

Yiqi Zheng

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RESEARCH INTERESTS

- Ecosystem-chemistry-climate interactions
- Atmospheric chemistry and air quality
- Plant volatiles and organic aerosol
- Earth system modeling

EDUCATION

- **Ph.D., Yale University**, New Haven, CT, USA 2018
Department of Geology and Geophysics
Advisors: Ronald B. Smith, Nadine Unger
- **B.S., Peking University**, Beijing, China 2012
Department of Atmospheric and Oceanic Sciences (rank 1/33), School of Physics
Advisor: Tzung-May Fu

PROFESSIONAL EXPERIENCE

Postdoctoral Fellow, University of Alaska Fairbanks

- Anthropogenic influences on biogenic secondary organic aerosol (2019-present)
Advisor: Jingqiu Mao

Graduate Research Assistant, Yale University

- Linking the land biosphere with atmospheric chemistry and climate: plant volatile emissions and organic aerosol (2012-2018)
Advisor: Nadine Unger

Visiting Scholar, Atmospheric Chemistry Observations and Modeling Laboratory, NCAR

- Implementation of SOA Volatility Basis Set in CESM (summer 2013, summer 2014)
Advisors: Louisa Emmons, Alma Hodzic

Teaching Assistant, Yale University

- Atmospheric Chemistry, with Prof. Nadine Unger (fall 2014, fall 2015)
- Natural Disasters, with Prof. David Bercovici (fall 2013)

Undergraduate Research Assistant, Peking University

- Summertime ozone sensitivity to meteorological variables in the southeastern US (2010-2012)
Advisor: Tzung-May Fu

FELLOWSHIPS

- Graduate Research Fellowship, Yale University (2012-2018)
- NASA Earth and Space Science Fellowship (2015-2017)
- Doctoral Dissertation Improvement Grants, Yale Institute for Biospheric Studies (2016)
- Wu Si Scholarship, Peking University (2011-2012)
- China National Petroleum Corp. Scholarship, Peking University (2010-2011)
- Fang Zheng Scholarship, Peking University (2009-2010)

HONORS AND AWARDS

- Selected participant for Young Investigator Program and Early Career Travel Grant for Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere, Les Diablerets, Switzerland (Jun 2018)
- Selected participant for European Research Course on Atmospheres, Grenoble, France (2016)
- Early Career Travel Grant for IGAC Science Conference, Colorado, USA (Sep 2016)
- Early Career Travel Grant for Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere, Girona, Spain (Jun 2016)
- Selected participant for NCAR Advanced Study Program (2013, 2014)

OTHER ACTIVITIES

- Reviewer for:
 - Biogeosciences*
 - Agricultural Forestry and Meteorology*
 - Journal of Environmental Sciences*
 - Elementa: Science of the Anthropocene*
- Organizer for land-climate research seminar, Yale University (2016)
- Member of the organizing committee for the 2nd Chinese Environmental Scholars Forum, Yale University (2015)

