



REGULATORY DEVELOPMENTS

European Commission Unable to Define Nanomaterial

Since the European Parliament issued a resolution on nanomaterials in April 2009, the European Commission has been attempting to find an internationally harmonized definition of the term “nanomaterial.” The Commission released a draft definition in October 2010 open for a month to public comments. However, it was recently made clear at the Safety for Success Dialogue in Brussels that after over 200 comments on the draft definition, consensus has yet to be found. The coordinator of the Commission’s effort noted that the Commission would not be rushing to make a decision because “once made, it would not be a working model but would immediately have a significant binding effect.” Aspects of the debate include whether to use the number or weight of particles as the standard to define nanomaterials. The Commission is expected to issue a definition before the end of the summer. For further details, see <http://www.innovationsgesellschaft.ch/index.php?section=news&cmd=details&newsid=441&teaserId=4>

Synthesis Report of the NanoCode Survey on EU Code of Conduct for Responsible Nanosciences and Nanotechnologies Research (EU-CoC)

NanoCode project, organized under the 7th Framework Programme of the European Commission, has issued a synthesis report on its recent survey. The NanoCode Survey, conducted between August 2010 and January 2011, is comprised of reports from seven EU members (Italy, UK, France, Spain, the Netherlands, Czech Republic, and Germany), and three non-EU states (Switzerland, Argentina, and South Africa), as well as experts from international organizations. The survey found broad support of the EU-CoC principles, however, contrary to the high level of agreement with the principles, there was a low rate of adaption in practice.

The full report can be found here:

<http://www.nanocode.eu/files/reports/nanocode/nanocode-consultation-synthesis-report.pdf>

Nanoscale Carbon Toxicity Testing Proposal Submitted to EPA

The NanoSafety Consortium for Carbon has submitted a toxicity testing proposal to the EPA on materials under Section 4 of the Toxic Substances Control Act. The toxicity testing proposal includes testing for multi-walled carbon nanotubes, double-walled carbon nanotubes, single-walled carbon nanotubes, and graphene.

The full proposal can be found here:

<http://www.nanolawreport.com/AlwoodLetterandProposal20110406.pdf>

World Health Organization Developing Guidelines on Nanomaterials

The World Health Organization is developing guidelines to protect workers' health from potential risks associated with manufacturing nanomaterials. The guidelines will encompass risk assessment, risk management, and provide recommendations on how to improve the occupational safety of workers using nanomaterials, with a focus on low and medium-income countries. The guidelines will be developed by a Guideline Developing Group and an External Review Group, organized by the WHO.

Switzerland launches National Research Program "Opportunities and Risks of Nanomaterials"

The Swiss National Science Foundation has launched a National research Program, "Opportunities and Risks of Nanomaterials" (NRP 64). NRP 64 aims to understand the effects of exposure to nanomaterials on humans and the environment by conducting 18 projects divided into three modules. The modules are medical applications, ecological effect of nanomaterials, development and use of nanomaterials in other industries, such as construction. See <http://www.nfp64.ch/E/Pages/home.aspx> for details.

REVIEWS AND OTHER PUBLICATIONS OF INTEREST

1. **Characterization of nanoparticles for therapeutics.** Nanomedicine. Dec 2007, Vol. 2, No. 6, pp. 789-803, Jennifer B Hall, Marina A Dobrovolskaia, Anil K Patri & Scott E McNeil. <http://www.futuremedicine.com/doi/abs/10.2217/17435889.2.6.789>
doi: 10.2217/17435889.2.6.789
2. **Comparative advantages of mechanical biosensors.** Nature Nanotechnology | Review 2011. Vol 6; pp 203-215. J.L. Arlett, E.B. Myers & M.L. Roukes.
doi:10.1038/nnano.2011.44
<http://www.nature.com/nnano/journal/v6/n4/full/nnano.2011.44.html>
3. **A review of characterization and physical property studies of metallic nanoparticles** Journal of Physics and Chemistry of Solids, Vol 62, Iss 9-10, 10 Sept 2001, pp 1599-1612 Juh-Tzeng Lue doi:10.1016/S0022-3697(01)00099-3
4. **Manufactured nanoparticles: An overview of their chemistry, interactions and potential environmental implications** Science of The Total Environment, Vol 400, Iss 1-3, 1 August 2008, pp 396-414. Yon Ju-Nam, Jamie R. Lead
doi:10.1016/j.scitotenv.2008.06.042
5. **Solid lipid nanoparticles: Production, characterization and applications** Advanced Drug Delivery Reviews, Vol 47, Iss 2-3, 25 Apr 2001, pp 165-196 Wolfgang Mehnert, Karsten Mäder doi:10.1016/S0169-409X(01)00105-3

