

*INC4, April 15, 2008*

## **The Changing Face of Nanotechnology**

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### **Summary**

Nanotechnology R&D has changed its research focus, typical outcomes, the domains of industrial relevance, its public perception and governance since 2000 when it was suggested as a 21<sup>st</sup> century key development in science and technology besides IT and modern biology. This trend has already powerful implications in electronics as well as in other areas of relevance from treating cancer to energy conversion. The presentation will outline important changes between 2000 and 2008 and possibilities for global governance of nanotechnology. In this context, several aspects of nanotechnology R&D development in U.S. related to setting the vision, NNI partnership with electronic industry, and increased funding for environmental, health and safety aspects will be discussed.

The U.S. National Nanotechnology Initiative (NNI) is a long-term program announced in January 2000 that coordinates 26 departments and independent agencies with a total budget estimated at about \$1.4 billion in fiscal year 2008. This program is a catalyst of the rapid R&D changes in the U.S. Upstream and broad-ranging investments are made by the National Science Foundation (NSF) in supporting fundamental research, balanced infrastructure and education across all disciplines of science and engineering. The long-term view of NNI, current status and future research frontiers in nanoelectronics will be presented.