

Joel A. Thornton

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Education History

2002 Ph.D., Department of Chemistry, University of California, Berkeley

1996 B.A., Dartmouth College; Magna Cum Laude, Honors in Chemistry

PhD Dissertation Title

Nitrogen Dioxide, Peroxynitrates, and the Chemistry of Tropospheric Ozone Production

Employment History

2026 – present	Maggie Walker Dean, College of the Environment, University of Washington, Seattle
2025 – 2026	Interim Dean, College of the Environment, University of Washington, Seattle
2022 – 2025	Chair, Department of Atmospheric and Climate Science, University of Washington, Seattle
2015 – present	Professor, Department of Atmospheric and Climate Science University of Washington, Seattle
2015 – present	Adjunct Professor, Department of Chemistry University of Washington, Seattle
2012 – 2015	Adjunct Associate Professor, Department of Chemistry University of Washington, Seattle
2009 – 2015	Associate Professor, Department of Atmospheric Sciences University of Washington, Seattle
2004 – 2009	Assistant Professor, Department of Atmospheric Sciences, University of Washington, Seattle
2019 – 2020	Visiting Professor, Departments of Environmental Science and Meteorology, Stockholm University

- 2012 – 2013 Visiting Professor, Department of Physics, Division of Atmospheric Sciences, University of Helsinki
- 2002 – 2004 Postdoctoral Research Fellow, Department of Chemistry, University of Toronto

Professional Awards and Achievements

- 2026 Union Fellow, American Geophysical Union
- 2025 Harold S. Johnston Lecturer, University of California, Berkeley
- 2020 ISI Highly Cited Researcher
- 2019 ISI Highly Cited Researcher
- 2018 Ascent Award, American Geophysical Union, *for outstanding achievements in atmospheric sciences by a mid-career researcher*
- 2012 Henry G Houghton Award, American Meteorological Society, *“For ground-breaking contributions to understanding chemical processes in the atmosphere, especially... [involving] atmospheric particles and the gas phase.”*
- 2010 Annual Teaching Award, Department of Atmospheric Sciences, UW
- 2009 NSF CAREER Award
- 2008 NASA Group Achievement Award for INTEX-B Campaign
- 2008 UW Student Technology Fee Award for Student Machine Shop
- 2005 UW Curriculum Development Award
- 2003 Atmospheric Chemistry Colloquium for Emerging Senior Scientists
- 2002 University of California Club of San Francisco Fellowship
- 2000 Teaching Effectiveness Award (UC, Berkeley)
- 1999-2002 NASA Earth Systems Science Fellow
- 1999 Outstanding Graduate Student Instructor (UC, Berkeley)
- 1996 American Chemical Society Award for Excellence in Analytical Chemistry

Professional Society Memberships

American Chemical Society, American Geophysical Union, American Meteorological Society, European Geosciences Union

Professional Activities and Service**Editorial Duties**

2020 – present Editorial Board, Royal Society of Chemistry's *Environmental Science: Atmospheres* journal

2015 – 2020 Editor, *Geophysical Research Letters* (editor of ~ 200 manuscripts per year)

2013 Invited Editor, *Atmospheric Chemistry and Physics special issue* on the UK's RONOCO campaign

2012 Invited Editor, *Atmospheric Chemistry and Physics special issue* on CARES campaign

2006 – present Co-Editor of the journal *Atmospheric Chemistry and Physics*

External Committee and Organizational Activities

2025 Expert Panelist on Silver Linings – ClimateImpact Roundtables at NY Climate Week on Climate Observations and Climate Interventions

2025 Expert Panelist on Silver Linings – ClimateImpact Roundtables at SF Climate Week on Climate Observations and Climate Interventions

2024 Expert Panelist on Silver Linings – ClimateImpact Roundtables at the World Economic Forum (Davos) on Climate Observations and Climate Interventions

2023 Expert Panelist on Silver Linings – ClimateImpact Roundtables at NY Climate Week on Climate Observations and Climate Intervention

2024 – 2025 Co-Chair NSF/NCAR Lower Atmospheric Observing Facility's Future Airborne Chemical Instrumentation Workshop

2023 – 2025 PNNL Cloud Chamber Science Planning Committee

2019 – 2023 Co-Chair and Co-Vice Chair, Gordon Conference on Atmospheric Chemistry

