

**DR. MOHD ZOBIR HUSSEIN**

Research Fellow, Nanomaterials Synthesis and Characterisation Laboratory

Expertise: Nanomaterials, nanomedicine, drug delivery, carbon nanomaterials, phase change materials, nanoenergy

Email: mzobir@upm.edu.my

Phone: +6012-3433858

Google Scholar: [Link](#)
Scopus ID: [7201898729](#)

ResearchGate : [Link](#)



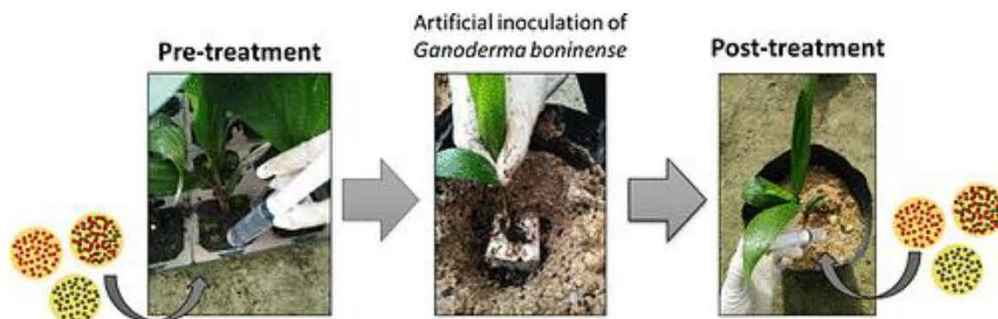
ORCID

RESEARCH HIGHLIGHTS

1. A potent agronanofungicides for basal stem rot diseases treatment of oil palm

The rise of environmental and health concerns due to the excessive use of the conventional fungicide urges the search for sustainable alternatives of agronanofungicides, to enhance plant uptake and minimize the volatilization, leaching, and runoff of fungicides. Fungicides were encapsulated into chitosan nanoparticles for the formulation of the agronanofungicides and used as potent antifungal agents in combating the basal stem rot (BSR) disease caused by *Ganoderma boninense* and were evaluated via artificial inoculation. The agronanofungicides were found to be superior compared to their conventional counterparts.

Farhatun Najat Maluin, Mohd Zobir Hussein, Nor Azah Yusof, Sharida Fakurazi, Abu Seman Idris, Nur Hailini Zainol Hilmi and Leona Daniela Jeffery Daim, Chitosan-Based Agronanofungicides as a Sustainable Alternative in the Basal Stem Rot Disease Management, *J. Agric. Food Chem.* 2020, 68, 15, 4305–4314.



2. Magnetic nanoparticles for nanotheranostics application

Cancer treatments are being continually developed for more effective and better-targeted to improve the outcomes. Magnetic iron oxide nanoparticles were coated with polyethylene glycol, layered double hydroxide and drug to generate the nanotheranostics with the superparamagnetic property. These unique core-shell nanoparticles synthesized with the presence of multiple functionalities are hoped can be used as a multifunctional nanocarrier with the capability of targeted delivery using an external magnetic field and can be exploited as hyperthermia for cancer cells in addition to the chemotherapy property.

Mona Ebadi, Bullo Saifullah, Kalaivani Buskaran, Mohd Zobir Hussein and Sharida Fakurazi, Synthesis and properties of magnetic nanotheranostics coated with polyethylene glycol/5-fluorouracil/layered double hydroxide, *International Journal of Nanomedicine*, 2019:14 6661–6678.

