

NIA Comment upon

**REPORT:**

**Environmental, Health, and Safety Research  
Needs for Engineered Nanoscale Materials.**

by

The National Nanotechnology Coordination Office (NNCO), on behalf of the Nanoscale Science, Engineering and Technology (NSET) Subcommittee of the Committee on Technology, National Science and Technology Council (NSTC).

## **Introduction to the NIA**

Formed in 2005, the Nanotechnology Industries Association (NIA) creates a clear single voice to represent the diverse industries' views in the multi-stakeholder debate on nanotechnology, by providing an interface with government, acting as a source for consultation on regulation and standards, communicating the benefits of nanotechnologies and interacting with the media to ensure an ongoing advancement and commercialisation of nanotechnologies.

The unique feature of the NIA is that it provides a purely industry-led perspective derived from the views of the collective membership, which is made up of many varied companies all at different stages of their life cycle and with a variety of interests in the huge range of technologies that derive their benefit from the nanoscale. This enables those seeking comment from industry to have a single point of entry to the industry and avoids the need to approach individual companies for statements on specific issues. In addition the breadth of the membership enables the NIA to put forward strong proposals to government and regulatory authorities to promote an environment that supports the application and utilisation of nanotechnologies.

Initial aims of the association are:

- promoting the responsible use of nanotechnology and raising awareness of its many applications in an unbiased way among key audiences within the UK,
- generating position statements and papers in areas relevant to its members and providing responses to consultations exercises,
- technology foresight exercises examining current products, developments and future applications of nanotechnologies with an industry-based perspective on the risk-based classification of emerging technologies including nanotechnology, which is linked to a new hazard assessment methodology as the current project,
- working closely with regulators to represent the interests of the NIA to ensure the future of nanotechnology is secured and to realise its full potential,
- encouraging and stimulating industry participation and support for nanotechnology, and
- providing a forum for discussing topics of relevance to its members.

The NIA is currently working together with various regulatory bodies and governmental departments and committees; ongoing interactions include:

- i. active support of the UK Government's Voluntary Reporting Scheme for Engineered Nanoscale Materials (conducted by DEFRA) by offering its members assistance with the completion of the required data sheet,
- ii. participation in selected meetings of the ISO/BSI nanotechnology standards working groups, the NRCG Task Groups, the Nanotechnology Engagement Group, and the UK Government's Council of Science and Technology, and
- iii. ongoing communication with equivalent organisations and governmental departments in other countries.

For further information visit <http://www.nanotechia.co.uk>.

## Comment

The NIA congratulates the NNCO on the complex and comprehensive report on the 'Environmental, Health, and Safety Research Needs for Engineered Nanoscale Materials'; the report represents a welcome contribution to the global development of EHS research strategies aiming to ensure a safe and responsible advancement of the research, development and commercialisation of nanotechnological innovations.

The report provides timely support to the activities of the recently launched OECD Working Party on Manufactured Nanomaterials. We appreciate that the OECD's strategy had been initiated but not launched at the time the NNCO report was written, and that detailed reference to the matching OECD Steering Groups was therefore not possible. With a view to the future implementation of the priorities described in the NNCO report a strong interaction and collaboration with the respective OECD SGs is desirable. We have no doubt that such collaboration can be facilitated through the involvement of members of the US EHS nanotechnology community in the OECD WPNM and its respective Steering Groups. Additional collaborations with individual national EHS research initiatives would benefit both the involved nations and the international nanotechnology (trade) community.

It would furthermore have been desirable for the report to be more specific about the anticipated involvement of industry in the five research priorities. It is appreciated that the NNI and its working parties are continuously liaising with industry, and that the report includes direct industry recommendations. A proactive support of continuing nanotechnology development and commercialisation, however, requires a paradigm shift in the cooperation between governmental bodies and industry that goes beyond any previous engagement exercises. The proposed development of an inventory of nanomaterials and their uses, for example, represents a pivotal agreement between the two sectors, and requires a carefully arranged support structure and monitoring procedure, which could well influence the future conduct of stakeholder debates. Additionally, it would be helpful to describe the anticipated impact of the inventory on the five proposed research priorities.

The proposed inventory should furthermore be developed with a view to sharing information on both the data collection exercise, as well as the storage and use of the gathered data with similar schemes that have already been completed or that are currently conducted by other countries (*cf.* Australia, German, UK). A clear indication of the (planned) interaction between all these reporting schemes would be immensely helpful for industry, especially multinational manufacturing and trading companies.

On the topic of 'Risk Management Methods; preparing for accidents relating to combustion and reactivity', the report states that 'systems of codes, standard, and industry practices exist to provide both the educated workforce and the highly engineered preventive and containment equipment needed to reduce the likelihood or consequence of severe accidents', which is welcomed, however, the validity of these should not be unconditionally applied to any novel nanomaterial engineered in any industry sector. Each nanomaterial should be assessed for the hazard it poses in relation to combustion and

reactivity and the appropriate equipment and procedures applied to handling the materials. Such statements should be disseminated with great care.

A particularly useful aspect of the report is the listing of existing research programmes, initiatives and collaborations, with a view to leveraging the proposed research priorities in part on their outcomes. In particular, the NIA strongly supports the proposed development of 'green' manufacturing research strategies.

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