

Chemical contaminants and their assessment: an analytical perspective

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European Commission surveys on environmental issues indicate that public perception ranks aquatic pollution as a major concern. Whilst many traditional/legacy pollutants, such as oil and carcinogens remain of particular concern, recent attention has focused on ‘emerging’ contaminants that are released primarily from waste water outfalls and are not removed through the treatment processes. These compounds are often used in massive quantities and include endocrine disrupters and toxic personal care products. More recently, attention has been drawn towards nanoparticles which are seeing massive growth in production. This presentation will explore strategies to investigate/regulate/assess pollution using examples of our research, including the appraisal of environmental effects and risks associated with ‘emerging’ contaminants and improvement in the assessment protocols to address pollution.

A variety of analytical techniques will be described for the determination of a broad range of emerging and priority pollutants including carcinogens, personal care products, pharmaceuticals, endocrine disrupters, antifoulants and nanoparticles. Our work demonstrates their ubiquitous distribution and investigates the behaviour/fate of these compounds in aquatic environments.