

Environmental Nanoscience: nanomaterials as emerging pollutants and applications of nanomaterials for the environment

Nanoscience is the science of materials in the size range between 1 and 100 nm, potentially demonstrating properties which are unusual for differently sized materials. Given the scale of the production and their potential deleterious environmental effects, nanomaterials are an emerging contaminant of great importance. The environmental risk of these nanomaterials is poorly constrained due to a fundamental lack of understanding and information on a range of issues. However, nanomaterials are of great potential benefit to the environment as sensors, in remediation and elsewhere. This talk will discuss the research in both areas and discuss tension and approaches at this interface.



ABOUT THE SPEAKER

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His research aims at understanding nanoscale phenomena in the environment and he is interested in investigating natural nanomaterials, manufactured nanomaterials and their interactions. Manufactured nanomaterials are important emerging pollutants, whose novel properties and high production volumes may result in novel environmental health problems and challenges. These risks to the environment are currently poorly understood and this lack of understanding may reduce the sustainability and safety of a huge and highly beneficial industry. Nanomaterials have important uses which may be exploited for the benefit of environmental and human health and these applications are being studied. Professor Lead remains adjunct Professor and co-Director of the Facility for Environmental Nanoscience Analysis and

Characterization, University of Birmingham, UK. He is a Fellow of the Royal Society of Chemistry (RSC), the Institute of Nanotechnology and the International Union of Pure and Applied Chemistry (IUPAC) and is editor of the journal *Environmental Chemistry* published by the CSIRO.

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