

## Environmental risk assessment of nanomaterials: open issues, pitfalls and recommendations

**CHAIRS:** Birgit Sokull-Kluettgen, Thomas Backhaus



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There is an ongoing debate on the adequacy of “standard” chemical risk assessment approaches for manufactured nanomaterials, a debate that concerns approaches for exposure assessment as well as hazard and risk assessment. Due to ever increasing use of nanomaterials in almost all areas, these questions more and more concern the safety/risk assessment in a broad range of regulations, such as e.g. REACH, the regulatory frameworks for the safety of food and food packaging, the new Biocidal Products Regulation or the Plant Protection Products Regulation. So far there are only a few legal instruments in the EU addressing nanomaterials specifically, in particular the Cosmetic Products Regulation, the Regulation on the Provision of Food Information, and the Biocidal Products Regulation. Despite the progress made, risk assessment and management of nanomaterials remains a scientific challenge for all stakeholders, including industry and authorities, and is the subject of many research projects. Activities concerning safety assessment across industries and nations are coordinating by the OECD Working Party on Manufactured Nanomaterials (WPMN). The session aims to provide an overview of the state of the art of the environmental risk assessment of nanomaterials. What do we know, and how do we implement scientific knowledge into regulation? What are the known unknowns and what are the current ideas on how to fill in the knowledge gaps? And finally: in which areas do the unknown unknowns most likely hide? We are inviting case studies on the environmental risk assessment of nanomaterials as well as conceptual reflections on current issues, e.g. the extrapolation between the nano-world and the non-nano world, the development of QSARs for risk assessment purposes, the use of LCA-approaches for nanoparticle risk assessment, improved approaches for environmental exposure estimations, strategies for improving the hazard characterization of nanoparticles testing outcomes and the intercomparability of the data used in risk assessments. Scientists from research organisations, industry and authorities are invited to present their experience and difficulties with regard to the risk assessment of nanomaterials. The purpose of the session is to share lessons learnt, to facilitate the identification of knowledge gaps and to propose solutions on how ensure the safe use of nanomaterials.

**SESSION TYPE:** Platform, Poster Spotlight and Poster

**ADVISORY GROUP:** Nanotechnology Advisory Group (Global)