R. Gillett, M. Lee, S. Molloy, R. Moolala, T. Wang, K. Sharps, J. A. Adame, G. Ancellet, F. Apadula, P. Artaxo, M. E. Barlasina, M. Bogucka, P. Bonasoni, L. Chang, A. Colomb, E. Cuevas, M. Cupeiro, A. Degorska, A. Ding, M. Fröhlich, M. Frolova, H. Gadhavi, F. Gheusi, S. Gilge, M. Y. Gonzalez, V. Gros, S.H. Hamad, D. Helmig, D. Henriques, O. Hermansen, R. Holla, J. Hueber, U. Im, D. A. Jaffe, N. Komala, D. Kubistin, K.-S. Lam, T. Laurila, H. Lee, I. Levy, C. Mazzoleni, L.R. Mazzoleni, A. McClure-Begley, M. Mohamad, M. Murovec, M. Navarro-Comas, F. Nicodim, D. Parrish, K. A. Read, N. Reid, L. Ries, P. Saxena, J. J. Schwab, Y. Scorgie, I. Senik, P. Simmonds, V. Sinha, A. I. Skorokhod, G. Spain, W. Spangl, R. Spoor, S. R. Springston, K. Steer, M. Steinbacher, E. Suharguniyawan, P. Torre, T. Trickl, L. Weili, R. Weller, X. Xu, L. Xue, M. Zhiqiang, **Tropospheric Ozone Assessment Report: Database and Metrics Data of Global Surface Ozone Observations**, *Elementa: Science of the Anthropocene*, 5:58, doi.org/10.1525/elementa.244, 2017.
10. China, S., P. A. Alpert, B. Zhang, S. Schum\*, K. Dzepina\*, K. Wright, R. C. Owen, L. R. Mazzoleni, C. Mazzoleni, D. A. Knopf, **Ice Cloud Formation Potential by Free Tropospheric Particles from Long-Range Transport over the Northern Atlantic Ocean**, *J. Geophysical Research*, doi/10.1002/2016JD025817/full, 2017.
11. Zhang, B., R. C. Owen, J. A. Perlinger, D. Helmig, M. Val Martin, L. Kramer, L. R. Mazzoleni, and C. Mazzoleni, Ten-Year Chemical Signatures Associated with Long Range Transport Observed in the Free Troposphere Over the Central North Atlantic, *Elementa: Science of the Anthropocene*, 5: 8, DOI: doi.org/10.1525/elementa.194. 2017.
12. Taylor, N. F., D. R. Collins, D. H. Lowenthal, B. Zielinska, V. Samburova, N. Kumar, A. G. Hallar, L. R. Mazzoleni, I. B. McCubbin, **Hygroscopic Growth of Water-Soluble Organic Carbon Isolated from Atmospheric Aerosol Collected at U.S. National Parks and Storm Peak Laboratory**, *Atmospheric Chemistry and Physics*, 17, 2555-2571, doi:10.5194/acp-17-2555-2017, 2017.
13. Kundu\*, S., R. Fisseha, A. L. Putman\*, T. A. Rahn, and L. R. Mazzoleni, **Molecular Formula Composition of  $\beta$ -Caryophyllene Ozonolysis SOA Formed in Humid and Dry Conditions**, *Atmospheric Environment*, 154, 70-81, 2017.
14. Khaksari, M., L. R. Mazzoleni, C. Ruan, R. T. Kennedy, A. R. Minerick, Determination of Water-Soluble and Fat-Soluble Vitamins in Tears and Blood Serum of Infants and Parents by Liquid Chromatography / Mass Spectrometry, *Experimental Eye Research*, 155, 54-63, 2017.
15. Khaksari, M., L. R. Mazzoleni, C. Ruan, R. T. Kennedy, A. R. Minerick, Data Representing Two Separate LC-MS Methods for Detection and Quantification of Water-Soluble and Fat-Soluble Vitamins in Tears and Blood Serum, *Data in Brief*, 11, 316-330, ISSN 2352-3409, dx.doi.org/10.1016/j.dib.2017.02.033, 2017.
16. Chang, K., J. Bench, M. Brege\*, W. Cantrell, K. Chandrakar, D. Ciochetto, C. Mazzoleni, L. R. Mazzoleni, D. Niedermeier, R. A. Shaw, **A Laboratory Facility to Study Gas-Aerosol-Cloud Interactions in a Turbulent Environment: The Pi Chamber**, *Bulletin of the American Meteorological Society*, 97, 2343-2358, doi: 10.1175/BAMS-D-15-00203.1, 2016.
17. Helmig, D., M. Munoz, J. Hueber, C. Mazzoleni, L. R. Mazzoleni, R. C. Owen, M. Val-Martin, P. Fialho, C. Plass-Duelmer, P. Palmer, A. C. Lewis, G. Pfister, **Climatology and Atmospheric Chemistry of Non-Methane Hydrocarbons Ethane and Propane over the North Atlantic**, *Elementa: Science of the*

*Anthropocene*, doi: 10.12952/journal.elementa.000054, 2015. Special Feature on Reactive Gases in the Global Atmosphere.

18. Dzepina\*, K., C. Mazzoleni, P. Fialho, S. China, B. Zhang, R. C. Owen, D. Helmig, J. Hueber, S. Kumar, J. A. Perlinger, L. Kramer, M. P. Dziobak, M. T. Ampadu\*, S. Olsen, D. J. Wuebbles, and L. R. Mazzoleni, **Molecular Characterization of Free Tropospheric Aerosol Collected at the Pico Mountain Observatory: A Case Study with a Long Range Transported Biomass Burning Plume**, *Atmospheric Chemistry and Physics*, 15, 5047-5068, 2015.
19. China, S., B. Scarnato, R. C. Owen, B. Zhang, M. T. Ampadu\*, S. Kumar, K. Dzepina\*, M. P. Dziobak, P. Fialho, J. A. Perlinger, J. Hueber, D. Helmig, L. R. Mazzoleni, and C. Mazzoleni, **Morphology and Mixing State of Aged Soot Particles at a Remote Marine Free Troposphere Site: Implications for Optical Properties**, *Geophysical Research Letters*, doi: 10.1002/2014GL062404, 2015.
20. Kane, E. S., L. R. Mazzoleni, C. J. Kratz, J. A. Hribljan, C. P. Johnson, T. G. Pypker, and R. A. Chimmer, Peat Porewater Dissolved Organic Carbon Concentration and Lability Increase with Warming: A Field Manipulation Experiment in a Poor-Fen, *Biogeochemistry*, doi:10.1007/s10533-014-9955-4, 2014.
21. Zhao\*, Y., A. G. Hallar, and L. R. Mazzoleni, Atmospheric Organic Matter in Clouds: Exact Masses and Molecular Formula Identification using Ultrahigh Resolution FT-ICR Mass Spectrometry, *Atmospheric Chemistry and Physics*, 13, 12343-12362, 2013.
22. Samburova, V., A. G. Hallar, L. R. Mazzoleni, P. Saranjampour\*, D. H. Lowenthal, S. Kohl, and B. Zielinska, **Composition of Water-Soluble Organic Carbon of Nonurban Atmospheric Aerosols Collected at the Storm Peak Laboratory**, *Environmental Chemistry*, 10, 370-380, 2013.
23. Hallar, A. G., D. H. Lowenthal, S. L. Clegg, V. Samburova, N. Taylor, L. R. Mazzoleni, B. Zielinska, T. Kristensen, G. Chirokova, I. B. McCubbin, C. Dodson, and D. Collins, **Chemical and Hygroscopic Properties of Aerosol Organics at the Storm Peak Laboratory**, *Journal of Geophysical Research*, 118, doi: 10.1002/jgrd.50373, 2013.
24. Kristensen, T. B., H. Wex, B. Nekat, J. K. Nøjgaard, D. van Pinxteren, D. H. Lowenthal, L. R. Mazzoleni, K. Dieckmann, C. Bender Koch, T. F. Mentel, H. Herrmann, A. G. Hallar, D. Stratmann, and M. Bilde. **Hygroscopic Growth and CCN Activity of HULIS from Different Environments**, *Journal of Geophysical Research*, 117, D22203, doi: 10.1029/2012JD018249, 2012.
25. Kundu\*, S., R. Fisseha, A. L. Putman\*, T. A. Rahn, and L. R. Mazzoleni, High Molecular Weight SOA Formation during Limonene Ozonolysis: Insights from Ultrahigh-Resolution FT-ICR Mass Spectrometry Characterization, *Atmospheric Chemistry and Physics*, 12, 5523-5536, 2012.
26. Mazzoleni, L. R., P. Saranjampour\*, M. M. Dalbec\*, V. Samburova, B. Zielinska, A. G. Hallar, D. Lowenthal, and S. Kohl, Identification of Water-Soluble Organic Carbon in Nonurban Organic Aerosols using Ultrahigh-Resolution FT-ICR Mass Spectrometry: Organic Anions, *Environmental Chemistry*, 9(3), 285-297, 2012. Invited Special Issue Paper.
27. LeClair\*, J. P., J. L. Collett and L. R. Mazzoleni, **Fragmentation Analysis of Water-Soluble Atmospheric Organic Matter using Ultrahigh-Resolution Mass Spectrometry**, *Environmental Science and Technology*, 46(8), 4312-4322, 2012.

