



Abstract ID : 44

Adsorption of hexylamine on ice

Content

Hexylamine is a member of the alkylamine family, important bases in the atmosphere. This work investigates the adsorption of hexylamine on ice and represents the first ever in situ investigation of the adsorption of a base on ice at environmental temperatures. Adsorption of hexylamine at the ice surface was tracked by ambient pressure X-ray photoelectron spectroscopy (XPS) and demonstrated reversible adsorption upon exposure to 10^{-5} mbar hexylamine. The detailed analysis of the N 1s core level spectra indicated that more than half of hexylamine at the ice surface was protonated. Partial electron yield O K-edge near edge X-ray absorption fine structure (NEXAFS) spectra indicated a strongly increasing degree of disorder at the surface in presence of hexylamine when compared to pure ice at the same temperature.

Primary authors: AMMANN, Markus (PSI - Paul Scherrer Institut); GABATHULER, Jérôme (Paul Scherrer Institut)

Co-authors: ARTIGLIA, Luca (Paul Scherrer Institut); BARTELS-RAUSCH, Thorsten (PSI - Paul Scherrer Institut); MANOHARAN, Yanisha

Presenter: AMMANN, Markus (PSI - Paul Scherrer Institut)

Track Classification: Environmental chemistry