

HANNAH S. KENAGY

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PROFESSIONAL APPOINTMENTS

Assistant Professor of Chemistry , University of Minnesota, Minneapolis, MN	2025-
Postdoctoral Associate , MIT, Cambridge, MA	2024
NSF Postdoctoral Research Fellow , MIT, Cambridge, MA	2022-2024
Postdoctoral Research Fellow , University of Michigan, Ann Arbor, MI	2021-2022

EDUCATION

University of California at Berkeley , Berkeley, CA	2021
PhD in Chemistry, Advisor: Ronald C. Cohen	
<i>Dissertation</i> : Condensed phase and dark reactions of atmospheric nitrogen oxides	
University of Chicago , Chicago, IL	2016
BS with Honors in Chemistry	
<i>Thesis</i> : Estimating the stratospheric hydrogen isotope budget using satellite remote sensing data	

AWARDS AND FELLOWSHIPS

NSF Atmospheric and Geospace Sciences Postdoctoral Research Fellowship	2022-2024
Atmospheric Chemistry Colloquium for Emerging Senior Scientists (ACCESS) XVII	2023
Caltech Young Investigators Lectureship	2023
MIT Civil and Environmental Engineering Rising Stars 2021	2021
NSF Graduate Research Fellowship	2016-2021
NASA Group Achievement Award (FIREX-AQ Airborne Earth Science Mission Team)	2020
American Geophysical Union Outstanding Student Presentation Award	2018
Graduate Division Conference Travel Grant (UC Berkeley)	2017
Dean's List, University of Chicago	2012-2016
Stamps Scholar at the University of Chicago	2012-2016
Dean's Fund for Student Life Grant (University of Chicago)	2016
F. Champion Ward Third Year International Travel Grant (University of Chicago)	2014
Semi-finalist in Intel Science Talent Search	2012
Fourth place in Biochemistry at Intel International Science & Engineering Fair	2012
Semi-finalist in 2012 US Presidential Scholars Program	2012

PUBLICATIONS

Kenagy, H.S., M.B. Goss, N. Tahsini, C. Heald, and J. Kroll. "Can we achieve atmospheric chemical environments in the laboratory? An integrated model-measurement approach to chamber SOA studies," *Science Advances*, under revision. <https://doi.org/10.26434/chemrxiv-2024-82644>

Jin, X., **H.S. Kenagy**, C. Li, Q. Zhu, A.M. Fiore, and R.C. Cohen. "Intersections between trends in NO_x and VOC and the impacts on chemistry of cities," *Urban & Regional Air Quality: Emissions, Chemistry, and Impacts*, Advances in Atmospheric Chemistry - Vol. 4, World Scientific, *in press*.

Kulju, K.D., S.M. McNamara, Q. Chen, **H.S. Kenagy**, J. Edebeli, J.D. Fuentes, S.B. Bertman, and K.A. Pratt. "Urban inland wintertime N₂O₅ and ClNO₂ influenced by snow-covered ground, air turbulence, and precipitation," *Atmospheric Chemistry and Physics*, 2022. <https://doi.org/10.5194/acp-22-2553-2022>

Kenagy, H.S., P.S. Romer Present, P.J. Wooldridge, B.A. Nault, P. Campuzano-Jost, D.A. Day, J.L. Jimenez, and R.C. Cohen. “Contribution of organic nitrates to organic aerosol over South Korea during KORUS-AQ,” *Environmental Science & Technology*, 2021. <https://doi.org/10.1021/acs.est.1c05521>

Kenagy, H.S., T.L. Sparks, P.J. Wooldridge, A.J. Weinheimer, T.B. Ryerson, D.R. Blake, R.S. Hornbrook, E.C. Apel, and R.C. Cohen. “Evidence of nighttime production of organic nitrates during SEAC⁴RS, FRAPPÉ, and KORUS-AQ,” *Geophysical Research Letters*, 2020. <https://doi.org/10.1029/2020GL087860>

Kenagy, H.S., T.L. Sparks, C.J. Ebben, P.J. Wooldridge, F.D. Lopez-Hilfiker, B.H. Lee, J.A. Thornton, E.E. McDuffie, D.L. Fibiger, S.S. Brown, D.D. Montzka, A.J. Weinheimer, J.C. Schroder, P. Campuzano-Jost, D.A. Day, J.L. Jimenez, J.E. Dibb, E.C. Apel, T. Campos, V. Shah, L. Jaeglé, and R.C. Cohen. “NO_x lifetime and NO_y partitioning during WINTER,” *Journal of Geophysical Research – Atmospheres*, 2018. <https://doi.org/10.1029/2018JD028736>