28. Putman\*, A. L., J. H. Offenberg, R. Fisseha, S. Kundu\*, T. A. Rahn, and L. R. Mazzoleni, **Ultra-high-Resolution FT-ICR Mass Spectrometry Characterization of  $\alpha$ -Pinene Ozonolysis SOA**, *Atmospheric Environment*, 46, 164-172, 2012.
29. Kroll, J. H., N. D. Donahue, J. L. Jimenez, S. H. Kessler, M. R. Canagaratna, K. R. Wilson, K. E. Altieri, L. R. Mazzoleni, A. S. Wozniak, H. Bluhm, E. R. Mysak, J. D. Smith, C. E. Kolb, and D. R. Worsnop, **Carbon Oxidation State as a Metric for Describing the Chemistry of Atmospheric Organic Aerosol**, *Nature Chemistry*, 3(2), 133-139, 2011.
30. Mazzoleni, L. R., B. M. Ehrmann, X. Shen, A. G. Marshall, and J. L. Collett, Water-Soluble Atmospheric Organic Matter in Fog Water: Exact Masses and Chemical Formulation Identification by Ultra-high Resolution FT-ICR Mass Spectrometry, *Environmental Science and Technology*, 44(10), 3690-3697, 2010.
31. Samy, S., L. R. Mazzoleni, S. Mishra, B. Zielinska, and A. G. Hallar, **Water-Soluble Organic Compounds at a Mountain-Top Site in Colorado, USA**, *Atmospheric Environment*, 44(13), 1663-1671, 2010.
32. El-Zanan, H.S., B. Zielinska, L. R. Mazzoleni, and D. A. Hansen, **Analytical Determination of the Aerosol Organic Mass to Organic Carbon Ratio**, *Journal of the Air and Waste Management Association*, 59, 58-69, 2009.
33. Fujita, E. M., B. Zielinska, D. E. Campbell, W. P. Arnott, J. Sagebiel, J. C. Chow, L. Mazzoleni, P. A. Gabele, W. Crews, R. Snow, N. N. Clark, S. Wayne, and D. R. Lawson, **Variations in Speciated Emissions from Spark-Ignition and Compression-Ignition Motor Vehicles in the California's South Coast Air Basin**, *Journal of the Air and Waste Management Association*, 57, 705-720, 2007.
34. Noblitt, S., L. R. Mazzoleni, J. L. Collett Jr. and C. S. Henry, Separation of Common Organic and Inorganic Anions in Atmospheric Aerosols Using a Piperazine Buffer and Capillary Electrophoresis, *Journal of Chromatography A*, 1154, 400-6, 2007.
35. Mazzoleni, L. R., B. Zielinska, and H. Moosmüller, Emissions of Levoglucosan, Methoxy Phenols, and Organic Acids from Prescribed Burns, Laboratory Combustion of Wildland Fuels, and Residential Wood Combustion, *Environmental Science and Technology*, 41(7), 2115-2122, 2007.
36. Chow, J. C., J. G. Watson, D. H. Lowenthal, L. W. A. Chen, B. Zielinska, L. R. Mazzoleni, and K. L. Magliano, **Evaluation of Organic Markers for Chemical Mass Balance Source Apportionment at the Fresno Supersite**, *Atmospheric Chemistry and Physics*, 7, 1740-54, 2007.
37. Ward, T. J., L. Rinehart (Mazzoleni), and T. Lange, **The 2003/2004 Libby, Montana PM<sub>2.5</sub> Source Apportionment Research Study**, *Aerosol Science and Technology*, 40(3), 166-177, 2006.
38. Rinehart (Mazzoleni), L. R., E. Fujita, J. C. Chow, K. Magliano and B. Zielinska, **Spatial Distribution of PM<sub>2.5</sub> Associated Organic Compounds in Central California**, *Atmospheric Environment*, 40(2), 290-303, 2006.

## Other Publications (Archival)

### \* Student / Post-doc Authors

1. Schum\*, S. K., B. Zhang, K. Dzepina, D. Helmig, P. Fialho, C. Mazzoleni, and L. R. Mazzoleni, **Molecular and Physical Characteristics of Aerosol at a Remote Marine Free Troposphere Site: Implications for Atmospheric Aging**, *Atmospheric Chemistry and Physics Discussions*, doi.org/10.5194/acp-2018-196,

2018.

2. Brege\*, M. A., M. Paglione, S. Gilardoni, S. Decesari, M. C. Facchini, and L. R. Mazzoleni, Molecular Insights on Aging and Aqueous Phase Processing from Ambient Biomass Burning Emissions-Influenced Po Valley Fog and Aerosol, *Atmospheric Chemistry and Physics Discussions*, doi.org/10.5194/acp-2018-301, 2018.
3. Sengupta, D., V. Samburova, C. Bhattarai, E. Kirillova\*, L. Mazzoleni, M. Iaukealumu, A. Watts, H. Moosmüller, A. Khlystov, **Light Absorption by Polar and Non-Polar Aerosol Compounds from Laboratory Biomass Combustion**, *Atmospheric Chemistry and Physics Discussions*, doi.org/10.5194/acp-2018-161, 2018.
4. Taylor, N. F., D. R. Collins, D. H. Lowenthal, B. Zielinska, V. Samburova, N. Kumar, A. G. Hallar, L. R. Mazzoleni, I. B. McCubbin, **Hygroscopic Growth of Water-Soluble Organic Carbon Isolated from Atmospheric Aerosol Collected at U.S. National Parks and Storm Peak Laboratory**, *Atmospheric Chemistry and Physics Discussions*, doi:10.5194/acp-2016-715, 2016.
5. Dzepina\*, K., C. Mazzoleni, P. Fialho, S. China, B. Zhang, R. C. Owen, D. Helmig, J. Hueber, S. Kumar, J. A. Perlinger, L. Kramer, M. P. Dziobak, M. T. Ampadu\*, S. Olsen, D. J. Wuebbles, and L. R. Mazzoleni, **Molecular Characterization of Free Tropospheric Aerosol Collected at the Pico Mountain Observatory: A Case Study with Long Range Transported Biomass Burning Plumes**, *Atmospheric Chemistry and Physics Discussions*, 14, 24753-24810, 2014.
6. Zhao\*, Y., A. G. Hallar, and L. R. Mazzoleni, Atmospheric Organic Matter in Clouds: Exact Masses and Molecular Formula Identification using Ultrahigh Resolution FT-ICR Mass Spectrometry, *Atmospheric Chemistry and Physics Discussion*, 13, 20561-20610, doi: 10.5194/acpd-13-20561-2013, 2013.
7. Kundu\*, S., R. Fisseha, A. L. Putman\*, T. A. Rahn, and L. R. Mazzoleni, High Molecular Weight SOA Formation during Limonene Ozonolysis: Insights from Ultrahigh-Resolution FT-ICR Mass Spectrometry Characterization, *Atmospheric Chemistry and Physics Discussions*, 12, 2167-2197, doi: 10.5194/acpd-12-2167-2012, 2012.
8. Chow, J. C., J. G. Watson, D. H. Lowenthal, L. W. A. Chen, B. Zielinska, L. R. Mazzoleni, and K. L. Magliano, **Evaluation of Organic Markers for Chemical Mass Balance Source Apportionment at the Fresno Supersite**, *Atmospheric Chemistry and Physics Discussions*, 6, 10341-10372, doi:10.5194/acpd-6-10341-2006, 2006.

## Manuscripts in Preparation

### \* *Student / Post-doc Authors*

1. Brege\*, M. A., S. China, A. Zelenyuk, S. K. Schum\*, and L. R. Mazzoleni, **Extreme Molecular Complexity Resulting in a Continuum of Carbonaceous Species in Biomass Burning Tar Balls**, *Environmental Science and Technology*, 2019, In Preparation.
2. Kirillova\*, E., V. Samburova, C. Bhattarai, D. Sengupta, A. C. Watts, H. Moosmüller, A. Khlystov, L. R. Mazzoleni, Molecular Characterization of Water-Soluble Organic Carbon (WSOC) from Laboratory Combustion of Peat and Wildland Fuels using Ultrahigh Resolution Orbitrap Elite Mass Spectrometry, In Preparation.

## Other Research Products

### \* *Student / Post-doc Authors*

1. Schum\*, S. K., L. R. Mazzoleni, L. E. Brown, **MFAssignR: An R Package for Data Preparation and Molecular Formula Assignment**, R Package Version 0.0.2, DOI: 10.5281/zenodo.1471471, <http://github.com/skschum/MFAssignR>, 2018.

## Citation Metrics from Google Scholar

Public Profile: <https://scholar.google.com/citations?user=SGhCGKMAAAAJ&hl=en>

<b>Total Citations</b>	1936
<b>H-Index</b>	20
<b>I10-Index</b>	26
<b>Last Updated</b>	June 25, 2019

## Conference Proceedings

### \* *Student / Post-doc Authors*

2. Orłowski\*, S. and L. R. Mazzoleni, **Separations of Atmospheric Water-Soluble Organic Compounds by Advanced Liquid Chromatographic Methods**, *Air and Waste Management Association 103<sup>rd</sup> Annual Conference Proceedings*, Calgary, Alberta, Canada. Paper #722,2010 (Poster)
3. LeClair\*, J. P., L. R. Mazzoleni and J. L. Collett, Structural Elucidation of Climate Relevant CHNOS Compounds in Atmospheric Organic Matter by Ultrahigh Resolution Mass Spectrometry, *Air and Waste Management Association 103<sup>rd</sup> Annual Conference Proceedings*, Calgary, Alberta, Canada. Paper #685,2010. (Poster)
4. Mazzoleni, L. R., J. P. LeClair\*, and J. L. Collett, **Identification of Climate and Health Relevant Atmospheric Organic Compounds**, *Air and Waste Management Association 103<sup>rd</sup> Annual Conference Proceedings*, Calgary, Alberta, Canada. Paper #675,2010. (Poster)
5. Rinehart (Mazzoleni), L. R., and B. Zielinska, **Semi-Volatile Polar Organic Method for Biomass Combustion Fine Particulate Matter Characterization**, *Air and Waste Management Association 98<sup>th</sup> Annual Conference Proceedings*, Minneapolis, MN, Paper #635,2005 (Platform)
6. Rinehart (Mazzoleni), L. R., A. Cunningham, J. Chow, and B. Zielinska, Characterization of PM<sub>2.5</sub> Associated Organic Compounds of Emission Sources Collected During the California Regional PM<sub>10</sub> / PM<sub>2.5</sub> Air Quality Study, *Air and Waste Management Association 96<sup>th</sup> Annual Conference Proceedings*, San Diego, CA, Paper #69681, 2003 (Platform)
7. Goliff, W. S., L. R. Reinhart (Mazzoleni), and B. Zielinska, **California Regional PM<sub>10</sub> / PM<sub>2.5</sub> Air Quality Study: Determination of Source VOC Profiles**, *Air and Waste Management Association 96<sup>th</sup> Annual Conference Proceedings*, San Diego, CA, Paper #69685, 2003. (Platform).

