

SEMINAR IN PHYSICS

FRIDAY, April 18, 2014
3:30-4:25 – Ross 0220
Refreshments

Carbon Nanotubes in Dye-Sensitized Solar Cells

Josh Wadle (UNC Physics student)

Photovoltaic cells are one of the most promising renewable energy sources currently being researched. The Dye-Sensitized Solar Cells are one of the most efficient types of photovoltaic cells currently being researched. The best way to optimize the Dye-Sensitized Solar Cell is to use carbon nanotubes in the design of the photovoltaic cell. This talk will focus on what a photovoltaic cell is, what is special about Dye-Sensitized Solar Cells, and how carbon nanotubes are incorporated in to the Dye-Sensitized Solar Cell.

Using Electroencephalography (*EEG*) in New Ways

Michael Paton (UNC Physics student)

It has been 90 years since Electroencephalography (*EEG*) was first used to measure the brain waves of a human. Typically it is used to identify seizures, analyze sleep, identify a patient in a coma, and test for brain death. More recently scientists and engineers have asked what else we can do with these electrical impulses that run across the human scalp. Their research has begun by using EEG as a noninvasive Brain Control Interface for robotics, gaming, education research, and in other varying ways. In the near future we may see these technologies being used in some of our everyday lives, but also improving the lives of people with physical and/or mental disabilities.