OBERLIN
COLLEGE & CONSERVATORY

Chemistry & Biochemistry

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UC Davis

"Connections Between Chemical Composition, Light Scattering and Water Uptake by Atmospheric Particles"

Atmospheric particulate matter (aka aerosols) play a crucial role in determining global climate, both by scattering and absorbing sunlight and by acting as seeds onto which all clouds form. How aerosols interact with sunlight or help to form clouds depends on their composition. One type of aerosol – organic aerosol – remains enigmatic, in large part due to the high chemical complexity and spatial and temporal variability of these particles in the atmosphere.

In this talk, I will discuss an experimental investigation of how light scattering by organic aerosols varies with composition. We use our measurements to develop a parameterization that relates light scattering to composition; this type of parameterization can be used in next-generation climate models. I will also discuss experiments that show how particle composition determines water uptake by particles, which is key to understanding the ability of these particles to form into clouds.

Wednesday 9/21/11

4:45 pm Room A255

Science Center

A reception will be held at 4:30 in the David Love Lounge

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