

Call for Graduate Research Assistant

Project Title: *Electrochromic Devices for Smart Window Applications*

Description: High electricity usage in commercial and residential buildings is mainly generated from cooling and heating, which can be reduced using smart devices for cost-saving purposes. Electrochromic (EC) windows employ electrochromism to reversibly modulate transmitted light, glare and solar heat while preserving outside views, thus significantly lessen the energy usage by controlling heating, cooling and lighting consumptions. This can reduce the electricity and carbon footprint.

In this research project, sol-gel spin-coating technique will be adopted to realize the all-solid-state, revolutionary smart window devices based on EC technology, which are free of liquid, safer, cheaper, and highly transparent. The main objectives are to investigate the processing technology, characterize and analyze the material constituents' structural, optical and electrical properties, and the performances of the solid state smart window devices through spectroscopies, microscopies, and cyclic voltammetry (CV) system.

Source of Funding: Fundamental Research Grant Scheme FRGS 2020

Project Duration: 1 Year

Monthly Stipend: RM 1800

Location: Faculty of Engineering, Multimedia University, Cyberjaya, Malaysia.

Responsibilities:

- Enroll as a full-time candidate of Master in Engineering Science (M.Eng.Sc) at the Faculty of Engineering, Multimedia University, Cyberjaya, Malaysia.
- Prepare technical documentations and scientific articles.
- Carry out any relevant administrative work/purchasing matters as requested.

Requirements:

- Bachelor's degree with honors in a field related to Electronic Engineering, Material Engineering, Nanotechnology Engineering, Microelectronic Engineering, Electrical Engineering, preferably 2nd class or above.
- Some knowledge in semiconductor topics are advantageous.
- Excellent command in written and oral English.
- Able to work with minimal supervision, self-motivated and independent.

Interested applicants may submit their resumes via email to Associate Prof. Ir. Dr. Chan Kah Yoong (kychan@mmu.edu.my).