Identification and prioritisation of hazardous emerging pollutants

CHAIRS: Werner Brack, Jaroslav Slobodnik

Wednesday 14th May 2014, 08:10 – 16:00, room: Sydney

More than 70 million of different chemicals are known and registered in the Chemicals Abstract System, more than 100.000 of chemicals are in daily use and ten thousands of chemicals are typically detected in environmental samples such as sediments, soil, water and biota. Only a very small fraction of these chemicals is monitored and often does not explain measurable effects on biological systems. Thus, this interdisciplinary session wants to focus on the presentation of concepts, approaches, tools and case studies to identify and prioritise (emerging) pollutants posing a hazard to ecosystems and human health. This includes site-scale approaches such as effect-directed analysis (EDA) of toxic compounds in different matrices including innovation in biodiagnostic tools (in vitro, in vivo, biomarkers, omics), fractionation, chemical structure elucidation (GC-MS, LC-MS, computer tools) and automated high-throughput approaches integrating these tools, larger scale integrated chemical, (eco)toxicological and ecological screening approaches and multivariate evaluation tools to identify possible links between exposure and effects, prioritisation approaches for individual chemicals based on monitoring data or exposure and risk modelling considering chemicals production, usage patterns, persistence and fate as well as toxicity and prioritisation of pollutant mixtures involving state-of-the art mixture toxicity models.

SESSION TYPE: Platform, Poster Spotlight and Poster