

YAP WING FEN**Ph.D. (Universiti Putra Malaysia)**

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**EXPERTISE**

APPLIED OPTICS

Dr. Yap Wing Fen leads the Applied Optics Laboratory at Department of Physics, Faculty of Science, Universiti Putra Malaysia. He is also attached to the Functional Device Laboratory, Institute of Advanced Technology UPM as a Research Associate. He has several research grants from university, Malaysian Ministry of Higher Education and Malaysian Ministry of Science, Technology and Innovation. His research interests encompass a broad area from fundamental to applied research in optics. He has contributed more than 30 articles in various international journals and proceeding, and has been invited as a referee/reviewer for several international journals. Numerous medals and recognition have been received for his research findings in various invention/innovation exhibitions or competitions at university, national as well as international level. He previously was a physics teacher and now actively involved in many schools and community outreach activities as well as research in physics education development.

Current research interests:

- **Development of optical sensor based on surface plasmon resonance technique**

The fundamental and potential of surface plasmon resonance in sensing various targeted ions/molecules. This study also includes the development of novel active layers in combination with surface Plasmon resonance to enhance the sensitivity and selectivity of the sensor. The optical properties of the active layers are also investigated.

- **Optical studies on glass ceramics composite materials**

Optical studies include the absorption, reflectance, transmittance, reflective index, optical band gap and photoluminescence. The success of this work provides the basis of understanding for tailoring various glass properties for optimum LED applications with the intention of producing the low cost of fabrication of these novel materials.

- **Optical properties of various nanocomposite thin film**

Semiconductor nanocomposite thin film; magnetic nanocomposite thin film; graphene based material thin film

- **Physics literacy, simulation and multimedia**

This area focuses the attention of physicists on the processes of teaching and learning physics. A broad range of research interests that include the development of effective learning modules and models, multimedia physics visualizations, and the development of new physics experiments and demonstrations.

LINK TO POSTGRADUATE FIELD OF STUDY:

Physics, Applied Physics, Material Science, Applied Optics, Sensor Technology, Advanced

Material ADDITIONAL INFORMATION:

<http://www.upmbiosensor.com>