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**EXPERTISE**

Nanomaterials, Polymers

Dr. Norizah Abdul Rahman is a senior lecturer at the Department of Chemistry, Faculty of Science, Universiti Putra Malaysia (UPM). Her research interests are preparation and characterizations of nanomaterials, mainly polymer based-materials nanofibers. These nanofibers were prepared using two methods; electrospinning and chemical polymerization. Various type of polymers has been electrospun to nanofibers including conducting polymers and biodegradable polymers. The nanofibers are studied for the many applications such as drug delivery, filtration and wound dressing. Her research grants mainly from UPM and Ministry of Education.

CURRENT RESEARCH INTERESTS:

- **Hydrogel nanofibers from sago waste for drug delivery applications**
Preparation and characterization of sago starch and carboxymethyl sago pulp hydrogel film and nanofibers from sago waste. The properties of the hydrogel including the swelling ratio, gel fraction and controlled release were evaluated and investigated.
- **Lignin from sago waste as precursor for the production of carbon nanofibers**
Sarawak produces approximately 25 tonnes of sago starch/hectare. This makes sago starch at fifth rank in term of agricultural revenue. Sago fiber is used to provide bulk for rumen fermentation, sago pith used as animal feed stuff and in livestock industry. However, the utilization of sago palm should be further explored. Investigating the potential application CMC hydrogel nanofibers prepared from sago waste for drug delivery application and lignin from sago waste as precursor for the production of carbon nanofibers, will not only open a new potential application sago waste, but also will help to recycle and solve disposal problem of sago waste.
- **Polyaniline/graphene composite nanofibers for DNA sensors**
An electrochemical DNA biosensor for the detection of mycobacterium tuberculosis (M. tuberculosis) based on polyaniline/graphene (PANI/GP) composite nanofibers modified screen printed carbon electrode (SPCE) has been studied. PANI/GP nanofibers were obtained from a solution containing poly(methyl vinyl ether-alt-maleic acid) (PMVEA) by oxidative polymerization. Excellent electrochemical properties of PANI/GP nanocomposite result DNA biosensor for the detection of M. tuberculosis DNA.

LINK TO POSTGRADUATE FIELD OF STUDY:

Material Science, Nanotechnology, Sensor technology

ADDITIONAL INFORMATIONhttp://profile.upm.edu.my/a_norizah/bm/profail.htmlhttps://www.researchgate.net/profile/Norizah_Abdul_Rahman<https://upm.academia.edu/NorizahAbdulRahman><https://scholar.google.com/my/citations?user=TnV7304AAAAJ&hl=en>