Overview on 'Removal and Interconversions of Oxidants in the Atmospheric Aqueous Phase, Part 2', Acronym: RINOXA 2

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In this presentation an overview on the RINOXA 2 project will be given. The participants of this research project are Dr. H. Herrmann and Prof. Dr. R. Zellner, University of Essen, D, Prof. Dr. Ph. Mirabel, University of Strasbourg, F, Prof. Dr. G. Buxton, Dr. A. Salmon, University of Leeds, UK, Dr. K. Sehested, Dr. J. Holcman, Riso National Laboratory, DK and Prof. O. Brede, Max-Planck-Arbeitsgruppe für Zeitaufgelöste Spektroskopie, Leipzig, D.
The project is devoted to laboratory studies of aqueous phase interactions of tropospheric oxidants (OH, HO_2, O_3, SO_4^- NO_3, Cl_2^-) with key organic tropospheric compounds which are transferred from the gas phase into the tropospheric aqueous phase, i.e. into the droplets of clouds, fog, rain and the aqueous phase of aerosols. The processes to be studied are expected to influence the oxidizing capacity of the troposphere by (i) phase transfer of organic compounds from the gas phase, leading to a potentially higher oxidizing capacity of the tropospheric gas phase and (ii) aqueous phase reactions of primary and secondary oxidants, potentially lowering the troposphere's gas phase oxidizing capacity due to the removal of oxidants from the gas phase and subsequent interconversions.
Main results of the RINOXA 2 project will be presented. The impact of multiphase processes on VOC oxidation for the constituent groups (organo-sulfur compounds, aldehydes, aromatics, terpenes and their degradation products) investigated will be discussed together in view of existing gas phase degradation schemes.