

PHYSICS DEPARTMENT COLLOQUIUM

" RECENT ADVANCES IN THE PHOTOPHYSICS OF
CARBON NANOTUBES"

BY

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The use of Raman spectroscopy to reveal the remarkable structure and properties of carbon nanotubes arising from their one-dimensionality will be briefly reviewed. Particular emphasis will be given to the fact that a nanotube can be semiconducting or metallic depending on its diameter and chirality and how Raman spectroscopy at the single nanotube level reveals unique information about this system. Some of the recent advances in single nanotube photophysics based on both resonance Raman spectroscopy and photoluminescence will then be discussed. Finally, some of the current research challenges and research opportunities facing the field will be reviewed.

THURSDAY, FEBRUARY 3, 2004
4:00 PM IN 102 JFB
REFRESHMENTS AT 3:30 PM IN 219 JFB