University of Pittsburgh

Petersen Institute of NanoScience and Engineering Seminar

Speaker: **Professor Ray Baughman**
Department of Chemistry, University of Texas, Dallas

Title: ***Nanotechnology for fun and profit***

Time/Date: **12:00 noon, Monday, February 4, 2008**
(refreshments at 12:00noon - 12:15pm)

Place: **Kresge Conference Center, 1175 Benedum Hall**

New technologies will be described, which have been developed in our NanoTech Institute: (a) artificial muscles with giant strokes and giant force generation capabilities that are powered by high energy density fuels; (b) solid-state fabrication methods for the manufacture of strong carbon nanotube yarns and transparent nanotube sheets at industrially useable rates; (c) carbon nanotube based devices for thermal and solar energy harvesting, energy storage, energy conversion, electron field-emission, sensing, and light emission; and (c) new generic methods for tuning the electrical, magnetic, and optical properties of conductors by giant charge injection.

Biographical Sketch

Dr. Ray Baughman became the Robert A. Welch Professor of Chemistry and Director of NanoTech Institute at the University of Texas in Dallas in August 2001, after 31 years in industry. He is a Fellow of the American Physical Society and the World Innovation Foundation, an Academician of the Russian Academy of Natural Sciences, an Honorary Professor of three universities in China, and is on editorial and advisory boards of *Science*, *Synthetic Metals*, the *International Journal of Nanoscience*, and the *Encyclopedia of Nanoscience and Nanotechnology*. Dr. Baughman has 58 US patents and over 280 publications with over 11,500 citations. He has received the *Chemical Pioneer Award* of the American Institute of Chemists (1995), the *Cooperative Research Award in Polymer Science and Engineering* (1996), the *New Materials Innovation Prize* of the Avantex International Forum for Innovative Textiles (2005), *Nano 50 Awards* from Nanotech Briefs Magazine for Carbon Nanotube Sheets and Yarns (2006) and for Fuel Powered Artificial Muscles (2007), the *NanoVic Prize* from Australia (2006), the *Scientific American Magazine 50* recognition for outstanding technological leadership (2006), Chancellor's Entrepreneurship and Invention Award (2007), *21 for the 21st Century* award (2007), the Alumni Distinguished Achievement Award of Carnegie Mellon University (2007), and the *Kapitza Metal* of the Russian Academy of Natural Sciences (2007).