

DR. EVA Y. PFANNERSTILL, ATMOSPHERIC CHEMIST

Department of Environmental Science, Policy, and Management, University of California at Berkeley

ORCID: <https://orcid.org/0000-0001-7715-1200>

◆ **RESEARCH EXPERTISE & INTERESTS**

- Anthropogenic and biogenic impacts on atmospheric chemistry and air pollution
- Novel sources and sinks of reactants investigated by atmospheric reactivity and eddy covariance measurements
- Climate change effects on atmospheric chemistry and air pollution
- Chemical ionization mass spectrometry

◆ **SCIENTIFIC EXPERIENCE**

- 09/2020 – present **Postdoctoral fellow (Feodor Lynen Fellowship of the Alexander von Humboldt Foundation) | University of California at Berkeley, CA, USA**
Investigation of the changing chemical cocktail of the urban and rural atmosphere using airborne flux measurements. Field work in Southern California, geospatial data analysis, machine learning for source attribution, student supervision, presentation of research at conferences, communication with air quality policy agency, and publication writing. Collaboration with CalTech, California Air Resources Board, and National Oceanic and Atmospheric Administration.
- 11/2019 – 08/2020 **Postdoctoral researcher | Max Planck Institute for Chemistry, Mainz, Germany**
Fieldwork at the Biosphere2 facility in Arizona studying drought effects on tropical forest emissions, published a study closing the budget of reactive organic gases above the Amazon Forest. Collaboration with various US and EU partners.
- 08/2015 – 10/2019 **Doctoral researcher in atmospheric chemistry | Max Planck Institute for Chemistry, Mainz, Germany**
Discovered the surprisingly large role of oxygenated organic gases in the OH reactivity around the Arabian Peninsula and found drought effects on atmospheric chemistry above the Amazon rainforest. Operated mass spectrometers in the field; led and contributed to peer reviewed articles; presented research at international conferences. Trained junior grad students. Collaboration with partners in Brazil, Germany, USA, Cyprus, Finland, and France.
- 09/2014 – 03/2015 **Master thesis research intern | Royal Netherlands Institute for Sea Research (NIOZ), Texel, Netherlands**
Contributed to the development of a proxy for paleoclimate research (using the relationship of salinity with algal lipid isotopes).
- 03/2014 – 07/2014 **Research intern | Max Planck Institute for Biogeochemistry (Jena, Germany) and Max Planck Institute for Marine Microbiology (Bremen, Germany)**
Developed a method for the organic extraction of sediment core samples used for reconstructing past Monsoon variability on the Tibetan Plateau by isotope-ratio mass spectrometry. Conducted Raman spectroscopy of iron-oxidizing bacteria.
- 09/2013 – 10/2013 **Student research assistant | Alfred Wegener Institute for Polar and Marine Research, Bremerhaven, Germany**
Developed a protocol for in situ measurements of radon and methane in sea water.
- 12/2011 – 02/2012 **Research intern | Environmental Chemistry Department, Université de Montréal, Montréal, Canada**
Tested the influence of different environmental conditions on iron nanoparticle size.

◆ EDUCATION

- 08/2015 – 10/2019 **Dr. rer. nat. in Atmospheric Chemistry | Max Planck Institute for Chemistry and Johannes-Gutenberg-Universität (Mainz, Germany)**
Thesis: Total OH reactivity in pristine and polluted environments: Investigating atmospheric chemistry in the Anthropocene.
- 04/2013 – 06/2015 **M. Sc. in Chemical Biology | Friedrich Schiller University (Jena, Germany) and Royal Netherlands Institute for Sea Research (Texel, Netherlands)**
Focus on organic analytical chemistry in selected courses. *Thesis:* The effects of salinity and alkalinity on the hydrogen isotope composition of long-chain alkenones in *Emilania huxleyi*.
- 10/2009 – 04/2013 **B. Sc. in Chemistry | Friedrich Schiller University (Jena) and Université de Montréal (Canada)**
Thesis: Light- and signal-induced pheromone production in *Seminavis robusta*.

◆ GRANTS

- 01/2022 – present Falling Walls Female Science Talents Intensive Track 2022 (ca. 8 000 €, career development grant)
- 09/2020 – present Feodor Lynen Postdoctoral Fellowship of the Alexander von Humboldt Foundation (87 000 €, salary grant)
- 01/2018 – 06/2019 Fellow of the Ada Lovelace Program for women in STEM (3 500 €, career development grant)
- 01/2017 – 02/2017 European Research School on Atmospheres (2 900 €, career development grant)
- 08/2011 – 02/2012 International mobility award, Trans-Atlantic Science Student Exchange Program (tuition waiver, \$ 8 000)
- 03/2011 – 06/2015 Scholarships for Bachelor and Master studies, Heinrich Böll Foundation (ca. 10 000 €)

◆ AWARDS

- 01/2022 Falling Walls Female Science Talent 2022
- 09/2020 Feodor Lynen Fellowship of the Alexander von Humboldt Foundation
- 12/2020 Best EGU Atmospheric Science Blog Post of the Year
- 06/2008 Graduation prize of the German Mathematical Society (DMV)
- 06/2008 Graduation prize of the German Chemical Society (GdCh)

