



# Analytical Seminar

by

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*"Organic Particles in the Atmosphere:  
Why so Complicated?"*

The atmosphere is a very complex mixture of gases, solids and liquids containing thousands of organic and inorganic compounds. Understanding and quantifying this complexity is critical for elucidating the impact of anthropogenic emissions on visibility, health and climate. A particularly challenging problem involves airborne particles. While there are direct, primary sources of particles such as soot from diesel engines, sea salt generated by wave action and wind-blown dust, much of the particulate matter in air is "secondary". That is, it is formed by reactions of precursor gases that ultimately generate low volatility products which either form new particles or add to existing particles in air to grow them. Given the enormous variety of organic precursors in air and their multiple oxidation pathways, understanding secondary organic aerosol (SOA) is especially challenging. The results of some of our recent experimental studies directed to understand SOA composition and structure, and how these evolve in a dynamic reaction system, will be used to illustrate current unsolved issues and highlight what we need to know in the future for an accurate prediction of their impacts on air quality and climate.

Thursday, October 12 at 12:15 p.m. in Room 1315 Chemistry