



Katherine S. Hopstock, PhD

Atmospheric Scientist

Dr. Katherine Hopstock joined Sonoma Technology in 2024. She has over 9 years of combined academic and professional experience conducting laboratory experiments, field work, and analysis of air quality data. Dr. Hopstock's previous work has included designing and conducting laboratory experiments on particulate matter, monitoring ambient levels of trace gases, and evaluating potential public health

effects from exposure to various emissions.

At Sonoma Technology, Dr. Hopstock draws upon her analytical expertise to support air quality monitoring and measurement projects within the Refinery Services Department. She provides technical subject matter expertise and oversight to high-impact projects, and contributes to the design and implementation of air quality monitoring/measurement networks. Dr. Hopstock routinely works with point monitors and open-path technology located at the fencelines of industrial facilities to assess real-time volatile organic compound emissions and their potential impacts on the air quality of surrounding communities.

Prior to joining Sonoma Technology, Dr. Hopstock completed her PhD in Atmospheric Chemistry at the University of California, Irvine, under the guidance of Professor Sergey Nizkorodov. Her thesis focused on the connection between the color of wildfire smoke and its molecular composition. She became an expert in utilizing chromatography and mass spectrometry techniques (GC, LC, UHPLC systems with PDA, MS, and MS/MS detectors) to identify light-absorbing species within chemically complex mixtures and determine their fates during atmospheric transport. In addition to her doctoral research, Dr. Hopstock participated in airborne and ground-based measurements with NASA's Student Airborne Research Program (SARP), where she served as a graduate mentor for the program. After completing her PhD, Dr. Hopstock was a Post-Doctoral Research Scientist at the University of California, Irvine, where she studied the chemical composition and optical properties of smoke produced during fires at the wildland-urban interface.

Dr. Hopstock has authored numerous peer-reviewed publications and has presented her work at national and international conferences. She was the recipient of the 2024 American Chemical Society Graduate Student Award in the Division of Environmental Chemistry, as well as the University of California, Irvine 2024 Rowland Graduate Fellowship.

Education

- PhD, Atmospheric Chemistry, University of California, Irvine
- MS, Chemistry, University of California, Irvine
- BS, Chemistry, University of California, Irvine

Memberships

- American Chemical Society
- American Association for Aerosol Research

For a list of publications, see sonomatech.com/ResPub/KSHpub.pdf.