Nanotechnology: Will it drive a new innovation economy for the U.S.?

WASHINGTON – The current economic downturn highlights the importance – and challenges – of building a new 21st century “innovation economy” for America. To move beyond the current crisis, we need to retain and create advanced manufacturing and knowledge-intensive jobs, invest in “green” science and engineering research, and ensure the competitiveness of U.S. technology based industries and workers.

Nanotechnology—which some scientists and business leaders hail as ushering in the next technology-driven Industrial Revolution—promises to be one of the critical foundations for this new innovation economy. Nanotechnology is still early in its development cycle, although a variety of nano-enabled products are already on the world market in clothing, cosmetics, washing machines, and sports equipment. Numerous novel nanotechnology applications with more radical capabilities and implications are foreseen across the economy, including in aerospace, construction, electronics, environment, medicine, and security.

Congress established the National Nanotechnology Initiative (NNI) to coordinate substantial increases in federally-funded nanotechnology research and infrastructure. Federal investments have been directed mainly to support nanotechnology research centers and projects, with some resources also allocated to education, training, and consideration of environmental, health, and societal implications. Several U.S. states have launched programs to foster nanotechnology development. The new Obama administration is set to further expand America’s nanotechnology efforts, with additional federal R&D investment, including in the energy sector. Governments in Europe, China, Japan, and other countries have also greatly expanded their investments in nanotechnology R&D.

Yet, while hopes are high for nanotechnology, what is actually happening on the ground in terms of nanotechnology research and commercialization? In which regions and countries is nanotechnology research clustering, and what is the U.S. position relative to other international competitors? What has been achieved by the $10 billion federal nanotechnology R&D investment since 2001? Are U.S. companies also making long-term investments in nanotechnology, and in what sectors, technologies and locations are corporations focusing upon?

Philip Shapira and Alan Porter of the Center for Nanotechnology in Society (CNS-ASU) will address these questions and more at a March 23 program with Project on Emerging Nanotechnologies Director David Rejeski.
Shapira, a Professor with the School of Public Policy at Georgia Institute of Technology (Georgia Tech) and the Manchester Business School (England), is a leading expert on technology and innovation processes and policies and their impacts on economic and regional development and industrial competitiveness. Porter, an emeritus professor in industrial and systems engineering and in public policy at Georgia Tech, is internationally recognized for research on technology intelligence, forecasting, and assessment, and for mining electronic, bibliographic data sources to generate intelligence on emerging technologies. Shapira and Porter have collaborated in the development and analysis of large-scale global databases of nanotechnology research and commercialization activities.

To attend this event, RSVP to nano@wilsoncenter.org. No RSVP is required to view the Web cast.

*** Webcast LIVE at www.wilsoncenter.org ***

What: Nanotechnology: Will it drive a new innovation economy for the U.S.?

When: Monday, March 23, 2009, 12:30 – 1:30 PM  
(Light lunch available at 12 noon.)

Who: Philip Shapira, Ph.D., Professor, School of Public Policy, Georgia Institute of Technology; and the Manchester Institute of Innovation Research, Manchester Business School, University of Manchester.  
Alan Porter, Ph.D., Emeritus Professor, School of Industrial and Systems Engineering, Georgia Institute of Technology  
David Rejeski, Director, Project on Emerging Nanotechnologies, Moderator


Nanotechnology is the ability to measure, see, manipulate and manufacture things usually between 1 and 100 nanometers. A nanometer is one billionth of a meter; a human hair is roughly 100,000 nanometers wide. In 2007, the global market for goods incorporating nanotechnology totaled $147 billion. Lux Research projects that figure will grow to $3.1 trillion by 2015.

The Project on Emerging Nanotechnologies was launched in 2005 by the Wilson Center and The Pew Charitable Trusts. It is a partnership dedicated to helping business, governments, and the public anticipate and manage the possible health and environmental
implications of nanotechnology. To learn more about the Project on Emerging Nanotechnologies, visit www.nanotechproject.org.

Prof. Shapira and Prof. Porter are associated with the Center for Nanotechnology in Society at Arizona State University (CNS-ASU), leading a research group that is examining trends and directions in nanotechnology research and commercialization. CNS-ASU undertakes research, training, and engagement to support the anticipatory governance of nanotechnologies, and is sponsored by the National Science Foundation (NSF). Findings and opinions expressed will be those of the presenters and do not necessarily reflect the views of NSF. For more information on CNS-ASU, see http://cns.asu.edu.

Media planning to cover the event should contact Colin Finan at (202) 691-4321 or at colin.finan@wilsoncenter.org.