

SEMINAR

Why Molecular Structure Matters in the Chemistry of Atmospheric Organic Aerosol Formation

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ABSTRACT

Laboratory studies provide much of the fundamental data on reaction kinetics, products, and mechanisms that are needed to understand atmospheric chemistry and to develop models that are used to establish air quality regulations and to predict the effects of human activities on climate. In this talk I will describe research in my laboratory that focuses on the chemical and physical processes by which oxidized products of atmospheric reactions of organic compounds form microscopic aerosol particles. Studies are conducted in large-volume environmental chambers in which experiments are designed to simulate atmospheric chemistry, and a diverse array of analytical methods are used to obtain information on gas and particle chemical composition, heterogeneous/multiphase reaction rates and equilibria, and gas-particle-wall interactions. I will focus in particular on studies we have conducted to better understand the ways in which the molecular structure of organic compounds influences their atmospheric chemistry and tendency to form aerosol particles.

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Refreshments 3:15 p.m.

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FL2-1022, Large Auditorium

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