## Selected Conference Presentations

### \* *Student / Post-doc Authors*

1. Brege\*, M. A., S. China, A. Zelenyuk, S. K. Schum, and L. R. Mazzoleni. **Extreme Molecular Complexity Resulting in a Continuum of Carbonaceous Species in**



- Biomass Burning Tar Balls**, *American Association of Aerosol Research Annual Conference*, Portland, OR, October 2019 (Poster)
- China, S. M. A. Brege\*, S. K. Schum\*, D. V. Veghte, K. Suski, G. Kulkarni, M. Shrivastava, L. R. Mazzoleni, A. Zelenyuk, **Physical Chemical and Optical Properties of Wildfire Aerosols**, *American Association of Aerosol Research Annual Conference*, Portland, OR, October 2019 (Poster).
  - Schum\*, S. K., L. E. Brown, L. R. Mazzoleni, **MFAssignR: Software Tools for Molecular Formula Assignment of Organic Aerosol**, *American Association of Aerosol Research Annual Conference*, Portland, OR, October 2019 (Poster)
  - Schum\*, S. K., C. Mazzoleni, P. Fialho, B. Zhang, L. R. Mazzoleni, Functional Group Analysis of Wildfire-Influenced Free Tropospheric Organic Aerosol using Ultrahigh Resolution Tandem Mass Spectrometry, *American Association of Aerosol Research Annual Conference*, Portland, OR, October 2019 (Poster).
  - Shetty, N., A. Pandey, S. Schum\*, M. Khaksari, L. R. Mazzoleni, R. K. Chakrabarty, **Toward Development of a Metric to Relate Molecular Characteristics with Optical Properties for Biomass Burning Aerosol**, *American Association of Aerosol Research Annual Conference*, Portland, OR, October 2019 (Poster).
  - Zelenyuk, A., K. J. Suski, D. Bell, D. Imre, S. Schum\*, L. R. Mazzoleni, M. K. Shrivastava, A. Kramer, S. L. Simonich, **Ozonolysis of Polycyclic Aromatic Hydrocarbons on the Surfaces of Secondary Organic Aerosol Particles**, *American Association of Aerosol Research Annual Conference*, Portland, OR, October 2019 (Platform).
  - Hawkins, L., S. J. Jones, L. R. Mazzoleni, S. K. Schum\*, M. Khaksari, Quantifying Pyrazine-Based Products in Cloud Water Mimics Containing Ammonium Sulfate and Methylglyoxal: Effects of Evaporation and pH on Product Formation, *American Chemical Society National Meeting and Expo: Chemistry and Water*, San Diego, CA, 2019 (Platform).
  - Mazzoleni, L. R., M. A. Brege\*, S. K. Schum\*, S. Gilardoni, S. Decesari, M. Paglione, and M. C. Facchini, Molecular Insights on the Aqueous Phase Processing of Ambient Biomass Burning Emissions Influenced Fog and Aerosol using Ultrahigh Resolution Orbitrap Elite Mass Spectrometry, *8<sup>th</sup> International Conference of Fog, Fog Collection, and Dew*, Taipei, Taiwan, 2019 (Poster).
  - Brege\*, M., T. Leverton\*, S. Gilardoni, S. Decesari, M. Paglione, M. C. Facchini, and L. R. Mazzoleni, Molecular Insights from Ultrahigh Resolution Orbitrap Mass Spectrometry on Aqueous Phase Processing of Ambient Biomass Burning Emissions Influenced Po Valley Fog and Aerosol, *International Aerosol Research Conference*, St. Louis, MO, September 2018 (Poster).
  - Mazzoleni, C., L. R. Mazzoleni, P. Fialho, S. China, B. Zhang, A. Baccarini, K. Anderson, and S. Schum\*, **Physico-Chemical Properties of Free Tropospheric Particles at the Remote Pico Mountain Observatory, in the Azores**, *International Aerosol Research Conference*, St. Louis, MO, September 2018 (Poster).
  - Mazzoleni, L. R., S. Schum\*, M. Brege\*, T. Leverton\*, E. Rose\*, and M. Khaksari, **Ultrahigh Resolution Orbitrap Elite Mass Spectrometry Reveals Unprecedented Molecular Detail in Atmospheric Aerosol**, *International Aerosol Research Conference*, St. Louis, MO, September 2018 (Poster).
  - Schum\*, S. K., B. Zhang, K. Dzepina\*, P. Fialho, S. China, C. Mazzoleni, and L. R.

Mazzoleni, **Molecular and Physical Characteristics of Aerosol at a Remote Marine Free Troposphere Site: Implications for Atmospheric Aging**, *International Aerosol Research Conference*, St. Louis, MO, September 2018 (Platform).

13. Mazzoleni, L. R., E. Kirillova\*, S. Schum\*, M. Khaksari, D. Sengupta, C. Bhattarai, V. Samburova, A. C. Watts, H. Moosmüller, and A. Khlystov, **Water-Soluble Aerosol Organic Matter from Wildland Fire Emissions as Observed using Ultrahigh Resolution Orbitrap Elite Mass Spectrometry**, *Goldschmidt Annual Conference*, Boston, MA, 2018 (Invited Platform).
14. Brege\*, M. A., M. Paglione, S. Gilardoni, S. Decesari, M. C. Facchini, L. R. Mazzoleni, **Ambient Biomass Burning Influenced Fog and Aerosol Samples: Molecular Insights on Aging**, *American Association of Aerosol Research Annual Conference*, Raleigh, NC, October 2017 (Poster).
15. Bhandari, J., G. Kinney, K. K. Chandrakar, S. Gilardoni, S. Decesari, M. C. Facchini, N. Zanca, L. R. Mazzoleni, M. Dubey, B. Scarnato, N. Sharma, P. Fialho, S. China, W. Cantrell, C. Mazzoleni, **Compaction of Soot Particles during Cloud Processing: Field and Laboratory Observations**, *American Association of Aerosol Research Annual Conference*, Raleigh, NC, October 2017 (Poster).
16. Kirillova\*, E. N., V. Samburova, C. Bhattarai, D. Sengupta, H. Moosmüller, A. Khlystov, and L. R. Mazzoleni, **Molecular Characterization of Water-Soluble Organic Carbon (WSOC) from Biomass Burning of Wildland Fuels Using Ultrahigh Resolution Orbitrap Elite Mass Spectrometry**, *American Association of Aerosol Research Annual Conference*, Raleigh, NC, October 2017 (Platform).
17. Schum\*, S., B. Zhang, K. Dzepina\*, P. Fialho, C. Mazzoleni, L. R. Mazzoleni, **Molecular Characteristics of Long-Range Transported Organic Aerosol at the Pico Mountain Observatory (PMO)**, *American Association of Aerosol Research Annual Conference*, Raleigh, NC, October 2017 (Platform).
18. Mazzoleni, L. R., S. Schum\*, B. Zhang, K. Dzepina\*, P. Fialho, and C. Mazzoleni, **Molecular Characteristics of Long-Range Transported Organic Aerosol in the North Atlantic: The Resilient Aerosol**, *Gordon Research Conference: Atmospheric Chemistry*, Newry, ME, August 2017. (Poster).
19. Brege\*, M. A., M. Paglione, S. Gilardoni, S. Decesari, M. C. Facchini, and L. R. Mazzoleni, **Molecular Characterization of Biomass Burning Aqueous Phase Secondary Organic Aerosol using Ultrahigh Resolution Mass Spectrometry**, *American Society for Mass Spectrometry Annual Conference*, Indianapolis, IN, June 2017. (Poster).
20. Khaksari, M., M. Auer, A. Kuczynski, and L. R. Mazzoleni, **Non-Targeted Screening of More Than 20 Ethoxylated Homologs and Their Transformation Products in Water Samples Using High Resolution-Mass Spectrometry**, *American Society for Mass Spectrometry Annual Conference*, Indianapolis, IN, June 2017. (Poster).
21. Kirillova\*, E. N., V. Samburova, C. Bhattarai, D. Sengupta, H. Moosmüller, A. Khlystov, and L. R. Mazzoleni, **Molecular Characterization of Water-Soluble Organic Carbon (WSOC) from Biomass Burning Aerosol using Ultrahigh Resolution Orbitrap Elite Mass Spectrometry**, *American Society for Mass Spectrometry Annual Conference*, Indianapolis, IN, June 2017. (Poster).
22. Schum\*, S. and L. R. Mazzoleni, **Unprecedented Isobaric Complexity in Long Range Transported Atmospheric Aerosol Observed using Fourier Transform Ion**

Cyclotron Resonance Mass Spectrometry, *American Society for Mass Spectrometry Annual Conference*, Indianapolis, IN, June 2017. (Poster).

