

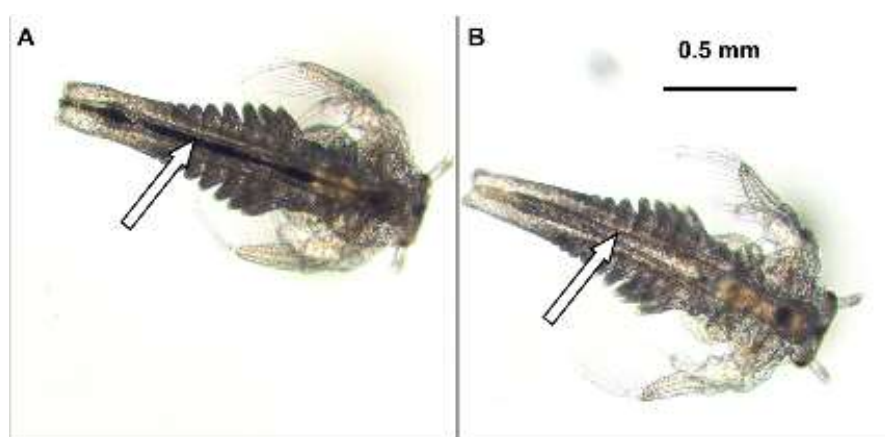
Present and future challenges of nanomaterials for the environment

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The release of nanomaterials into the environment is increasing, and more and more nanomaterials are reaching freshwaters. This is of great concern due to the potential risks for aquatic biota and functions they drive in the environment. We will discuss principal effects of nanomaterials on aquatic biota and ecosystem processes and the potential of bioaccumulation of nanomaterials along food chains. We will also discuss the EU regulation (or absence of it) to minimize the nanomaterials release and the risks to the environment and human health. We will propose measures to mitigate nanomaterial impacts on freshwaters and we will identify the players, which should be involved to minimise this problem of global concern

Fig 1: CuO nanoparticles accumulation in the gut of a freshwater organism. A) exposed to CUONPs B) not exposed.



Blinova I, Ivask A, Heinlaanal M, Mortimer M, Kahru A. Ecotoxicity of nanoparticles of CuO and ZnO in natural water Environm Poll 158, 41–47 (2010).