

UPTAKE OF PAH'S ONTO ORGANIC-COATED WATER SURFACES

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Previous laboratory and field studies have established the likelihood that aqueous particles in the atmosphere can have a surface film composed of partially oxidized organic compounds, such as organic acids and alcohols. Such surface films could solvate hydrophobic compounds at the droplet-atmosphere interface, altering the atmospheric lifetimes of the hydrophobic compounds, as well as potentially changing their oxidative pathways and photochemistry. We have developed a glancing-angle laser-induced fluorescence technique which provides good surface sensitivity towards PAHs at the water-air interface. Using this method, fluorescence spectra, adsorption isotherms and uptake from the gas phase to the surface have been measured for 3- and 4-ring PAHs on water surfaces coated with sub-monolayer films of hexanoic acid. Our initial results will be presented here.