2020 - 2021 AGU Revelle Medal Selection Committee

2020 – 2021 Scientific Advisory Committee for *Mountain Observatories for Composition of the Atmosphere*

2019 Board of Visitors, U.S. Army Research Office Earth Sciences program

- 2018 - 2023 NCAR ACOM Advisory Panel for Instrumentation
- 2018 – 2020 NSF Observational Facility Advisory Panel (OFAP)
- 2017 Panel member NSF-sponsored long-term chemical flux measurement workshop
- 2015 – 2017 Chair AMS Committee on [Atmospheric Ozone Statement](#)
- 2014 – present Scientific Advisory Group, European Research Council funded project:
Comprehensive molecular characterization of organic aerosol formation in the atmosphere
- 2015 – present AMS Science and Early Career Researcher Engagement Committee
- 2013 – 2016 AMS Science and Technology Advisory Committee on Atmospheric Chemistry
- 2013 – present Co-lead DOE Atmospheric System Research focus area on organic and inorganic aerosol interactions
- 2014 – 2016 Environmental Molecular Sciences Laboratory's (EMSL) Aerosol Initiative Strategic Planning and Review Panel at Pacific Northwest National Laboratory
- 2014 Organizing Committee: Long-range Pollution Transport Impacts on Criteria Pollutants Conference
- 2012 – 2014 Co-organizer Telluride Conference on Organic Particles in the Atmosphere
- 2012 Fundamental and Computational Sciences Directorate Advisory Committee, Pacific Northwest National Laboratory
- 2011 Co-Chair *Tropospheric Halogens and Multiphase Chemistry*, American Geophysical Union Fall Meeting
- 2008 Co-Chair *Physical Chemistry of Atmospheric Processes*, a weeklong session at the American Chemical Society Spring Meeting
- 2006 Co-Chair *Tropospheric Heterogeneous Chemistry and Aerosol Phase Transitions*, American Geophysical Union Fall Meeting
- 2006 – 2008 Pacific Northwest National Laboratory Aerosol Climate Initiative Advisory Panel
- 2005 Pacific Northwest National Laboratory Environmental Molecular Sciences Laboratory Recapitalization Workshop/Panel
- 2004 Co-Chair *Tropospheric Chemistry*, American Geophysical Union Spring Meeting

Peer Reviewer Activities

2003 – present Regular peer reviewer for following journals: *Science*, *Nature*, *Proceedings of the National Academy of Sciences*, *Atmospheric Chemistry and Physics*, *Environmental Science and Technology*, *Geophysical Research Letters*, *Journal of Geophysical Research*, *Journal of Physical Chemistry*, *Physical Chemistry and Chemical Physics*, *Journal of Aerosol Science*

2003 – present Peer reviewer and/or review panel member for following funding agencies: NSF, DOE, NASA, UK NERC, DFG (Germany), Israel Science Foundation, and others

University of Washington Service

2023 – 2025 Climate Action and Adaptation Executive Strategy Task Force

2023 Search Committee Chair – Department of Earth and Space Sciences Chair

2022 – 2023 New Faculty Orientation Panelist on Building a Research Program

2022 – 2025 Chair, Department of Atmospheric and Climate Science

2019 – 2022 Associate Chair, Department of Atmospheric Sciences

2017 – 2022 Graduate Program Coordinator, Department of Atmospheric Sciences

2018 – 2019 Faculty Council on Academic Standards

2017 – 2019 Faculty Senator

2014 – 2015 Civil and Environmental Engineering Faculty Search Committee

2014 – 2016 Payload Advisor to UW Society for Advanced Rocket Propulsion

2013 – 2018 Department of Atmospheric Sciences Strategic Planning Committee

2011 – 2015 Program on the Environment Advisory Board

2011 Department of Atmospheric Sciences Chair Search Committee

2011 – 2013 UWHS Climate Course (Luanne Thompson lead) –course content provider

2010 – 2011 Atmosphere-Biosphere Faculty Search Committee

2010 – 2022 Hobbs Memorial Lecture Selection Committee

2010 – 2015 Department Development Committee

- 2007 – 2011 Undergraduate Curriculum Committee
- 2007 – 2008 Alternate Graduate Program Coordinator
- 2006 – 2022 Research Infrastructure and Machine Shop Committee (Chair as of 2010)
- 2007 – 2008 Atmosphere and Climate Dynamics Faculty Search Committee
- 2004 – present Graduate School Representative (>15 since 2009)

