

## Eleanor C. Browne

Assistant Professor, Department of Chemistry  
Fellow, Cooperative Institute for Research in the Environmental Sciences  
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### **Education**

2012 Ph.D., Department of Chemistry, University of California, Berkeley  
2006 B.S., *Summa cum Laude*, The College of William and Mary

### **Research, Professional Experience, and Employment**

2015-Current University of Colorado, Boulder  
Assistant Professor, Department of Chemistry  
Fellow, Cooperative Institute for Research in Environmental Science  
2012-2015 Massachusetts Institute of Technology  
Department of Civil and Environmental Engineering  
NOAA Climate and Global Change Postdoctoral Fellow  
2006-2012 University of California, Berkeley, Department of Chemistry  
Graduate Research Assistant

### **Honors and Awards**

2019 American Society for Mass Spectrometry Research Award  
2013 ACCESS XII invited participant  
Atmospheric Chemistry Colloquium for Emerging Senior Scientists  
Brookhaven National Laboratory, Upton, NY  
2012-2014 NOAA Climate and Global Change Postdoctoral Fellowship  
2010-2012 NASA Earth Systems Science Fellowship  
2009 NASA Group Achievement Award for efforts during the Arctic Research of the  
Composition of the Troposphere from Aircraft and Satellite Experiment (ARCTAS)  
February 2008-July 2008  
2005 Inducted into Phi Beta Kappa

### **Service and Leadership**

Reviewer for: *Atmospheric Environment, Atmospheric Chemistry and Physics, Atmospheric  
Measurement Techniques, Environmental Science: Processes & Impacts, Environmental  
Science & Technology*, NOAA Atmospheric Chemistry, Carbon Cycle, & Climate (AC4),  
NSF, Canada Foundation for Innovation, and the Netherlands Organisation for Scientific  
Research  
2016 Symposium Co-organizer, Fall ACS National Meeting "Physical Chemistry of Atmospheric  
Processes"  
2015-current Co-editor of *Atmospheric Chemistry and Physics*  
2014 Co-organizer of MIT atmospheric chemistry student/postdoc research seminar  
2013 New England Atmospheric Chemistry Symposium Program Committee Member

### **Field Research Experience**

2021 Characterizing New Particle Formation and Growth, Lamont, OK  
2016 HISCALE – Holistic Interactions of Shallow Clouds, Aerosols, and Land-Ecosystems, Lamont, OK  
2013 TCAP – Two Column Aerosol Project, Truro, MA  
2010 CalNex – California Research at the Nexus of Air Quality and Climate Change, Bakersfield, CA.  
2008 ARCTAS – Arctic Research of the Composition of the Troposphere from Aircraft and Satellite, Palmdale, CA, Fairbanks, AK, Cold Lake, Canada.  
2007, 2009 BEARPEX – Biosphere Effects of Aerosols and Photochemistry Experiment, Blodgett Forest, CA.

### **Student Training**

#### **Current**

Ph.D. Students Mitchell Alton – Expected graduation Fall 2021  
Victoria Arau – Expected graduation Spring 2026  
Bri Dobson – Expected graduation Spring 2026  
Daniel Katz – Expected graduation Spring 2025  
Nathan Reed (joint with Prof. Margaret Tolbert) – Expected graduation Fall 2022

Undergraduate McKenzie Larson (CU Boulder) – Fall 2019 – current

#### **Alumni**

Ph.D. Students Dr. Aroob Abdelhamid – Ph.D. awarded December 2020  
Dr. Jennifer Berry – Ph.D. awarded May 2020

Undergraduate Armaan Dhillon (CU Boulder) – Fall 2017 – Spring 2019  
Davin Duke (Pikes Peak Community College) – Summer 2018  
Nagam Gill (CU Boulder) – Fall 2017 – Fall 2018  
Tyler Kukuchka (CU Boulder) – Summer 2018  
Natalie LeMessurier (McGill University) – Summer 2019  
Katherine Thompson (Pikes Peak Community College) – Summer 2019

High School Joseph Brodsky (East High School, Denver) – Summer 2017

#### **Teaching** (\*indicates new courses developed)

\*CHEM 2100, Chemical Energetics and Dynamics (undergraduate), Spring 2018, Spring 2019, Spring 2020, Spring 2021

