

TAKING THE NANOPULSE

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Who's afraid of the big, bad nano? Nanotech "tales of terror" need more science, less fiction.

BY SCOTT E. RICKERT

Did you see the recent news stories out of China about factory workers who developed lung problems after spraying paints infused with nanoparticles? Here's my favorite headline: "Trail of Death Leads Doctors to Nanoparticles." Even the worst supermarket tabloid should blush at that kind of claptrap. So if you've missed the articles, let me explain. And frankly, if you saw the articles, you still need some real facts.

It's a sad story. Seven women in China suffered permanent lung damage and two died. They were, in fact, working in a paint shop using paints that contained nanoparticles, and a small amount of nanomaterial was found in their lungs. But I think when you get all the information, you'll see that nanotechnology may be the least of the problems.

These women worked in an 8' x 10' room with no windows and a door that was kept closed during the five months just prior to their illness. The sprayer's vent was broken and accumulated dust particles were evident in the exhaust vent. They had only gauze masks for respiration protection, and wore them only rarely.

Boggles the mind, doesn't it? Shouldn't the headline have read "Breathing Enormous Amounts of Particles, Dust and Fumes Can Be Dangerous To Your Health"? Not quite the same news flash, is it?

So let's skip the theatrics and stop blaming nanotechnology for the lack of basic worker safety in China. The normal common-sense guidelines we've followed for a generation in U.S. labs and factories could surely have made all the difference.

You know why I'm so confident in that fact? Nanomaterials are nothing new. They occur in nature. Erosion generates nanoparticles. Coatings on lotus leaves are nanofilms. Nano-gold was used to make stained glass in the 10th century. Tire wear has been creating rubber nanomaterials for almost as long as there have been tires.

There's more. Continuous research on the topic is being done, funded by the likes of the National Science Foundation, National Institutes of Health, Environmental Protection Agency, the National Institute for Occupational Safety and Health, the Departments of Energy and the Department of Defense. Their efforts provide frequently updated guidelines for handling of nanomaterials and are largely parallel to those of analogous materials.

My company – and most others – long ago developed environmental, health and safety policies. And, I think Nanofilm's record is typical. After decades of experience and literally millions of individual

products, not one health issue has surfaced. Not one problem for one employee. Not one problem for one consumer.

My point? Companies and countries need to move ahead rationally and reasonably, minus the fear – and fear-mongering. China can – and must – take their place in the international nano-community. All it takes is tapping into information and adopting standards that guide others.

So, let's drop the scare tactics and get on with writing the next chapter in the nano-story. Nanotechnology is revolutionizing the world around us -- energy, transportation, medicine, electronics. It's the success story of 21st century innovation.

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