

# CURRICULUM VITAE



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## **EDUCATION**

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- 2018 – PhD Degree (Process, environmental and materials engineering)  
Thesis title - *Ultrafast laser plasma doping of rare earth ions for optical waveguiding applications*, School of Chemical and Process Engineering, University of Leeds, United Kingdom.
- 2009 – MSc Degree (Physics)  
Thesis title - *Development of n-type spin-on dopant for semiconductor devices (research mode)*, School of Physics, Universiti Sains Malaysia.
- 2006 – BSc Degree (Applied Physics):  
Final year project thesis: *Photoconductivity measurement of d.c. PECVD Hydrogenated Amorphous Silicon*, Physics Department, Faculty of Science, Universiti Malaya, Malaysia.

## **RESEARCH EXPERIENCE**

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Field of Interest - Thin films, Semiconductor devices, Glass, Optical materials and Optical waveguides, Ultrafast lasers

### **Research Projects/Grants**

- *Investigation of bandgap energies of single phase  $Zn_{(1-x)}Cu_xO$  nanoparticles* (2010-2012), Fundamental Research Grant Scheme, Ministry of Science, Technology and Innovation, Grant of RM39,200 (Principal investigator).
- *Unit cell parameter, cation position and oxygen site occupancy factor  $Fe_xO_y$  and  $Fe_xAl_zO_y$  Nanomaterials prepared by Combustion Method* (2010-2013), Fundamental

Research Grant Scheme, Ministry of Science, Technology and Innovation, Grant of RM65, 000 (Member).

- *Effect of particle size on the strain of TiO<sub>2</sub> nanoparticles* (2010-2012). Fundamental Research Grant Scheme, Ministry of Science, Technology and Innovation, Grant of RM39, 200 (Member).
- *Investigation of doping profile and device characteristic of n-type and p-type silicon wafer by using solid and liquid dopant* (2010-2011), Excellent Fund, Universiti Teknologi MARA, Grant of RM6,000 (Member).
- *Revival of double-exchange mechanism in charge-ordered in Bi<sub>0.75</sub>Na<sub>0.25</sub>MnO<sub>3</sub> and Bi<sub>0.75</sub>Na<sub>0.25</sub>Mn<sub>0.99</sub>Ru<sub>0.01</sub>O<sub>3</sub> manganites by Ru<sup>3+</sup>/Gd<sup>3+</sup> substitutions* (2012-2014), Research Intensive Faculty Grant, Universiti Teknologi MARA, Grant of RM32,000 (Principal investigator).
- *Elastic properties of electronic-ionic transition region in xAg<sub>2</sub>O-(35-x)[0.5MoO<sub>3</sub>/Fe<sub>2</sub>O<sub>3</sub>-0.5V<sub>2</sub>O<sub>5</sub>]-65TeO<sub>2</sub> glasses* (2014-2016), Fundamental Research Grant Scheme, Ministry of Science, Technology and Innovation, Grant of RM69, 200 (Member).

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## SUPERVISION / TEACHING EXPERIENCE

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### 1. Student Project Supervision / Co-supervision

MSc – (2013-2016) – Siti Laila Abdul Hamid (Completed)

*Influence of glass network modification on elastic and structural properties of lead vanadate (55-x)V<sub>2</sub>O<sub>5</sub>-45PbO-(x)ZnO and vanadotellurite 35V<sub>2</sub>O<sub>5</sub>-(65-x)TeO<sub>2</sub>-(x)Li<sub>2</sub>O glass system*

*The effect of annealing time on pn junction diode and its device characteristic*  
Nur Syazana binti Mohd Zainiuddin - Final-year Project (2009 – 2010)

*Effect of annealing temperature and time on boron and phosphorus spin-on dopant in n-type silicon wafer*

Nor Aishah bin Jamaluddin- Final-year Project (2009 – 2010)

*Deposition of ZnO on n-type silicon wafer*

Nur Zalikha binti Kamarul Zamri \_Final-year Project (2010 – 2011)

*Deposition of ZnO on p-type silicon wafer*

Azlina Abdul Aziz- \_Final-year Project (2010 – 2011)

*Characterization of Li<sub>4</sub>Ca<sub>2</sub>O<sub>4</sub> and Li<sub>2</sub>MgO<sub>2</sub> using XRD, SEM and UV-VIS-Nir*

Khairi bin Omar- Final-year Project (2011 – 2012)

*Charge discharge profile of L<sub>1</sub>Mn<sub>1.5</sub>FeO<sub>4</sub>.*

Siti Zawanis Darus - Final-year Project (2011 – 2012)

*Phase analysis of Zn<sub>(1-x)</sub>Cu<sub>x</sub>O nanomaterials*

Mohammad Syazmeer Zakaria - Final-year Project (2011 - 2012)

*4-bit universal shift register using 0.18 mm CMOS*  
Nuraida Fadzilah Aidrus - Final-year Project (2013 - 2014)

*Impurity implant using boron silicate glass thin film by the sol gel method for fabrication of solar cell*  
Suhaili Nadiah Aris - Final-year Project (2013 - 2014)

*Effect of DNA complex thickness based OLED*  
Puteri Nur Aishah Megat Yahaya - Final-year Project (2013 - 2014)

*Development of plasma focus nuclear Malaysia diagnostic*  
Norfazliana Mohamad Ali - Final-year Project (2013 - 2014)

## 2. Teaching Experience

Physics for Scientist and Engineers I, Physics for non-majors, Device Physics I (Semiconductor Device I), Device Physics II (Semiconductor Device II), Mathematical Methods in Physics, Fundamental Physics II, Semiconductor Fabrication Laboratory I, Semiconductor Fabrication Laboratory II, Advanced Physics Laboratory.