Graduate Students as Primary Advisor

- Glenn Wolfe **PhD CHEM 2010**, thesis topic: transport and forest-atmosphere exchange of reactive nitrogen, now a Research Scientist UMBC/NASA Goddard Space Flight Center
**NASA Earth System Science graduate fellowship recipient*
**EPA STAR graduate fellowship recipient*
- Reddy Yatavelli **PhD ATMS 2011** thesis topic: development of new measurement methods for gas and particle organic compounds, now Research Scientist at Desert Research Institute, University of Nevada
**NASA Earth System Science graduate fellowship recipient*
- Sarah Harrold **MS ATMS 2010** thesis topic: organic nitrogen compounds in a forest environment, now a staff scientist at Puget Sound Clean Air Agency
- Theran Riedel **PhD CHEM 2013** thesis topic: chlorine radical sources and chemistry in polluted regions, now a Postdoctoral Fellow, UNC Chapel Hill
**NASA Earth System Science graduate fellowship recipient*
- Beth Friedman **PhD ATMS 2014** thesis topic: cloud nucleating ability of atmospheric particles, now a Postdoctoral Fellow at Colorado State University
**DOE Graduate Student Fellowship recipient*
- Julia Peterson **MS CHEM 2011** thesis topic: assessment of high-resolution time of flight mass spectrometry for detection of oxygenated hydrocarbons by chemical ionization, now in Private Industry
- Felipe Lopez-Hilfiker **PhD ATMS 2015** thesis topic: composition and volatility of atmospheric organic aerosol in subtropical and boreal forest ecosystems
- Emma D'Ambro **PhD CHEM 2019** thesis topic: atmospheric organic aerosol formation from photochemical oxidation of isoprene (biogenic hydrocarbon with largest emission rate)
**NSF Graduate Fellowship recipient*
- Jessica Haskins **PhD ATMS 2020** thesis topic: tropospheric reactive chlorine chemistry.
**jointly advised with L. Jaeglé; AMS Graduate Fellowship recipient and ARCS fellow, EPA STAR Fellow*

Lexie Goldberger **MS ATMS 2017** thesis topic: couplings between reactive nitrogen and organic aerosol chemistry in biomass burning plumes.

Qiaoyun Peng **PhD ATMS 2022** thesis topic: measurements and modeling of reactive nitrogen emissions and chemistry in western U.S. wildfire plumes

Jeremy Chan **PhD BIO 2022** thesis topic: Olfactory pollution in the Anthropocene, the impact of nitrogen oxides and ozone on plant-pollinator interactions

Carley Fredrickson **PhD ATMS 2024** thesis topic: In Situ and Remote Sensing Constraints on Reactive Nitrogen Emissions and Evolution in Wildfires

Philip Rund **PhD ATMS 2025** thesis topic: Reactive Bromine Chemistry in the Sub-Tropical Marine Boundary Layer – Novel Constraints on Heterogeneous Activation and Recycling

Tianyi Xu **MS CHEM 2025** thesis topic: Indoor Air Chemistry Resulting from Application of a Commercial Chlorine-based Disinfectant

Christopher Wright **PhD ATMS Expected 2026** thesis topic: Aerosol Effects on Shallow and Deep Convective Cloud Microphysics – Implications for Lightning and Cloud Radiative Forcing

Randall Jones **PhD ATMS Expected 2026** thesis topic: Development and Applications of a Deep Learning Model for Global High Resolution Predictions of Lightning Stroke Density

Olivia Hakan **PhD CHEM Expected 2027** thesis topic: Sources and Properties of Aerosol Particles in the Remote Marine Boundary of the NE Pacific – Current Day Importance of Volcanic and Biogenic Emissions

Austin Dobrecevic **PhD CHEM Expected 2027** thesis topic: Development and Characterization of a Compact, High-Speed, Hadamard Gas Chromatograph Coupled to an Ultra-Portable Time of Flight Chemical Ionization Mass Spectrometer (HSGC-UPTof-CIMS).

