

ASU's Nanotech in Society Center hosts launch event

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Nanotechnology promises to have a profound impact on society. Defined as science and engineering done at the scale of a billionth of a meter, nanotechnology has been heralded by many scientists, futurists and investors as the next industrial revolution.

But for every optimistic forecast of nanobots to perform microsurgery or in-body sensors to monitor human health, there are doomsday scenarios of nano-chips implanted in the brain that forever alter human identity or nano-sensors publicly revealing all private places and information. How can scientists, citizens, and policy makers be adequately engaged in a dialogue about nanotechnology's potential for good and ill? How can we successfully govern nanotechnology?

On Monday, January 30, nanotechnology leaders from across the nation will gather in Tempe as ASU launches its Center for Nanotechnology in Society. The culmination of the launch event will be a Public Forum on Nanotechnology in Society from 4 p.m. to 7 p.m. in the Great Hall (Armstrong Hall) of the College of Law.

A distinguished panel of scientists, policy experts and ethicists will convene for this important discussion. The panel includes remarks from ASU President Michael Crow, David Guston, director of the Center for Nanotechnology in Society; George Poste, director of the Biodesign Institute; and Jonathan Moreno, University of Virginia Professor of Biomedical Ethics and co-chair of the National Academies' committee on human embryonic stem cell research.



Guston called the event "the beginning of an unprecedented effort to expand our knowledge of how emerging technologies like nanotechnology interact with society, to train students to understand those interactions, and to involve the general public in helping to make decisions, along with scientists and engineers and policy makers, about what nanotechnology's future will be like."

Last fall, the National Science Foundation awarded ASU \$6.2 million to establish the Center for Nanotechnology in Society (CNS-ASU). The Center is a collaboration of the Consortium for Science, Policy and Outcomes (CSPO) and the Biodesign Institute at ASU.

CNS-ASU is the largest in a network of \$14.3 million in newly funded NSF activities on nanotechnology and society, which includes a second \$5 million center at the University of California-Santa Barbara and additional projects at Harvard University and the University of South Carolina.

The ASU Center will be a "center of excellence" for the National Nanotechnology Initiative (NNI), a federal research and development (R&D) program established to coordinate the multi-agency efforts in nanoscale science, engineering, and technology. According to the NNI, federally supported nanotechnology R&D in 2005 was \$1 billion, and the future global marketplace for goods and services using nanotechnologies will grow to \$1 trillion by 2015.

However, nano- scientists and engineers are still working out the rules and techniques for imaging, manipulating and manufacturing matter at this minute atomic scale, 10,000 times smaller than the width of a human hair. And social scientists and humanists are just starting to understand how such inquiries and technologies interact with the broader society.



The launch event will gather a broad network of CNS-ASU researchers and collaborators, including researchers from the University of Wisconsin, Madison; Georgia Institute of Technology, Atlanta; North Carolina State University, Raleigh; University of Colorado, Boulder; Rutgers University, New Brunswick, N.J.; and other universities and private and public sector groups.

CNS-ASU focuses on two broad research themes: freedom, privacy, and security; and human identity, enhancement, and biology.

CNS-ASU will also experiment with a novel approach of teaming social scientists and nano-scientists to consider the ethical and social dimensions of nanotechnology as the new technologies are developed in real-time. The Center also incorporates regular meetings with and feedback from citizens, policy makers, and business leaders on their perspectives on nanotechnology.

"The Center will help both researchers and citizens develop a better understanding of where scientific and social values come from, what they mean, and how they shape the direction that nanotechnology takes," said Guston.

By understanding the interactions between nanotechnology and society, the Center hopes to encourage informed discussions and improve policy choices and technological outcomes for the benefit of society. The forum is free and open to the public. A public reception with light fare will be held following the forum.

The event is co-sponsored by the Center for Nanotechnology in Society, The Biodesign Institute, the Consortium for Science, Policy and Outcomes, and the Center for Biology and Society.

The vision of CNS-ASU is that research into the societal aspects of



nanoscale science and engineering (NSE), carried out in close collaboration with NSE scientists and combined with public engagement, will improve deliberation and decision making about NSE. Its goal is nothing less than charting a path toward new ways of organizing the production of knowledge and developing and testing new processes of anticipatory governance to meet the emerging promises and challenges of NSE.

Source: Arizona State University

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