Jaeglé, L., V. Shah, J.A. Thornton, F.D. Lopez-Hilfiker, B.H. Lee, E.E. McDuffie, D.L. Fibiger, S.S. Brown, P. Veres, T.L. Sparks, C.J. Ebben, P.J. Wooldridge, **H.S. Kenagy**, R.C. Cohen, A.J. Weinheimer, T. Campos, D.D. Montzka, J. DiGangi, G. Wolfe, T. Hanisco, J.C. Schroder, P. Campuzano-Jost, D.A. Day, J.L. Jimenez, A. Sullivan, H. Guo, and R. Weber. “Nitrogen oxides emissions, chemistry, deposition, and export over the Northeast United States during the WINTER aircraft campaign,” *Journal of Geophysical Research - Atmospheres*, 2018. <https://doi.org/10.1029/2018JD029133>

Kenagy, H.S., C. Lin, H. Wu, and M.R. Heal. “Greater nitrogen dioxide concentrations at child versus adult breathing heights close to urban main road kerbside.” *Air Quality, Atmosphere, and Health*, 9:589, 2016. <https://doi.org/10.1007/s11869-015-0370-3>

INVITED TALKS AND SEMINARS

“Atmospheric organic aerosol production: the role of organic peroxy radicals.” University of Minnesota Department of Chemistry, Minneapolis, MN, February 2024, *invited seminar*.

“Impacts of peroxy radical chemistry on atmospheric organic aerosol production.” University of Chicago Department of Chemistry, Chicago, IL, January 2024, *invited seminar*.

“Atmospheric organic aerosol production: the role of organic peroxy radicals.” York University Department of Chemistry, Toronto, Ontario, January 2024, *invited seminar*.

“Towards a better understanding of SOA formation: perspectives on model-informed approaches to laboratory studies.” Atmospheric Chemistry Colloquium for Emerging Senior Scientists (ACCESS) XVII, Brookhaven National Lab, Upton, NY, July 2023, *invited talk*.

“Using models to inform atmospherically relevant laboratory measurements of aerosol formation reactions.” Caltech Young Investigators Lecture Series, Pasadena, CA, March 2023, *invited seminar*.

“Impacts of atmospheric organic peroxy radical chemistry on organic aerosol production.” Oregon State University Department of Chemistry, Corvallis, OR, December 2022, *invited seminar*.

“Using measurements and modeling to understand atmospheric oxidation pathways with implications for air quality and climate.” MIT Civil and Environmental Engineering Rising Stars Workshop, Cambridge, MA, October 2021, *invited talk*.

“NO_x thing good happens after midnight: the importance of nighttime chemistry for urban NO_x loss.” Berkeley Atmospheric Science Center seminar, virtual, April 2021, *invited seminar*.

“Production and fate of alkyl nitrates during KORUS-AQ.” American Geophysical Union Fall Meeting 2019, San Francisco, CA, December 2019, *invited talk*.

CONFERENCE PRESENTATIONS

“The spectrum of low-NO chemistry: RO₂ fates at low NO concentrations in environmental chambers and the atmosphere.” American Geophysical Union Annual Meeting, December 2023, *poster*.

“How can we do better chamber experiments of SOA formation? A systematic, model-informed approach for laboratory studies of VOC oxidation with a focus on RO₂ chemistry.” American Association for Aerosol Research Annual Conference, Portland, OR, October 2023, *oral presentation*.

“Can we achieve atmospheric chemical environments in chambers? Model-informed perspectives on RO₂ fate distributions in laboratory experiments of SOA formation.” Atmospheric Chemistry Gordon Research Conference, August 2023, *poster*.

“Constraining RO₂ fate in environmental chambers: a systematic, model-informed approach for laboratory studies of VOC oxidation.” American Chemical Society Spring 2023 Meeting, Indianapolis, IN, March 2023, *oral presentation*.

“Integrated laboratory and model approach to understanding the multiphase product distribution of Cl-initiated VOC oxidation.” American Geophysical Union Fall Meeting, Chicago, IL, December 2022, *poster*.

“SOA production from mixtures of Cl- and OH-initiated isoprene oxidation.” American Association for Aerosol Research Annual Conference, Raleigh, NC, October 2022, *poster*.

