

Nanotechnology Frontiers at 20 years of NNI

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NSF nanoscale science and engineering at 20 years of NNI

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Abstract

A global scientific and societal endeavor was set in motion by the nanotechnology R&D vision formulated in 1999 that inspired the National Nanotechnology Initiative (NNI) and other international R&D programs. NNI currently involves 33 research and regulatory agencies with a cumulative public R&D investment of about \$29B by 2020. The presentation includes an overview of the nanotechnology development (the main milestones in the long view), international context (publications, patents, people, revenues), NSF contributions, and several challenges and trends. Convergence of nanotechnology with biology-information-cognition- and artificial intelligence (AI) systems are envisioned to accelerate introduction of new nanoscale science and technology platforms after 2020 and support industries of the future.