

Lynn R. Mazzoleni
Michigan Technological University
Associate Professor of Chemistry
Department of Chemistry
1400 Townsend Drive, Houghton, MI 49931
Phone: +1-906-487-1853, Email: lrmazzol@mtu.edu

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:

Ph.D. in Environmental Sciences & Health, University of Nevada, Reno	2000 – 2005
B.S. in Environmental Science, Kutztown University	1994 – 2000

Awards and Honors:

Fulbright U.S. Scholar Award Los Alamos National Laboratory, Institute of Geophysics and Planetary Physics Award	2015 – 2016 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:

Shaw, R.A., C. Mazzoleni, L.R. Mazzoleni, W.H. Cantrell, **CIF: Making the Pi Convection-Cloud Chamber Available to the Community for Aerosol-Cloud-Turbulence Research**, NSF Atmospheric and Geospace Sciences, 2021-2026.

Mazzoleni, C., W.H. Cantrell, L.R. Mazzoleni, T. Onasch, S. Schum, and R. Shaw, **LAACI - Light Absorbing Aerosol-Cloud Interactions Experiment**, DOE Atmospheric System Research, 2020-2023.

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.

Yatavelli, R.L.N., L.-W.A. Chen, L.R. Mazzoleni and A.C. Watts, **Collaborative Research: Nitrogen Partitioning and Evolution of Particulate Organic Nitrogen in Peat Fire Emissions**, NSF Atmospheric Chemistry Program, 2015-2017.

- 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.
- 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).
- 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.
- 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).
- 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.
- 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).
- 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).
- 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.
- 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.
- 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.
- Mazzoleni, L.R., J. Perlinger, and C. Mazzoleni, **A Submicron Aerosol Generator for Interdisciplinary Research Applications**, Century II Campaign Endowed Equipment Fund, 2009.
- Zielinska, B. and L.R. Rinehart (Mazzoleni), **Evaluation of PM_{2.5} Emissions in Washoe County, NV: During the 2004 Wildfire Season**, Washoe County Health Department Air Quality Management Division, 2004.

Peer Reviewed Publications:

Total Citations on Google Scholar: 5338, H-index: 33, I10-index: 48, Updated: May 01, 2026

*Student/Post-doc Authors

- Schum*, S.K., A. Zelenyuk, K.J. Suski, and L.R. Mazzoleni, **Influence of Gas-Phase Polycyclic Aromatic Hydrocarbons on Molecular Composition of α -Pinene Ozonolysis Secondary Organic Aerosol Particles**, *Aerosol Science and Technology*, 60(6), 653-664, 2026.
- Joshi, S., G. Kulkarni, L.R. Mazzoleni, W.H. Cantrell, R.A. Shaw, S.K. Schum*, T. Divisekara*, I. Helman, I. Norwood, J. Nordeng, J. Anderson, K. Gorkowski, T.B. Onasch, A.J. Sedlacek, O.Y. Enekwizu, and C. Mazzoleni, **Performance of Pumped Counterflow Virtual Impactors to Study Aerosol Interactions with Laboratory Generated Warm Clouds**, *Aerosol Science and Technology*, 1-16, 2026.

