

The U.S. National Nanotechnology Initiative and Progress in Commercializing Nanotechnology through U.S Small Business Innovation Research programs.

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The U.S. National Nanotechnology Initiative (NNI) is the key U.S. government program for managing and coordinating the nation's efforts to understand and control matter on the nanoscale, which is leading to a revolution in technology and development of complete new industries. The progress of the NNI through its NSET coordinating committee to meet the nanotechnology and challenges and opportunities is described including agencies participating, budgets assigned, program components, interagency cooperative activities, and the NSET working groups. The four important working groups involve environmental and health, liaison with industry, global issues, and public engagement, particularly ethical and societal issues. Recent events in these areas are described as well as the external reviews of the NNI program by the Presidents Council on Science and Technology (PCAST).

The issue of effectively transferring the results of the nanoscale science and engineering research carried out by the NNI sponsored institutions continues to be emphasized as the next step in a successful nanotechnology program. The NSET industry liaison group has successfully engaged many of the large industry particularly the electronics and chemical industries. At the same time the small business community is playing a crucial role in transferring the nanoscience and technology developed by the research institutions into new embryonic businesses. This has been effectively supported by the U.S. Small Business Innovation Research programs over the past six years. Details of this effort and examples of nanoscale science and technology that has been commercialized into the market place will be given.