◆ SUPERVISION OF STUDENTS

- 01/2021 – present Training of PhD student Erin Katz on PTR-MS instrumentation and data analysis
- 07/2021 – present Supervision of undergraduate student Nathan Sweet for operation of PTR-MS and data analysis
- 11/2016 – 11/2018 Training of junior PhD students Nijing Wang and Nina Reijrink in the Comparative Reactivity Method

◆ TEACHING

- 10/2021 **Certificate in Scientific Teaching (UC Berkeley)**
- 04/2022 **Undergraduate course “Air Pollution”, guest lecturer | University of California, Berkeley, Department of Civil and Environmental Engineering**
- 07/2018 – 08/2018 **Introductory course in inorganic chemistry | Johannes Gutenberg University (Mainz), Department of Inorganic Chemistry**
• Taught and graded a full-time summer laboratory course for first-year students
- 04/2012 – 07/2013 **Student teaching assistant in inorganic analytics | Friedrich Schiller University (Jena), Department of Inorganic Chemistry**

- Taught analytical chemistry seminars, gave oral exams and supervised a laboratory course for first-year students

06/2010 – 07/2015

Instructor for Global Education | Bildung trifft Entwicklung Regionale Bildungsstelle Mitteldeutschland, Jena, Germany

- Prepared and carried out sustainability workshops in schools

◆ **SCIENCE OUTREACH**

Present

“Meet a scientist” events with (pre-)schools on Amazon rainforest research, e.g. German School Shanghai

06/2017 – present

Author and editor of scientific blogs

- [European Geosciences Union Atmospheric Sciences blog](#)
- [Amazon Tall Tower Observatory research blog](#)
- [Air Quality and Climate Change in the Arabian Basin ship campaign blog](#)

03/2019 – 02/2020

Scientists4Future Mainz outreach activities on climate change, e.g. information booths in city center

12/2018

Youth representative at COP 2018 (UNFCCC climate change summit) in Katowice, Poland

01/2016 – 09/2019

Demonstration experiments for children and other visitors, Max Planck Institute for Chemistry, Mainz

◆ **SERVICE AND LEADERSHIP**

Present

Convener at scientific conferences

- AGU Fall Meeting 2022 (Session “Sources and Fate of Volatile Organic Compounds and NO_x in Human-Made Environments”)
- AGU Fall Meeting 2021 (Session “Novel VOC emission sources and atmospheric reactivity”)
- ATTO Research Seminar 2021 (Session “VOCs and atmospheric chemistry”)

08/2017 – present

Editorial board membership and peer-review of scientific publications

- Editorial board member at *Frontiers in Forest and the Atmosphere*
- Reviewer for the journals *Environmental Science and Technology*, *Atmospheric Chemistry and Physics*, *Atmospheric Measurement Techniques*, *Atmospheric Environment*, and *Science of the Total Environment*
- For the chapter on short-lived climate forcers in the IPCC Sixth Assessment Report
- Judge, Outstanding Student Presentation Award, AGU Fall Meeting 2020

03/2010 – 06/2020

Leadership positions in national & international youth organizations

Grüne Jugend, Global Young Greens & Federation of Young European Greens

- Led executive committee and staff of *Grüne Jugend Thüringen*
- Managed and moderated national and international conferences/seminars, coordinated working groups on- and offline
- Communicated with press (wrote ca. 40 press releases, gave interviews for newspapers, radio, TV)
- Designed and managed the website of *Global Young Greens*
- Wrote successful applications securing EU funding for international youth exchanges for *Grüne Jugend* (2/2 successful) and for observer status at the UN Climate Summits for *Global Young Greens*

08/2008 – 08/2009

Volunteer in development service

Deutscher Entwicklungsdienst (German Development Service), “weltwärts” program. Service in Kampong Speu (Cambodia)

- GPS mapping of protected community forests
- Taught English and environmental education to youth in a remote village

◆ FIELD CAMPAIGN PARTICIPATION

RECAP-CA	Reevaluating the Chemistry of the Atmosphere in California, aircraft campaign (Los Angeles and San Joaquin Valley, California, USA, 05-06/2021)
B2-WALD	Biosphere 2 Water, Atmosphere, and Land Dynamics (Arizona, USA, 11/2019)
AQABA	Air Quality and Climate Change in the Arabian Basin research cruise (Mediterranean Sea, Red Sea, Arabian Sea, Persian Gulf, 06/2017– 08/2017)
ATTO	Amazon Tall Tower Observatory campaigns (Brazil, 11–12/2016, 03/2017, 02–03/2018, 10/2018, 06/2019)
kOHComp	OH reactivity intercomparison campaigns at the atmospheric simulation chamber SAPHIR (Jülich, Germany, 10–11/2015, 06/2016)

◆ LANGUAGES

German (native) | English (C2) | French (C1) | Dutch and Portuguese (B1) | Khmer (A2)

◆ PROGRAMMING/SOFTWARE EXPERIENCE

Matlab, Igor Pro, ArcGIS Pro, Python, WordPress