

University of Notre Dame
College of Science
Department of Physics

COLLOQUIUM

The spin Hall effect for electrons and photons in semiconductors

Prof. Henry van Driel
University of Toronto

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(Refreshments at 3:30 p.m. NSH 202)

Both classical and quantum Hall effects have provided important insight into transport properties of semiconductors since 1879. The spin Hall effect is the production of a transverse electrical current from a longitudinal spin current or vice-versa. An analogous spin Hall effect for light has recently been discussed wherein a linearly polarized beam incident on an interface is transversely split into its spin, that is right and left circularly polarized, components. I describe the generation and detection of electronic and photon spin Hall effects in GaAs using ultrafast, optical techniques although the displacements in all cases is subwavelength.

Host: Morten Eskildsen

ALL INTERESTED PERSONS ARE CORDIALLY INVITED TO ATTEND