23. Varansai, L., E. Coscarelli, M. Khaksari, L. Mazzoleni, and D. Minakata, **Transformation of Dissolved Organic Matter in Engineered Ultraviolet (UV) Photolysis and UV-Based Advanced Oxidation Process**, *AEESP Conference*, Ann Arbor, MI, June 2017. (Platform).
24. Khaksari, M., L. R. Mazzoleni, and A. R. Minerick, **Longitudinal Determination of Vitamin Concentrations in Tears and Blood Serum of Infants and Parents**, *AIChE International Conference*, San Francisco, CA, Nov. 2016. (Platform).
25. Fialho, P., D. Helmig, D. Henriques, C. Mazzoleni, and L. Mazzoleni, **Pico Mountain Observatory**, *4<sup>th</sup> Iberian Meeting on Aerosol Science and Technology*, Aveiro, Portugal, June 2016. (Poster).
26. Mazzoleni, C., S. China, B. Scarnato, N. Sharma, J. Bhandari, L. Mazzoleni, P. Fialho, C. Facchini, S. Decesari, S. Gilardoni, N. Zanca, **The Morphology of Atmospheric Aerosol and Some Implications**, *European Geophysical Union General Assembly 2016*, Vienna, Austria, April 2016 (Poster).
27. Mazzoleni, L. R., Y. Zhao\*, V. Samburova, A. G. Hallar, and D. Lowenthal, **Unraveling the Complexity of Atmospheric Aerosol: Insights from Ultrahigh Resolution Mass Spectrometry**, *European Geophysical Union General Assembly 2016*, Vienna, Austria, April 2016. (Poster).
28. Mazzoleni, L. R., V. Samburova, Y. Zhao\*, M. M. Dalbec\*, D. M. A. Habib\*, M. A. Brege\*, P. Saranjampour\*, A. G. Hallar, B. Zielinska, and D. Lowenthal, **Ultrahigh Resolution Mass Spectrometry Fragmentation Analysis for Functional Groups and Structural Insights of WSOC Collected at the Storm Peak Laboratory**, *European Aerosol Conference*, Milan, Italy, September 2015. (Platform).
29. Mazzoleni, C., P. Fialho, S. China, B. Scarnato, K. Wright, N. Niedermeier, S. Kumar, K. Dzepina\*, M. Dziobak, M. Ampadu\*, J. Hueber, D. Helmig, B. Zhang, J. Perlinger, and L. Mazzoleni, **Properties of Free Tropospheric Aerosols at the Pico Mountain Observatory in the Azores**, *European Aerosol Conference*, Milan, Italy, September 2015. (Platform).
30. Stark, H., R. L. N., Yatavelli, S. Thompson, L. R. Mazzoleni, J. Kimmel, M. Cubison, D. A. Day, P. Campuzano Jost, B. B. Palm, P. S. Chhabra, M. R. Canagaratna, J. T. Jayne, D. R. Worsnop, and J. L. Jimenez, **High-Resolution Analysis of Atmospheric Mass Spectra: Identification, Resolution, Assignment of Complex Mass Spectra**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2015.
31. Mazzoleni, L. R., C. Mazzoleni, K. Dzepina\*, S. Kumar, P. Fialho, B. Zhang, R. C. Owen, S. China, M. T. Ampadu\*, J. Perlinger, and S. Schum\*, **Black Carbon and Molecular Characterization of Free Tropospheric Aerosol in the North Atlantic at the Pico Mountain Observatory**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2014. (Invited Platform).
32. Dzepina\*, K., C. Mazzoleni, P. Fialho, S. China, B. Zhang, R. C. Owen, D. Helmig, J. Hueber, S. Kumar, J. Perlinger, L. Kramer, M. Dziobak, M. T. Ampadu\*, S. Olsen, D. Wuebbles, and L. R. Mazzoleni, **Molecular Characterization of Free Tropospheric Aerosol Collected at the Pico Mountain Observatory**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2014. (Poster).
33. Zhang, B., N. Urban, J. Perlinger, R. C. Owen, S. China, C. Mazzoleni, and L. R.

Mazzoleni, **Radionuclides Reveal Age and Source of Aerosols Collected Over Central North Atlantic**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2014. (Poster).

34. Wright, K., L. R. Mazzoleni, P. Fialho, K. Dzepina\*, D. Helmig, J. Hueber, M. Dziobak, S. Kumar, S. China, N. Sharma, and C. Mazzoleni, **Optical Properties of Aged Free Tropospheric Aerosol Over the Northern Atlantic: Analysis of 2012-2014 Data**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2014. (Poster).
35. Mazzoleni, C., S. China, B. Scarnato, R. Moffet, R. O'Brien, M. Gilles, P. Fialho, B. Zhang, M. T. Ampadu\*, S. Kumar, K. Dzepina, K. Wright, N. Sharma, B. Zhang, R. C. Owen, J. Perlinger, J. Hueber, D. Helmig, M. Dziobak, L. Kramer, and L. R. Mazzoleni, **Single Particle Characterization of Free Tropospheric Aerosols at the Pico Mountain Observatory over the North Atlantic**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2014. (Platform).
36. Mazzoleni, L. R., Y. Zhao\*, D. M. A. Habib\*, M. Brege\*, V. Samburova, A. G. Hallar, B. Zielinska, and D. Lowenthal, **Structural Insights of Water-Soluble Organic Carbon from Ultrahigh Resolution FT-ICR Tandem Mass Spectrometry**, *American Chemical Society*, San Francisco, CA, August 2014 (Invited Platform).
37. Mazzoleni, C., L. R. Mazzoleni, S. China, N. Sharma, M. Ampadu\*, S. Gebreyesus\*, P. Fialho, S. Kumar, S. Schum\*, K. Dzepina\*, M. Dziobak, B. Zhang, J. Perlinger, N. Urban, K. Wright, J. Hueber, D. Helmig, R. Owen, S. Olsen, D. Wuebbles, and B. Scarnato, **Optical and Morphological Properties of Free-Tropospheric Aerosol at the Pico Mountain Observatory, Azores**, *Symposium on Atmospheric Chemistry and Physics at Mountain Sites*, Steamboat Springs, CO, August 2014. (Platform).
38. Zhao\*, Y., L. R. Mazzoleni, V. Samburova, A. G. Hallar, B. Zielinska, D. Lowenthal, and S. Kohl, **Multivariate Analysis of Water-Soluble Organic Carbon Molecular Formulas in Daily Samples**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2013. (Poster).
39. Dzepina\*, K., S. China, S. Kumar, C. Mazzoleni, M. Dziobak, P. Fialho, J. Hueber, D. Helmig, R. C. Owen, L. Kramer, S. Olsen, and L. R. Mazzoleni, **Chemical Characterization of Free Tropospheric Aerosols in the North Atlantic Measured at the Pico Mountain Observatory During Summer of 2012**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2013. (Poster).
40. Dalbec\*, M. M., Y. Zhao\*, R. Fisseha, A. L. Putman\*, S. Kundu\*, T. A. Rahn, and L. R. Mazzoleni, **Molecular Formula Characterization of Biogenic Secondary Organic Aerosol: Descriptive Statistical Evaluation**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2013. (Poster).
41. Harkness\*, L., L. R. Mazzoleni, K. Dzepina\*, C. Mazzoleni, and S. China, **Developing Atmospheric Science Tools for Teachers Based on Research at the Pico Mountain Observatory, Pico Island, Azores**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2013. (Poster).
42. Mazzoleni, L. R., D. M. A. Habib\*, Y. Zhao\*, M. M. Dalbec\*, V. Samburova, A. G. Hallar, B. Zielinska, and D. Lowenthal, **Functional Groups and Structural Insights of Water-Soluble Organic Carbon Using Ultrahigh Resolution FT-ICR Tandem Mass Spectrometry**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2013. (Platform).

43. Zhang, B., R. C. Owen, J. A. Perlinger, L. R. Mazzoleni, M. Val Martin, and P. Fialho, **Chemical Climatology of Air Pollutants at Pico Mountain Observatory**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2013. (Poster).
44. Wright, K., C. Mazzoleni, L. R. Mazzoleni, K. Dzepina, J. Hueber, S. China, and N. Sharma, **Vertical Profile of Aerosol Properties on Pico Mountain, Azores**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2013. (Poster).
45. China, S., L. R. Mazzoleni, S. Kumar, M. Dziobak, P. Fialho, K. Dzepina\*, J. Hueber, D. Helmig, L. Kramer, N. Sharma, S. Olsen, C. Mazzoleni, **Aging of Soot Particles: Remote Marine Free-Tropospheric Aerosol at the Pico Mountain Observatory, Azores**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2013. (Poster).
46. Mazzoleni, C., S. China, N. Sharma, K. Gorkowski, M. Dubey, A. Aiken, R. Zaveri, N. Salvadori, R. Chakrabarty, H. Moosmüller, T. Onasch, S. Herndon, L. Williams, L. Shang, K. Dzepina\*, D. Helmig, J. Hueber, P. Fialho, L. R. Mazzoleni, S. Kumar, M. Dziobak, K. Wright, **Evolution of Soot Morphology and Mixing State in the Atmosphere**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2013. (Platform).
47. Mazzoleni, L. R., K. Dzepina\*, C. Mazzoleni, P. Fialho, S. Kumar, B. Zhang, S. China, S. Olsen, R. C. Owen, K. Wright, J. Perlinger, N. Urban, L. Kramer, M. Dziobak, D. Helmig, and J. Hueber, **Chemical and Molecular Characterization of Free Tropospheric Aerosol Sampled at the Pico Mountain Observatory, Azores**, *American Association for Aerosol Research 32<sup>nd</sup> Annual Conference*, Portland, OR, October 2013. (Platform).
48. Mazzoleni, C., S. China, L. R. Mazzoleni, P. Fialho, S. Kumar, K. Dzepina\*, M. Dziobak, S. Olsen, R. C. Owen, K. Wright, L. Kramer, D. Helmig, and J. Hueber, **Optical and Morphological Properties of Free Tropospheric Aerosol Sampled at the Pico Mountain Observatory, Azores**, *American Association for Aerosol Research 32<sup>nd</sup> Annual Conference*, Portland, OR, October 2013. (Platform).
49. Khaksari, M., C. Ruan, P. Song, N. Hershey, R. Kennedy, M. Burns, D. Burke, L. Mazzoleni and A. Minerick, **Determination and Quantification of Water-Soluble and Fat-Soluble Vitamins in Human Biofluids with HPLC/MS**, *SciX – The Great Scientific Exchange*, Milwaukee, WI, October 2013. (Poster).
50. Mazzoleni, L. R., Y. Zhao\*, M. M. Dalbec\*, and K. Dzepina\*, **Molecular Formula Fingerprints of Biogenic Secondary Organic Aerosol in Laboratory and Ambient Samples**, *Gordon Research Conference on Atmospheric Chemistry*, Mount Snow Resort, VT, July 2013. (Poster).
51. Mazzoleni, L. R., Y. Zhao\*, M. M. Dalbec\*, **Characterization of Biogenic Secondary Organic Aerosol Using Ultrahigh-Resolution FT-ICR Mass Spectrometry**, *61<sup>st</sup> American Society of Mass Spectrometry Conference*, Minneapolis, MN, June 2013. (Poster).
52. Saranjampour\*, P., V. Samburova, A. G. Hallar, D. Lowenthal, B. Zielinska, and L. R. Mazzoleni, **Water-Soluble Organic Compounds in Ambient Aerosol: A Study Using Positive Ion Mode Electrospray Ionization Fourier Transform Ion Cyclotron Resonance (FT-ICR) Mass Spectrometry**, *245<sup>th</sup> American Chemical Society & Exposition*, New Orleans, LA, April 2013. (Poster).
53. Kramer, L., C. Mazzoleni, L. Mazzoleni, P. Fialho, D. Helmig, S. Olsen, R. C.

