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Nanomaterials in the Environment: from implications to applications

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Abstract

Engineered nanomaterials (ENMs) are now becoming a significant fraction of the material flows in the global economy. Research into the health and environmental safety of nanotechnology has still lagged behind its emergence in industry. In this seminar we will see the ENMs flow in the Environment, analyzing the implication of ENMs exposure/effects in the Environment as well as the potential step forward to the ENMs applications, with particular regards to the Agri-food production. In order to clarify and exemplify the relevant points related to ENM implications, a series of functional cases study will be also reported, in particular related to i) effects at the level cellular and sub-cellular level, ii) effects of ENMs co-exposure, iii) ENMs trophic transfer, iv) ENMs biotransformation in plants.