

# Introduction to Multidisciplinary Nanotechnology Laboratory

**Fall 2011**

**MAE 495 / MSE 490 / ISE 495**

## Topics:

- Nanoscale building blocks: gold nanoparticles, carbon nanotubes, and polymer microspheres
- Nanofabrication: top-down and bottom-up approaches, and self-assembly
- Characterization: structural, optical, electrical, and mechanical properties
- Applications: energy harvesting, biosensing
- Instrumentation: CVD, Raman, AFM, SEM, TEM, UV-vis spectroscopy, and more

## Instructors:

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## Time:

Lecture (Mondays, 10:40-11:55 am)

Four lab sections (choose one):

(Tu: 8:30-10:20 am, 10:40 am-12:30 pm)

(Th: 8:30-10:20 am, 10:40 am-12:30 pm)

## Location:

Engineering Building III, Room 2220

## Prerequisites and Enrollment Information:

- Senior standing and instructor permission are required for enrollment.
- For MAE, MSE and ISE students, contact the instructor(s) in your department; for students from other departments, contact Dr. Zhu.
- Enrollment is limited to a total of 16 students.

