



**SAN FRANCISCO BAY AREA  
NANOTECHNOLOGY COUNCIL**

**June 2008 Seminar**

**Subject:** Hybrid Organic-Inorganic Devices Using Self Assembly Technique And Their Application To Solar Cells

**Speaker:** Dr. Geetha R Dholakia  
Senior Research Scientist at the Advanced Aerospace and Materials Group  
NASA Ames Research Center

**Date:** Tuesday, June 17, 2008

**Time:** Registration & light lunch 11:30am. Presentation & Q/A 12:00 to 1pm

**Location:** National Semiconductor Bldg E-1 CMA Room. 2900 Semiconductor Drive, Santa Clara, CA  
<http://www.google.com/search?hl=en&q=2900+Semiconductor+Drive.+santa+clara+%2C+ca&btnG=Google+Search>

**Cost:** IEEE Members and Students \$5. Non-Members \$10

**Please RSVP at our web site:** [www.ieee.org/nano](http://www.ieee.org/nano)

**Talk Abstract:**

In recent years there has been a tremendous amount of research directed towards the development of low dimensional nanostructured materials having a broad range of physical and electronic properties. Assembly of nanoscale objects, both for routine transport measurements as well as for integration into functional devices requires new techniques to efficiently manipulate them at the nanoscale. Self assembly is a promising technique for manipulating and assembling nanoscale structures. This talk will focus on self assembly of molecular monolayers and multilayers. The critical role played by orientation, order and nanostructure in the electronic transport properties and the device performance will be discussed. Finally, possibilities in the synthesis of oxide nanowires and their applications in hybrid organic solar cells will be discussed.

**Speaker Biography:**

Geetha Dholakia is a Senior Research Scientist at the Advanced Aerospace and Materials Devices group, NASA Ames Research Center. At NASA, she works in the areas of soft condensed matter, multifunctional materials synthesis and electronic transport measurements in nanomaterials. She conducts research at the interface of Physics, Materials Science and Chemistry. She has developed scanning probe instruments and is currently also involved in instrument development for NASA on board planetary missions. She received a Ph.D in Physics from the Indian Institute of Science, Bangalore India and a Masters in Physics from the Indian Institute of Technology, Madras, India. She also held a Visiting Scientist position in the Applied Physics Department at Rensselaer Polytechnic Institute, Troy prior to her current position at NASA Ames.