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Micropolluants and microplastics in the aquatic environment

Conveners

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Keynote Speaker

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Pollutants from urban, industrial and agricultural activities end up through various routes to aquatic environment. Partitioning and transformation processes affect their fate and possible impacts to natural functions and water use. Even at low concentrations these pollutants may pose a significant threat for ecosystems and human health. Studies on micropollutants in the aquatic environment represent a wide field of environmental research. This session aims to present current scientific knowledge regarding the presence, fate and impact of various classes of priority and emerging micropollutants (such as pesticides, old and new persistent pollutants, pharmaceutical compounds, personal care products, flame retardants, surfactants, engineered metal nanoparticles) in surface and ground waters, coastal and marine environment. Studies that deal with active and passive sampling tools, new analytical trends and bioanalytical approaches to assess the occurrence of micropollutants in water, sediments and biota, the processes that govern their fate and, possible risk at different endpoints are welcomed. Microplastics is a new “contaminant of concern”. It comprises a wide range of material types and formation pathways, and does also include paints and elastomers like tire wear particles. Microplastic research originates from marine studies, but is today also carried out in other environmental compartments such as freshwater bodies, terrestrial environments, biota, and air. This session aims at a comprehensive assessment of the relevance of microplastics in the aquatic environment by contributions on various aspects of microplastics research, including analytical methods, occurrence, fate and behavior, and impacts across all environmental compartments.