“Toward accurate satellite-based inferences of emissions of NO₂ from fires: insights from FIREX-AQ.” FIREX-AQ ER-2 Science Team Meeting, May 2020, *oral presentation*.

“Gas-particle partitioning of total alkyl nitrates during KORUS-AQ.” Berkeley Atmospheric Science Center Symposium, Berkeley, CA, April 2019, *poster*.

“Gas-particle partitioning of total alkyl nitrates during KORUS-AQ.” American Geophysical Union Fall Meeting 2018, Washington, D.C., December 2018, *oral presentation*. (Outstanding Student Presentation Award winner)

“NO_x lifetime and NO_y partitioning during WINTER.” Berkeley Atmospheric Science Center Symposium, Berkeley, CA, February 2018, *poster*.

“NO_x lifetime during WINTER.” American Geophysical Union Fall Meeting 2017, New Orleans, LA, December 2017, *poster*.

“Isotopic signatures in the stratospheric hydrogen isotope budget.” ACE Satellite Science Team Meeting, Waterloo, ON, Canada, May 2016, *oral presentation*.

“Estimating the stratospheric hydrogen isotope budget using satellite remote sensing data.” Midstates Undergraduate Research Symposium, Chicago, IL, November 2015, *poster*.

“Greater NO₂ concentrations at child vs. adult breathing heights close to urban main road curbside.” University of Chicago Undergraduate Research Symposium, Chicago, IL, October 2015, *poster*.

TEACHING EXPERIENCE

Graduate Atmospheric Chemistry: Guest Lecturer, MIT, MA	2023
MIT Traveling Research Environmental Experiences (TREX): Teaching Assistant, HI	2023, 2024
Intersections of Data Science and Chemistry: Guest Lecturer, UC Berkeley, CA	2021
Analytical Chemistry: Graduate Student Instructor, UC Berkeley, CA	2018
General Chemistry: Graduate Student Instructor, UC Berkeley, CA	2016, 2017
Calculus: Undergraduate Teaching Assistant, University of Chicago, IL	2013
English as a Second Language: Instructor, Tsinghua University, Beijing, China	2013

UNDERGRADUATE RESEARCH MENTORSHIP

Isabel Albores (2022, MIT Summer Research Program): *“Long term aging of methyl vinyl ketone”*
Next position: PhD student at MIT, starting Fall 2024

Evelyn Widmaier (2021-2022, University of Michigan): *“Ozone depletion events in the Alaskan Arctic”*
Next position: PhD student at University of Wisconsin-Madison

Jennifer Grant (2020-2021, UC Berkeley): *“Machine learning to improve satellite NO₂ retrieval efficiency”*
Next position: Data Scientist at Rappi

Lindsey Anderson (2018-2021, UC Berkeley): *“Ozone chemistry in Seoul during KORUS-AQ”*
Next position: PhD student and NSF Graduate Research Fellow at University of Colorado Boulder

TEACHING, MENTORING, AND INCLUSIVITY TRAINING

Kaufman Teaching Certificate Program: MIT, MA	Spring 2023
Graduate Student Inclusivity Training: Restorative Justice Center, UC Berkeley, CA	Spring 2021
Certificate in Teaching and Learning in Higher Education: UC Berkeley, CA	completed 2021
Effective Mentoring in Higher Education: UC Berkeley, CA	Spring 2021
Teaching and Learning in Higher Education: UC Berkeley, CA	Spring 2020

OUTREACH

POWER-Bay Area: Co-founder, Coordinator & Workshop Leader	2019-2022
Women+ Excelling More in Math, Engineering, and the Sciences: Activity Leader	2021
Bay Area Scientists in Schools (BASIS): Volunteer & Team Coordinator	2017-2021
Expanding Your Horizons at Berkeley: Activity Leader	2019
Neighborhood Schools Program at UChicago: Volunteer Science & Math Tutor	2012-2013

SERVICE

Peer reviewer for *ACS Earth and Space Chemistry, Atmospheric Chemistry and Physics, Environmental Science and Technology, Geophysical Model Development, Physical Chemistry Chemical Physics*

MIT CEE Diversity, Equity, and Inclusion Committee: Postdoctoral Representative (2022-2023)

UC Berkeley College of Chemistry Junior Faculty Search: Student Committee Member (2020-2021)

University of California Leadership through Advanced DegreeS (LEADS): Symposium Judge (2021)