



NATIONAL NANOTECHNOLOGY INITIATIVE
Research and Development Funding in the President's 2004 Budget

The President's 2004 Budget provides \$847 million for the multi-agency National Nanotechnology Initiative (NNI), a 9.5-percent increase over 2003. This investment will advance fundamental understanding of nanoscale phenomena—unique properties of matter that occur at the level of clusters of atoms and molecules. This increased understanding promises to underlie revolutionary advances that will contribute to improvements in medicine, manufacturing, high-performance materials, information technology, and environmental technologies.

Ten federal agencies currently request funding for NNI activities, though more agencies participate in coordination. The 2004 Budget proposes significant increases for the Department of Energy and the National Science Foundation (NSF). 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. The request for DOE's nanotechnology program reflects, in part, the development of five geographically distributed user centers.

| | 2003 | 2004 | Difference from 2003 to 2004 | Percent Difference from 2003 to 2004 |
|-------------------------------|------------|------------|---------------------------------|---|
| National Science Foundation | 221 | 247 | 26 | 11.8% |
| Defense | 243 | 222 | -20 | -8.3% |
| Energy | 133 | 197 | 64 | 48.1% |
| National Institutes of Health | 65 | 70 | 5 | 7.7% |
| Commerce | 69 | 62 | -7 | -10.1% |
| NASA | 33 | 31 | -2 | -6.1% |
| Agriculture | 1 | 10 | 9 | 900.0% |
| EPA | 6 | 5 | -1 | -16.7% |
| Homeland Security | 2 | 2 | 0 | 0.0% |
| Justice | 1 | 1 | 0 | 0.0% |
| TOTAL | 774 | 847 | 74 | 9.5% |

The NNI strategy for 2004 involves further investment in fundamental research across the range of scientific and engineering disciplines through investments in investigator-led activities at colleges and universities, centers of excellence, and supporting infrastructure.

Examples of notable achievements over the past year include the development of single molecule electron devices, molecular motors, nanoscale fabrication using atomic force microprobes, micro-cantilevers to detect proteins, and enhanced medical imaging using nanoparticle-based probes.

A recent report of the National Research Council underscored the importance of nanoscale science and engineering research and praised the NNI for its role in coordinating interagency nanotechnology funding. In response to the recommendations in the report, an external advisory board will provide advice aimed at strengthening the NNI. The President's Council of Advisors for Science and Technology, with expertise relevant to nanotechnology and the management of large-scale, multidisciplinary R&D programs, will conduct this external review.