CHEM 4171, Instrumental Analysis (undergraduate), Fall 2017, Fall 2020

\*CHEM 5131, Computer Programming & Data Analysis (graduate), Fall 2015, Fall 2016, Fall 2019

#### **Professional Training**

2019 Certification in Mental Health First Aid by National Council for Behavioral Health  
2018 Introductory Leadership Workshop  
2013 Path of Professorship Workshop  
2011 Summer Institute for Preparing Future Faculty

**Publications** (advisees underlined; \*indicates Browne as corresponding author)

- 28\* Reed, N. W.; **Browne, E. C.**; Tolbert, M. A.; Impact of Hydrogen Sulfide on Photochemical Haze Formation in Methane/Nitrogen Atmospheres, *ACS Earth and Space Chem.*, 4(6), 897-904, doi: 10.1021/acsearthspacechem.0c00086, 2020.
- 27\* Alton, M. W.; **Browne, E. C.**; Atmospheric Chemistry of Volatile Methyl Siloxanes: Kinetics and Products of Oxidation by OH Radicals and Cl Atoms, *Environ. Sci. Tech.*, 54(10), 5992-5999, doi: 10.1021/acs.est.0c01368, 2020.
- 26\* Ugelow, M. S.; Berry, J. L.; **Browne, E.C.**; Tolbert, M. A.; The Impact of Molecular Oxygen on Anion Composition in a Hazy Archean Earth Atmosphere, *Astrobiology*, 20(5), 658-669, doi:10.1089/ast.2019.2145, 2020.
- 25\* Berry, J. L.; Ugelow, M. S.; Tolbert, M. A.; **Browne, E.C.**; The Influence of Gas-phase Chemistry on Organic Haze Formation, *Astrophys. J. Lett.*, 885(1), L6 (7pp), doi:10.3847/2041-8213/ab4b5b, 2019.
- 24\* **Browne, E. C.**; Zhang, X.; Franklin, J. P.; Ridley, K. B.; Kirchstetter, T. W.; Wilson, K. R.; Cappa, C. D.; Kroll, J. H. Effect of heterogeneous oxidative aging on light absorption by biomass-burning organic aerosol, *Aerosol Sci. Technol.*, 53(6), 663-674, doi:10.1080/02786826.2019.1599321, 2019.  
**\*\*Editorial Board Selection as a 2019 Notable Paper\*\***
- 23\* Berry, J. L.; Ugelow, M. S.; Tolbert, M. A.; **Browne, E. C.** Chemical Composition of Gas-Phase Positive Ions During Laboratory Simulations of Titan's Haze Formation, *ACS Earth and Space Chem.*, 3(2) 202-211, doi:10.1021/acsearthspacechem.8b00139, 2019.  
**\*\*Selected for inclusion in J Phys Chem A/ACS Earth and Space Chem Virtual Issue on Astrochemistry, ACS Earth and Space Chem, 3(11), 2372-2372, doi:10.1021/acsearthspacechem.9b00259, 2019.\*\***
- 22\* Berry, J. L.; Day, D. A.; Elseberg, T.; Palm, B. B.; Hu, W.; Abdelhamid, A.; Schroder, J. C.; Karst, U.; Jimenez, J. L.; **Browne, E. C.** Laser Ablation-Aerosol Mass Spectrometry-Chemical Ionization Mass Spectrometry for Ambient Surface Imaging, *Anal. Chem.*, 90(6), 4046-4053, doi:10.1021/acs.analchem.7b05255, 2018.
- 21 Lim, C. Y.; **Browne, E. C.**; Sugrue, R. A.; Kroll, J. H. Rapid heterogeneous oxidation of organic coatings on submicron aerosols, *Geophys. Res. Lett.*, 44, 2949-2957, doi:10.1002/2017GL072585, 2017.
- 20 Brune, W. H.; Baier, B. C.; Thomas, J.; Ren, X.; Cohen, R. C.; Pusede, S. E.; **Browne, E.**; Goldstein, A. H.; Gentner, D. R.; Keutsch, F. N.; Thornton, J.; Harrold, S.; Lopez-Hilfiker, F.; Wennberg, P. O. Ozone Production Chemistry in the Presence of Urban Plumes, *Faraday Discuss.*, 189, 169-189, doi:10.1039/C5FD00204D, 2016.
- 19 Pusede S. E.; VandenBoer T. C.; Murphy J. G.; Markovic M. Z.; Young C. J.; Veres P. R.; Roberts J. M.; Washenfelder R. A.; Brown S. S.; Ren X.; Tsai C.; Stutz J.; Brune W. H.; **Browne E. C.**; Wooldridge P. J.; Graham A. R.; Weber R.; Goldstein A. H.; Dusanter S.; Griffith S. M.; Stevens P. S.; Lefer B. L.; Cohen R. C.. An Atmospheric Constraint on the NO<sub>2</sub> Dependence of Daytime Near-Surface Nitrous Acid (HONO), *Environ. Sci. Tech.*, 49(21), 12774-81, doi:10.1021/acs.est.5b02511, 2015.

