

# SEMINAR NOTICE

*Department of Physics and Engineering Physics  
University of Saskatchewan*

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**SPEAKER:** Dr. Michael P. Bradley, Department of Physics & Engineering Physics  
University of Saskatchewan

**TOPIC:** *High-Fluence Ion Implantation as a Nanofabrication Tool*

**DATE:** Tuesday, September 29, 2015

**TIME:** 3:30-4:30pm.

**PLACE:** Rm. 103, Physics Building

## **ABSTRACT:**

The enhanced optical and electronic properties of nanocrystals relative to their bulk material precursors make nanocrystals intriguing choices for new electronics and photonics applications. However electronic and photonic devices incorporating nanocrystals must be integrated with existing electronic devices on chips in order to be useful in the context of other information and communications technologies. Because of its compatibility with ordinary silicon CMOS device processing, high-fluence ion implantation (using plasma-based as well as beamline implanters) can be a versatile method for in situ fabrication of nanocrystals for integrated circuit applications. This talk will review the physics of energetic ions implanted into solid materials, and illustrate how post-implant thermal treatment can be used to form nanocrystals in the ion-implanted region. A number of potential applications of this materials synthesis technique will be discussed.

Coffee and Cookies will be served in the Physics lounge at 3:00 pm. for those attending the seminar.