6. **Identification and characterization of organic nanoparticles in food.** rAC Trends in Analytical Chemistry, Ruud Peters, Guillaume ten Dam, Hans Bouwmeester, Hans Helsper, Stefan Weigel, Günter Allmaier, Frank vd Kammer, Roland Ramsch, Conxita Solans, Monika Tomaniová, Jana Hajslova 2011
doi:10.1016/j.trac.2010.10.004
7. **Controlling protein translocation through nanopores with bio-inspired fluid walls** Nature Nanotechnology 2011; Vol 6, pp 253–260. Erik C. Yusko, Jay M. Johnson, Sheereen Majd, Panchika Prangkio, Ryan C. Rollings, Jiali Li, Jerry Yang & Michael Mayer. doi:10.1038/nnano.2011.12
8. **Nanobiotechnology: A new look for nanopore sensing.** Nature Nanotechnology 2011 Vol 6, pp 195–196. Tim Albrecht. doi:10.1038/nnano.2011.52

CONFERENCES AND WORKSHOPS

NANOBio&Med 2011

April 11-14, 2011, Bilbao, Spain

- Topics include: Nanobioanalysis in vitro, bio-nano fabrication, bio-nano measurement and microscopy, nanomaterials for medicine, bioelectronics, bio-water, nanomaterials for bio and medical applications, nanoassemblies/surfaces, drug delivery, molecular imaging and biophotonics, integrated systems/sensors, nanotoxicology, far future challenges, and bio-inspired nanotechnologies
- Emerging and future trends to be discussed among industry, academia, governmental and non-governmental institutions

http://www.imagenenano.com/SCIENCE/Scienceconferences_BioNanoMed.php

2011 AAPS Drug Delivery Workshop

April 14 – 15, 2011; Baltimore, MD

- Emerging oral delivery strategies and technologies to enable biopharmaceutical performance of BCS II, III and IV molecules
- Physicochemical and biopharmaceutical properties and evaluation tools
- Lipid-based systems and solid dispersions
- Prodrugs and nanoparticles

<http://www.aaps.org/meetings/workshops/OralDelivery/index.asp>

International Conference on Biotechnology and Nanotechnology

April 27-29, 2011; Venice, Italy

For academic scientists, leading engineers, industry researchers and scholar students to exchange experience and share research results of:

- All aspects of biotechnology and nanotechnology
- Practical challenges and solutions

<http://www.waset.org/conferences/2011/rome/icbn/index.php>

Nanotechnology for Cancer Medicine

May 12-13, 2011, Baltimore, MD

- Fifth annual symposium of Johns Hopkins Institute for NanoBio Technology
- Talks on nanotechnology, oncology, engineering, medicine

<http://inbt.jhu.edu/outreach/symposium/twentyeleven/>

2011 National Biotechnology Conference – sponsored by AAPS

May 16 – 18, 2011; San Francisco, CA

Symposium on Targeted Nanotheragnostics: Scientific Achievements and Commercialization Challenges, May 16, 2011: 1:30 – 4:00 pm.

