



Siti Zulaikha Binti Ngah Demon

Senior Lecturer (DS51)

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🌐 Department of Physics
Centre for Defence Foundation Studies
National Defence University of Malaysia

TEACHING & RESEARCH INTERESTS

- ▶ laser technology & instrumentation
- ▶ nonlinear optics
- ▶ molecular electronics
- ▶ science, technology, engineering & mathematics (STEM)

CURRENT RESEARCH PROJECTS

- ❖ *Design of Hybrid Carbon Nanotube/Polythiophene based Chemiresistive Sensor for VX-type Nerve Agent Stimulant* under CHEMDEF 2018 grant
- ❖ *Effect of Chloroauric Acid Doping into P3HT Nanowires in Saturable Absorption Phenomenon* under UPNM Short Term Grant 2019
- ❖ *Role of Intermolecular Interaction in Conductive Polymer Wrapped MWCNT as Organophosphate Sensing Material Structure* under ISIS-NEWTON 2019 grant

EDUCATION

Doctor of Philosophy (Materials Science), Japan Advanced Institute of Science and Technology (JAIST) (2014)

Master of Science (Physics), Universiti Teknologi Malaysia (UTM) (2011)

Bachelor of Science (Physics), Universiti Teknologi Malaysia (UTM) (2008)

PREVIOUS RESEARCH PROJECTS

- ❖ Study of intermolecular interaction between carbon nanotubes and π -conjugated molecules for ultrafast optical switching (RAGS 2015)
- ❖ Electronic structure of metal oxide/organic semiconductor interface by optical second harmonic generation measurement (FRGS 2015)
- ❖ The Perturbation of Backscattered Fast Neutrons Flux Caused By The Resonances In The Cross Section Of C, N And O For Possible Use In Explosive Detection (RAGS 2012)

FEATURE PUBLICATIONS

- ❖ S. Z. N. Demon et al, Graphene-based Materials in Gas Sensor Applications: A Review, *Sensors and Materials* 32 (2020) 759-777
- ❖ S. Z. Ngah Demon et al, Normal and Resonant Raman Spectra of CuPc-MWCNT Blend, *Key Engineering Materials* 773 (2018) 113-117
- ❖ S. Z. N. Demon et al, Optical second harmonic generation at interfaces of some organic layers with indium tin oxide. *Appl. Surf. Sci.* 311 (2014) 715-720
- ❖ S. Z. N. Demon et al, High Voltage Power Supply for Laser System. *IEEE.Proceedings* (2009) International Conference TECHPOS Kuala Lumpur.

LIST OF POSTGRADUATE STUDENTS

- ❖ Nursaadah Binti Ahmad Poad (Graduated 2018)
- ❖ Nurul Syahirah Nasuha Binti Saa'ya (co-sv)
- ❖ Nur Atikah Binti Shaari (co-sv)

MEMBERSHIPS

- ❖ Persatuan Sains dan Teknologi Pepejal Malaysia (MASS)
- ❖ Jawatankuasa Program Pemindahan Ilmu (KTP) dan Program Sains, Teknologi, Kejuruteraan dan Matematik (STEM) UPNM

Full CV Upon Request