



## DR. NURUL HAYATI BINTI IDRIS

My research interest revolves around development of energy storage nanomaterials/nanocomposites for lithium battery and supercapacitor towards the realization of green energy futures. I am working on the understanding of the formation of the nanomaterials/nanocomposites synthesizing by various approaches such as hydrothermal, solid-state, sol-gel, ball-mill, and rheological methods. Also, elucidate the basic understanding of the morphology, structure and electrochemical performances of the nanomaterials/nanocomposites. For instance, I have successfully studied on numerous graphene-based, metals-based, metal oxides-based and conducting polymers-based nanomaterials/nanocomposites. I am familiar with characterization techniques such as X-ray diffraction, Fourier-transform infrared, scanning electron microscope, high-resolution transmission electron microscope, electrochemical impedance spectroscopy and battery analyzer. My work will contribute in the green energy storage research and development and thus, reduce our reliance on fossil fuels and alleviate air pollution.



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### Expertise Area

Main Field : Physics  
Sub Field : Material Science  
Specialization : Lithium Battery

### Networking & Collaboration

- University of Wollongong, Australia
- University of Malaya, Malaysia

### Publication Reference

- Scopus Author id.: Author ID: 36659181400
- Google Scholar: Nurul Hayati Idris