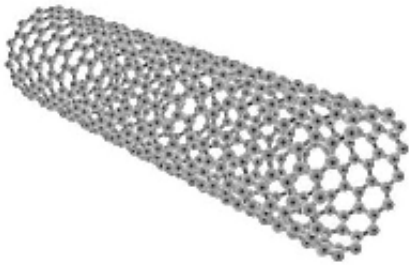


# How the Public Makes Sense of Nanotechnology

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Ever since nanotechnology began attracting public attention, various experts have voiced concern that the public's acceptance of nanotechnology will play an increasingly important role in determining the ultimate impact that nanotechnology has across society. As a result, U.S. government efforts aimed at promoting the development of nanotechnology have also included funds for studying environmental, health and safety issues relating to nanoscale materials. Two recent studies suggest it will be important to continue educating the public about these new technologies and their ultimate safety in order to develop support, but that more general personal beliefs, about which little can be done, will also play a role.

To better gauge the public's knowledge about and attitudes toward

nanotechnology, Dietram Scheufele, Ph.D., at the University of Wisconsin-Madison, and Bruce Lewenstein, Ph.D., at Cornell University, conducted a national telephone survey of over 700 adults in the fall of 2004. The investigators asked a series of questions aimed at determining general attitudes toward nanotechnology, understanding of risk-benefit assessments, nanotechnology literacy, and how the public learns about nanotechnology. The survey also included questions designed to tease out the roles that education and personal beliefs play in forming attitudes toward nanotechnology.

The researchers found that most Americans today know little about nanotechnology, though what they do know they have learned through the mass media. They also found that most Americans have a positive attitude toward nanotechnology, largely, the researchers believe, because most media coverage to date has focused on the bright promise that nanotechnology has for society. Indeed, while only fewer than half of those polled knew the difference between a nanometer and an atom, well over half had an appreciation of the economic implications of nanotechnology.

One interesting finding from these studies was that negative feelings towards nanotechnology were stronger in women, older individuals, and among ethnic minorities. The investigators also found that past controversies in science and an individual's positive or negative feelings about those areas of science – think genetic engineering and stem cell research - correlated strongly with how that person felt about nanotechnology. Public outreach efforts may therefore have to overcome previous failures in science communication.

This work appeared in two papers. The first is titled, “The public and nanotechnology: how citizens make sense of emerging technologies,” appeared in the *Journal of Nanoparticle Research*. An abstract is available at the journal's website. [View abstract.](#)

The second paper, titled, “Public attitudes toward emerging technologies: examining the interactive effects of cognitions and affect on public attitudes toward nanotechnology,” has been accepted for publication in a forthcoming issue of the journal *Science Communication*. The journal’s webpage is available [here](#).

Source: National Cancer Institute

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