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Helping nanotechnology work for everyone

Center for Nanotechnology in Society dedicated to helping the public become a voice in nano and other emerging technologies

When you think of researchers working on nanotechnology, you probably picture scientists and engineers manipulating incredibly small structures in a state-of-the-art lab. But there are many others who are also interested in the future of this technology, including community planners, political scientists, urban designers--maybe even your next door neighbor.

With support from the National Science Foundation (NSF), the <u>Center for Nanotechnology (/cgi-bin/good-bye?https://cns.asu.edu/)</u> in Society at Arizona State University is engaging the public and a wide range of experts to think deeply about where nano and other emerging technologies are headed and how to make them work effectively for everyone. Recent and ongoing activities include the <u>Futurescape City Tours (/cgi-bin/good-bye?http://www.futurescapecitytours.org/)</u>, the <u>Phoenix 2050 Design Studio (/cgi-bin/good-bye?https://www.youtube.com/watch?v=7WDsDHIIOdM)</u>, the <u>Nano Around the World card game (/cgi-bin/good-bye?http://www.nisenet.org/catalog/programs/nano_around_world)</u> and the <u>Life Cycle Assessment for Responsible Innovation (/cgi-bin/good-bye?http://pubs.acs.org/doi/full/10.1021/es5016923)</u> workshop.

The research in this episode was supported by NSF awards #0937391 (/awardsearch/showAward?AWD_ID=0937591&HistoricalAwards=false) and #0531194 (/awardsearch/showAward?AWD_ID=0531194&HistoricalAwards=false), Nanoscale Science and Engineering Center (NSEC) Center for Nanotechnology in Society at Arizona State University.

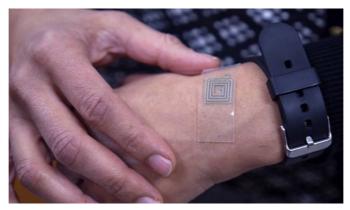
<u>Miles O'Brien (producers/obrien.jsp)</u>, Science Nation Correspondent <u>Marsha Walton (producers/walton.jsp)</u>, Science Nation Producer

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To advance research in nanoscale science, engineering and technology, NSF will provide a total of \$81 million over five years to support 16 sites and a coordinating office as part of a new National Nanotechnology Coordinated Infrastructure (NNCI). The NNCI sites will provide researchers from academia, government, and companies large and small with access to university user facilities with leading-edge fabrication and characterization tools, instrumentation, and expertise within all disciplines of nanoscale science, engineering and technology. Find out more in this news-release (/news/news_summ.jsp?cntn_id=136211).

Credit: Dan Sears, the University of North Carolina at Chapel Hill



Veena Misra, director of Advanced Systems of Integrated Sensors and Technologies at North Carolina State University, and her multidisciplinary team are using nanotechnology to develop small, wearable sensors that monitor a person's immediate environment, as well as the wearer's vital signs. Find out more in this <u>Science Nation video (/news/special_reports/science_nation/wearablenano.jsp)</u>.

Credit: Science Nation, National Science Foundation

Related Links

Social and Economic Sciences (SES) (/sbe/ses/about.jsp)

The Division of Social and Economic Sciences in NSF's Directorate for Social, Behavioral and Economic Sciences seeks to enhance our understanding of human, social and organizational behavior by building social science infrastructure, by developing social disciplinary and interdisciplinary research projects that advance knowledge in the social and economic sciences.

${\color{red} \underline{Illustrating\ anticipatory\ life\ cycle\ assessment\ for\ emerging\ photovoltaic\ technologies\ (/cgi-bin/good-bye?\ http://pubs.acs.org/doi/full/10.1021/es5016923)}$

Current research policy and strategy documents recommend applying life cycle assessment (LCA) early in research and development to guide emerging technologies toward decreased environmental burden. However, existing LCA practices are ill-suited to support these recommendations. Barriers related to data availability, rapid technology change, and isolation of environmental from technical research inhibit application of LCA to developing technologies.

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