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## The Frontiers of Nanotechnology

## Futuristic electronics and energy technologies pave the way for 21<sup>st</sup> Century applications

Washington, DC – The future of how the world communicates, and how we power our lives, will likely come from the same source: nanotechnology. According to a just-released podcast and new publication from the Project on Emerging Nanotechnologies (PEN), nanotechnology will be central to developing advanced, "faster, better, cheaper" electronics and "green" energy technologies.

In the latest installment of the podcast series *Trips to the Nanofrontier*, journalist Karen Schmidt interviews Caltech chemistry professor Dr. Jim Heath about how computers, healthcare applications and other devices will use nanotechnology to exchange and obtain information more effectively.

But to power these new applications, as well as every other modern human activity, experts from industry and government are searching for new technologies that will foster more efficient and less-polluting energy sources, according to the new PEN *Nanofrontiers* publication, *Nanotechnology: Energizing the Future*. From nanotechenabled solar panels to long-lasting automobile batteries that contain nanoparticles, this emerging technology is a cornerstone of 21<sup>st</sup> Century energy sources.

"We see a future where vehicles run on electricity and are equipped with clever ways of making electricity on board, making us less dependent on gasoline. It's the next great paradigm shift in our industry, an opportunity largely due to the rapid advancement in battery cell technology" that result from nanotechnology, according to Bob Lutz, General Motors vice chairman of Global Product Development, who is quoted in the report.

To learn more about the future nanotechnology applications, download the new resources from <a href="https://www.nanotechproject.org">www.nanotechproject.org</a>.

## **About Nanotechnology**

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** is an initiative launched by the Woodrow Wilson International Center for Scholars and The Pew Charitable Trusts in 2005. It is dedicated to helping business, government and the public anticipate and manage possible health and environmental implications of nanotechnology. For more information about the project, log on to <a href="https://www.nanotechproject.org">www.nanotechproject.org</a>.

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