



**Woodrow Wilson
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for Scholars**

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News Release

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Former White House Science Advisor Warns that Nanotechnology's Potential Threatened by Weak Public Education and Outreach

WASHINGTON, D.C.—“Nanoscale science and engineering promise to be as important as the steam engine, the transistor, and the Internet, and have the potential to revolutionize all other technologies” according to Neal Lane, former science advisor to U.S. President Bill Clinton. “But that outcome is not guaranteed.”

Dr. Lane made his remarks today at a Project on Emerging Nanotechnologies event at the Woodrow Wilson International Center for Scholars. The program marked the release of a new article in the December 2006 issue of the journal *Nature Nanotechnology*, “What drives public acceptance of nanotechnology?”

“A recent poll by the Project on Emerging Nanotechnologies shows that while public awareness of nanotechnology is increasing, fully 69 percent of Americans have heard little or nothing about nanotechnology,” said Lane. “More young people are seeing nanotechnology in advertisements for MP3 players than are learning about nanotechnology in schools.”

“In my view, given what’s at stake, this situation is unacceptable. I fear that nanotechnology may be heading for a fall. A major environmental, medical or safety problem—real or bogus—with a product or application that’s labeled ‘nanotechnology’—whether it actually is nanotechnology or not—could dampen public confidence and financial investment in nanotechnology’s future, and could even lead to unwise regulation. We should not let this happen,” stated Dr. Lane.

He called on government, corporations and the science and engineering community to take urgently three steps to avert this possible occurrence. “First is a major effort to set aside the resources necessary to investigate nanotechnology’s possible environmental, health, and safety risks.”

A “second step critical to the success of nanotechnology is to infuse nanotechnology education into the curriculum in every school and teacher education program.” Dr. Lane highlighted the huge investment the U.S. made to science and engineering education almost fifty years ago when Russia launched Sputnik—the world’s first artificial satellite. He stressed that America’s “children and workforce need that same level of national commitment to lead and keep them competitive in the Nano Age.”

Finally, Lane called for “a deliberate effort to provide the public with balanced and easily understood information about nanotechnology’s potential benefits and its possible risks and for more public engagement”—led by government, industry and the science and engineering community working together.

“From the beginning, an explicit aim of the U.S. National Nanotechnology Initiative (NNI)—a \$6.5 billion federal investment in nanotechnology research launched in January 2000 under President Bill Clinton—was to excite young girls and boys about science, particularly the physical sciences and

engineering. The intent was to reach millions of children using the wonders of nanotechnology to encourage them to study science and to equip them to compete successfully at the cutting-edge of a globalized economy.” Another stated NNI goal was “to establish channels of communication, providing information to, and seeking input from, the public at large regarding the federal nanotechnology program. But so far, government-supported children’s education programs and public outreach efforts have been long on rhetoric and short on the strategy and resources necessary to achieve significant results,” Lane said.

Lane is one of four co-authors of “What drives public acceptance of nanotechnology?”—a paper which presents the results of the first large-scale empirical study of how consumers consider risks and benefits when deciding whether to purchase or use specific nanotechnology products. The article’s lead author is Steven C. Currall, University of College London and London Business School. (For information on the article, U.S. journalists should contact Jade Boyd, News & Media Relations, Rice University, by phone at 713/348-6778 or by e-mail jadeboyd@rice.edu.)

Dr. Lane is senior fellow in Science and Technology at Rice University’s Baker Institute and the Malcolm Gillis University Professor at Rice. While director of the National Science Foundation (1993-1998) and assistant to the president for Science & Technology and director of the White House Office of Science & Technology Policy (1998-2001), Lane played a major role in establishing the NNI. He also is a well-known proponent of greater citizen-scientist dialogue and science education.

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.

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