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Towards reaction studies on aqueous aerosol particles

Wednesday 13 November 2024 15:00 (10 minutes)

Our previous work has demonstrated the feasibility of liquid jet XPS for identifying reactive intermediates at the aqueous solution - air interface for solutions in the mM range of concentrations. This establishes a major concentration or water activity gap to atmospheric aerosol particles existing at ambient relative humidity and thus characterized by highly non-ideal conditions. Aerodynamic focussing of aerosols into a particle beam requires vacuum at the point of measurement, which will lead to departure of particle composition from equilibrium. Therefore, I am suggesting to work towards flow focusing systems that allow maintaining relevant water vapor pressure to allow probing particles at equilibrium. This would offer new opportunities in reaction studies of many relevant aerosol reaction systems.

Significance

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Session Classification: Aerosol