ALLISON L. STEINER
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Research Description

My research group studies the interactions between the biosphere and the atmosphere to understand how vegetation affects atmospheric chemistry and climate. The biosphere is a living and dynamic component of the Earth System, and is constantly responding to the world around it. We focus on understanding how natural emissions from the biosphere can affect atmospheric chemistry and air quality, as well as understanding how changes at the land surface can affect regional climate and climate change.

Education and Training

Johns Hopkins University, Baltimore, MD, B.S. Chemical Engineering	1994
Georgia Institute of Technology, Atlanta, GA, Ph.D. Atmospheric Science	2003
University of California, Berkeley, Berkeley, CA, Postdoctoral Fellow	2003-6

Research and Professional Experience

Professor, University of Michigan, Ann Arbor, MI Associate Chair for Graduate Studies Department of Climate and Space Sciences and Engineering Department of Earth and Environmental Sciences	2018-present
Associate Professor, University of Michigan, Ann Arbor, MI Department of Climate and Space Science and Engineering Department of Earth and Environmental Sciences	2012-2018
Assistant Professor, University of Michigan, Ann Arbor, MI Department of Atmospheric, Oceanic and Space Sciences	2006-2012
Postdoctoral Research Fellow, University of California, Berkeley, CA Department of Environmental Science, Policy and Management	2003-2006
Graduate Research Asst., Georgia Institute of Technology, Atlanta, GA School of Earth and Atmospheric Sciences	1997-2003
Environmental Consultant, Sadat Associates, NJ; Dames & Moore, MD	1994-1996

Selected Awards

- University of Michigan Harold R. Johnson Diversity Service Award 2018
- American Geophysical Union Atmospheric Sciences Ascent Award 2015
- University of Michigan Henry Russel Award 2013
- National Science Foundation CAREER Award 2010
- NASA Earth System Science Fellowship 2000-2003

Selected International and National Professional Service

- President-elect, Atmospheric Sciences Section, American Geophysical Union, 2021-present
- Member, National Academy of Sciences Board on Atmospheric Sciences & Climate, 2016-present
- Member, American Meteorological Society, Board on Atmospheric Biogeosciences, 2015-present
- Member, Scientific Steering Committee, Global Emissions Inventory Activity, 2017-present
- Member, Scientific Steering Committee, iLEAPS, 2015-present
- Member, UCAR President's Advisory Committee on University Relations, 2015-2018
- Member, National Academy of Sciences, *The Future of Atmospheric Chemistry Research* report, 2015-6
- Editor, *Journal of Geophysical Research-Atmospheres*, 2014-2018
- Co-Founder and Board Member, Earth Sciences Women's Network (ESWN) –2008-2011

Selected University of Michigan Service

- Associate Chair for Graduate Studies, 2018-2020, 2021-present
- Chair, Departmental DEI Committee, 2018-2019
- Departmental Diversity Ally, 2016-2020
- Chair, Dean's Advisory Committee on Female Faculty (DACFF), 2015-2018
- Co-Chair, NextProf Committee, 2017
- Member, Committee on Environment and Sustainability Programs, 2016

Advisees

- 4 prior postdoctoral fellows, 2 current
- 8 Ph.D. students graduated, 3 in progress
- 7 M.S. students
- 16 undergraduate students, including 6 NSF REU students

Selected Bibliography

Total Publications: Peer reviewed manuscripts (82), Grey literature (4), Book Chapters (2), Books (2)
Citation Metrics: h-index = 28 (Google Scholar, 6/1/21)
Postdocs, Graduate Students, Undergraduate Students

1. *Amiri-Farahani, A.*, N.E. Oleson, D. Neubauer, B. Roozitalab, A.P. Ault and **A.L. Steiner**, Lake spray aerosol emissions alter nitrogen partitioning in the Great Lakes region, *Geophysical Research Letters*, 48, 12, e2021GL093727, 2021.
2. Huber, D.E., **A.L. Steiner** and E.A. Kort, Daily cropland emissions identified by TROPOMI and SMAP, *Geophysical Research Letters*, 47, 22, e2020GL089949, doi: 10.1029/2020GL089949, 2020.
3. Li, Y., M.C. Barth and **A.L. Steiner**, Comparing turbulent mixing of atmospheric oxidants across model scales, *Atmospheric Environment*, 199, 88-101, 2019.
4. Jing, P., Z. Lu, and **A.L. Steiner**, The ozone-climate penalty in the Midwestern United States, *Atmospheric Environment*, 170, 130-142, 2017.
5. Li, Y., M. C. Barth, E.G. Patton and **A.L. Steiner**, Impact of in-cloud aqueous processes on the chemistry and transport of biogenic volatile organic compounds*, Journal of Geophysical Research – Atmospheres*, 122, 2017.
6. *Ashworth, K.*, S.H. Chung, K.A. McKinney, Y. Liu, B.J. Munger, S.T. Martin and **A.L. Steiner**, Modeling bi-directional fluxes of methanol and acetaldehyde with the FORCAsT canopy exchange model, *Atmospheric Chemistry and Physics*, doi: 10.5194/acp-2016-522, 2016.
7. Li, Y., M.C. Barth, G. Chen, E.G. Patton, S.-W. Kim, A. Wisthaler, T. Mikoviny, A. Fried, R. Clark and **A.L. Steiner**, Large-eddy simulation of biogenic VOC chemistry during the DISCOVER-AQ 2011 campaign, *JGR-Atmospheres*, 121, 8083-8105, 2016.
8. Gall, E.T., R.J. Griffin, **A. Steiner**, J.E. Dibb, E. Scheuer, L. Gong, A.P. Rutter, B.K. Cevik, S. Kim, B. Lefer, and J. Flynn, Evaluation of nitrous acid sources and sinks in urban outflow, *Atmospheric Environment*, 127, 272-282, 2016.
9. Bryan, A.M., S.J. Cheng, *K. Ashworth*, A.B. Guenther, B.S. Hardiman, C.S. Vogel, G. Bohrer and **A.L. Steiner**, Forest-atmosphere BVOC exchange in diverse and structurally complex canopies: 1D modeling of a mid-successional forest in northern Michigan, *Atmospheric Environment*, 120, 217-226, 2015.
10. Pusede, S.E., **A.L. Steiner** and R.C. Cohen, Temperature and recent trends in the chemistry of continental surface ozone, *Chemical Reviews*, 2015.
11. Tawfik, A.B. and **A.L. Steiner**, A physical mechanism for explaining ozone-meteorology correlations using land-atmosphere coupling regimes, *Atmospheric Environment*, 72, 50-59, 2013.
12. **Steiner, A.L.,** A.J. Davis, S. Sillman, *R.C. Owen*, A.M. Michalak and A.M. Fiore. Observed suppression of ozone formation at extremely high temperatures due to chemical and biophysical feedbacks, *Proceedings of the National Academy of Sciences*, *107*, 46, 19685-19690, 2010.