

Summer Research Program 2011/2012

Project Title: fabrication of metallic nanostructures for bioimaging application

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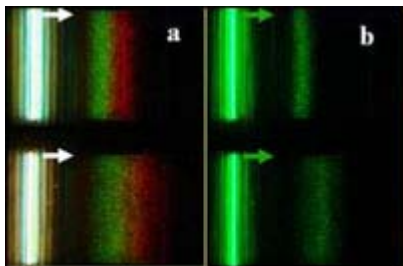
Department: Mechanical & Aerospace Engineering

Objective

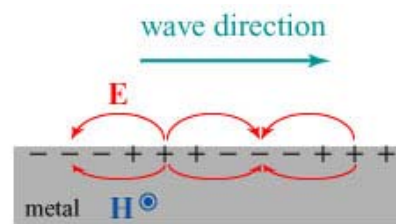
To develop metallic nanostructures that will advance biochemical-based applications through nano-scale fabrication.

Description

When light passes into or through metallic structures in the nano scale it creates light in the form of surface plasmons. These surface plasmons can be harnessed in various ways to create devices that enhance biochemical sensing. Biochemical sensing using such miniature devices opens up important avenues in healthcare that is not possible using current technologies.



Plasmonic light emanating from nanoscale structures



The nature of plasmonic light travel

Knowledge will be gained in nano scale machining and characterization. Candidate will have opportunity to work on state-of-the-art equipment at the Monash Centre for Electron Microscopy, and the Melbourne Centre for Nanofabrication.

Some background or interest in manufacturing, mechanical, mechatronic, electrical engineering or physics will be beneficial.