

Duke Nanotechnology Specialist Named AAAS Fellow

Duke University

For his work probing the environmental implications of the burgeoning field of nanotechnology, Mark Wiesner, professor of civil and environmental engineering at Duke University, was elected as a fellow to the American Association for the Advancement of Science (AAAS) .

Because of their unique properties, nanoparticles – which are a million times smaller than the head of pin -- are being used in a wide variety of industrial applications and consumer products. To date, the use of these tiny particles has far out-stripped science’s understanding of what, if any, effects these particles might have on humans and the environment.

“There are an infinite number of potential new man-made nanoparticles, so we need to find a way to focus on those that have the greatest likelihood of having the unique properties with unique effects,” said Wiesner, who joined the faculty of Duke’s Pratt School of Engineering in 2006. “A key question to be answered is whether or not a particular nanoparticle has toxic or hazardous properties that are truly different from identical particles in their bulk form. This question has not been answered.

“Election to AAAS fellow of me and colleagues in this field is an indication of how important this line of research is,” he said.

The AAAS cited Wiesner for “distinguished contributions to the environmental applications and implications of nanotechnologies, particularly in developing membrane technologies and theory for nanomaterials exposure assessment.”

Last year, the National Science Foundation and the Environmental Protection Agency awarded \$14.4 million to create the Center for Environmental Implications of NanoTechnology (CEINT) to explore the potential ecological hazards of nanoparticles. Wiesner directs this effort, which also includes scientists from Carnegie Mellon University, Howard University, Virginia Tech, Stanford University and the University of Kentucky.

Wiesner earned a Ph.D. in environmental engineering from Johns Hopkins University, an M.S. in civil and environmental engineering from the University of Iowa, and a B.A. in mathematics/biology from COE College in Cedar Rapids, Iowa. He conducted postdoctoral studies at the Chemical Engineering Sciences Laboratory at the Ecole Nationale Supérieure des Industries Chimiques (ENSIC) in Nancy, France.

The official presentation for the 531 fellows will be held at a special forum during

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the 2010 AAAS annual meeting in San Diego on Feb. 20.

The AAAS is the world's largest general scientific society, and publisher of the journals, Science, Science Translational Medicine and Science Signaling. It was founded in 1848, and includes some 262 affiliated societies and academies of science, serving 10 million individuals. The tradition of AAAS Fellows began in 1874.

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