- Promising advances in scientific strategies and approaches that combine disease diagnosis with therapy (Nanotheragnostics);
- Nanodevices;
- Safety concerns on the interaction of nanomaterials and nanoparticles with the human body;
- Pharmacokinetics and biodistribution of nanoparticles;
- Formulation, processing and manufacturing of nanoparticles;
- Opportunities for future growth and commercialization of nanomedicinal products

http://www.nxtbook.com/nxtbooks/aaps/nbc2011_preprogram/#

Pharmaceutical Nanotechnology: Applications & Commercialization

June 29-30, 2011; London, UK

- Engineering, formulation and drug delivery
- Nano-enabled nucleic acid therapeutic delivery
- Translating discoveries into commercial successes
- Regulatory considerations, IP issues and partnering opportunities

<http://smi-online.co.uk/events/overview.asp?is=4&ref=3484>

NanoFormulation2011

June 26 – July 1, 2011 ; Singapore

- Formulation of Nano-Biomaterials
- Handling and processing of Nanopowders
- Processing and Stabilization of Nanoparticle Suspensions
- Smart and Functional Materials in Formulations: Coating, Films and Tapes
- Safety and Health Effects and Nanoscale Materials – Towards Sustainable and Safety

<http://www.nanoformulation2011.com/>

Nanoscale Bioceramics in Healthcare and High Performance Ceramics

October 12-13, 2011, Stoke-on-Trent, Staffordshire, UK

- Hosted by Institute of Nanotechnology and CERAM
- Focus on application of bioactive glass and ceramics to orthopaedics, regenerative medicine, dentistry, biosensing, controlled drug release, high performance coatings, and functionalized biomaterials.

<http://www.nano.org.uk/events/ion-events>

NanoMedicine – 2011

November 3 – 5, 2011, Shenzhen, China

- Breaking Research of Nanomedicines
- Versatile Nanotech and Nanomaterials in Biomedicine
- Nanodevices and Diagnostic
- Nanomedicine Targeting Major Diseases
- Regenerative Nanomedicine
- Culturing Public Environment for Healthy Growth

<http://www.bitconferences.com/NanoMedicine2011/>

BioNanoTox and Applications International Research Conference

November 10-14, 2011, Mobile, AL

- Multidisciplinary focus on biology, nanotechnology, and toxicology
- Joint research between nanomaterials and biological systems

<http://sites.google.com/site/bntconference/>

Nano Health

January 15-16, 2012, Egypt, Cairo

- To address the future of nanotechnology, as well as potential risks and regulatory issues
- New frontiers in drug delivery and therapeutics
- New frontiers in imaging and diagnosis
- Nanotechnology and the developing world
- Roadmapping new technologies
- Novel medical materials and products

<http://www.clocate.com/conference/Nano-Health-2012/13170>

REFERENCE SECTION**Nano Organizations**

- National Center for Toxicological Research (NCTR): <http://www.fda.gov/AboutFDA/CentersOffices/NCTR/default.htm>
- National Nanotechnology Initiative (NNI): <http://www.nano.gov/>
- Nano Science and Technology Consortium (NSTC): <http://www.nstc.in/>
- Nano Science and Technology Institute (NSTI): <http://www.nsti.org/>
- The Nanotechnology Institute (NTI): <http://nanotechinstitute.org/>

Nano Journals

- American Chemical Society -- Nano Letters: <http://pubs.acs.org/journal/nalefd>
- Institute of Physics – Nanotechnology: <http://iopscience.iop.org/0957-4484/>
- Journal of Nanoscience and Nanotechnology: <http://www.aspbs.com/jnn/>
- NanoTrends - A Journal of Nanotechnology and its Applications: <http://www.nstc.in/journal/default.aspx>
- BCC Research -- Nanotechnology Reports: <http://www.bccresearch.com/report/index.php?rcode=nan>

CONTACT

For further information, or if you have any questions about the Nanomedicines Alliance, please contact the Nanomedicines Alliance Secretariat at 1-202-230-5607 or info@nanomedicines-alliance.org

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