The number of ecotoxicity studies of engineered nanoparticles is rapidly increasing in these years, but in most studies of toxicity and bioaccumulation the experimenters struggle with problems of controlling the exposure. This raises questions about the reliability of results generated in standardized test systems that originally have been developed for substances in solution. Nanoparticles do behave fundamentally different than solute chemicals in aquatic media. Based on own experiences these fundamental problems in aquatic ecotoxicity testing of engineered nanoparticles and some implications for risk assessment will be addressed in this lecture. It is concluded that not only is there an urgent need to study both ecotoxicity and bioaccumulation of engineered nanoparticles, but also to develop methods suitable for handling and detecting engineered nanoparticles in exposure systems in order to decrease the uncertainty in environmental risk assessments of engineered nanoparticles.

Thursday April 19th at 10.15
Room 234, Building 1135
The number of ecotoxicity studies of engineered nanoparticles is rapidly increasing in these years, but in most studies of toxicity and bioaccumulation the experimenters struggle with problems of controlling the exposure, i.e. defining what the x-axis in a concentration-response or uptake study actually represents. This raises questions about the reliability of results generated in standardized test systems that originally have been developed for substances in solution. Nanoparticles do behave fundamentally different than solute chemicals in aquatic media. Based on own experiences these fundamental problems in aquatic ecotoxicity testing of engineered nanoparticles and some implications for risk assessment will be addressed in this lecture. It is claimed that not only is there an urgent need to study both ecotoxicity and bioaccumulation of engineered nanoparticles, but also to develop methods suitable for handling and detecting engineered nanoparticles in exposure systems in order to decrease the uncertainty in environmental risk assessments of engineered nanoparticles.