- Owen, M. Dziobak, J. Hueber, K. Dzepina\*, and S. Kumar, **Measurement of Aerosols and Trace Gases in the Free Troposphere at the Pico Mountain Observatory in the Azores**, *European Geosciences Union General Assembly 2013*, Vienna, Austria, April 2013. (Poster).
54. Helmig, D., J. Hueber, M. Munoz, C. Mazzoleni, L. Mazzoleni, R. C. Owen, M. Val-Martin, and P. Fialho, **Climatology and Atmospheric Chemistry of Non-Methane Hydrocarbon Emissions Over the North Atlantic**, *European Geosciences Union General Assembly 2013*, Vienna, Austria, April 2013. (Poster).
55. Mazzoleni, C., L. Mazzoleni, P. Fialho, S. Kumar, K. Dzepina\*, M. Dziobak, L. Kramer, S. Olsen, R. Owen, D. Helmig, J. Hueber, K. Wright, B. Zhang, S. China, **Properties of Aerosol in the North Atlantic Free Troposphere at the Pico Mountain Observatory, Azores**, *ASR Science Team Meeting 2013*, Potomac, MD, March 2013. (Poster).
56. Kumar, S., P. Fialho, L. Mazzoleni, S. Olsen, R. Owen, D. Helmig, J. Hueber, M. Dziobak, L. Kramer, C. Mazzoleni, **Ten Years of Black Carbon Measurements in the North Atlantic at the Pico Mountain Observatory, Azores (2225 m a.s.l.)**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2012. (Platform).
57. Mazzoleni, L. R., P. Saranjampour\*, M. Dalbec\*, V. Samburova, A. G. Hallar, B. Zielinska, D. Lowenthal, **Molecular Composition of Water-Soluble Organic Carbon in Nonurban Aerosols**, *American Association for Aerosol Research 31<sup>st</sup> Annual Conference*, Minneapolis, MN, October 2012. (Platform).
58. Dzepina\*, K., S. Kumar, C. Mazzoleni, P. Fialho, M. Dziobak, J. Hueber, D. Helmig, L. Kramer, S. Olsen, and L. R. Mazzoleni, **Measurement of Free Tropospheric Aerosols in the North Atlantic at the Pico Mountain Observatory**, *American Association for Aerosol Research 31<sup>st</sup> Annual Conference*, Minneapolis, MN, October 2012. (Poster).
59. Habib\*, D. and L. R. Mazzoleni, **Aqueous Processing of Low Molecular Weight Carbonyls in Ammonium Sulfate Solution**, *American Association for Aerosol Research 31<sup>st</sup> Annual Conference*, Minneapolis, MN, USA, October 2012. (Poster).
60. Zhao\*, Y., P. Saranjampour\*, A. G. Hallar, and L. R. Mazzoleni, **Molecular Characterization of Cloud Water Using Ultrahigh-Resolution FT-ICR Mass Spectrometry**, *American Association for Aerosol Research 31<sup>st</sup> Annual Conference*, Minneapolis, MN, October 2012. (Poster).
61. Mazzoleni, C., L. R. Mazzoleni, P. Fialho, S. Kumar, K. Dzepina\*, M. Dziobak, L. Kramer, S. Olsen, R. Owen, D. Helmig, J. Hueber, S. China, **Free Tropospheric Aerosol Measurements at the Pico Mountain Observatory, Azores (2225 m a.s.l.)**, *American Association for Aerosol Research 31<sup>st</sup> Annual Conference*, Minneapolis, MN, October 2012. (Poster).
62. Samburova, V., L. R. Mazzoleni, A. Laskin, J. Laskin, P. Saranjampour\*, A. G. Hallar, D. Lowenthal, B. Zielinska, **Analysis of Atmospheric Water-Soluble Organic Compounds Using H-NMR and Liquid Chromatography High Resolution Mass Spectrometry**, *American Association for Aerosol Research 31<sup>st</sup> Annual Conference*, Minneapolis, MN, October 2012. (Platform).
63. Mazzoleni, C., P. Fialho, K. Gorkowski, R. Owen, M. Dziobak, J. Hueber, L. Mazzoleni, L. Kramer, S. Kumar, S. Olsen, D. Helmig, **Aerosol Measurements in the Free Troposphere at the North Atlantic Pico Mountain Observatory in the Azores**, *Atmospheric System Research (ASR) Science Meeting*, Arlington, VA,

March 2012. (Poster).

64. Putman\*, A. L., J. H. Offenberg, R. Fisseha, S. Kundu\*, T. A. Rahn, and L. R. Mazzoleni, **Characterizing the Secondary Organic Aerosol Products of Ozone and  $\alpha$ -Pinene using Ultrahigh-Resolution FT-ICR Mass Spectrometry**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2011. (Poster).
65. Samburova, V., P. Saranjampour\*, L. R. Mazzoleni, S. Kohl, A. G. Hallar, D. Lowenthal, and B. Zielinska, **Isolation and Characterization of Atmospheric Water-Soluble Organic Compounds**, *American Association for Aerosol Research 30<sup>th</sup> Annual Conference*, Orlando, FL, October 2011. (Platform).
66. Zhao\*, Y., P. Saranjampour\*, A. G. Hallar, and L. R. Mazzoleni, **Identification of Atmospheric Organic Matter in Supercooled Cloud Water Using Ultrahigh-Resolution FT-ICR Mass Spectrometry**, *242<sup>nd</sup> American Chemical Society National Meeting*, Denver, CO, August 2011. (Platform).
67. Saranjampour\*, P., V. Samburova, A. G. Hallar, D. Lowenthal, B. Zielinska, and L. R. Mazzoleni, **Ultrahigh-Resolution FT-ICR Mass Spectrometric Identification of Water-Soluble AOM in Nonurban Organic Aerosols**, *242<sup>nd</sup> American Chemical Society National Meeting*, Denver, CO, August 2011. (Poster).
68. Mazzoleni, L. R., B. Ehrman, X. Shen, A. G. Marshall, and J. L. Collett, **Ultrahigh-Resolution Fourier Transform Ion Cyclotron Resonance Mass Spectrometry Identification of Water-Soluble Atmospheric Organic Matter in Polluted Fog Waters**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2010. (Invited Platform).
69. Kundu\*, S., R. Fisseha, A. L. Putman\*, T. A. Rahn, and L. R. Mazzoleni, **Molecular Characterization of Monoterpene Ozonolysis Products Using Ultrahigh-Resolution Fourier Transform Ion Cyclotron Resonance Mass Spectrometry**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2010. (Poster).
70. Derseh (Fisseha), R. F., T. E. Larson, G. Perkins, C. I. Mora, L. R. Mazzoleni, A. Putman\*, and T. Rahn, **Characterization of Secondary Organic Aerosols (SOA) from Oxidation of Biogenic Volatile Organic Compounds (VOCs) Using Stable Isotopes**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2010. (Platform).
71. Kane, E. S., L. R. Mazzoleni, C. J. Kratz, J. A. Hribljan, C. P. Johnson, T. G. Pypker, and R. A. Chimmer, **Dissolved Organic Carbon in Peat Porewater Increases with Warming: A Field Manipulation Experiment in a Northern Temperature Bog**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2010. (Poster).
72. Putman\*, A. P., J. Offenberg, T. Rahn, R. Fisseha, and L. R. Mazzoleni, **Characterization of Secondary Organic Aerosols from the Complex Reactions of  $\alpha$ -Pinene and Ozone**, *Central Regional Meeting of the American Chemical Society*, Dayton, OH, 2010. (Poster).
73. LeClair\*, J. P. and L. R. Mazzoleni, **Structural Elucidation of Atmospheric Water-Soluble Organic Nitrogen Compounds with Ultrahigh Resolution Mass Spectrometry**, *Central Regional Meeting of the American Chemical Society*, Dayton, OH, 2010. (Poster).
74. Orłowski\*, S. S., P. Saranjampour\*, and L. R. Mazzoleni, **Separations of Atmospheric Water-Soluble Organic Compounds by Advanced Liquid Chromatographic Methods**, *Central Regional Meeting of the American Chemical*

Society, Dayton, OH, 2010. (Poster).