- 18 **Browne, E. C.**; Franklin, J. P.; Canagaratna, M. R.; Massoli, P.; Kirchstetter, T. W.; Worsnop, D. R.; Wilson, K. R.; Kroll, J. H. Changes to the chemical composition of soot from heterogeneous oxidation reactions, *J. Phys. Chem. A*, 119(7), 1154-1163, doi:10.1021/jp511507d, 2015.
- 17 Canagaratna, M. R.; Massoli, P.; **Browne, E. C.**; Franklin, J. P.; Wilson, K. R.; Onasch, T. B.; Kirchstetter, T. W.; Fortner, E. C.; Kolb, C. E.; Jayne, J. T.; Kroll, J. H.; Worsnop, D. R. Chemical compositions of black carbon particle cores and coatings via soot particle aerosol mass spectrometry with photoionization and electron ionization, *J. Phys. Chem. A*, 119(19), 4589–4599, doi: 10.1021/jp510711u, 2015.
- 16 VandenBoer, T. C.; Markovic, M. Z.; Sanders, J. E.; Ren, X.; Pusede, S. E.; **Browne, E. C.**; Cohen, R. C.; Zhang, L.; Thomas, J.; Brune, W. H.; Murphy, J. G. Evidence for a nitrous acid (HONO) reservoir at the ground surface in Bakersfield, CA, during CalNex 2010, *J. Geophys. Res., Atmos.*, 119(14), 9093-9106, doi:10.1002/2013JD020971, 2014.
- 15 Min, K.-E.; Pusede, S. E.; **Browne, E. C.**; LaFranchi, B. W.; Wooldridge, P. J.; Cohen, R. C. Eddy covariance fluxes and vertical concentration gradient measurements of NO and NO<sub>2</sub> over a ponderosa pine ecosystem: observational evidence for within-canopy removal of NO<sub>x</sub>, *Atmos. Chem. Phys.*, 14, 5495-5512, doi:10.5194/acp-14-5495-2014, 2014.
- 14 Pusede, S. E.; Gentner, D. R.; Wooldridge, P. J.; **Browne, E. C.**; *et al.*, On the temperature dependence of organic reactivity, nitrogen oxides, ozone production, and the impact of emission controls in San Joaquin Valley California, *Atmos. Chem. Phys.*, 14, 3373-3395, doi:10.5194/acp-14-3373-2014, 2014.
- 13 **Browne, E. C.**; Wooldridge, P. J.; Min, K.-E.; Cohen, R. C. On the role of monoterpene chemistry in the remote continental boundary layer, *Atmos. Chem. Phys.*, 14, 1225-1238, doi:10.5194/acp-14-1225-2014, 2014.
- 12 Worton, D. R.; Surratt, J. D.; LaFranchi, B. W.; Chan, A. W. H.; Zhao, Y.; Weber, R. J.; Park, J.-H.; Gilman, J. B.; de Gouw, J.; Park, C.; Schade, G.; Beaver, M.; St. Clair, J. M.; Crouse, J.; Wennberg, P.; Wolfe, G. M.; Harrold, S.; Thornton, J. A.; Farmer, D. K.; Docherty, K. S.; Cubison, M. J.; Jimenez, J. L.; Frossard, A. A.; Russell, L. M.; Kristensen, K.; Glasius, M.; Mao, J.; Ren, X.; Brune, W.; **Browne, E. C.**; Pusede, S. E.; Cohen, R. C.; Seinfeld, J. H.; Goldstein, A. H. Observational insights into high- and low-NO<sub>x</sub> aerosol formation from isoprene, *Environ. Sci. Tech.*, 47(20), 11403–11413, doi:10.1021/es4011064, 2013.
- 11 **Browne, E. C.**; Min, K.-E.; Wooldridge, P. J.; Apel, E.; Blake, D. R.; Brune, W. H.; Cantrell, C. A.; Cubison, M. J.; Diskin, G. S.; Jimenez, J. L.; Weinheimer, A. J.; Wennberg, P. O.; Wisthaler, A.; Cohen, R. C.; Observations of total RONO<sub>2</sub> over the boreal forest: NO<sub>x</sub> sinks and HNO<sub>3</sub> sources, *Atmos. Chem. Phys.*, 13, 4543-4562, doi:10.5194/acp-13-4543-2013, 2013.
- 10 Rollins, A. W.; **Browne, E. C.**; Min, K.-E.; Pusede, S. E.; Wooldridge, P. J.; Gentner, D. R.; Goldstein, A. H.; Liu, S.; Day, D. A.; Russell, L. M.; Cohen, R. C. Evidence for NO<sub>x</sub> control over nighttime SOA formation, *Science*, 337, doi:10.1126/science.1221520, 1210-1212, 2012.
- 9 **Browne, E. C.**; Cohen, R.C. Effects of biogenic nitrate chemistry on the NO<sub>x</sub> lifetime in remote continental regions, *Atmos. Chem. Phys.*, 12, 11917-11932, doi:10.5194/acp-12-11917-2012, 2012.
- 8 Min, K.-E.; Pusede, S. E.; **Browne, E. C.**; *et al.* Observations of atmosphere-biosphere exchange of total and speciated peroxy nitrates: nitrogen fluxes and biogenic sources of peroxy nitrates, *Atmos. Chem. Phys.*, 12, 9763-9773, doi:10.5194/acp-12-9763-2012, 2012.

