Ningxin Wang, PhD

Air Quality Data Scientist

Dr. Wang joined Sonoma Technology's Data Science Department in 2020. She has seven years of academic research experience in atmospheric chemistry, and has expertise in chemical speciation of secondary organic aerosols (SOA) and the statistical analysis of their mass spectra using positive matrix factorization (PMF). She is currently involved in multiple Sonoma Technology refinery fenceline monitoring projects, where she uses her expertise to perform quality assurance and quality control (QA/QC) of measurements from optical instruments such as the Ultra-Violet Differential Optical Adsorption Spectrometer (UV-DOAS) and the Fourier-transform Infrared Spectrometer (FTIR).

Before joining Sonoma Technology, Dr. Wang was a postdoctoral researcher at the University of California, Davis. She was involved in a number of projects, including QA/QC of ambient measurements from a Time-of-Flight (ToF) Aerosol Chemical Speciation Monitor (ACSM) and its long-term deployment at the California Air Resources Board's (CARB) Fresno Garland site. She also conducted PMF analysis of ACSM measurements from an Arctic oil field, and took the main role in the development and building of an automated relative humidity conditioning sampling system. She participated in the SeaSCAPE 2019 Campaign (Sea Spray Chemistry and Particle Evolution) at the National Science Foundation (NSF) Center for Aerosol Impacts on Chemistry of the Environment (CAICE) to study the formation of marine aerosols.

Education

- PhD, Chemical Engineering, Carnegie Mellon University
- BS, Chemical Engineering, University of Arizona

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

While earning her PhD at the Center for Atmospheric Particles Studies (CAPS) at Carnegie Mellon University, Dr. Wang focused on the simulation of continuous atmospheric oxidation processes of SOA generated from a biogenic precursor through smog chamber experiments. In 2016, she also participated in the international field campaign of the Finokalia Aerosol Measurement Experiment (FAME). The results of her work can be used in atmospheric chemical transport models to predict ambient aerosol levels. She became an expert in advanced instrumentation such as the High-Resolution Aerosol Mass Spectrometer (Aerodyne), and gained fundamental knowledge of SOA formation processes.