PUBLICATIONS

- **Y. Zheng**, N. Unger and K. Harper, Cleaning up pollutants by economic sector: impacts on climate and ecosystem health, *in prep.*
- K. Harper, **Y. Zheng**, and N. Unger, Advances in representing interactive methane in the global chemistry-climate model ModelE2-YIBs, *submitted.*
- Y. Huang, N. Unger, T. Storelvmo, K. Harper, **Y. Zheng**, and C. Heyes, Global radiative effects of solid fuel cookstove aerosol emissions, *in press for Atmos. Chem. Phys.*, 2018.
- **Y. Zheng**, N. Unger, J. M. Tadic, R. Seco, A. B. Guenther, M. P. Barkley, M. J. Potosnak, L. T. Murray, A. M. Michalak, X. Qiu, S. Kim, T. Karl, L. Gu, and S. G. Pallardy, Drought impacts on photosynthesis, isoprene emission and atmospheric formaldehyde in a mid-latitude forest, *Atmospheric Environment*, 167, 190-201, 2017.
- **Y. Zheng**, N. Unger, A. Hodzic, L. Emmons, C. Knote, S. Tilmes, J-F. Lamarque, and P. Yu, Limited effect of anthropogenic nitrogen oxides on secondary organic aerosol formation, *Atmos. Chem. Phys.*, 15, 13487-13506, 2015.
- **Y. Zheng**, N. Unger, M. P. Barkley, and X. Yue, Relationships between photosynthesis and formaldehyde as a probe of isoprene emission, *Atmos. Chem. Phys.*, 15, 8559-8576, 2015.
- T.-M. Fu, **Y. Zheng**, F. Paulot, J. Mao, and R.M. Yantosca, Positive but variable sensitivity of August surface ozone to large-scale warming in the southeast United States, *Nature Climate Change*, 5, 454-458, 2015.
- X. Yue, N. Unger, and **Y. Zheng**, Distinguishing the drivers of trends in land carbon fluxes and plant volatile emissions over the past three decades, *Atmos. Chem. Phys.*, 15, 11931-11948, 2015.
- N. Unger, K. Harper, **Y. Zheng**, N. Y. Kiang, I. Aleinov, A. Arneth, G. Schurgers, C. Amelynck, A. Goldstein, A. Guenther, B. Heinesch, C. N. Hewitt, T. Karl, Q. Laffineur, B. Langford, K. A. Mcknney, P. Misztal, M. Potosnak, J. Rinne, S. Pressley, N. Schoon, and D. Serca, Photosynthesis-dependent isoprene emission from leaf to planet in a global carbon-chemistry-climate model. *Atmos. Chem. and Phys.*, 13, 10243-10269, 2013.
- J. Huang, C. Zhou, X. Lee, Y. Bao, X. Zhao, J. Fung, A. Richter, and **Y. Zheng**, The effects of rapid urbanization on the levels in tropospheric nitrogen dioxide and ozone over East China, *Atmospheric Environment*, 77, 558-567, 2013.

INVITED TALKS

- Extratropical biogenic isoprene emission constrained by satellite solar-induced fluorescence, *Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere*, Les Diablerets, Switzerland, Jun 2018.

- Relationships between photosynthesis and formaldehyde as a probe of isoprene emission, *Yale G&G Atmosphere, Oceans and Climate Dynamics Seminar*, New Haven, CT, USA, Nov 2015.
- Impact of extreme drought on photosynthesis, isoprene emission and atmospheric formaldehyde in the Missouri Ozarks, *Yale F&ES 32nd Annual Doctoral Student Research Conference*, New Haven, CT, USA, Oct 2015.
- Positive but variable sensitivity of August surface ozone to large-scale warming in the southeast United States, *Southeast Atmosphere Studies Workshop*, Princeton, NJ, USA, Jun 2015.

POSTER PRESENTATIONS

- Emission reductions by economic sector: impacts on climate and plant carbon uptake, *Gordon Research Conference on Atmospheric Chemistry*, Newry, ME, USA, Jul 2017.
- Coupling of GEOS-Chem and YIBs: Why is it important and what can it be used for, *IGAC Science Conference*, Breckenridge, CO, USA, Sep 2016.
- Impact of extreme drought on photosynthesis, isoprene emission and atmospheric formaldehyde in the Missouri Ozarks, *Gordon Research Conference on Biogenic Hydrocarbons and the Atmosphere*, Girona, Spain, Jun 2016.
- Relationships between photosynthesis and formaldehyde as a probe of isoprene emission, *AGU Fall Meeting*, San Francisco, CA, USA, Dec 2015.
- Limited effect of anthropogenic nitrogen oxides on secondary organic aerosol formation, *AGU Fall Meeting*, San Francisco, CA, USA, Dec 2014.
- Coupling between photosynthesis and isoprene emission: the view from Space, *AGU Fall Meeting*, San Francisco, CA, USA, Dec 2013.
- Global and regional climate effect of secondary organic aerosol, *The 4th New England Atmospheric Chemistry Symposium*, Boston, MA, USA, Oct 2013.