- 7 Ren, X.; Sanders, J. E.; Rajendran, A.; Weber, R. J.; Goldstein, A. H.; Pusede, S. E.; **Browne, E. C.**; Min, K.-E.; Cohen, R. C. A relaxed eddy accumulation system for measuring vertical fluxes of nitrous acid, *Atmos. Meas. Tech.*, 4, 2093-2103, doi:10.5194/amt-4-2093-2011, 2011.
- 6 Russell, A. R.; Perring, A. E.; Valin, L. C.; Hudman, R. C.; **Browne, E. C.**; Min, K.-E.; Wooldridge, P. J.; Cohen, R. C. A high spatial resolution retrieval of NO<sub>2</sub> column densities from OMI: Method and Evaluation, *Atmos. Chem. Phys.*, 11, 8543-8554, doi:10.5194/acp-11-8543-2011, 2011.
- 5 **Browne, E. C.**; Perring, A. E.; Wooldridge, P. J.; Apel, E.; Hall, S. R.; Huey, L. G.; Mao, J.; Spencer, K. M.; St. Clair, J. M.; Weinheimer, A. J.; Wisthaler, A.; Cohen, R. C. Global and regional effects of the photochemistry of CH<sub>3</sub>O<sub>2</sub>NO<sub>2</sub>: Evidence from ARCTAS, *Atmos. Chem. Phys.*, 11, 4209-4219, doi:10.5194/acp-11-4209-2011, 2011.
- 4 Wolfe, G. M.; Thornton, J. A.; Bouvier-Brown, N. C.; Goldstein, A. H.; Park, J.-H.; McKay, M.; Matross, D. M.; Mao, J.; Brune, W. H.; LaFranchi, B. W.; **Browne, E. C.**; *et al.* The Chemistry of Atmosphere-Forest Exchange (CAFE) Model, Part II: Application to BEARPEX-2007 observations, *Atmos. Chem. Phys.*, 11, 1269-1294, doi:10.5194/acp-11-1269-2011, 2011.
- 3 Alvarado, M. J.; Logan, J. A.; Mao, J.; Apel, E.; Riemer, D.; Blake, D.; Cohen, R. C.; Min, K.-E.; Perring, A. E.; **Browne, E. C.**; *et al.* NO<sub>x</sub> and PAN in boreal fire smoke plumes observed during ARCTAS-B and their impact on Arctic ozone: an integrated analysis of aircraft and satellite observations, *Atmos. Chem. Phys.*, 10, 9739-9760, doi:10.5194/acp-10-9739-2010, 2010.
- 2 Ren, X.; Gao, H.; Zhou, X.; Crouse, J. D.; Wennberg, P. O.; **Browne, E. C.**; LaFranchi, B. W.; Cohen, R. C.; McKay, M.; Goldstein, A. H.; Mao, J. Measurement of atmospheric nitrous acid at Blodgett Forest during BEARPEX2007, *Atmos. Chem. Phys.*, 10, 6283-6294, doi:10.5194/acp-10-6283-2010, 2010.
- 1 LaFranchi, B. W.; Wolfe, G. M.; Thornton, J. A.; Harrold, S. A.; **Browne, E. C.**; *et al.* Closing the peroxy acetyl nitrate budget: Observations of acyl peroxy nitrates (PAN, PPN, and MPAN) during BEARPEX 2007, *Atmos. Chem. Phys.*, 9, 7623-7641, doi:10.5194/acp-9-7623-2009, 2009.

