



**NATIONAL NANOTECHNOLOGY INITIATIVE**  
***Research and Development Funding in the President's 2005 Budget***

The President's 2005 Budget provides \$1 billion for the multi-agency National Nanotechnology Initiative (NNI), a doubling over levels in 2001, the first year of the Initiative. This investment will advance our understanding of nanoscale phenomena—the unique properties of matter that occur at the level of clusters of atoms and molecules – and enable the use of this knowledge to bring about improvements in medicine, manufacturing, high-performance materials, information technology, and energy and environmental technologies. Nanotechnology will likely have a broad and fundamental impact on many sectors of the economy.

Ten federal agencies currently fund NNI activities, though more agencies participate in coordination. Since FY 2001, the National Science Foundation (NSF), the Department of Energy (DOE) Office of Science, the Department of Defense (DoD), and the National Institutes of Health (NIH) have all seen significant increases in their nanotechnology funding, with FY 2005 requests that are more than double 2001 levels. NSF continues to have the largest share of federal nanotechnology funding, reflecting the broad mission of NSF in supporting fundamental research across all disciplines of science and engineering. DOE's investment has grown significantly with the creation of five Nanoscale Science Research Centers, which will provide research equipment and infrastructure that will be broadly available to researchers from across the scientific research community. Funding for DoD's nanotechnology program, most of which is supported through DARPA but which also includes contributions from the three military services, has also grown significantly over the years. NIH's FY 2005 request for nanotechnology reflects the growing emphasis on nanotechnology-based biomedical advances occurring at the intersection of biology and the physical sciences and the priority of nanomedicine in the NIH Roadmap (<http://nihroadmap.nih.gov/>).

**National Nanotechnology Initiative**  
(Budget authority, dollars in millions)

	<b>2001 Actual</b>	<b>2005 Request</b>	<b>Dollar Change 2001 to 2005</b>	<b>% Change 2001 to 2005</b>
National Science Foundation	150	305	155	103
Defense	125	276	151	121
Energy	88	211	123	140
National Institutes of Health	40	89	49	122
Commerce (NIST)	33	53	20	61
NASA	22	35	13	59
Agriculture	0	5	5	-
EPA	5	5	0	0
Justice	1	2	1	100
Homeland Security	0	1	1	-
<b>TOTAL</b>	<b>464</b>	<b>982</b>	<b>518</b>	<b>112</b>

Last year the President signed the 21<sup>st</sup> Century Nanotechnology Research and Development Act, which put into law programs and activities supported by the NNI. Consistent with this legislation, in 2005 the Initiative will continue to focus on fundamental and applied research through investigator-led activities, multidisciplinary centers of excellence, and infrastructure development, and will continue to support activities aimed at assessing the societal implications of nanotechnology, including ethical, legal, public and environmental health, and workforce related issues.

The President's Council of Advisors on Science and Technology (PCAST) is currently in the process of reviewing the multi-agency nanotechnology R&D programs and articulating a strategic plan for the program, defining specific grand challenges to guide the program, and identifying metrics for measuring progress toward those grand challenges. PCAST will deliver an initial report in 2004.