PROJECT FACTSHEET

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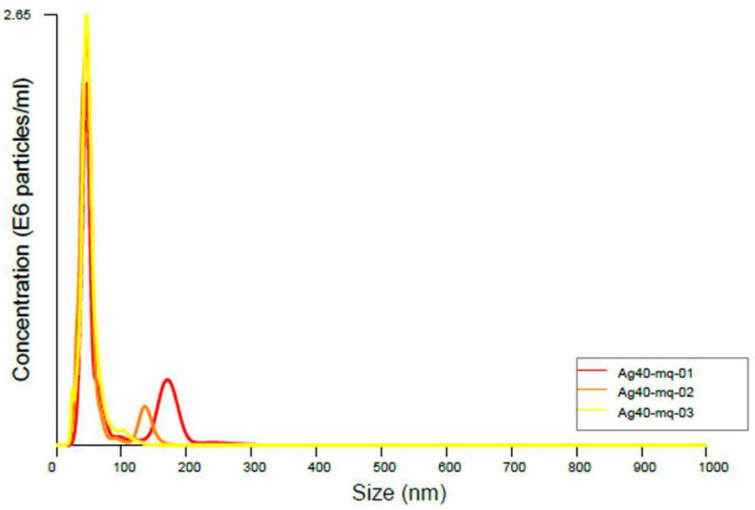
FutureNanoNeeds

Enabling the naming and classification, and hazard and environmental impact assessment of the next generation of nanomaterials.



Inspiration

Rapidly developing markets such as green construction, energy harvesting and storage, and advanced materials for aerospace, electronics, medical implants and environmental remediation are potential key application targets for nanomaterials. Nanotechnology has the potential to make qualitative improvements or indeed even to enable the technology. Potential impacts range from the increased efficiency of energy harvesting or storage batteries, to radical improvements in mechanical properties for construction materials. In addition, the concerns of these markets such as scarcity of materials, cost, security of supply, and the negative environmental impact of older products could also be addressed by new nano-enabled materials (e.g. lighter aircraft use less fuel).

Innovation

The FutureNanoNeeds project will develop a novel framework to enable the naming and classification, and hazard and environmental impact assessment of the next generation of nanomaterials prior to their widespread industrial use. It will uniquely achieve this by integrating concepts and approaches from several well-established related domains, such as structure-activity-relationships and crystallography to develop a robust, versatile and adaptable naming approach, coupled with a full assessment of all known biological protective responses as the basis for a decision tree for screening the potential impacts of nanomaterials at all stages of their lifecycle. Together, these tools will form the basis of a “value chain” regulatory process which will allow each nanomaterial to be assessed for different applications on the basis of available data and the specific exposure and life cycle concerns for that application.

Impact

FutureNanoNeeds will provide policy makers with unbiased scientific data on nanomaterials. The materials that will be investigated are not yet on the market, and in many cases there is still sufficient flexibility of choice and time for different technological options to be explored for commercialisation. Thus, science can play its correct role; giving measured, careful and accurate answers and insights into any novel hazards or risks foreseen, and allowing policy makers to measure the whole group of issues, and make the decisions for which they hold final responsibility.

Partners
University College Dublin (IE)

Financial Support
Seventh Framework Programme (FP7)

Contact
5, avenue des Hauts-Fourneaux
L-4362 Esch-sur-Alzette
phone: +352 275 888 - 1 | LIST.lu

Dr Arno GUTLEB (arno.gutleb@list.lu)
Dr Damien LENOBLE (damien.lenoble@list.lu)

LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY | LIST