

PhD Studentship (Advanced Materials Research Group)

Applications are invited for one MPhil/PhD studentship under the Advanced Materials Research Group at the University of Nottingham Malaysia campus for the following research project:

Project Title: High Performance Electrochemical Immunosensor based on Graphene/metal oxide Nanocomposites

Highly sensitive and selective immunosensor that are able to detect disease biomarkers at ultra-low levels at early stages are urgently needed to improve mortality risk. Recognition layer immobilisation is potentially an important prerequisite for the fabrication of immunosensor. Since most proteins' redox centers are usually buried within its structure, a sound investigation is crucial on maintaining the proteins' conformation and activity, ensuring direct electron transfer between proteins and sensor electrodes. This research aims to establish understanding on the synergistic effect of the hybridisation of graphene with metal nanoparticles as sensor electrode platform towards the development of high performance immunosensor. The work is multidisciplinary and will involve the synthesis of the nanomaterials and its surface functionalisation towards the development and fabrication of the nanosensor device.

Potential candidates should have either a MSc degree, a MEng degree (1st class or 2nd upper) or BEng degree (1st class or 2nd upper) in engineering degree (material, chemical or electrical and electronic engineering) Or Candidates from Biosciences, Physic and Material Science background are also encouraged to apply. Experience in electrochemical analysis techniques and other material characterisation instruments (Raman, AFM, SEM, etc) will be an added advantage. Scholarship will be provided and successful candidate is expected to take up the studentship in March 2015 (Malaysian only).

For further details, please contact and send your CV with a summary of research experience to:-

Dr. Michelle T. T. Tan

Department of Electrical and Electronic Engineering

Faculty of Engineering, The University of Nottingham Malaysia Campus

Tel: +60-3-89248715

E-mail: Michelle.Tan@nottingham.edu.my