Physics

TAN SIN TEE

Ph.D. (Universiti Kebangsaan Malaysia)

Dr. Department of Physics Universiti Putra Malaysia Tel.: n/a Fax.: n/a tansintee@upm.edu.my

EXPERTISE

NANOMATERIAL AND DEVICE PHYSICS



Sin Tee Tan graduated from Universiti Kebangsaan Malaysia (UKM) in 2011 with a B.Sc. degree in physics and received her Ph.D. degrees in 2014. Presently, she is a senior lecturer in the Department of Physics at University Putra Malaysia. Her research interests included the synthesis and design of metal, semiconductor and two dimensional nanomaterials for application in photo(electro)catalysis, perovskite/organic based photovoltaic and optical gas sensor. She has published more than 30 research article in international journal and involved in international academic services as an reviewer. She has received several research grant from the Ministry of Higher Education including ERGS and FRGS. She is a member of Lindau Alumni Network and American Chemical Society.

Current research interests:

Nanomaterials Design

Synthesis and design of metal, metal oxide and two dimensional nanomaterial via solution processing approach. Fundamental study on its intrinsic properties including electrical, mechanical and optical properties. Characterization using HRTEM, XPS, XRD, UV-vis, Raman-PL, FESEM, AFM (CFM and KPFM) and etc. The robust relation between the morphology and energy band alteration in the nanomaterial is the key of the research.

New Energy Technology

Fabricate and set-up a device experiment in the field of organic/perovskite based solar cells, photo(electro)catalysis, optical based CO gas sensor and a flexible supercapacitor. A series of device performance analysis and computational simulation based on COMSOL FEM method is conducted to optimize and design a new intelligent device materials and structure.

LINK TO POSTGRADUATE FIELD OF STUDY:

ADDITIONAL INFORMATION: