

## OP 1.4

### **High priority contaminants of the aquatic environment: Speciation analysis for detection and the evaluation of removal strategies**

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With the introduction of the water framework directive 2000/60/EC (WFD) the EU aimed at harmonized, uniform and high quality goals for surface water bodies with respect to organic and inorganic micropollutants. A list of so-called priority substances which comprises mainly persistent organic pollutants (POP) and several inorganic pollutants (Cd, Hg, Ni, Pb) was issued. In this context organotin compounds and brominated flame retardants represent a class of substances which affords highly sensitive and selective methods for detection and accurate quantification in different environmental compartments. We will discuss the figures of merit of different separation methods in combination with mass spectrometric detection and their applicability for investigation of the fate of these substances in the aquatic environment.

It is evident that the contamination of the aquatic environment can be avoided by fit-for-purpose elimination strategies. We have assessed the potential of ionic liquids for removal of organotin compounds, brominated flame retardants and priority metals from waste water of different contamination sources employing the above mentioned techniques. First data will be presented.