- Mathai, S., A. Ijaz*, T. Gautam, Z. Cheng, N.N. Lata, H. Bhotika, D. Tseng, R.K. Chu, L.R. [Mazzoleni](#), C. Mazzoleni, and S. China, **Haze Processing of Atmospheric Particles During Wintertime in the Indo-Gangetic Plains**, *Environmental Science: Atmospheres*, 2026.
- Cheng, Z., M. Shrivastava, A. Ijaz*, D. Veghte, G.W. Vandergrift, K.-P. Tseng, N.N. Lata, W. Kew, K. Suski, J. Weis, G. Kulkarni, L.K. Berg, J.D. Fast, L. Kovarik, L.R. [Mazzoleni](#), A. Zelenyuk, and S. China, **Enhanced Light Absorption for Solid-State Brown Carbon from Wildfires Due to Organic and Water Coatings**, *Nature Communications*, 15(1), 10326, 2024.
- Cheng, Z., M. Morgenstern, S. Henning, B. Zhang, G.C. Roberts, M. Fraund, M.A. Marcus, N.N. Lata, P. Fialho, L.R. [Mazzoleni](#), B. Wehner, C. Mazzoleni, and S. China, **Cloud Condensation Nuclei Activity of Internally Mixed Particle Populations at a Remote Marine Free Troposphere Site in the North Atlantic Ocean**, *Science of the Total Environment*, 904, 166865, 2023.
- Zito, P., B.A. Bekins, D. Martinović-Weigelt, M.L. Harsha, K.E. Humpal, J. Trost, I. Cozzarelli, L.R. [Mazzoleni](#), S.K. Schum*, and D.C. Podgorski, **Photochemical Mobilization of Dissolved Hydrocarbon Oxidation Products from Petroleum Contaminated Soil into a Shallow Aquifer Activate Human Nuclear Receptors**, *Journal of Hazardous Materials*, 459, 132312, 2023.
- Divisekara*, T., S.K. Schum*, and L.R. [Mazzoleni](#), **Ultrahigh Performance LC/FT-MS Non-Targeted Screening for Biomass Burning Organic Aerosol with MZmine2 and MFAssignR**, *Chemosphere*, 338, 139403, 2023.
- Ijaz*, A., W. Kew, Z. Cheng, S. Mathai, N.N. Lata, L. Kovarik, S.K. Schum*, S. China, and L.R. [Mazzoleni](#), **Molecular and Physical Composition of Tar Balls in Wildfire Smoke: An Investigation with Complementary Ionisation Methods and 15-Tesla FT-ICR Mass Spectrometry**, *Environmental Science: Atmospheres*, 3(10), 1552-1562, 2023.
- Vandergrift, G.W., N.N. Lata, S. Mathai, A. Ijaz*, Z. Cheng, M. Shrivastava, J. Zhang, A.S.Md. Shawon, G. Kulkarni, L.R. [Mazzoleni](#), W. Kew, and S. China, **Case Study Evaluation of Size-Resolved Molecular Composition and Phase State of Carbonaceous Particles in Wildfire Influenced Smoke from the Pacific Northwest**, *Environmental Science: Atmospheres*, 3(9), 1251-1261, 2023.
- Ijaz*, A., W. Kew, S. China, S.K. Schum*, L.R. [Mazzoleni](#), **Molecular Characterization of Organophosphorus Compounds in Wildfire Smoke Using 21-T Fourier Transform-Ion Cyclotron Resonance Mass Spectrometry**, *Analytical Chemistry*, 94, 42, 14537-14545, 2022.
- Cheng, Z., M. Morgenstern, B. Zhang, M. Fraund, N.N. Lata, R. Brimberry, M.A. Marcus, L.R. [Mazzoleni](#), P. Fialho, S. Henning, B. Wehner, C. Mazzoleni, S. China, **Particle Phase-State Variability in the North Atlantic Free Troposphere During Summertime is Determined by Atmospheric Transport Patterns and Sources**, *Atmospheric Chemistry and Physics*, 22, 13, 9033-9057, 2022.
- Lata, N.N., B. Zhang, S.K. Schum*, L.R. [Mazzoleni](#), R. Brimberry, M.A. Marcus, W.H. Cantrell, P. Fialho, C. Mazzoleni, and S. China, **Aerosol Composition, Mixing State, and Phase State of Free Tropospheric Particles and Their Role in Ice Cloud Formation**, *ACS Earth and Space Chemistry*, 5, 12, 3499-3510, 2021.
- Brege*, M.A., S. China, S.K. Schum*, A. Zelenyuk, and L.R. [Mazzoleni](#), **Extreme Molecular Complexity Resulting in a Continuum of Carbonaceous Species in Biomass Burning Tar Balls from Wildfire Smoke**, *ACS Earth and Space Chemistry*, 5, 10, 2729-2739, 2021.
- Schum*, S.K., L.E. Brown, L.R. [Mazzoleni](#), **MFAssignR: Molecular Formula Assignment Software for Ultrahigh Resolution Mass Spectrometry Analysis of Environmental Complex Mixtures**, *Environmental Research*, 191, 110114, 2020.
- Siebert, H., K. Szodry; U. Egerer; B. Wehner; S. Henning; K. Chevalier; J. Lückerrath; O. Welz; K. Weinhold; F. Lauermann; M. Gottschalk; A. Ehrlich; M. Wendisch; P. Fialho; G. Roberts; N. Allwayin; S. Schum*; Raymond A. Shaw; C. Mazzoleni; L. [Mazzoleni](#); J. Nowak; S. Malinowski; K. Karpinska; W. Kumala; D. Czyżewska; E. Luke; P. Kollias; R. Wood; J.P. Mellado, **Observations of Aerosol, Cloud, Turbulence**

and Radiation Properties at the Top of the Marine Boundary Layer over the Eastern North Atlantic Ocean: The ACORES Campaign, *Bulletin of the American Meteorological Society*, 1-59, 2020.

