

NEPHH - nanomaterials related environmental pollution and health hazards throughout their life cycle

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Besides the positive multipurpose nano-reinforcement in polymeric materials and expanded devices applications, limited know-how presently exists on the environmental and health risks of certain manufactured nanomaterials. Initial research has indicated that engineered nanoparticles can have a negative impact on human health and environmental pollution. More importantly, and fundamental to the success of nanotechnology, is the perceived safety of the technology by the public. As activity shifts from research to the development of applications, there exists an urgent need to understanding and managing the associated risks, but in particular to personnel working with these materials.

NEPHH Project aims to identify and rate important forms of nanotechnology-related environmental pollution and health hazards that could result from activities involved in silicon-based polymer nanocomposites throughout their life cycle, and also to suggest means that might reduce or eliminate these impacts. NEPHH will consider the safety, environmental and human health implications of nanotechnology-based materials and products. This project accounts that nanoparticles, for most applications, are surface modified and generally embedded in the final product and therefore do not come into direct contact with consumers or the environment. Consequently, NEPHH will be going beyond the primary nanomaterials and will specially focus into the secondary and tertiary polymer nanoproducts with silicon nanoparticles compounds as base of their composition.

Present communication will include a general overview of the Project, including its main structure and work packages interrelation. Main outcomes of the Project to date will also be described including materials selected and procedures for samples production.