#### Reports (not peer reviewed)

- 1 Smith, J., Stark, H., **Browne, E.**, Hanson D.: HI-SCALE Nanoparticle Composition and Precursors Field Campaign Report, DOE/SC-ARM-17-023, June 2017.

#### Research Funding at CU

Title	Agency	Award	Duration	Role
Development of a Chemical Ionization Time-of-flight Mass Spectrometer for Characterizing the Role of Organic Amines in New Particle Formation	Department of Energy	\$1,200,225	4/6/15-	Co-I
	SBIR	(\$139,758 to Browne) DE-SC0011218	4/5/18	
Constraining the Degradation Pathways of Siloxanes in the Atmosphere	National Science Foundation Environmental Chemical Sciences & Atmospheric Chemistry	\$341,312 CHE-1808606	8/15/18- 7/31/21	PI

<b>Title</b>	<b>Agency</b>	<b>Award</b>	<b>Duration</b>	<b>Role</b>
Development of a Novel Method for Aerosol Chemical Characterization	American Society for Mass Spectrometry	\$35,000 Research Award 2019	7/1/19- 6/30/21	PI
Constraining the Chemistry of Particle Formation and Growth in the Southern Great Plains	Department of Energy Atmospheric Systems Research	\$637,190 DE-SC0020175	8/15/19- 8/14/22	PI
Impact of Sulfur on Planetary Haze: Implications for Habitability	NASA Habitable Worlds	\$444,323 80NSSC20K0232	11/5/19- 11/4/22	PI

### **Fellowships to supervised graduate students**

<b>Student</b>	<b>Award</b>	<b>Duration</b>	<b>Amount</b>
Aroob Abdelhamid	NSF Graduate Research Fellowship	6/16-5/20	\$138,000
Aroob Abdelhamid	NSF Graduate Research Opportunities Worldwide (research at University of Eastern Finland)	7/19-6/20	\$5,000
Aroob Abdelhamid	William Robert Findley Graduate Chemistry Scholarship	8/16-5/17	\$2,000
Jennifer Berry	Department of Chemistry Fellowship	5/18-8/18	\$10,000
Jennifer Berry	CIRES Graduate Student Research Award	8/18-5/19	\$30,761
Nathan Reed	Department of Chemistry Sharrah Fellowship	5/20-8/20	\$6,500

### **Awards to supervised graduate students**

Jennifer Berry	Outstanding Student Presentation Award, American Geophysical Union Fall 2018 Conference, January 2018 (Awarded to top 2-5% of presenters)
Jennifer Berry	Top Poster Presenter, CU Boulder Research and Innovation Week, October 2018
Jennifer Berry	Best Poster Presentation in Atmospheric Chemistry category, ATOC Earth System & Space Science Poster Conference, December 2017
Jennifer Berry	NSF Graduate Research Fellowship Honorable Mention 2016