- Hawkes, J.A., J. D'Andrilli, R.L. Sleigher, H. Chen, P.G. Hatcher, A. Ijaz*, M. Khaksari*, S. Schum*, L. Mazzoleni, R. Chu, N. Tolic, W. Kew, N. Hess, J. Lv, S. Zhang, H. Chen, Q. Shi, R. Hutchins, D.C.P. Lozano, R. Gavard, H.E. Jones, M. Barrow, H. Osterholz, T. Dittmar, C. Simon, G. Gleixner, S.M. Berg, C.K. Remucal, N. Catalán, R.B. Cole, B. Noreiga-Ortega, G. Singer, N. Radoman, N.D. Schmitt, A. Stubbins, J.N. Agar, P. Zito, D.C. Podgorski, **An International Laboratory Comparison of Dissolved Organic Matter Composition by High Resolution Mass Spectrometry: Are We Getting the Same Answer?**, *Limnology and Oceanography Methods*, 18, 6, 235-258, 2020.
- Bhandari, J., S. China, K.K. Chandrakar, G. Kinney, W. Cantrell, R.A. Shaw, L.R. Mazzoleni, G. Girotto, 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*, 9, 11824, doi.org/10.1038/s41598-019-48143-y, 2019.
- 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*, 214, 116760, doi.org/10.1016/j.atmosenv.2019.05.068, 2019.
- 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.
- 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.
- 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.
- 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.
- 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.
- Schultz, M.G., S. Schröder, O. Lyapina, O. Cooper, I. Galbally, I. Petropavlovskikh, E. von Schneidmesser, H. Tanimoto, Y. Elshorbany, M. Naja, R.J. Seguel, U. Dauert, P. Eckhardt, S. Feigen span, 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. Moolla, 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.

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- 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.
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- Kundu*, S., R. Fisseha, A.L. Putman*, T.A. Rahn, and L.R. Mazzoleni, **Molecular Formula Composition of β -Caryophyllene Ozonolysis SOA Formed in Humid and Dry Conditions**, *Atmospheric Environment*, 154, 70–81, 2017.
- 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.
- 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.
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- 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.
- 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.
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- 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.
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- 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**, *245th American Chemical Society & Exposition*, New Orleans, LA, April 2013.
- 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.
- 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.
- 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.
- 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.
- 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 31th Annual Conference*, Minneapolis, MN, October 2012.
- 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 31th Annual Conference*, Minneapolis, MN, October 2012.
- Habib*, D. and L.R. Mazzoleni, **Aqueous Processing of Low Molecular Weight Carbonyls in Ammonium Sulfate Solution**, *American Association for Aerosol Research 31st Annual Conference*, Minneapolis, MN, USA, October 2012.
- 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 31th Annual Conference*, Minneapolis, MN, October 2012.
- 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 (2225m asl)**, *American Association for Aerosol Research 31th Annual Conference*, Minneapolis, MN, October 2012.
- 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 31th Annual Conference*, Minneapolis, MN, October 2012.
- 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.
- Putman*, A.L., J.H. Offenberg, R. Fisshe, S. Kundu*, T.A. Rahn, and L.R. Mazzoleni, **Characterizing the Secondary Organic Aerosol Products of Ozone and α -Pinene using Ultrahigh-Resolution FT-ICR Mass Spectrometry**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2011.
- 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 30th Annual Conference*, Orlando, FL, October 2011.
- 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**, *242nd American Chemical Society National Meeting*, Denver, CO, August 2011.
- 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**, *242nd American Chemical Society National Meeting*, Denver, CO, August 2011.
- 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).
- Kundu*, S., R. Fisshe, 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.
- 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.
- 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 Temperate Bog**, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2010.
- Putman*, A.P., J. Offenberg, T. Rahn, R. Fisseha, and L.R. Mazzoleni, **Characterization of Secondary Organic Aerosols from the Complex Reactions of α -Pinene and Ozone**, *Central Regional Meeting of the American Chemical Society*, Dayton, OH, 2010.
- 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.
- Orlowski*, 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.
- 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.
- Mazzoleni, L.R., X. Shen, B. Erhmann, 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.
- 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.

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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**, *7th Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy*, Orlando, FL, March 2006.
- 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.

