

Interconnections of atmospheric aqueous-phase chemistry: Past, Present and Future

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Since the inception of the concept that aqueous-phase chemistry occurs in the troposphere, there has been fruitful interconnections and interaction with other areas such processes are of relevance. As outlined in the session call, this is surely the case for surface water chemistry, but further such interconnections exist: There have been strong interactions with radiation chemistry, inorganic chemistry, water treatment research and, to a certain extent, organic chemistry. During this presentation it will be discussed how transfer of knowledge worked from one research area to the other. Generally, cross-talk and interconnection of the work discussed here can be fruitful for either side.

First, a short report is given how interaction with inorganic chemistry research works successfully in the past with a focus on past European projects. Here, good examples exist, especially in sulphur oxidation, on how to widen the existing expertise of existing networks.

Second, some examples of important interconnections of surface water chemistry towards aqueous-phase atmospheric chemistry are discussed. These will be taken from non-organic systems and include photochemistry, such as nitrate photolysis.

In the third part it is discussed whether or not professional organic chemistry and atmospheric chemistry are in fruitful exchange and how that might be fostered more as apparently organic multiphase chemistry in the troposphere still needs further development.

Finally, a summary together with an outlook will be given.