Postdoctoral Supervision

V. Faye McNeill	2005-2007	PhD, MIT	Associate Professor, Columbia University
James Kercher	2007-2009	PhD, Duke U.	Associate Professor, Hiram College
Timothy Bertram	2007-2009	PhD, UC Berkeley	Assistant Professor, University of Wisconsin, Madison

Claudia Mohr	2011-2014	PhD, ETH, Zurich	Assistant Professor, Stockholm University
Cassandra Gaston	2012-2015	PhD, UCSD	Assistant Professor, University of Miami
Siegfried Schobesberger	2015-2016	PhD, U. Helsinki	Assistant Professor, University of Eastern Finland
Ben Lee	2012-2016	PhD, Harvard U.	Research Scientist University of Washington
Yue Zhao	2016-2018	PhD, Peking U.	Assistant Professor, Shanghai Jiao Tong University
Brett Palm	2017-2019	PhD, CU, Boulder	Research Scientist at NCAR
Olga Garmasch	2022-2024	PhD, U. Helsinki	Assistant Professor, University of Copenhagen
Christopher Kenseth	2022-2026	PhD, Caltech	Assistant Professor, University of Maryland
Huan Song	2024- Current	PhD, Peking Univ	

Atmospheric Chemistry Field Campaigns and Science Teams (since 2009):

2020 – 2026	Greater New York Oxidant, Trace gas, Halogen, and Aerosol Airborne Mission (GOTHAAM, NSF/NCAR C-130 aircraft)
2017 – 2020	FIREX (NOAA Twin Otter Aircraft)
2017 – 2020	Western Wildfire Clouds Aerosols and Nitrogen (WE-CAN, NSF/NCAR C-130 aircraft)
2017 – 2019	Utah Winter Fine Particle Study (NOAA Twin Otter aircraft)
2016 – 2019	Hi-SCALE (DOE G-1 aircraft)
2015 – 2018	Wintertime Emissions, Transformations, and Transport – (PI , NSF/NCAR C-130 aircraft)
2015 – 2018	Biogenic Aerosol Effects on Clouds and Climate (DOE AMF 2) – Finland
2013	Southeast Nexus of Climate and Air Quality (SENEX) – (NOAA P-3 aircraft)
2013	Southern Oxidants and Aerosol Study (SOAS) – (NSF)

- 2013 Pan-European Gas-AeroSols-climate interaction Study (PEGASOS) – Finland
- 2011 – 2014 ClearFlo: London Air Quality Campaign, sponsored by DOE ASR
- 2011 NACHTT – Tall tower study of nighttime nitrogen oxide and halogen activation chemistry (UW and NOAA ESRL collaboration)
- 2010 CALNEX 2010 – A coupled air quality and climate forcing study. Participating on NOAA-led cruise, LA ground site, and Bakersfield ground site
- 2009 Activation of Continental Chloride by Reactive Oxides of Nitrogen in winter time: Boulder, Co, February 2009 (UW –NOAA ESRL collaboration)
- 2007 – 2010 VAMOS Ocean-Cloud-Land Study: Deployment at Paposo Land Site September – November 2008
- 2007 – 2010 International Chemistry Experiment in the Arctic Lower Troposphere (Part of International Polar Year): March – April 2008 on the Research Vessel *Knorr*
- 2007 – 2010 Biosphere Effects on Aerosols and Photochemistry Experiment: Blodgett Forest, CA, July – October 2007 and June – July 2009

Presentations: Invited Lectures (2009 – 2026)

- June 2026, *Invited Lecture*, Ultra-fast Gas Chromatography for Atmospheric Chemistry, Nobel Symposium, Stockholm, Sweden
- March 2025, *Invited Lecture*, Connections: Ships, Trees, Lightning and Atmospheric Nanoparticles, School of Engineering and Applied Sciences, Harvard University
- October 2025, *Invited Lecture*, Connections: Ships, Trees, Lightning and Atmospheric Nanoparticles, Earth and Planetary Sciences Department, University of California, Berkeley
- October 2025, *Invited Lecture*, From 1 to 1000: Advances in Mass Spectrometry for Atmospheric Chemistry, *Harold Johnston Memorial Lecture*, University of California, Berkeley, CA
- December 2024, *Invited Lecture*, Biogenic VOC Transport and Chemistry in Convective Clouds – From Scavenging to New Particle Formation, AGU Annual Meeting Washington DCS
- April 2024, *Invited Lecture*, Biogenic VOC Multiphase Chemistry – From Cloud Scavenging to New Particle Formation, EGU Annual Meeting Vienna
- June 2023, *Invited Lecture*, “Uptake and Loss of IEPOX to Clouds: Large Eddy Simulations of Isoprene Multiphase Chemistry”, Canadian Society of Chemistry Annual Meeting
- January 2022, *Invited Lecture*, “Oxidative processing in fresh wildfire plumes: implications for ozone and particulate matter formation”, American Meteorological Society Annual Meeting
- November 2021, *Invited Lecture*, “The Chemistry of Wildfire Plumes”, William and Mary University, Department of Chemistry
- October 2021, *Invited Lecture*, “The Chemistry of Biogenic VOC From the Fast Flow Tube to Convective Outflow”, NCAR ACOM Seminar Series

