

# Overview of Sensors NSI, Purpose of the Workshop

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# NNI Signature Initiatives

The Nanotechnology Signature Initiatives (NSIs) spotlight areas of national significance that can be more rapidly advanced through focused and closely-coordinated inter-agency collaboration.

The NSIs

- ***Address R&D gaps*** within areas of critical national need
  - Identify research ***thrust areas***
  - Select ***key research targets*** associated with near-and long-term expected outcomes
- ***Leverage*** skills, resources, and capabilities among multiple NNI agencies to maximize scientific and technological progress
- Provide a forum for communication and ***ongoing assessment*** of direction and progress
- ***Catalyze*** communities of practice and public private partnerships to accelerate commercialization

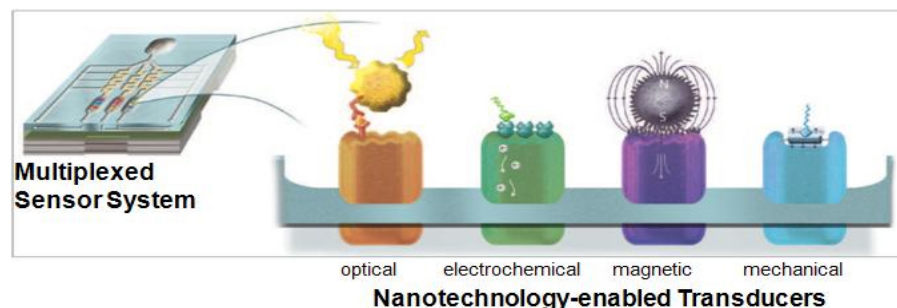
# Nanotechnology for Sensors and Sensors for Nanotechnology: Improving and Protecting Health, Safety, and the Environment

**Agencies involved:** CPSC, DOD/DTRA, EPA, FDA, NASA, NIH, NIOSH, NIST, NSF, USDA/NIFA

**Goals:** Support research on nanomaterial properties and development of supporting technologies that enable next-generation sensing of biological, chemical, and nanoscale materials.

## Thrust Areas:

- Using nanotechnology and nanoscale materials to build more sensitive, specific, and adaptable sensors in order to overcome the technical barriers associated with conventional sensors
- Developing new sensors to detect engineered nanomaterials across their life cycles, in order to assess the potential impact on health, safety, and the environment



# Sensor Fabrication, Integration, and Commercialization Workshop

- Builds upon the knowledge gained and progress since the 2009 Nanotechnology-Enabled Sensing Workshop.
- Aims to *identify key challenges* faced by sensor developers and *determine the critical needs* of the community, especially with respect to necessary standards, testing facilities, and advances in manufacturing.

