

# FUTURE DIRECTIONS FOR THE NATIONAL NANOTECHNOLOGY INITIATIVE (NNI)

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National Nanotechnology Coordinated Infrastructure (NNCI)  
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Hosted by the Cornell NanoScale Facility (CNF)



# NATIONAL NANOTECHNOLOGY INITIATIVE (NNI)

“**Just imagine**, materials with 10 times the strength of steel and only a fraction of the weight; shrinking all the information at the Library of Congress into a device the size of a sugar cube; detecting cancerous tumors that are only a few cells in size. Some of these research goals will **take 20 or more years** to achieve. But that is why -- precisely why -- as Dr. Baltimore said, there is such a **critical role for the federal government.**”

-President Bill Clinton, January 21, 2000



Today at the White House, the President signed into law the **21st Century Nanotechnology Research and Development Act**... Nanotechnology promises to be both evolutionary and revolutionary--improving and creating entirely new products and processes in areas from electronics to health care.

-White House Press Release, December 3, 2003



# NATIONAL NANOTECHNOLOGY INITIATIVE (NNI)

**NNI Vision:** A future in which the ability to understand and control matter at the nanoscale leads to ongoing revolutions in technology and industry that benefits society.

“authorizes **funding** for nanotechnology research and development (R&D)”

“puts into law programs and activities supported by the National Nanotechnology Initiative (NNI), one of the President's **highest multi-agency R&D priorities.**”

-White House Press Release, December 3, 2003



# NATIONAL NANOTECHNOLOGY COORDINATION OFFICE (NNCO)

Engage with the nanotechnology community



Facilitate collaboration among agencies



Provide technical and administrative support



Promote commercialization



Nanotechnology Commercialization: Perspectives from a Regional Innovation Ecosystem  
June 28, 2022



Anthony P. Green, PhD  
Chief Scientific Officer for Ben Franklin Technology Partners of Southeastern PA



Gerald Lopez, PhD  
Director of Operations and Business Development, Singh Center for Nanotechnology, University of Pennsylvania



Brendan DeLacy, PhD  
President and Founder of Ballydel Technologies

Promote opportunities for education and training



Engage with the public



[www.nano.gov](http://www.nano.gov)



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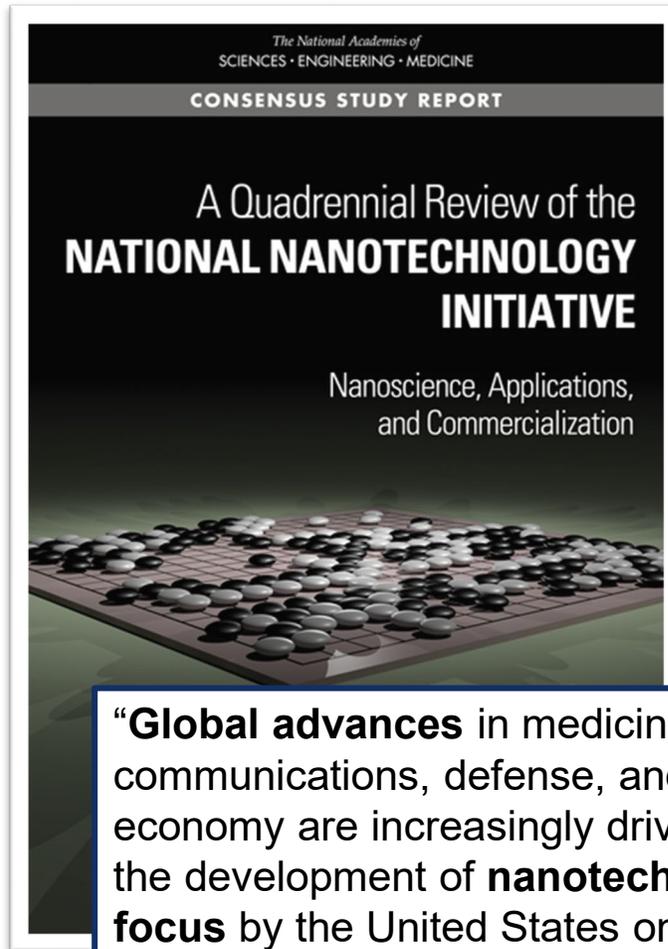


National Nanotechnology Initiative



NanoTube - The National Nanotechnology Initiative

# NATIONAL NANOTECHNOLOGY INITIATIVE (NNI)



“**Global advances** in medicine, food, water, energy, microelectronics, communications, defense, and other important sectors of the economy are increasingly driven by discoveries in **nanoscience** and the development of **nanotechnologies** and justify a **continued focus** by the United States on, and **investments** in, these fields.”

