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Leaders:
Professors C. P. Wong,
Sam Graham,
Rao Tummala,
Meilin Liu, and
Dr. Raj Pulugurtha

Contact:
Dr. Jack Moon,
jack.moon@gatech.edu

Contact PRC:

404.894.9097
prcinfo@ece.gatech.edu
www.prc.gatech.edu

An Industry-Academia Consortium

NanoPack

Nano Materials, Components, Packaging and Systems

Georgia Tech
MICROSYSTEMS PACKAGING RESEARCH CENTER

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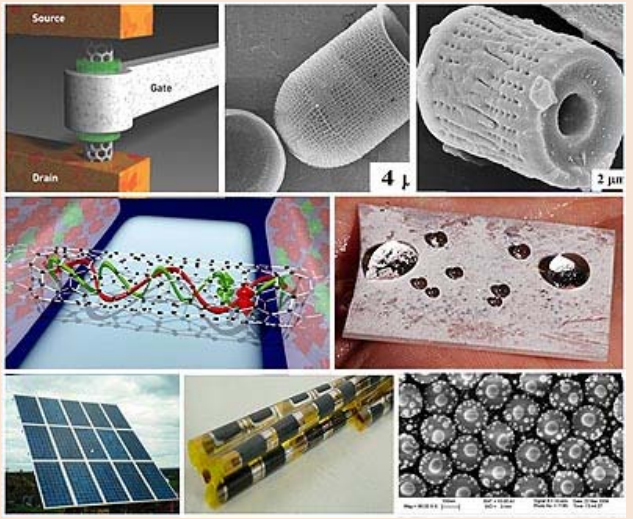
Focus:

Nano-science and technology has been a buzzword for about five years. Most of the research to date in this area, however, has been focused either in materials or devices. Such technologies as carbon nano tubes (CNTs), molecular self assembly and manufacturing, nano imprints and sensors, etc. are being explored and studied for mechanical, physical, chemical, photonic, electronic and biological properties.

The Packaging Research Center proposes to go beyond nano-materials and devices to form chip-to package interconnects, system level components, sensors, dielectrics, coatings and batteries, leading to nano-modules. This proposed emphasis is expected to lead to a number of commercial applications, not achieved so far.

To accomplish these goals, the Packaging Research Center proposes a global Industry-Academia consortium on "Nano Packaging, Components, and Systems (NanoPack)" to explore a variety of new opportunities that these materials may provide.



Proposed Projects:

- Nano-materials for Batteries
- Embedded Thin film Processes for Batteries in Organic Packages
- Nano Materials for Thermal and Electrical Interconnects
- Nano Surfaces for High Performance Reliability Electronic and Photonic Packaging
- Nano Embedded Thin Film Passive Components
- Nano-capacitors and Batteries
- Modeling and Characterization

Research Tasks:

- Chip-to-Package Nano Interconnections
- Nano-coatings
- Nano-sensor

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Microsystems Packaging Research Center
813 Ferst Drive, NW
Atlanta, GA 30332
404.894.9097
404.894.3842 fax
www.prc.gatech.edu
prcinfo@ece.gatech.edu