- Ward, T., L.R. Rinehart (Mazzoleni), and T. Lange, **PM_{2.5} Polar Organics, Polycyclic Aromatic Hydrocarbons, and ¹⁴C Measured During the 2003/2004 Libby, Montana Winter**, *American Association for Aerosol Research*, Austin, TX, October 2005.
- 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.
- 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.
- 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.
- 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.
- 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.
- Rinehart (Mazzoleni), L.R., D. Campbell, E. Fujita, and B. Zielinska, **Spatial Characterization of PM_{2.5} Associated Organic Compounds in the San Joaquin Valley**, *American Association for Aerosol Research*, Atlanta, GA, October 2004.
- 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.
- Rinehart (Mazzoleni), L.R., D. Campbell, E. Fujita, J. Chow, and B. Zielinska, **Semi-volatile Organic Compound Characterization and Evaluation of PM_{2.5} Emission Sources Collected During the California Regional PM₁₀/ PM_{2.5} Air Quality Study**, *American Association for Aerosol Research*, Anaheim, CA, October 2003.
- 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.
- Rinehart (Mazzoleni), L.R. and B. Zielinska, **Characterization of PM_{2.5} Associated Organic Compounds of Emission Sources Collected During the California Regional PM₁₀/ PM_{2.5} Air Quality Study**, *American Association for Aerosol Research*, Charlotte, NC, October 2002.
- Rinehart (Mazzoleni), L.R. and B. Zielinska, **Characterization of PM_{2.5} Associated Organic Compounds Collected During California Regional PM₁₀/ PM_{2.5} Air Quality Study; Comparison with SRM 1649a**, *American Association for Aerosol Research*, Portland, OR, October 2001.

Other Presentations:

***Student/Postdoc Authors**

- 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.
- 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.

- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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 – *Awarded Honorable Mention*.
- 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.
- 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.
- 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.
- 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 – *Awarded Best Attended Session*.

- Habib*, D.M.A. and L.R. Mazzoleni, **Molecular Characterization of Aqueous Secondary Organic Aerosol Formed in Bulk (NH₄)₂SO₄ from Methylglyoxal**, *Michigan Technological University Graduate Research Colloquium*, February 2014.
- 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.
- 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 – *Awarded First Place in Poster Competition*.
- Curtis*, T., J.H. Offenbergl, 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.
- Mazzoleni, L.R., S. Stockero, A. Oliveira, **Publishing, Presenting, and Building your Professional Reputation**, *Michigan Technological University Graduate School Professional Development Series*, Spring 2013.
- 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.
- Mazzoleni, L.R., **Molecular Composition of Atmospheric Water-Soluble Organic Carbon**, *Michigan Technological University Research Scholars Program*, Fall 2012.
- Orlowski*, 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.
- Putman*, A. and L.R. Mazzoleni, **Characterization of Secondary Organic Aerosols from the Complex Reactions of α -Pinene and Ozone**, *Michigan Technological University Undergraduate Research Expo*, Spring 2010.
- Mazzoleni, L.R., **Identification of Climate Relevant Water-Soluble Organic Compounds**, *Michigan Technological University Department of Chemical Engineering Seminar Series*, Spring 2010.
- Mazzoleni, L.R., **Identification of Climate Relevant Water-Soluble Organic Compounds**, *Michigan Technological University Department of Biology Seminar Series*, Spring 2010.
- Mazzoleni, L.R., **Atmospheric Organic Matter Composition Analysis by Ultrahigh Resolution Mass Spectrometry**, *Michigan Technological University Remote Sensing Institute Seminar Series*, Fall 2009.

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 Brittan	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
Kutztown University, Department of Physical Sciences, Kutztown, 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 Courses Developed at Michigan Tech:

CH2590 – Color Chemistry (3 Credits): Students explore the chemistry behind color and art materials. Topics include light and color perception, historical pigments, synthetic colorants, paint composition, and art conservation. Students will investigate how chemistry shapes both the creation and preservation of paintings, with cultural and historical perspectives.

