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**International Risk Research Strategy  
& Funding Needed for Nanotech Safety**  
*Uncertainty Will Hamper Nanotechnology Commercialization*

WASHINGTON, DC—Today, the Council for Science and Technology—the British government’s top-level advisory body on science and technology issues—criticized the slow progress being made in providing needed support for focused research into the potential hazards of nanotechnology. CST’s comments are contained in a new review of the UK government’s response to recommendations made by the Royal Society and Royal Academy of Engineering in their landmark 2004 assessment of nanotechnology’s opportunities and hazards.

“The UK government deserves a lot of credit for commissioning both the ground-breaking 2004 Royal Society report and for submitting itself to a tough review of its performance since then,” said Project on Emerging Nanotechnologies chief scientist Andrew Maynard.

The new high-level review concluded that not enough is being done to address uncertainties over the environmental, health, and safety impacts of nanomaterials. The CST found funding support and effective research strategies to be lacking.

“The UK is not alone in falling short on funding for research to address the uncertainties surrounding the environmental, health and safety risks of engineered nanoscale materials” said Maynard. “Altogether, governments in the United States and other nations spend about \$5 billion globally each year on nanotechnology research and development. If held up to the same scrutiny, their risk research plans and funding levels would earn equally disappointing marks.”

“The specific health and safety questions that are important to be addressed for nanotechnology are reasonably straightforward,” noted Maynard. “And a lot already has been published about what we know and do not know about the potential risks and about how to fill existing research gaps. Far harder is getting governments to set risk research priorities and to develop and sufficiently fund an internationally-coordinated risk research plan for nanotechnology.”

Maynard proposes that the U.S. federal government invest a minimum of \$100 million over the next two years in targeted risk research in order to lay a strong, science-based foundation for safe nanotechnology. According to Maynard’s analysis, despite investing more than \$1 billion annually on nanotechnology research, U.S. government spending on highly relevant nanotech risk research was only \$11 million in 2005.

“With an estimated \$2.6 trillion in manufactured goods expected to incorporate nanotechnology globally by 2014, there’s a lot at stake in ‘getting it right’ and in addressing nanotechnology environment and safety questions early,” stressed Maynard. “As both the Republican and Democratic leaders of the U.S. House of Representatives Committee on Science declared last year,

‘Nanotechnology is an area of research that could add billions of dollars to our economy, but that won’t happen if it is shrouded in uncertainty about its consequences.’ ”

“The American government needs to take action urgently in three critical areas of nanotechnology: first, documenting what relevant risk research exists; second, ensuring that 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), the Consumer Product Safety Commission (CPSC)—are adequately funded; and third, developing a robust, top-down research plan that can be implemented by the U.S. government and used for collaborations with industry and with researchers in other countries,” said Maynard.

“Nanotechnology is no longer a scientific curiosity,” he added. “Nanomaterials and nanoproducts are in the workplace, the environment, and the home. But if people are to realize nanotechnology’s benefits—in medicine, electronics, and sustainable energy production—governments around the world need a master plan for identifying and reducing potential risks. This plan should include a top-down risk research strategy, sufficient funding to do the job, and the mechanisms to ensure that resources are used effectively.”

### **About Nanotechnology**

Nanotechnology is the ability to measure, see, manipulate and manufacture things usually between 1 and 100 nanometers. A nanometer is one billionth of a meter; a human hair is roughly 100,000 nanometers wide.

The **Project on Emerging Nanotechnologies** is an initiative launched by the Woodrow Wilson International Center for Scholars and The Pew Charitable Trusts in 2005. It is dedicated to helping business, government, and the public anticipate and manage possible health and environmental implications of nanotechnology. For more information about the project, log on to [www.nanotechproject.org](http://www.nanotechproject.org).

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