75. Mazzoleni, L. R., and J. L. Collett, **Identification of Atmospheric Organic Matter in Fog Water: Exact Masses, Empirical Formulas, and Structural Insights**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2009. (Poster).
76. Mazzoleni, L. R., X. Shen, B. Ehrmann, and J. Collett, Characterization of Atmospheric Organic Matter by Ultrahigh Resolution FT-Ion Cyclotron Resonance Mass Spectrometry: Assignment of 2000 Unique Empirical Formulas, *Department of Energy Atmospheric Science Program FY 2009 Science Team Meeting*, Santa Fe, NM, April 2009. (Poster).
77. Sun, Y., Q. Zhang, L. Mazzoleni, J. Collett, and U. Rowchowdhury, **Insights into Fog and Cloud Chemistry from High Resolution Mass Spectrometry**, *American Association for Aerosol Research*, Orlando, FL, October 2008. (Platform).
78. Mazzoleni, L. R., B. Zielinska, E. Fujita, and T. Snorraddottir, **Evaluation of Fine Particulate Emission Sources During Wild/Prescribed Fire Events**, *Air and Waste Management Association Annual Conference*, Portland, OR, June 2008. (Platform).
79. Collett, J., L. Mazzoleni, P. Herckes, F. Schwandner, K. Beem, S. Raja, Y. Liu, Y. Sun, and Q. Zhang, **Organic Nitrogen in Clouds and Precipitation**, *European Geophysical Union General Assembly*, Vienna, Austria, April 2008. (Invited Platform).
80. Mazzoleni, L. R., X. Shen, A. P. Sullivan, and J. L. Collett, **High Resolution LC/MS Identification of Water-Soluble Organic Matter in Atmospheric Fog Water Samples**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2007. (Poster).
81. Sun, Y., L. Mazzoleni, J. L. Collett, C. Anastasio, U. Rowchowdhury, and Q. Zhang, **High Resolution Mass Spectrometry of Organic Nitrogen Species in Atmospheric Fog and Cloud Waters**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2007. (Poster).
82. Collett, J. L., L. R. Mazzoleni, A. P. Sullivan, and X. Shen, **Cloud Processing of Atmospheric Organic Matter: New Insights from LC/MS**, *American Association for Aerosol Research*, Reno, NV. October 2007. (Platform).
83. Sullivan, A. P., A. S. Holden, L. R. Mazzoleni, S. M. Kreidenweis, J. L. Collett, W. C. Malm, W. M. Hao, and C. E. Wold, **A Method for Smoke Marker Measurements for Determining Air Quality Impacts of Biomass Burning**, *American Association for Aerosol Research*, Reno, NV. October 2007. (Platform).
84. Zhang, Q., Y. Sun, L. Rinehart (Mazzoleni), and J. Collett, **Chemistry of Organic Substances in Atmospheric Fog and Cloud Waters: Insights from High Resolution Mass Spectrometry**, *American Association for Aerosol Research*, Reno, NV, October 2007. (Platform).
85. Carrico, C. M., M. D. Petters, S. M. Kreidenweis, A. J. Prenni, P. J. DeMott, G. R. McMeeking, A. Sullivan, L. Rinehart (Mazzoleni), J. L. Collett, W. Malm, C. Wold, and W. Hao, **Hygroscopic Growth and Cloud Condensation Nuclei Activity and Chemical Composition of Primary Biomass Smoke**, *American Association for Aerosol Research*, Reno, NV, October 2007. (Platform).
86. Engling, G., Y. T. Chen, Y. C. Wu, L. R. Rinehart (Mazzoleni), C. M. Carrico, A.



- Sullivan, A. Holden, S. M. Kreidenweis, J. L. Collett, and W. M. Hao, **Chemical and Physical Characteristics of Smoke Particles from Laboratory Combustion of Biomass**, *Asian Aerosol Conference*, Taiwan, August 2007. (Poster).
87. Collett, J. L., L. Rinehart (Mazzoleni), P. Herckes, X. Shen, T. Lee, A. P. Sullivan, S. Raja, R. R. Kommalapati, and K. T. Valsaraj, **Carbonaceous Aerosol Processing by Clouds and Fogs**, *American Chemical Society National Meeting*, Boston, MA, August 2007. (Platform).
88. Collett, J. L., P. Herckes, L. Rinehart (Mazzoleni), A. Sullivan, and X. Shen, **New Insights into the Organic Composition of Clouds and Fogs**, *International Fog Conference*, Chile, July 2007. (Platform).
89. Rinehart (Mazzoleni), L. R., X. Shen, and J. L. Collett Jr., **LC/TOF-MS Identification of Organic Components in Radiation Fog Water Samples**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2006. (Poster).
90. Collett, J. L., A. Bator, H. Chang, B. Demoz, P. Herckes, K. Hoag, T. Lee, K. F. Moore, S. Raja, X. Rao, J. Reilly, L. Rinehart (Mazzoleni), D. E. Sherman, D. J. Straub, G. Xu, S. Youngster, S. Youngster, X. Yu, R. Ravikrishna, and K. Valsaraj, **The Chemical Composition of Fogs and Clouds in the United States**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2006. (Invited Platform).
91. Collett, J. L., L. Rinehart (Mazzoleni), and X. Yu, **New Lab-on-a-Chip Approaches for Fast Online Measurement of Aerosol Composition**, *International Aerosol Conference*, Minneapolis, MN, October 2006. (Platform).
92. Henry, C. C., D. MacDonald, S. D. Noblitt, L. Rinehart (Mazzoleni), X. Xu, J. L. Collett, and S. Hering, **Development of a Lab-on-a-Chip System for Characterization of Aerosols**, *7<sup>th</sup> Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy*, Orlando, FL, March 2006. (Platform).
93. Rinehart (Mazzoleni), L. R., and J. L. Collett Jr. **Organic Matter in Cloud Water Collected in the Colorado Rocky Mountains During the 2005 North American Monsoon**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2005. (Poster).
94. Ward, T., L. R. Rinehart (Mazzoleni), and T. Lange, **PM<sub>2.5</sub> Polar Organics, Polycyclic Aromatic Hydrocarbons, and <sup>14</sup>C Measured During the 2003/2004 Libby, Montana Winter**, *American Association for Aerosol Research*, Austin, TX, October 2005. (Poster).
95. Rinehart (Mazzoleni), L. R., and B. Zielinska, **Semi-Volatile Polar Organic Method for Biomass Combustion Fine Particulate Matter Characterization**, *Air and Waste Management Association*, Minneapolis, MN, June 2005. (Platform).
96. Rinehart (Mazzoleni), L. R., and B. Zielinska, **Analytical Method for Semi-Volatile Polar Organic Compound Characterization**, *American Association for Aerosol Research PM Supersites Program & Related Studies International Specialty Conference*, Atlanta, GA, February 2005. (Poster).
97. Rinehart (Mazzoleni), L. R., and B. Zielinska, **Organic Compound Characterization of Emissions from Prescribed Burns, Wildland Fuels, & Residential Wood Combustion**, *American Association for Aerosol Research PM Supersites Program & Related Studies International Specialty Conference*, Atlanta, GA, February 2005. (Poster).

98. Rinehart (Mazzoleni), L. R., D. Campbell, H. Moosmüller, J. C. Chow, and B. Zielinska, Semi-Volatile Organic Compound Characterization of Biomass Combustion Emission for Prescribed Burns, Wildland Fuels, and Residential Wood Combustion, *AWMA Regional and Global Perspectives on Haze: Causes, Consequences and Controversies Visibility Specialty Conference*, Asheville, NC, October 2004. (Poster).
99. Moosmüller, H., W. P. Arnott, L. R. Rinehart (Mazzoleni), R. Susott, V. Kovalev, and W. M. Hao, **Characterization of Visibility Relevant Fire Emissions from Several Wildland Fuels**, *AWMA Regional and Global Perspectives on Haze: Causes, Consequences and Controversies Visibility Specialty Conference*, Asheville, NC, October 2004. (Platform).
100. Rinehart (Mazzoleni), L. R., D. Campbell, E. Fujita, and B. Zielinska, **Spatial Characterization of PM<sub>2.5</sub> Associated Organic Compounds in San Joaquin Valley**, *American Association for Aerosol Research*, Atlanta, GA, October 2004. (Poster).
101. Rinehart (Mazzoleni), L. R., M. McDaniel, R. Tanner, and B. Zielinska, **Comparison of Analytical Derivatization Methods of Polar Organic Aerosol Speciation**, *International State of the Science Workshop on Organic Speciation in Atmospheric Aerosols Research*, Las Vegas, NV, April 2004. (Poster).
102. Rinehart (Mazzoleni), L. R., D. Campbell, E. Fujita, J. Chow, and B. Zielinska, Semi-Volatile Organic Compound Characterization and Evaluation of PM<sub>2.5</sub> Emission Sources Collected During the California Regional PM<sub>10</sub> / PM<sub>2.5</sub> Air Quality Study, *American Association for Aerosol Research*, Anaheim, CA, October 2003. (Poster).
103. Rinehart (Mazzoleni), L. R., A. Cunningham, and B. Zielinska, Comparison of Semi-Volatile Organic Compounds from Wildfire Emission Dominated Ambient Samples to Residential and Agricultural Wood Combustion Source Samples, *Particulate Matter 2003, an International Specialty Conference by the American Association for Aerosol Research*, Pittsburgh, PA, April 2003. (Poster).
104. Rinehart (Mazzoleni), L. R. and B. Zielinska, Characterization of PM<sub>2.5</sub> Associated Organic Compounds of Emission Sources Collected During the California Regional PM<sub>10</sub> / PM<sub>2.5</sub> Air Quality Study, *American Association for Aerosol Research*, Charlotte, NC, October 2002. (Platform).
105. Rinehart (Mazzoleni), L. R. and B. Zielinska, Characterization of PM<sub>2.5</sub> Associated Organic Compounds Collected During California Regional PM<sub>10</sub> / PM<sub>2.5</sub> Air Quality Study; Comparison with SRM 1649a; *American Association for Aerosol Research*, Portland, OR, October 2001. (Poster).

## Other Presentations

### \* Student / Post-doc Authors

1. Leverton\*, T., S. K. Schum\*, M. Khaksari, M. A. Brege\*, and L. R. Mazzoleni, **Electrospray Ionization (ESI) Artifacts Observed Using Ultrahigh Resolution Mass Spectrometry**, *Michigan Technological University Graduate Research Colloquium*, February 2019. (Platform).
2. Brege\*, M. A., S. China, L. R. Mazzoleni, **Extreme Molecular Complexity in Biomass Burning Atmospheric Tar Balls Observed Using Complimentary Soft Ionization Methods and Ultrahigh Resolution Mass Spectrometry**, *Michigan Technological University Graduate Research Colloquium*, February 2019. (Platform).

