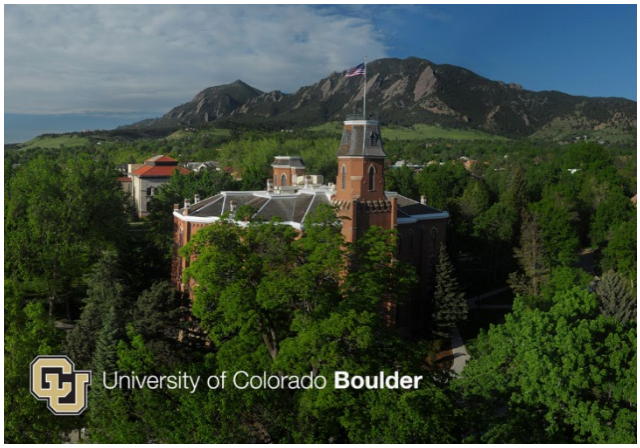
Sep 2023

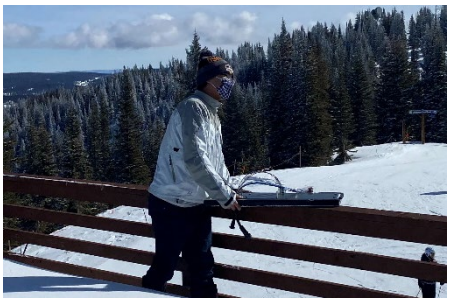
Department of Chemistry
UNIVERSITY OF COLORADO **BOULDER**

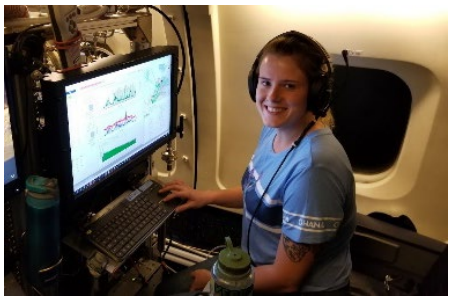
PhD Program in Analytical, Environmental, and Atmospheric Chemistry

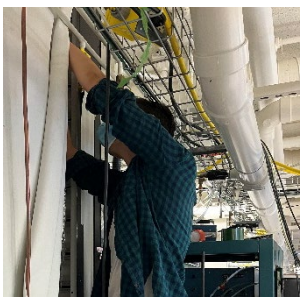
Our Research and Facilities:

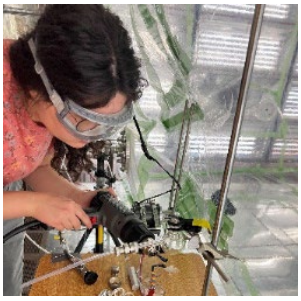
- CU-Boulder ranked **#2** in Atmospheric science worldwide (2022 Shanghai Ranking)
- World-class laboratory and field programs
  - Aircraft, ship, and ground-based field research
  - Large simulation chamber facility
  - State-of-the-art instrumentation
- ~$4 million/year research budget, ~50 papers/year
- Collaborations across departments/fields, nationally and internationally, and with the nearby national labs
  - The Boulder area has the largest number of atmospheric scientists and chemists











Boulder, CO:

- Bike and pedestrian friendly
- Skiing, biking, hiking, climbing, and more
- Lively downtown (Pearl St)
- 30 min. to Denver

Our Program:

- ~30 grad students and ~10 postdocs/res. scientists,
- All students fully funded by research or department
- Atmospheric chemistry focus within the Chemistry Dept.
- Graduates pursue careers in national labs, academia, industry, policy & government

This flyer: bit.ly/CU-AtmosChem

Examples of Recent Student Research

Henning Finkenzeller, Volkamer Lab

The gas-phase formation mechanism of iodic acid as an atmospheric aerosol source
volkamergroup.colorado.edu

Nature Chem publication:
doi.org/10.1038/s41557-022-01067-z

Aerosol pH indicator and organosulfate detectability from aerosol mass spectrometry measurements
cires1.colorado.edu/jimenez-group

Atmos. Meas. Tech. publication:
doi.org/10.5194/amt-14-2237-2021

Mindy Schueneman, Jimenez Lab

Our Faculty

Eleanor Browne
sites.google.com/view/brownelab
Laboratory and field studies of organonitrogen and organosilicon chemistry, instrument development

Margaret Tolbert
cires.colorado.edu/research/research-groups/margaret-tolbert-group
Laboratory studies of particulate matter on Earth, Mars, and Titan

Steven Brown (adjoint)
colorado.edu/lab/browngroup
Atmospheric nitrogen oxides, nighttime tropospheric chemistry, and high-sensitivity optical instrumentation

Rainer Volkamer
volkamergroup.colorado.edu/
Small molecules, radicals and aerosols; advanced optical instrumentation; air-surface exchange; oceans; wildfires; energy & environment

Joost de Gouw
sites.google.com/view/de-gouw-lab
Volatile organic compounds in the atmosphere, mass spectrometry, atmospheric impact of energy systems

Kevin Cossel
Collaborating NIST Researcher
nist.gov/people/kevin-cossel
Development and application of fiber-laser frequency combs for spectroscopy; lab and field measurements of greenhouse gases and other small molecules

Jose-Luis Jimenez
cires.colorado.edu/jimenez
Aerosol composition and sources, aircraft and simulation chamber studies, advanced instrumentation, modeling, disease transmission by aerosols

Paul Ziemann
sites.google.com/site/ziemanngroup
Laboratory studies of the products, mechanisms, and kinetics of atmospheric oxidation of organic compounds and aerosol formation; indoor air chemistry

Collaborating Institutions

The Cooperative Institute for Research in Environmental Sciences (CIRES) is a joint research partnership that connects scientists at NOAA and several departments at CU.

NCAR studies the behavior of the atmosphere and related Earth and geospace systems.

RASEI is a joint institute between CU-Boulder and the National Renewable Energy Laboratory (NREL) addressing complex problems in energy with a multidisciplinary, multi-institutional approach.

Zoom open house: 26 Oct 2023, 4:00 PM Mountain time, tinyurl.com/CUCHEM23

Opportunities for under-represented students: colorado.edu/initiative/cdi/
More info on applying: tinyurl.com/ANYL-1st and colorado.edu/chemistry/prospective-graduate/admission
Deadline for applications for admission into the Department of Chemistry PhD program for students starting Aug. 2024: **1st of December 2023**.