Postgraduate research project in organic electronics:

Title of the project offered:

1. Optimum structure determination for resonance cavity organic light emitting diode (RC-OLED) through device characteristics simulation.

Abstract:

In this research project, we aim to provide a detailed investigation into cavity design and thickness optimization of organic layers by examining both electrical and optical characteristics. Initially, the optimum thickness of organic layers is determined by using resonant cavity model. Electrical carrier transport characteristics and optical properties of a micro-cavity device are then simulated to determine the optimum structure. The influence of the cathode choice, organic layer thickness, and the position of the emission region to the output from the OLED can be further investigated.

Supervisor:

Prof. Dr. Wan Haliza Abd. Majid – Physics Department-Theoretical aspect (q3haliza@um.edu.my)
Prof. Madya Dr. Noor Hasnah Moin – Institute Mathematical Science - Programming and simulation aspect (noor_hasnah@um.edu.my)

Candidate must have Physics or Mathematics degree. The project is designed such that it can be converted to PhD depending on the interest and progress of the student.

Interested candidate can contact the above supervisors for clarification and further discussion.