SAFETY MANAGEMENT OF NANOMATERIALS - WHAT IS STILL MISSING?

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Abstract
Nanomaterials science and technology made a huge progress in last two decades and in the contrary to other historical cases as radioactivity or pesticides, the concern of occupational and environmental safety accompanied the technological progress of nanomaterials since early beginning. Despite this effort, new properties of nanomaterials brought complications, which have to be overcome. The hazard identification methods are still not be completed and they are doubts if all of possible hazards are recognized already. The dose – effect studies search for the balance between simplicity and low-cost of in-vitro methods and very complicated inhalation tests simulating real exposure. The need of in-silico testing methods development is emphasized by EU administration. Principal gaps are in exposure assessment and in epidemiologic data collection. Risk management, if any, is then typically based on precaution principle only and legislation regulation specific to nanomaterials missing. Nevertheless, the progress is enormous and international scientific community runs series of various perspective projects.

Keywords: nanomaterial safety, testing, risk management

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