

## Nanotechnology Project

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# U.S. Government Delays Nanotechnology Safety Measures

## Expert warns Congress that safety questions put nanotech enterprise at risk

WASHINGTON—Want to buy a bag of carbon nanotubes—in quantities from a few grams to hundreds of kilograms (100 kilograms = approximately 220 pounds)? With a credit card and Internet access, you can. But is the U.S. government doing enough to ensure the safety of these materials and the hundreds of other nanotechnology commercial and consumer products currently on the market?

The answer is a resounding “no,” says Project on Emerging Nanotechnologies chief scientist Andrew Maynard. “The materials safety data sheet for carbon nanotubes—which provides workers and safety personnel with information on proper handling procedures—treats these substances as graphite, the material used in pencils. But carbon nanotubes are as similar to pencil lead as the soot on my barbeque grill at home is to diamonds.”

According to Maynard, “This is just one example of the yawning knowledge gap between the nanomaterials entering commerce now and their safety. And this uncertainty over how to develop nanotechnologies safely, hamstringing regulators, hinders nanobusiness, and confuses consumers.”

Dr. Maynard’s remarks are from his testimony today at a hearing held by U.S. Congress’s House Science Committee. According to Maynard, filling this knowledge gap will not be easy, but it is essential and must be done quickly if nanotechnology is to succeed. He recommends the following necessary steps:

- Establish a clear, top-down risk research strategy with the resources



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### SUMMARY

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### FILES

[Dr. Andrew Maynard's full written testimony](#)  
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required to ensure its implementation;

- Create a new federal advisory committee to allow transparent input and review from industry, scientists, labor groups, nongovernmental organizations and other stakeholders;
- Allocate approximately 10 percent of the U.S. government’s nanotechnology research and development budget to goal-oriented nanotechnology environment, health, and safety research—a minimum of \$50 million annually for research directly tied to oversight and regulatory needs and an estimated \$95 million per year for exploratory research that is conducted within the scope of a federal strategic research program; (Previous analysis by Maynard shows that in 2005 the U.S. government spent approximately \$11 million on highly relevant risk research.)
- Launch a public-private research partnership program, with cost-sharing between industry and government, to address immediate and critical research questions on effective oversight; and
- Appoint a top-level government leader responsible for the action needed to address the environment, health and safety challenges of nanotechnology.

“There is no doubt that nanotechnology has the potential to make the world a better place and that members of the National Nanotechnology Initiative have great intentions to do the right thing. But given what is at stake here—the quality of our environment, the future vitality of the American economy, and the health of workers and consumers—good intentions are not enough,” said Maynard.



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