3. Brege\*, M., M. Khaksari, T. Leverton\*, and L. R. Mazzoleni, **Detection of 15,000 Molecular Formulas in an Environmental Complex Mixture Using Liquid Chromatography Coupled to Orbitrap Elite Mass Spectrometry with Electrospray Ionization**, *Upper Peninsula – NE Wisconsin ACS Student Research Symposium*, Marquette, MI, March 2018. (Poster).
4. Schum\*, S., E. Rose\*, M. Khaksari, E. Kirillova\*, V. Samburova, and L. R. Mazzoleni, **More Comprehensive Molecular Characterization of Organic Aerosol Using Ultrahigh Resolution Orbitrap Elite Mass Spectrometry with ESI, APCI, and APPI**, *Upper Peninsula – NE Wisconsin ACS Student Research Symposium*, Marquette, MI, March 2018. (Poster).
5. Rose\*, E., M. Khaksari, T. Leverton\*, S. Schum\*, and L. R. Mazzoleni, **Evaluation of Negative Ion Electrospray Ionization Aggregation Artifacts Using Ultrahigh Resolution Mass Spectrometry**, *Upper Peninsula – NE Wisconsin ACS Student Research Symposium*, Marquette, MI, March 2018. (Poster).
6. Brege\*, M., M. Paglione, S. Gilardoni, S. Decesari, M. C. Facchini, and L. R. Mazzoleni, **Detailed Molecular Analysis of Ambient Biomass Burning Influenced Aerosol and Fog Water from the Po Valley**, *Michigan Technological University Graduate Research Colloquium*, February 2018. (Oral).
7. Brege\*, M. A., M. Paglione, S. Gilardoni, S. Decesari, M. C. Facchini, and L. R. Mazzoleni, **Molecular Characterization of Biomass Burning Aqueous Phase Secondary Organic Aerosol Using Ultrahigh Resolution Mass Spectrometry**, *Upper Peninsula – NE Wisconsin ACS Student Research Symposium*, Marquette, MI, March 2017 (Poster).
8. Schum\* S. K., B. Zhang, K. Dzepina\*, C. Mazzoleni, and L. R. Mazzoleni, **Molecular and Chemical Characteristics of Long-Range Transported Organic Aerosol at the Pico Mountain Observatory (PMO)**, *Michigan Technological University Graduate Research Colloquium*, February 2016. (Poster).
9. Brege\*, M. A., M. Paglione, S. Gilardoni, S. Decesari, M. C. Facchini, and L. R. Mazzoleni, **Molecular Characterization of Ambient and Laboratory Biomass Burning Influenced Aqueous Phase Secondary Organic Aerosol Using Ultrahigh Resolution Mass Spectrometry**, *Michigan Technological University Graduate Research Colloquium*, February 2016. (Poster).
10. Khaksari, M., L. R. Mazzoleni, M. R. Gretz, P. Doskey, A. R. Minerick, D. Minakata, E. Kane and S. A. Green, **Introducing the New 2D Liquid Chromatograph and High-Resolution Mass Spectrometer in the Chemical Advanced Resolution Methods (ChARM) Core Facility at Michigan Tech**, *Michigan Technological University Life Sciences and Technology Institute Colloquium*, October 2016. (Poster).
11. Brege\*, M. A., S. Gilardoni, M. C. Facchini, and L. R. Mazzoleni, **Molecular Characterization of Po Valley Fog Water Using Ultrahigh Resolution Mass Spectrometry**, *Upper Peninsula – NE Wisconsin ACS Student Research Symposium*, Marquette, MI, April 2015. (Poster) – *Awarded Honorable Mention*.
12. Schum\*, S. K., K. Dzepina\*, C. Mazzoleni, P. Fialho, B. Zhang, S. China, M. T. Ampadu\*, R. C. Owen, and L. R. Mazzoleni, **Chemical and Molecular Characterization of Long-Range Transported Biomass Combustion Aerosol Collected at the Pico Mountain Observatory**, *Upper Peninsula – NE Wisconsin ACS Student Research Symposium*, Marquette, MI, April 2015. (Poster).
13. Khaksari, M., L. R. Mazzoleni, C. Ruan, P. Song, N. Hershey, R. T. Kennedy, M.

- A. Burns, D. T. Burke, A. R. Minerick, **Simultaneous Detection and Quantification of Water- and Fat-Soluble Vitamins with Liquid Chromatography and Tandem Ion Trap-Mass Spectrometry**, *Michigan Technological University Graduate Research Colloquium*, February 2015. (Platform).
14. Mazzoleni, L. R., S. Stockero, A. Oliveira, **Publishing, Presenting, and Building Your Professional Reputation**, *Michigan Technological University Sustained Support to Ensure Engineering Degrees (SSEED) Program*, December 2014. (Platform).
  15. Khaksari, M., L. R. Mazzoleni, C. Ruan, P. Song, N. Hershey, R. T. Kennedy, M. A. Burns, D. T. Burke, A. R. Minerick, **Determination and Quantification of Water-Soluble and Fat-Soluble Vitamins in Human Biofluids with HPLC/MS**, *Michigan Technological University Graduate Research Colloquium*, February 2014. (Platform) – *Awarded Best Attended Session*.
  16. Habib\*, D. M. A. and L. R. Mazzoleni, **Molecular Characterization of Aqueous Secondary Organic Aerosol Formed in Bulk (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub> from Methylglyoxal**, *Michigan Technological University Graduate Research Colloquium*, February 2014. (Poster).
  17. Khaksari, M., P. Song, C. Ruan, N. Hershey, R. Kennedy, M. Burns, D. Burke, L. Mazzoleni and A. Minerick, **Detection and Identification of Water-Soluble and Fat-Soluble Vitamins in Human Tears with HPLC/MS**, *Michigan Technological University Ninth Annual Student Research Forum*, Spring 2013. (Poster).
  18. Dalbec\*, M. M., Y. Zhao\*, and L. R. Mazzoleni, **Molecular Characterization of Biogenic Secondary Organic Aerosol**, *Michigan Technological University Honors Institute First Annual Undergraduate Research Expo*, Spring 2013. (Poster) – *Awarded First Place in Poster Competition*.
  19. Curtis\*, T., J. H. Offenberg, and L. R. Mazzoleni, **Naphthalene SOA Analysis Using Ultrahigh-Resolution FT-ICR MS**, *Michigan Technological University Honors Institute First Annual Undergraduate Research Expo*, Spring 2013. (Poster).
  20. Mazzoleni, L. R., S. Stockero, A. Oliveira, **Publishing, Presenting, and Building Your Professional Reputation**, *Michigan Technological University Graduate School Professional Development Series*, Spring 2013. (Platform).
  21. Zhao\*, Y., M. Dalbec\*, and L. R. Mazzoleni, **Multivariate Statistical Analysis of Biogenic Secondary Organic Aerosol Analyzed by Ultrahigh Resolution Mass Spectrometry**, *Michigan Technological University Graduate Research Colloquium*, Spring 2013. (Poster).
  22. Mazzoleni, L. R., **Molecular Composition of Atmospheric Water-Soluble Organic Carbon**, *Michigan Technological University Research Scholars Program*, Fall 2012. (Informal Talk).
  23. Orłowski\*, S. S. and L. R. Mazzoleni, **Separations of Atmospheric Water-Soluble Organic Compounds by Advanced Liquid Chromatographic Methods**, *Michigan Technological University Undergraduate Research Expo*, Spring 2010. (Poster).
  24. Putman\*, A. and L. R. Mazzoleni, **Characterization of Secondary Organic Aerosols from the Complex Reactions of  $\alpha$ -Pinene and Ozone**, *Michigan Technological University Undergraduate Research Expo*, Spring 2010. (Poster).

25. Mazzoleni, L. R., **Identification of Climate Relevant Water-Soluble Organic Compounds**, *Michigan Technological University Department of Chemical Engineering Seminar Series*, Spring 2010. (Platform).
26. Mazzoleni, L. R., **Identification of Climate Relevant Water-Soluble Organic Compounds**, *Michigan Technological University Department of Biology Seminar Series*, Spring 2010. (Platform).
27. Mazzoleni, L. R., **Atmospheric Organic Matter Composition Analysis by Ultrahigh Resolution Mass Spectrometry**, *Michigan Technological University Remote Sensing Institute Seminar Series*, Fall 2009. (Platform).

### **Invited Seminars and Platform/Plenary Talks**

American Association of Aerosol Research Tutorial Session, Portland, OR	2019
University of Trento, Department of Environmental Engineering, Trento, Italy	2019
University of York, Department of Chemistry, York, Great Britain	2019
University of Alberta, Department of Chemistry, Edmonton, Canada	2019
Prairie Environmental Chemistry Colloquium, Edmonton, Canada	2019
University of Minnesota, Department of Chemistry, Duluth, MN	2018
Goldschmidt Conference – Biogeochemistry, Boston, MA	2018
International Symposium on Atmospheric Pollution: Science, Technology, Innovation, and Compliance, National Institute of Technology, Calicut, India	2018
Atmospheric Physics & Chemistry Lecture Series, National Institute of Technology, Calicut, India	2018
Northern Michigan University, Department of Chemistry, Marquette, MI	2018
Washington University, Department of Chemical and Environmental Engineering, St. Louis, MO	2018
Paul Scherrer Institute, Zurich, Switzerland	2017
Army Corps of Engineers Environmental Research & Development Center, Vicksburg, MS	2017
Fulbright Grantees Conference, Rome, Italy	2016
Italian National Research Council, Institute of Atmospheric Sciences and Climate, Bologna, Italy	2016
Leibniz Institute for Tropospheric Research (TROPOS), Leipzig, Germany	2016
American Chemical Society, Delaware Valley Discussion Group, Villanova, PA	2015
Northern Michigan University, Department of Chemistry, Marquette, MI	2015
American Geophysical Union Fall Meeting – Pyrogenic Carbon Dynamics from Boreal Wildfires	2014
University of Wisconsin, Department of Chemistry, Madison, WI	2014
American Chemical Society National Meeting – Fundamental Processes of Atmospheric Chemistry	2014
Aerodyne Research Inc., Aerosol & Cloud Chemistry, Billerica, MA	2014
Italian National Research Council, Institute of Atmospheric Sciences and Climate, Bologna, Italy	2014

American Geophysical Union Fall Meeting – Tropospheric Multiphase Chemistry	2010
National Autonomous University of Mexico (UNAM), Mexico City, Mexico	2010
University of Minnesota, Large Lakes Observatory, Duluth, MN	2009
Chevron Energy Technologies, Houston, TX	2007
Washoe County Health Department, Air Quality Management Division, Reno, NV	2003
Kurztown University, Department of Physical Sciences, Kurztown, PA	2003

## Teaching

### International Lecture Series

*National Institute of Technology – Calicut, Atmospheric Chemistry & Physics Lecture Series*

A Global Initiative of Academic Networks (GIAN) Sponsored Lecture Series in collaboration with Ravi Varma (NIT-Calicut) and Claudio Mazzoleni (Michigan Tech)

### New Graduate Education Courses Developed at Michigan Tech

*CH5240 – Advanced Mass Spectrometry (3 Credits)*

Advanced instrumentation and methods are the focus of this course. Design of various mass analyzers and their advantages and limitations will be reviewed. Advanced identification methods such as tandem mass spectrometric analysis and exact mass analysis will be discussed.