March 2020, *Invited Lecture*, “Stealing Zeus’ Thunder: Anthropogenic Enhancements to Lightning”, University of Toronto, Climate and Global Change Lecture Series

February 2020, *Invited Lecture*, “What happens to air pollution when it is cold and dark? Insights from the WINTER campaign”, Department of Environmental Sciences, Stockholm University

November 2019, *Invited Lecture*, “What happens to air pollution when it is cold and dark? Insights from the WINTER campaign” Shanghai Jiao Tong University

November 2019, *Invited Lecture*, “The Chemistry of Nanoparticle Growth Over Forests” Fudan University, Shanghai

October 2019, *Invited Seminar*, “Stealing Zeus’ Thunder: Anthropogenic Enhancements to Lightning”, Meteorological Institute of Stockholm University

October 2019, *Invited Lecture*, “The Chemistry of Wintertime Pollution: Insights from the WINTER campaign” AQUARIUS science team meeting

August 2019, *Invited Keynote*, “The Chemistry of Biogenic Secondary Organic Aerosol Formation”, European Aerosol Conference

June 2019, *Invited Seminar*, “Western Wildfire Emissions, Clouds, Aerosols and Nitrogen Campaign Overview, U.S. Forestry Service Wildland Fires Laboratory, Seattle

May 2019 *Invited talk*, “Mechanistic Source Apportionment of Secondary Organic Aerosols”, GEOS-Chem User’s Meeting

August 2018, *invited lecture*, “A Mechanistic Source Apportionment of Secondary Organic Aerosol”, Julich Research Center, Julich Germany

July 2018, *invited lecture*, “A Mechanistic Source Apportionment of Secondary Organic Aerosol”, Telluride Conference on Organic Particles in The Atmosphere

April 2018, *invited lecture*, “Peroxy Radical Chemistry that Drives New Particle Formation and Growth”, Colorado University, Boulder

December 2017, *invited lecture*, “Laboratory Studies of Monoterpene Secondary Organic Aerosol Formation and Aging,” American Geophysical Union Fall Meeting, New Orleans, LA

November 2017, *invited lecture*, Wintertime Transport, Emissions and Reactivity” National Center for Atmospheric Research, Boulder CO

October 2017, *plenary lecture*, “Towards a Molecular-level Understanding of Biogenic Secondary Organic Aerosol, **American Association for Aerosol Research Annual Conference**, Raleigh NC

May 2017, *key note speaker*, “What happens to air pollution when it is cold and dark?” University of Alaska, Fairbanks Environmental Chemistry Symposium, Fairbanks AK

February 2017, *invited lecture*, “An Outsized Climate Effect for Organic Peroxy Radical Chemistry,” **University of California, Riverside**, Dept. of Environmental Sciences seminar series, Riverside, CA

February 2017, *invited lecture*, “An Outsized Climate Effect for Organic Peroxy Radical Chemistry,” **University of California, Berkeley**, College of Chemistry seminar series, Berkeley, CA

December 2016, *invited lecture*, “Insights into Wintertime Radical Budget from the WINTER Campaign,” **American Geophysical Union Fall Meeting**, San Francisco, CA.

