

Laboratory studies of tropospheric chemical conversions in the condensed phase

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An overview on laboratory studies on aqueous systems which are studied for a better understanding of tropospheric multiphase chemistry is given. Firstly, a phase transfer experiment is described to study the input of oxidants and reactants into atmospheric droplets. This experiment utilises a macroscopic pendant drop with in-situ time-resolved UV/VIS detection. Second, recent work on photochemical radical generation in aqueous solution is treated, which, second to direct phase transfer, also constitutes an important radical source for aqueous tropospheric systems. Thirdly, selected results from laser photolysis/long path laser absorption experiments are presented where sink reactions of short lived species are studied mostly for organic reactants.

The results of the above laboratory investigations are being summarized by implementation into the CAPRAM mechanism and a few results of model runs are discussed to conclude the contribution.