### **Invited Seminars**

11	Department of Chemistry, University of North Carolina, Chapel Hill, NC, 12 April 2021.
10	Department of Chemistry, University of California Irvine, Irvine, CA, 30 March 2021.
9	Frontiers in Atmospheric Chemistry seminar series, Online, 4 December 2020 (314 attendees).
8	Department of Geology Colloquium, University of Colorado Boulder, Boulder, CO, 21 October 2020.
7	Department of Chemistry, University of Iowa, Iowa City, IA, 9 October 2020.
6	National Center for Atmospheric Research, Boulder, CO, 31 August 2020.
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- 5 Department of Chemistry and Biochemistry, University of Texas El Paso, El Paso, TX, 27 September 2019.
- 4 Department of Chemistry, University of Denver, Denver, CO, 3 May 2018.
- 3 NOAA ESRL Chemical Sciences Division, Boulder, CO, 8 June 2016.
- 2 National Center for Atmospheric Research, Boulder, CO, 8 February 2016.
- 1 Department of Chemistry and Biochemistry, University of Colorado Boulder, Boulder, CO, 13 February 2014.

**Presentations by Group Members** (advisees underlined, undergraduates in italics, \*presenting author)  
**National/International Conferences** (since 2015)

**Invited**

- 3 \***Browne, E. C.**, Stark, H., Abdelhamid, A., Nowak, J. B., Kimmel, J. R., Smith, J., Jayne, J. T., Worsnop, D. R.: Chemistry of organic reduced nitrogen in a rural environment, *American Chemical Society National Meeting*, San Diego, CA, August 2019. (Invited oral presentation)
- 2 \***Browne, E. C.**, Alton, M., Abdelhamid, A., Berry, J.: Detection of novel organic nitrogen compounds with protonated ethanol cluster chemical ionization mass spectrometry, *Atmospheric Chemical Mechanisms*, Davis, CA, December 2018. (Invited oral presentation)
- 1 Abdelhamid, A., Stark, H., Worsnop, D., \***Browne, E. C.**: Chemical Composition of Ambient Ions: Role of Nitrogen Compounds, *Canadian Chemistry Conference and Exhibition*, Edmonton, Alberta, Canada, May 2018. (Invited oral presentation)

**Contributed**

- 16 \*Reed, N., **Browne, E. C.**, Tolbert, M.A.: The Role of Hydrogen Sulfide in Organic Haze Chemistry, *American Geophysical Union Fall Meeting*, virtual, December 2020. (Oral presentation)
- 15 \*Alton, M., **Browne, E. C.**: Laboratory Investigation of Multigenerational Siloxane Oxidation Chemistry, *American Geophysical Union Fall Meeting*, virtual, December 2020. (Oral presentation)
- 14 \*Larson, M., **Browne, E. C.**: Investigating Wintertime Sources of Organic Aerosols in Cape Code, Massachusetts, *American Geophysical Union Fall Meeting*, virtual, December 2020. (Poster presentation)
- 13 \*Jansen, K., **Browne, E. C.**, Tolbert, M.A.: Impact of Ozonolysis on Brown Carbon Light Absorption, *American Geophysical Union Fall Meeting*, virtual, December 2020. (Poster presentation)
- 12 \*Berry, J., Ugelow, M., Tolbert, M., **Browne, E. C.**: Haze Formation in Planetary Atmospheres: Investigating the Role of Gas-phase Organic Nitrogen Chemistry, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2019. (Oral presentation)
- 11 \*Berry, J., Ugelow, M., Tolbert, M., **Browne, E. C.**: Probing the Evolution of Gas-phase Chemistry during Laboratory Simulations of Planetary Haze Formation, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2019. (Oral presentation)
- 10 \*Alton, M., **Browne, E. C.**: Atmospheric Lifetime of Volatile Methyl Siloxanes: Is Chlorine Important?, *American Geophysical Union Fall Meeting*, San Francisco, CA, December 2019. (Oral presentation)

