

# Nanotechnology: consumers must be convinced benefits outweigh risks

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“There is no doubt that nanotechnology has the potential to make the world a better place,” said Project on Emerging Nanotechnologies Chief Scientist Andrew Maynard. “But if consumers and other stakeholders are not convinced that the benefits outweigh the risks, many applications will not see the light of day. Likewise, if the benefits are unclear and the risks uncertain, the products of nanotechnology will be a hard sell.”

Dr. Maynard’s remark is in his presentation today before a public meeting of the President’s Council of Advisors on Science and Technology (PCAST). He spoke as part of a panel devoted to addressing and managing the potential health, environmental and safety risks of nanotechnology.

“Nanotechnology is turning our world upside down...It also is shaking up our understanding of what makes something harmful and how we deal with that,” according to Maynard. He described the current U.S. policy toward managing the possible health and safety risks of nanotechnologies as “approaching 21st century technologies with a 20th century mindset.”

Maynard called on the federal government to develop a goal-driven risk research strategy to provide decision-makers—including regulators, industry and consumers—with the scientific information they need to help develop and use nanotechnologies as safely as possible. He suggested an international approach to this challenge based on a set of strategic research questions developed by thirteen top scientists last year

which were published in the journal *Nature*.

The paper, “Safe handling of nanotechnology” (Maynard et al., *Nature*, vol. 44, 16 November 2006), was praised as a “landmark in the history of nanotechnology research” by the then chair Sherwood Boehlert (R-NY) and ranking member Bart Gordon (D-TN) of the U.S. Congress’s House Science Committee. In a statement about the paper’s findings, the Congressmen said they both had made it clear that they felt “the Administration was moving too slowly in preparing and funding a research agenda in this area [of nanotechnology risk research] when a sense of urgency was needed.” Two co-authors of the paper, University of Rochester’s Gunter Oberdorster, and National Institute of Environmental Health Sciences’ (NIEHS) Sally Tinkle, also made presentations at the PCAST meeting.

In his remarks, Maynard proposed a significant increase in research funding for agencies responsible for oversight and related research—the Environmental Protection Agency (EPA), Food & Drug Administration (FDA), National Institute of Environmental Health Sciences (NIEHS), National Institute for Occupational Safety & Health (NIOSH), and the Consumer Product Safety Commission (CPSC). He called for creation of a better decision-making and coordination mechanism among government agencies to implement a strategic federal risk research plan for nanotechnology and to lead government-industry research partnerships in this area. He noted that government-industry models like the Health Effects Institute, developed to address automobile pollution, could be leveraged for nanotechnology risk research.

Maynard also suggested that America’s competitive edge and continued world leadership in nanotechnology require a sound and innovative risk management plan. He gave examples of other countries who are taking an integrated approach to nanotechnology implications and commercial applications research.

Source: Project on Emerging Nanotechnologies

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