

Session BG7.2 “Natural organic matter in aquatic systems: methods, fractions and interactions in natural and engineered systems”

EGU 2018, in Vienna (Austria), 08-13 April 2018.

Deadline for submission of abstracts is **January 10th 2018.**

More details at: <http://meetingorganizer.copernicus.org/EGU2018/session/26401>

Natural organic matter plays an important role in aquatic biogeochemical cycling. Although a substantial progress has been made in aquatic organic matter characterisation, data acquisition, modelling and characterisation of environmental gradients, further studies are needed to improve process understanding of observed patterns. In particular there is a growing need to monitor the advances in application of novel organic matter characterisation tools, understanding the origins, pathways, transformations and environmental fate of organic matter in aquatic environments and identification of robust numerical and statistical tools for data processing and modelling. In particular, we invite comprehensive aquatic organic matter characterisation studies providing independent lines of evidence from different analytical methods e.g. fluorescence and absorbance spectroscopy, mass spectrometry, chromatography (HPLC, HPSEC). The purpose of this session is to evaluate the current state-of-the-art of aquatic natural organic matter research, to bring together the research community and to provide a platform for knowledge and best practice exchange.

We would like to welcome oral and poster contributions in the following research areas:

- Sources and reactivity of aquatic organic matter in the environment including transformations along the freshwater to marine continuum,
- Catchment-scale and reach-scale organic matter processing and interactions with other biogeochemical cycles e.g. denitrification in the hyporheic zone,
- Spectroscopic (fluorescence and absorbance) properties of organic matter from natural (streams, lakes, estuaries and marine ecosystems) and engineered systems (drinking water treatment, distribution system, wastewater treatment),
- In situ applications of organic matter characterization tools including CDOM and Tryptophan sensors for understanding organic matter patterns and processes on a fine temporal scale,
- Linking information on organic matter properties from different analytical approaches e.g. fluorescence and absorbance spectroscopy, size exclusion chromatography, resonance spectroscopy, capillary electrophoresis and advanced mass spectrometry,
- Advanced data processing and modelling tools including indices, methods for fluorescence and absorbance spectra deconvolution and component analysis including principal components analysis, parallel factor analysis and self-organizing maps.