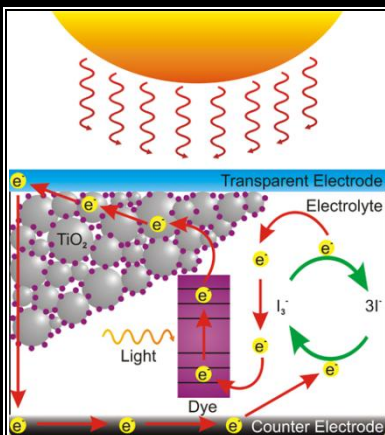


# Physics Seminar

Friday, 3:30 pm Mar. 23rd, 2012

## Building and Testing Dye-Sensitized Solar Cells

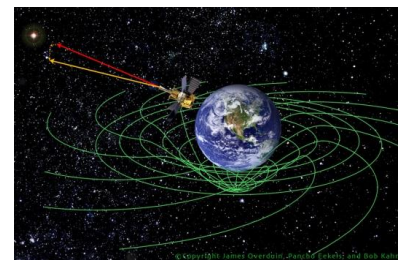
*Rachel Bennet*



We've all seen them, standing silent outside airports, government facilities, and the homes of the environmentally conscious elite. Silicon solar panels, the first generation of sun-based energy generation, are a promising alternative to fossil-fuel-based power plants. But silicon-based panels are heavy and expensive to produce, relying on processed silicon and heavy metals that increase their cost both to our pocketbooks and to the environment. "There's got to be a better way!" Want to learn how to make a solar cell from white paint, berry juice, and a pencil? You've come to the right place! Join us for a look into dye-sensitized solar cell technology – find out what it is, how easy it is to build in a basic laboratory, and how current research from the UNC Physics department seeks to improve it.

## Gravity Probe B

*Kyle Kingsley*



An experiment conceived in the 1950's to test some aspects of Einstein's Theory of General Relativity took decades to design and complete. The effects of the Earth and its rotation on the surrounding spacetime were tested with Gravity Probe B. This seminar will discuss the standards of measurement required to detect the geodetic effect of the Earth and the frame-dragging caused by the Earth's rotation. It will also delve into some of the technology developed specifically for this experiment. Finally, this seminar will discuss the final results of the Gravity Probe B experiment and what they mean for Einstein's theory.

**Location: Ross 0220 (Ground level of Ross Hall)**

(Refreshments will be served at 3:20pm.)

*Physics/EPS/NHS/UNC*

[ruwang.sung@unco.edu](mailto:ruwang.sung@unco.edu) 970-351-2961 <http://www.unco.edu/nhs/physics/>