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:

- CH1000 – Introduction to Chemistry (3 Credits)
Fall 2021, Fall 2022, Fall 2024, Fall 2025
- CH1140 – Introduction to Organic, Inorganic & Biochemistry (3 Credits)
Spring 2009, Spring 2010
- CH1163 – University Chemistry II Recitations (1 Credit)
Spring 2023
- CH1170 – University Chemistry II-GOB (Formerly CH1140; 3 Credits)
Spring 2011
- CH4130 – Professional Development for Chemists (2 Credits)
Spring 2022, Spring 2023, Spring 2025, Spring 2026
- CH4210 - Instrumental Analysis (3 Credits)
Fall 2022, Fall 2025
- CH4212 – Instrumental Analysis (5 Credits)
Fall 2016, Fall 2017, Fall 2018, Fall 2019, Fall 2020
- 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, Spring 2020
- CH5241 – Advanced Mass Spectrometry Methods Laboratory (1 Credit)
Spring 2017, Spring 2018
- CH5516/ATM5516 – Aerosol and Cloud Chemistry (3 Credits)
Spring 2014, 2019
- CH5800 – Special Topics in Chemistry: Scientific Writing
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 Research Students Advised:

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

- Eric Mattson, Chemistry B.S., Summer 2026 – present.
- Peyton Bainbridge, Chemistry B.S., Fall 2018
- Tyler Levertton, Chemistry B.S., Fall 2017 – Spring 2018
- Elizabeth Rose, Chemistry B.S., Spring 2017, Fall 2017 – Spring 2019
- Tyler Sawall*, Chemistry B.S., Spring 2015 – Spring 2016

- Alexandra Maday, Chemistry B.S., Spring 2015, Spring 2016, Fall 2016
- Trevor Curtis**, Chemistry B.S., Fall 2012 – Spring 2014
- Megan Dalbec*, **, Environmental Engineering B.S., Summer 2011 – Spring 2013; Fall 2013 – Spring 2014
- Senait Gebreyesus*, Environmental Engineering B.S., Spring 2012 – Spring 2013; Fall 2013 – Spring 2014
- Victoria Farhat*, Environmental Engineering B.S., Spring 2012
- Philip Olivares*, Chemistry B.S., Spring 2012
- Koressa Reiter*, Chemistry B.S., Spring 2012
- Annie Putman*, Chemistry B.S., Spring 2010 – Summer 2010
- Allyce Gilligan, Chemistry B.S., Fall 2010
- Nickolaus Manyard**, Chemistry B.S., Summer 2009 & Summer 2010
- Sandra Orłowski, Chemistry B.S., Spring 2009 – Summer 2009, & Spring 2010

Graduate Students Advised:

- Thusitha Diversekara, Chemistry Ph.D., 2018 – 2023
- Abby Mikolitis, Chemistry M.S., 2019 – 2021
- Amna Ijaz, Chemistry Ph.D., 2018 – 2021
- Tyler Leverton, Chemistry Accelerated M.S., 2018 – 2019
- Matthew Brege, Chemistry Ph.D., 2013 – 2020
- Simeon Schum, Chemistry Ph.D., 2013 – 2019
- Marian Thersea Ampadu, Chemistry M.S. (Joint with S.A. Green), 2013 – 2017
- D.M. Ashraf Habib, Atmospheric Science M.S., 2011 – 2014
- Yunzhu Zhao, Environmental Engineering Ph.D., 2009 – 2014
- Parichehr Saranjampour, Chemistry M.S., 2010 – 2012
- Jeffrey LeClair, Chemistry M.S., 2009 – 2011

Postdoctoral Scholars Advised:

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

ChARM Research Scientists Supervised:

- Simeon K. Schum, 2019 – 2022
- Maryam Khaksari, 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, 2019
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

Kutztown University, Environmental Science Program Review, 2007

Michigan Technological University Service:

Vice President for Research Office

Co-Director of Chemical Advanced Resolution Methods (ChARM) Laboratory, 2016 - 2019

Research Advisory Council, 2016 - 2020

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 – 2020

Coordinator, Graduate Seminar Series, 2011 – 2014

Department of Chemistry

Chair, Chair Search Committee, 2022 – 2023

Member, Chair Search Committee, 2018 – 2019

Chair, Promotion, Retention and Tenure Committee, 2017 – 2018, 2021 – 2022

Member, Promotion, Retention and Tenure Committee, 2014 – 2015, 2016 – 2017, 2019 - 2021

Chair, Graduate Programs Committee, 2016 – 2017

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 Society of Mass Spectrometry, 2010 – Present
Member: American Association for Aerosol Research, 2001 – 2005; 2012 – 2020
Member: American Association for the Advancement of Science, 2006 – 2020
Member: American Geophysical Union, 2007 – 2020
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 Program Faculty Advisory Committee, 2009 – 2020
Member: Great Lakes Research Center, 2012 – 2020