October 2016, *invited tutorial*, “Organic Aerosol Chemistry and Novel Instrumentation”, American Association for Aerosol Research annual conference, Portland, OR

September 2016, *invited lecture* “From Isoprene to Secondary Organic Aerosol”, **International Global Atmospheric Chemistry Conference**, Breckenridge, CO

- August 2016, *invited lecture* “Wintertime Oxidant Budgets”, **American Chemical Society annual meeting**, Philadelphia, PA.
- July 2016, *invited lecture* “Isoprene, Peroxy Radicals and Organic Aerosols”, plenary speaker to **joint session of the Telluride Science Research Conferences on Organic Aerosols in the Atmosphere and New Insights into Atmospheric Chemistry**, Telluride, CO
- June 2016, *invited lecture*, “Chemical Couplings Between Forests, Humans, and Atmospheric Aerosol Particles”, **University of Helsinki**, Department of Physics seminar series
- June 2016, *invited lecture*, “Chemical Couplings Between Forests, Humans, and Atmospheric Aerosol Particles”, **University of Copenhagen**, Department of Chemistry seminar series
- June 2016, *invited lecture, panel member*, “Isoprene Multiphase Chemistry and SOA”, CLOUD Open Meeting, Frankfurt, Germany
- January 2016, *invited lecture*, “Forests, Humans, and Atmospheric Aerosol Particles”, **University of California, Irvine**, Department of Chemistry seminar series
- December 2015, *invited lecture*, "Applications of online high resolution time of flight chemical ionization mass spectrometry (HRTof-CIMS): opportunities and challenges for aircraft measurements, atmosphere-ecosystem exchange, and organic aerosol composition", AGU Fall Meeting, San Francisco, CA
- December 2015, *invited lecture*, "An overview of reactive chlorine measurements during the WINTER C-130 aircraft campaign", AGU Fall Meeting, San Francisco, CA,
- October 2015, *invited lecture*, “On the volatility of IEPOX derived SOA,” **American Association for Aerosol Research Annual Meeting**, Minneapolis, MN
- August 2015, *invited lecture*, “Highly Functionalized Organic Nitrates: Implications for SOA and Reactive Nitrogen Cycling,” **American Chemical Society Fall Meeting**, Boston, MA
- April 2015, *invited lecture*, “Forests, Humans, and Atmospheric Aerosol Particles”, **Colorado State University**, Department of Chemistry seminar series
- March 2015, *invited lecture*, “Photochemical and multiphase sources of SOA from isoprene,” **American Chemical Society Spring Meeting**, Denver, CO
- December 2014, *invited lecture*, “Detection of extremely low volatility organic compounds in the gas-phase: implications for cloud condensation nuclei and secondary organic aerosol,” **American Geophysical Union Annual Meeting**, San Francisco – Given by postdoctoral fellow C. Gaston due to scheduling conflict
- December 2014, *invited lecture*, “Detection of extremely low volatility organic compounds in the gas-phase: implications for cloud condensation nuclei and secondary organic aerosol,” **International Atmospheric Chemical Mechanisms Conference**, Davis
- August 2014, *invited lecture*, “Nitrogen oxides in high biogenic voc environments: implications for NO_x removal and SOA formation,” **American Chemical Society Annual Meeting**, San Francisco
- August 2014, *invited lecture*, “Detection of extremely low volatility organic compounds in the gas-phase: implications for cloud condensation nuclei and secondary organic aerosol,” **American Chemical Society Annual Meeting**, San Francisco
- July 2014, *invited lecture*, “Attack of the Peroxides: ELVOC and the Saving Grace of IEPOX”, **Telluride Science Research Conference Organic Aerosol meeting**
- May 2014, *invited lecture*, “Detection of extremely low volatility organic compounds in the gas-phase: implications for cloud condensation nuclei and secondary organic aerosol”, **EMSL Aerosol Initiative Science Meeting, PNNL**
- March 2014, *invited plenary lecture*, “Detection of extremely low volatility organic compounds in

