Please Post

Speaker: Dr. Shoucheng Zhang (Stanford University)

Title: The Spin Hall Effect

Date: Monday, April 10, 2006

Time: 4:10 PM

Place: 55 Roessler

The main roadblock on the Moore's law trajectory is the Ohm's law, which describes the inevitable dissipation associated with the electric current flow. Recently, it has been shown theoretically that the spin current generated by an electric field can flow without dissipation in conventional semiconductors even at room temperature. In this talk, I shall describe the basic physics of spin-orbit coupling in semiconductors, and show how it can be used for electric generation of the spin current, leading to the so called spin Hall effect. Recent experiments and theories in this field will be summarized.

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Refreshments – 3:50 p.m., Entrance of Phy/Geo Bldg. (Outdoor breezeway area)

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