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**Uptake Kinetics of Trace Gases on Aqueous and Organic Droplets<sup>1</sup>**

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Submicron atmospheric particles are now known to frequently contain significant levels of aliphatic, aromatic, and/or partially oxygenated organic species. The interaction of atmospheric trace gases with organic and aqueous/organic particle surfaces may have important impacts on atmospheric chemistry and aerosol/cloud microphysics processes. A droplet train/fast flow reactor technique has been used to investigate the uptake kinetics of reactive and/or condensable inorganic and organic vapor species with ethylene glycol, 1-octanol and 1-methylnaphthalene surfaces as a function of relative humidity. The trace vapor uptake kinetics on these surfaces will be compared and contrasted with the kinetics of trace gas uptake on aqueous droplets.

<sup>1</sup>Results from a collaboration between the Davidovits Group, Department of Chemistry, Boston College and Aerodyne Research, Inc.