- 9 \*Berry, J., **Browne, E. C.**: Sensitive and Selective Organic Nitrogen Measurements: Applications of Ethanol Chemical Ionization Mass Spectrometry, *National Atmospheric Deposition Program Science Symposium and Fall Meeting*, Boulder, CO, November 2019. (Poster presentation)
- 8 \*Reed, N. W., Tolbert, M. A., **Browne, E. C.**: Laboratory Studies of Early Earth Organic Haze. *Astrobiology Graduate Conference 2019*, Salt Lake City, UT, July 2019. (Poster presentation)
- 7 \*Berry, J., Ugelow, M., Tolbert, M., **Browne, E. C.**: The Influence of Gas-phase Chemistry on Organic Haze Formation. *Astrobiology Graduate Conference 2019*, Salt Lake City, UT, July 2019. (Poster presentation)
- 6 \***Browne, E. C.**, Alton, A.: A Novel Mass Spectrometric Method to Measure Siloxanes, *American Society for Mass Spectrometry Annual Conference*, Atlanta, GA, June 2019. (Poster presentation)
- 5 \*Berry, J., Ugelow, M., Tolbert, M.: **Browne, E.** Influence of Positive Ions during Laboratory Simulations of Titan's Haze Formation. *American Geophysical Union Fall Meeting*, Washington, D.C., December 2018. (Oral Presentation)
- 4 \*Berry, J., Ugelow, M., Tolbert, M., **Browne, E. C.**: Chemical composition of ions during laboratory simulations of Titan's haze formation. *Astrobiological Graduate Conference 2018*, Atlanta, GA, June 2018. (Poster presentation)
- 3 \*Abdelhamid, A., Stark, H., Kuang, C., Bullard, R., Worsnop, D., Nowak, J., **Browne, E. C.**: Measurements of Positive Ambient Ions in Lamont OK as Part of the Holistic Interaction of Shallow Clouds Aerosols and Land Ecosystems (HISCALE II) Field Campaign, *American Geophysical Union Fall Meeting*, New Orleans, LA, December 2017. (Poster presentation)
- 2 \***Browne, E. C.**, Abdelhamid, A., Berry, J., Alton, M.: Demonstration of Laser Induced Acoustic Desorption – Chemical Ionization Mass Spectrometry (LIAD-CIMS) for Fragment-Free Measurements of Organic Aerosol Molecular Composition, *American Geophysical Union Fall Meeting*, New Orleans, LA, December 2017. (Poster presentation)
- 1 \*Berry, J., Ugelow, M., Tolbert, M., **Browne, E. C.**: Chemical composition of ions during laboratory simulations of Titan's haze formation. *The American Association for Aerosol Research Conference*, Raleigh, NC, October 2017. (Oral presentation)

#### Local/Regional Conferences (since 2015)

##### Invited

- 2 \***Browne, E. C.**: Reactive nitrogen at high altitude sites in Colorado: towards understanding the relative contributions of inorganic and organic nitrogen species, ACS Regional Meeting: Young Talent in Colorado and Beyond, Fort Collins, CO, August 2016. (Invited oral presentation)
- 1 \***Browne, E. C.**: A Conversation on Addressing Mismatches between Student and Professor Perception of "Difficult Material," *New Assistant Professor Program Concluding Event*, Boulder, CO, April 2016 (Invited oral presentation)

##### Contributed

- 5 \*Abdelhamid, A., Buchholz, A., Pullinen, I., Schobesberger, S., Virtanen, A., **Browne, E. C.**: Nitrogen Incorporation in Biogenic Aerosol and its Effect on Aerosol Volatility. *CIRES Rendezvous*, Boulder, CO, August 2020. (Poster presentation)
- 4 \*Berry, J., **Browne, E. C.**: Characterization of New Particle Formation in a Rural Agricultural Site. *CIRES Rendezvous*, Boulder, CO, August 2020. (Poster presentation)



- 3 \*Berry, J., Ugelow, M., Tolbert, M., **Browne, E. C.**: Chemical composition of ions during laboratory simulations of Titan's haze formation. *CIRES Rendezvous*, Boulder, CO, May 2019. (Poster presentation)
- 2 \*Berry, J., Ugelow, M., Tolbert, M., **Browne, E. C.**: Chemical composition of ions during laboratory simulations of Titan's haze formation. *Research and Innovation Week*, Boulder, CO, October 2018. (Poster presentation)
- 1 \*Berry, J., Ugelow, M., Tolbert, M., **Browne, E. C.**: Chemical composition of ions during laboratory simulations of Titan's haze formation. *ATOC Earth System & Space Science Poster Conference*, Boulder, CO, December 2017. (Poster presentation)