



Multiphase photochemistry of organic compounds in tropospheric clouds

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Water droplets encountered in the troposphere can contain important fractions of organic compounds, which can photooxidize, leading to new organic compounds. These photooxidation processes are not well understood although a number of important issues are related to these phenomena, i.e. the oxidizing capacity of the atmosphere (formation of ozone, hydroperoxides, and organic acids), the formation of Secondary Organic Aerosols (SOA), the CCN capacity of aerosols, the formation of humic like substances (HULIS)...

We will present the results of our laboratory experiments on the direct photolysis and the OH-initiated oxidation of a number of organic compounds that can be encountered in the tropospheric aqueous phase. The obtained kinetics and the mechanisms will be presented and discussed in details, as well as some Structure Activities Relationships (SAR).