

Summer Research Program 2011/2012

Project Title: Next step green electrical circuits

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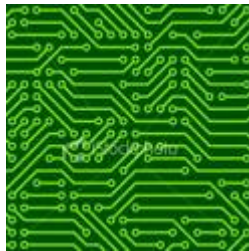
Department: Mechanical & Aerospace Engineering

Objective

To develop printed electrical circuits that are cost-effective, environmentally friendly, and can be easily repaired.

Description

The traditional PCB fabrication process – involving thick copper layers, the creation of different photomasks for each layer and complex steps for forming plated through-holes – is expensive and requires discharging environmentally harmful materials. Direct inkjet printed circuits offer the ability to overcome this but damaged segments cannot be repaired easily. This project seeks to build on a viable alternative that has already been developed.



*Traditional
printed circuit
board*



*Circuit board
developed by
direct inkjet
printing*

Knowledge will be gained in micro fabrication and characterization. The participant 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 mechanical, mechatronic, electrical engineering or physics will be beneficial.