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## PUBLICATIONS / CONFERENCES

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E. Elyana, Z. Mohamed, S. A. Kamil, S. N. Supardan, S.K. Chen, and A. K. Yahya. Revival of ferromagnetic behavior in charge-ordered  $\text{Pr}_{0.75}\text{Na}_{0.25}\text{MnO}_3$  manganite by ruthenium doping at Mn site and its MR effect. *Journal of Solid State Chemistry*. 2018, **258**, pp. 191-200.

S. A. Kamil, J. Chandrappan, M. Murray, P. Steenson, T. F. Krauss, and G. Jose. Ultrafast laser plasma doping of  $\text{Er}^{3+}$  ions in silica-on-silicon for optical waveguiding applications. *Optics Letters*. 2016, **41** (20), pp. 4684-4687.

S. A. Kamil, J. Chandrappan, M. Murray, P. Steenson, T. F. Krauss, and G. Jose. Novel technique for doping rare earth ions in silica-on-silicon for photonic integrated circuits. In: *PHOTON16, 5-8 September 2016, Leeds*. Institute of Physics (IOP).

G. Jose, J. Chandrappan, S. A. Kamil, M. Murray, Z. Zolnai, E. Agocs, P. Petrik, P. Steenson and T. Krauss. Ultrafast laser plasma assisted rare-earth doping for silicon photonics. In: *Conference on Lasers and Electro-Optics (CLEO), 5-10 June 2016, San Jose, California*. IEEE.

M. Murray, S.A. Kamil, S. Mickelthwaite, T. Nunney, J. Treacy, and G. Jose. Implantation of erbium doped  $\text{TeO}_2\text{-ZnO-Na}_2\text{O}$  glass into silicon for gain media in silicon photonics. In: *Glass Reflections, 7-9 September 2015, Cambridge*. Society of Glass Technology.

M. Murray, J. Chandrappan, S. A. Kamil, T. Kakkar, P. Petrik, E. Agocs, Z. Zolnai, R. Hogg, D. Childs, T. Krauss, I. White, R. Penty, P. Steenson, A. Jha and G. Jose. Platform manufacturing technique for next generation integrated photonic components. In: *17th International Conference on Transparent Optical Networks (ICTON), 5-9 July 2015, Budapest, IEEE*.

Kasim, M. F., N. Kamarulzaman and S. A. Kamil. Crystal structural studies of ZnO nanorods and their band gaps. *Advanced Materials Research*, 2014, **938**, pp. 71-75.

Kasim, M. F., N. Kamarulzaman and S. A. Kamil. Investigation of Phase, Purity, Morphology and Particle Size of  $Zn_{(1-x)}Cu_xO$  Materials via X-Ray Diffraction (XRD) and Microscopic Techniques. *Advanced Materials Research*, 2014, **895**, pp. 343-346.

S. Laila, S.A. Kamil, and A.K. Yahya. Effect of glass network modification on elastic and structural properties of mixed electronic-ionic  $35V_2O_5-(65-x)TeO_2-(x)Li_2O$  glass system. *Chalcogenide Letters*, 2014, **11** (2), pp. 91-104.

Kasim, M. F., R. Rusdi, N. Kamarulzaman and S. A. Kamil. The effect of annealing temperature on the band gap of ZnO nano materials. *Advanced Materials Research*, 2012, **545**, pp. 165-168.

S.A. Kamil, M.F.Kasim, R.Rusdi, N.Kamarulzaman, *Synthesis and Band Gap energies of ZnO nanostructures*, 26<sup>th</sup> Regional Conference Of Solid State Science and Technology (RCSST 2011), 22-24 Nov 2011, Seremban, Malaysia

S.A. Kamil, F.L.M.Khir, A.Zakaria and M.S. Abdullah, *The investigation of doping profile of p-type silicon wafer by using solid dopant*, International Conference on Functional Materials and Devices (ICFMD 2010), 14-17 June 2010, Terengganu, Malaysia.

S. A.Kamil, K.Ibrahim, A.Abdul Aziz, *FTIR measurement of phosphosilicate films prepared by sol-gel method*, International Conference on Science and Technology: Applications in Industry and Technology (ICSTIE 2008), 12-13 Dec 2008, Penang, Malaysia

S. A. Kamil, K.Ibrahim, A.Abdul Aziz & M. Hussein, *Development of spin-on dopant for semiconductor devices*, IEEE Regional Symposium on Microelectronics (RSM 2007), 3-6 Dec 2007, Penang, Malaysia.

S. A. Kamil, K. Ibrahim and A. Abdul Aziz. Characterization of spin-on dopant by sol-gel method. *AIP Conference Proceedings*, 2008, **1017** (1), pp. 124-128.