“The highest priority of this report is to provide recommendations that will **restore the United States to the global forefront** of nanotechnology-enabled advances...”



# 2021 NNI STRATEGIC PLAN

**Goal 1:** Ensure that the United States remains a world leader in nanotechnology research and development

**Goal 2:** Promote commercialization of nanotechnology R&D

**Goal 3:** Provide the infrastructure to sustainably support nanotechnology research, development, and deployment

**Goal 4:** Engage the public and expand the nanotechnology workforce

**Goal 5:** Ensure the responsible development of nanotechnology



## NATIONAL NANOTECHNOLOGY INITIATIVE STRATEGIC PLAN

*A Report by the*  
SUBCOMMITTEE ON NANOSCALE SCIENCE, ENGINEERING,  
AND TECHNOLOGY  
COMMITTEE ON TECHNOLOGY  
*of the*  
NATIONAL SCIENCE AND TECHNOLOGY COUNCIL

October 2021

# NATIONAL NANOTECHNOLOGY CHALLENGE: CLIMATE CHANGE

Mobilize the nanotechnology community to help address global issues

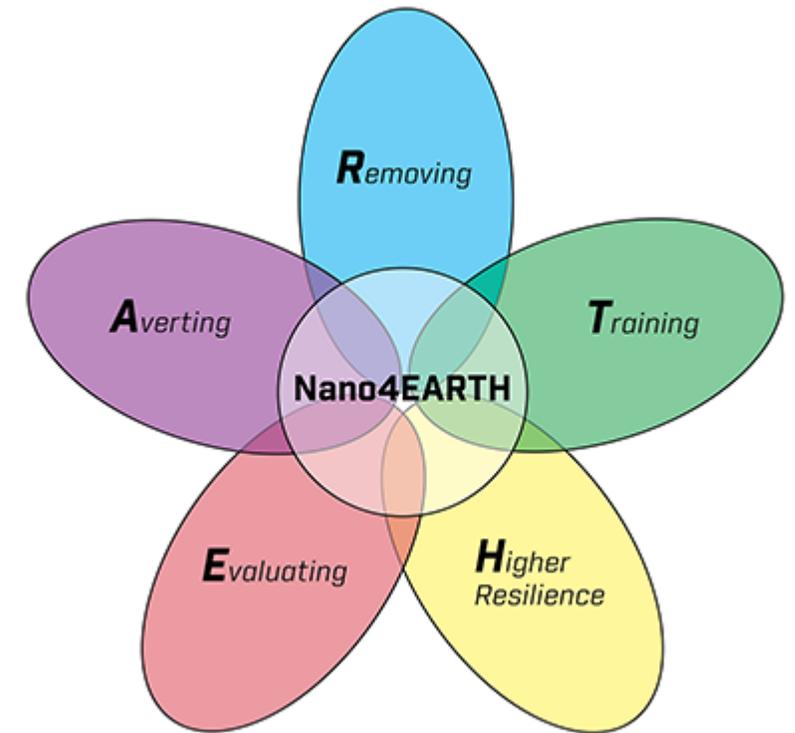
**Evaluating**, monitoring, and detecting climate change status and trends

**Averting** future greenhouse gas emissions

**Removing** existing greenhouse gases

**Training** and educating a highly skilled workforce to harness nanotechnology solutions

developing **Higher Resilience** to—and mitigation of—climate change-induced pressures for improved societal/economic resilience



# U.S.-EU NANOEHS COMMUNITIES OF RESEARCH

Address questions about the potential environmental, health, and safety (EHS) implications of nanomaterials

- Characterization
- Databases and Computational Modeling for NanoEHS
- Ecotoxicity
- Human Toxicity
- Exposure through Product Life
- Risk Assessment
- Risk Management and Control

**US** — **EU**  
Nanotechnology Communities of Research (CORs)



# JOIN THE CONVERSATION!

## Engage

- Webinars
- Workshops
- Respond to Requests For Information (RFI)
- Share news and highlights
- Participate in Communities of Research & Networks
- Contact the NNCO: [info@nnco.nano.gov](mailto:info@nnco.nano.gov)

## Follow Social Media

 [www.nano.gov](http://www.nano.gov)

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 National Nanotechnology Initiative

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# THANK YOU

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