- the gas-phase: implications for cloud condensation nuclei and secondary organic aerosol”, **Department of Energy Atmospheric System Research Science Team Meeting**
- November 2013, *invited lecture*, “Low volatility organic acids in gas and particle phases,” **Center for Particle Studies, Carnegie Mellon University**
- March 2013, *invited lecture*, “Rethinking the role of nocturnal nitrogen oxide chemistry on air quality and climate,” **Department of Physics, University of Eastern Finland**, Kuopio
- February 2013, *invited lecture*, “Rethinking the role of nocturnal nitrogen oxide chemistry on air quality and climate,” **Center for Atmospheric Chemistry, University of Gothenburg**
- December 2012, *invited lecture*, “Rethinking the role of nocturnal nitrogen oxide chemistry on air quality and climate,” **Institute for Energy and Climate, Forschungszentrum Jülich**, Germany,
- October 2012, *invited lecture*, “Rethinking the role of nocturnal nitrogen oxide chemistry on air quality and climate,” **Institute for Atmospheric and Climate Science, Swiss Federal Institute of Technology (ETH)**
- October 2012, *invited lecture*, “Effect of Aerosol Organics on Trace Gas Processing” **Finnish Center of Excellence** Fall Meeting, Hyytiälä Finland
- August 2012 *invited lecture*, “Chlorine activation by Nocturnal Reactive Nitrogen: Impacts on oxidants, ozone, and VOC,” **American Chemical Society Fall Meeting** Philadelphia – Given by student Theran Riedel due to my departure for sabbatical in Finland
- July 2012, *invited lecture*, “Organic acids in gas and particle phases”, **Telluride Science Research Conference, Organic Aerosols: Formation, Processing and Impacts**
- May 2012, *invited lecture*, “N₂O₅ uptake to halide-doped ices” **Canadian Society of Chemistry Spring Meeting**, Calgary
- May 2012, *invited lecture*, “Stumbling around in the dark: the importance of nighttime heterogeneous chemistry to reactive nitrogen budgets” Analytical Chemistry Seminar, **Department of Chemistry, University of Washington**
- April 2012, *invited lecture*, “Stumbling around in the dark: the importance of nighttime heterogeneous chemistry to reactive nitrogen budgets”, **Harvard University, School of Engineering and Applied Sciences**
- March 2012, *invited lecture*, “From Alkane SOA to Light Absorbing Compounds in Biomass Burning Particles: Applications of the MOVI-CI-HTOFMS” **CI-TOF User’s Meeting, Boulder, CO.**
- August 2011, *invited lecture*, “Direct Measurements of N₂O₅ reactivity on Ambient Particles”, **American Chemical Society Annual Meeting**, Denver
- July 2011, *invited lecture*, “Chlorine Activation by N₂O₅ in Expected and Unexpected Locations”, **Dartmouth College**, Hanover, NH.
- July 2011, *invited lecture*, “Chlorine Activation by N₂O₅ in Expected and Unexpected Locations”, **Gordon Research Conference on Atmospheric Chemistry**, Mt. Snow, VT.
- April 2011, *invited lecture*, “Rethinking Chlorine Atom Sources in Polluted Coastal and Continental Regions”, **HALOPROC Annual Research Team Meeting**, Oberjoch Germany
- December 2010, *invited lecture*, “Halogen Activation by N₂O₅ in Continental and Marine Environments: Mechanistic Insights from Field Observations and Expected Impacts on Oxidant Budgets” **International Atmospheric Chemical Mechanisms Conference**
- December 2010, *invited lecture*, “Towards in situ molecular-level speciation of organic aerosol using a chemical ionization high-resolution time of flight mass spectrometer (CI-HToF-MS), **Environmental Chemistry of Aerosols, Pacifichem 2010 Congress**

December 2010, *invited lecture*, “The Chemistry of Forest Atmosphere Exchange” ***American Geophysical Union Fall Meeting***

October 2010, *invited lecture*, “Rethinking chlorine atom sources and the role of nighttime chemistry” ***Massachusetts Institute of Technology, EPS***

October 2010, *invited lecture*, “The Chemistry of Atmosphere Forest Exchange”, ***Harvard University, Earth and Planetary Sciences***

September 2010, *invited lecture*, “Chlorine Activation and Air Quality”, ***Pacific National Northwest Laboratory***

August 2010, *invited lecture*, “Widespread Halogen Activation by N_2O_5 Heterogeneous Chemistry”, ***American Chemical Society annual meeting***, Boston

July 2010, *invited lecture*, “Organic Aerosol Viewed Through Two Lenses”, ***Telluride Science Research Conference on Organic Aerosols***

January 2010, *invited lecture*, “Sea Spray Chemistry Over Denver and Other Insights into Nocturnal Reactive Nitrogen Chemistry,” ***Howard University***, Washington, D.C.

December 2009, *invited lecture*, “From Tromsø to Boulder: the global importance of ClNO_2 as a Cl atom source”, ***American Geophysical Union Meeting***