



# DEPARTMENT OF CHEMISTRY SEMINAR SERIES

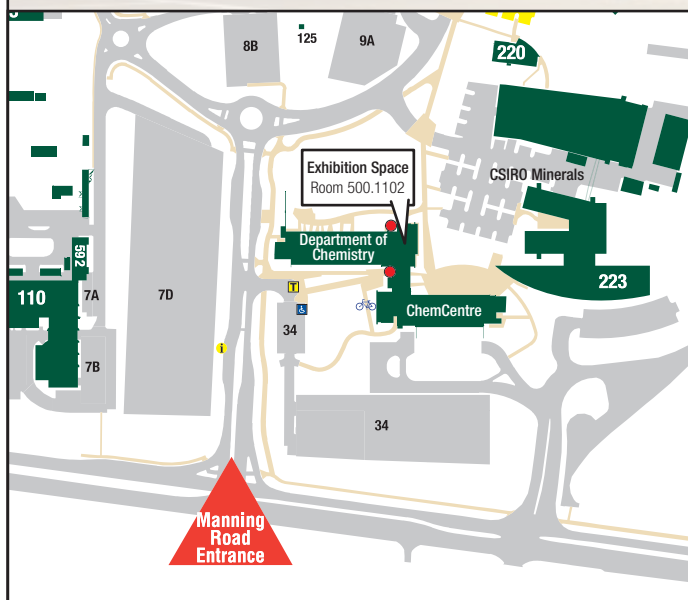
## Interaction between natural organic matter and oxidants: Reactivity, competition, oxidation by-product formation and precursor control

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Natural organic matter (NOM) plays an important role in all water treatment processes and typically leads to a reduction of their efficiency. The interaction with oxidants are manifold, but mostly, they result in a consumption of oxidants leading to a lower performance related to disinfection and oxidation. At the same time, the interaction with NOM may directly lead to the formation of oxidation by-products or affect their formation (in)directly (shift of reactive species, precursor control). The reactivity of NOM with chemicals has often been related to UV-Vis absorption spectra, because they give information on aromatic and conjugated moieties in NOM, which are related to the oxidisability of NOM. Recently, we also investigated the electron donating capacity (EDC) of NOM as a new parameter to characterize its reactivity with various oxidants, such as chlorine, chlorine dioxide and ozone. A combination with the UV absorption enables drawing conclusions on reactive sites in NOM.

The talk will give an overview over the interactions between NOM and chemical oxidants and their effect on micropollutant abatement, oxidation by-product formation and precursor removal and try to rationalize the observations in terms of NOM character related to UV absorption and EDC.



Friday, 27th September 2013 at 4:00 PM  
Exhibition Space, Building 500, Room 1102

For more details about the  
Chemistry Seminar Series, please contact:

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