*CH5241 – Advanced Mass Spectrometry Laboratory (1 Credit)*

Students learn how to perform mass spectrometry (MS) experiments to identify and quantify molecules. The experiments include the following method approaches: electrospray ionization (ESI), matrix associated laser desorption ionization (MALDI) and tandem MS analysis (MS/MS) Students work collaboratively on a research project intended for publication.

*CH5516/ATM5516 – Aerosol and Cloud Chemistry (3 Credits)*

This course is focused on the chemistry of atmospheric aerosols and cloud processes. Students learn about methods for chemical characterization, the chemical composition of aerosol and the chemical reactions pertinent to secondary aerosol and cloud composition.

*CH5800 – Special Topics in Chemistry: Scientific Writing (2 Credits)*

This course is a writing intensive course with a focus on scientific English and style; content and structure of scientific presentations, manuscripts and proposals; practical strategies for compiling a literature review, evaluating scientific writing and implementing the writing process

### Undergraduate Courses Taught

CH1140 – Introduction to Organic, Inorganic & Biochemistry (3 Credits)	Spring 2009, Spring 10
CH1170 – University Chemistry II-GOB (Formerly CH1140; 3 Credits)	Spring 2011
CH4212 – Instrumental Analysis (5 Credits)	Fall 2016, Fall 2017, Fall 2018, Fall 2019
CH4222 – Bioanalytical Chemistry (5 Credits)	Fall 2011, Fall 2012, Fall 2013, Fall 2014
CH4290 – Advanced Mass Spectrometry Methods (3 Credits)	Fall 2009, Spring 2013
CH4800 – Chemistry of Aerosols / Hydrometeors (3 Credits)	Spring 2012

UN4000 – Remote Sensing Seminar (1 Credit) Fall 2011

### Graduate Courses Taught

CH5240 – Advanced Mass Spectrometry Methods (3 Credits) Spring 2015, Spring 2017, Spring 2018  
CH5241 – Advanced Mass Spectrometry Methods Laboratory (1 Credit) Spring 2017-18  
CH5516/ATM5516 – Aerosol and Cloud Chemistry (3 Credits) Spring 2014, 2019  
CH5800 – Special Topics in Chemistry: Scientific Writing (3 Credits) Spring 2018  
CH5900 – Graduate Chemistry Seminar (1 Credit) Spring 2015  
CH6290 – Advanced Mass Spectrometry Methods (3 Credits) Fall 2009, Spring 2013  
CH6800/ATM5200 – Chemistry of Aerosols/Hydrometeors (3 Credits) Spring 2012  
CH6800 – Liquid Chromatography / Mass Spectrometry (1 Credit) Fall 2009

### Undergraduate Students Advised

*\* Supported with Funded Research; \*\* Fellowship Recipient*

Peyton Bainbridge, Chemistry BS Fall 2018  
Tyler Leverton, Chemistry BS Fall 2017 – Spring 2018  
Elizabeth Rose, Chemistry BS Spring 2017, Fall 2017 – Spring 2019  
Tyler Sawall\*, Chemistry BS Spring 2015 – Spring 2016  
Alexandra Maday, Chemistry BS Spring 2015, Spring 2016, Fall 2016  
Trevor Curtis\*\*, Chemistry BS Fall 2012 – Spring 2014  
Megan Dalbec\*, \*\*, Environmental Engineering BS Summer 2011 – Spring 2013; Fall 2013 – Spring 2014  
Senait Gebreeyesus\*, Environmental Engineering BS Spring 2012 – Spring 2013; Fall 2013 – Spring 2014  
Victoria Farhat\*, Environmental Engineering BS Spring 2012  
Philip Olivares\*, Chemistry BS Spring 2012  
Koressa Reiter\*, Chemistry BS Spring 2012  
Annie Putman\*, Chemistry BS Spring 2010 – Summer 2010  
Allyce Gilligan, Chemistry BS Fall 2010  
Nickolaus Manyard\*\*, Chemistry BS Summer 2009 & Summer 2010  
Sandra Orłowski, Chemistry BS Spring 2009 – Summer 2009, Spring 2010

### Graduate Students Advised

Thusitha Diversekara, Chemistry PhD Student 2018 – Current  
Amna Ijaz, Chemistry PhD Student 2018 – Current  
Matthew Brege, Chemistry PhD Candidate 2013 – Current  
Tyler Leverton, Chemistry Accelerated MS 2018 – 2019  
Simeon Schum, Chemistry PhD Candidate 2013 – 2019  
Marian Thersea Ampadu, Chemistry MS (Joint with S. A. Green) 2013 – 2017  
D. M. Ashraf Habib, Atmospheric Science MS 2011 – 2014  
Yunzhu Zhao, Environmental Engineering PhD 2009 – 2014  
Parichehr Saranjampour, Chemistry MS 2010 – 2012  
Jeffrey LeClair, Chemistry MS 2009 – 2011

### Postdoctoral Scholars Advised

Elena Kirillova 2016 – 2017  
Katja Dzepina 2012 – 2014  
Shuvashish Kundu 2010 – 2012

## ChARM Research Scientists Supervised

Simeon K. Schum  
Maryam Khaksari

2019 – Present  
2016 – 2019

## Service

### National & International Professional Service

*Peer Review – Selected Journals (2015 Impact Factors)*

Nature Communications – Impact Factor 12.1

Analytical Chemistry – Impact Factor 5.6

Environmental Science & Technology – Impact Factor 5.4

Atmospheric Chemistry and Physics – Impact Factor 5.1

Tellus B – Impact Factor 4.3

Scientific Reports – Impact Factor 4.2

Journal of Geophysical Research – Impact Factor 3.4

Atmospheric Environment – Impact Factor 3.1

*Peer Review – Proposals*

NSF, Marine Chemistry Program, Ad-Hoc Reviewer 2019

NASA, Atmospheric Composition Modeling and Analysis Program, Panelist 2018

NSF, Atmospheric Chemistry Program, Ad-Hoc Reviewer 2009, 2010, 2013 – 2017

NSF, Antarctic Ocean and Atmospheric Sciences Program, Panelist 2017

NSF, Chemical Oceanography Program, Ad-Hoc Reviewer 2014

NSF, Environmental Chemical Sciences Program, Ad-Hoc Reviewer 2009, 2010

NSF, Major Research Instrumentation Program, Panelist 2012

EPA, Science to Achieve Results (STAR) Graduate Fellowship, Panelist 2013

### International Symposium on Atmospheric Pollution: Science, Technology, Innovation, and Compliance

Co-Convener, Calicut, India 2018

### American Geophysical Union

Session Convener for A019: Chemical, Physical and Morphological Properties  
of Remote Aerosols 2013

Session Convener for A005: Aerosol Observations at High Elevation 2012

### American Association for Aerosol Research

Session Chair for Aerosol Chemistry 2012, 2013

### European Aerosol Conference

Session Chair for Aerosol Chemistry 2015

### Western Upper Peninsula Science Fair

Judge 2012, 2014, 2015

### Air and Waste Management Association

Basic Sciences Division, AB-2 Chemistry Committee Secretary 2008 – 2010

### Kurztown University

Environmental Science Program Review 2007

### Michigan Technological University

*Vice President for Research Office*

Co-Director of Chemical Advanced Resolution Methods Laboratory 2016 – Present



Research Advisory Council	2016 – Present
Summer Undergraduate Research Program – Reviewer	2011, 2012
Research for Excellence Fund – Research Seed Grant Proposal Reviewer	2011
Century II Campaign Endowed Equipment Fund – Reviewer	2012, 2013, 2014

*Earth Planetary Space Sciences Institute*

Departmental Representative	2014 – 2015
Seminar Series Coordinator	2011

*College of Sciences and Arts*

Member, Research Computing Committee	2010
--------------------------------------	------

*Atmospheric Sciences Program*

Member, Advisory Committee	2009 – Present
Coordinator, Graduate Seminar Series	2011 – 2014

*Department of Chemistry*

Member, Chair Search Committee	2018 – 2019
Chair, Promotion, Retention and Tenure Committee	2017 – 2018
Member, Graduate Programs Committee	2017 – 2018
Chair, Graduate Programs Committee	2016 – 2017
Member, Promotion, Retention, and Tenure Committee	2014 – 2015, 2016 – 2017, 2019 – Present

Member, Graduate Programs Committee	2010 – 2011, 2013 – 2015, 2017 – 2018
Chair, Faculty Search Committee	2013 – 2014
Member, Admissions and Recruitment Committee	2009 – 2010, 2012 – 2013
Member, Space and Infrastructure Committee	2011 – 2012
Member, Computing Committee	2010 – 2011
Member, Awards Committee	2009 – 2010

**Professional Affiliations**

Member: American Chemical Society	1998 – Present
Member: American Association for Aerosol Research	2001 – 2005; 2012 – Present
Member: American Association for the Advancement of Science	2006 – Present
Member: American Geophysical Union	2007 – Present
Member: American Society of Mass Spectrometry	2010 – Present
Member: Air & Waste Management Association	2008 – 2010

**University Affiliations**

Member: Atmospheric Sciences Program	2008 – Present
Member: Earth, Planetary, and Space Sciences Institute	2008 – Present
Member: Environmental Engineering PhD Faculty Advisory Committee	2009 – Present
Member: Great Lakes Research Center	2012 – Present