



**Release No. 94-07**  
**October 11, 2007**

## Nanoparticle Exposures Happen, Says Expert

*In new blog and article, scientist tackles nanotechnology health and safety issues*

WASHINGTON, DC – Some nanotechnology fanciers suggest that, like proverbial birds of a feather, engineered nanoscale materials will flock – or clump – together. This tendency, they maintain, should reduce or eliminate risks as nanotechnology manufacturing increases and the number of nanotechnology-enabled products grows.

Think again, cautions nanoparticle expert Andrew Maynard, chief science advisor to the Project on Emerging Nanotechnologies at the Woodrow Wilson International Center for Scholars, in a new article written for the United Kingdom's SAFENANO Initiative. Drawing on available scientific knowledge, Maynard disputes the claim that the so-called agglomeration of engineered nanomaterials will result in "super-sized" clusters so large that they cannot penetrate deep inside the body, thereby eliminating the potential for harm.

"Will people really be exposed to engineered nanomaterials?" Maynard writes. "Despite protestations to the contrary, the science says, yes. There is certainly no reason to believe that exposures will not occur to both individual nanoparticles and agglomerates of nanoparticles that present a nano-specific risk." The article – "[Is Engineered Nanomaterial Exposure a Myth?](#)" – can be found at the SAFENANO website at: <http://www.safenano.org/>

Maynard points out that, in addition to addressing questions about exposure, resolving concerns about potential health risks of nanotechnology also will require better understanding of the toxicity of nanomaterials – whether specific types of the materials are harmful or benign. The article is accompanied by the inaugural entry in [Maynard's new blog](#) on the SAFENANO Initiative website at: <http://community.safenano.org/Blogs/>.

Both examine the current state of the science needed to answer questions about the potential environmental, health, and safety risks posed by nanotechnology – so that the benefits can be maximized. "Clearly, exposure to these materials will occur," Maynard explains in his blog entry. "The challenge we face is surely to snap out of denial, and start to ask what the nature of the exposures will be, and whether they will lead to harm."

Nanotechnology is the ability to manipulate and manufacture products with features measuring between 1 nanometer (billionth of a meter) and 100 nanometers. A human hair is about 80,000 nanometers in diameter. More than an estimated \$50 billion in products incorporating nanotechnology were sold globally in 2006. The Nanotechnology [Consumer Products Inventory](#) begun in 2006 by the Project on Emerging Nanotechnologies now lists nearly 600 commercial items.

Launched by the UK's Institute of Occupational Medicine, an independent research center, the SAFENANO Initiative helps industrial and academic organizations to quantify and control risks to their workforce, as well as to consumers, the general population and the environment.

The Project on Emerging Nanotechnologies, an initiative begun by the Woodrow Wilson International Center for Scholars and The Pew Charitable Trusts in 2005, works to help business, government and the public anticipate and manage possible health and environmental implications of nanotechnology.

# # #