Editorial

Risks and Control of Nanomaterials

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In this issue we bring together 12 articles on nanomaterials and approaches to risk control. The issue opens with a review by Eileen Kuempel and colleagues of the research needs for effective management of these materials. This is followed by two items on tools for control: a review of control banding and a report of discussions on reference values. Then an article describes the development of a practical generic approach to control, applying the popular tool Stoffenmanager to nanoparticles.

After this come two articles on exposure: one in the new field of manufacture of nanotubes and nanofibres and the other in welding, a process which dates back to the Bronze Age but which is attracting new attention because of the very fine component of the fume. Welding is now often quoted as an example of process-generated nanoparticles. The nanofibres article complements others on this topic we have published recently (Evans et al., 2010; Birch, 2011; Birch et al., 2011); and exposure to process-generated nanoparticles in welding and related processes has also been a popular topic (Bémer et al., 2010; Elihn and Berg, 2009; Pfefferkorn et al., 2010; Beurksens-Comuth et al., 2011; Topham et al., 2012).

Inevitably respiratory protective equipment is an important control, and there follow three articles on its effectiveness for these fine particles. Then comes an article on practical performance of portable exposure meters for nanoparticles, and finally two articles on toxicological tests of silica and titanium dioxide.

The issue originated with the conference held in April (2011) by the Institut National de Recherche et de Sécurité (INRS) in Nancy, France, on risks associated with nanoparticles and nanomaterials. Topics included measurement and control process design, occupational toxicology, protection, epidemiology, assessment and management of risk of nanoparticles. The conference organizers suggested some of the articles that might be considered by the Annals, and this resulted in the opening review and the last four articles in the issue. This conference is intended to be the first in a series of Occupational Health Research Symposia organized by INRS. The second, on mixed exposures, was held in April 2012, and we hope to publish some of the articles from that meeting later. Details of future symposia will be on the INRS website http://www.inrs.fr/accueil.html. We are pleased to cooperate with INRS in what promises to become a major series of European conferences on occupational health.

We are very grateful to Olivier Witschger and his colleagues at INRS for their part in the selection of the conference articles, which have all been through the journal’s normal peer-review process. We are delighted to cooperate with them in this way. Some of the rest of the issue was put together with the help of Derk Brouwer of TNO (TNO, Zeist, The Netherlands) and we gratefully acknowledge his help.

REFERENCES


