


Brief CV

中文姓名/ Name	Nor Farhani Zakaria	性别/ Gender	Female	
职称 (Pro./Dr.)	Dr.	国家 /Country	Malaysia	
所在单位 University/Department	Universiti Malaysia Perlis/Faculty of Electronic Engineering Technology			
研究领域 Research Area	Semiconductor Device Simulation and Modelling			
<p>Brief introduction of your research experience:</p> <p>I began my research foundation in undergraduate and graduate studies (2005-2008) under the supervision of Prof. Mitachi Seiko in the Tokyo University of Technology, Japan, in the field of bioelectronics investigating the photo-current regeneration using in bio integrated (retinal) device with publication in national and international proceedings.</p> <p>My career as a lecturer and researcher began in 2008 at University Malaysia Perlis (UniMAP). During this time, my research focus has been diverse, in semiconductor and optoelectronics field. I had been a principal lead for 4 grants projects:</p> <ol style="list-style-type: none"> 1. Essential Studies of III-V Quantum Dot Using Metal-Organic Chemical Vapor Deposition to Investigate the Optoelectronic Devices Efficiency, RM55,200, 06 July 2010 – 05 July 2011 2. Optical Response and Characteristic of Organic All-Trans Retinal and All-Trans Retinoic Acid as a Photo-receptive Material on Silicon Wafer, RM 40,000, March 2010 – March 2012 3. Fabrication and Electrical Testing of Zinc Oxide(ZnO) Thin Film Sensor for Electronic Communication”, RM12,000, March 2009 4. Thin Film Gas Sensor Fabrication for Detecting Hydrogen Produce from Water Fuel Cell, RM8,000, Nov. 2008 <p>with</p> <p>In 2016, I continue my studies (PhD) in Microelectronics Engineering, and rewarded the Graduate on Time (GoT) Award in 2019. I deeply researched on nano-planar TeraHertz device, mostly involved in simulation and modelling of devices. I continued to be a senior lecturer in UniMAP after graduated, and</p>				

had secured a grant from the ministry in this area:

1. High Responsivity of Planar Nano-Diodes by Using Curvature Co-Efficient Analysis for Optimal Passive RF-DC Rectification in Energy Harvesting and RFID Application in IOT, RM119,700, 01 Sept 2019 – 30 Nov 2020)

I have been awarded with Professional Technologist (Ts.) by Malaysian Board of Technology (MBOT) in 2020. Until now, I have 20 Scopus and ISI indexed publications, 37 citations, with h-index of 4. I also have experienced as a committee member in international conferences (RCCSST2010, ICED 2020, InCAPE2019, InCAPE2017) and as a reviewer in Scopus-indexed proceedings.

Publications list:

Article:

- 1) Zakaria, N.F., Kasjoo, S.R., Isa, M.M., Zailan, Z., Md Arshad, M.K. and Song, A., 2020. Improved Rectification Performance and Terahertz Detection in Hybrid Structure of Self-Switching Device (SSD) and Planar Barrier Diode (PBD) Using Two-Dimensional Device Simulation. In *Solid State Phenomena* (Vol. 301, pp. 111-117). Trans Tech Publications Ltd.
- 2) Zakaria, N.F., Kasjoo, S.R., Isa, M.M., Zailan, Z., Arshad, M.K.M. and Taking, S., 2019. Self-switching diodes as RF rectifiers: evaluation methods and current progress. *Bulletin of Electrical Engineering and Informatics*, 8(2), pp.396404.
- 3) NF Zakaria, SR Kasjoo, Z Zailan, MM Isa, MK Arshad, and S Taking, "InGaAs-based Planar Barrier Diode as Microwave Rectifier", *Japanese Journal of Applied Physics* 57(6), 2018,064101.(IF: 1.471)
- 4) NF Zakaria, SR Kasjoo, Z Zailan, MM Isa, S Taking, MKM Arshad, "Permittivity and Temperature Effects on Rectification Performance of Self-Switching Diodes with Different Geometrical Structures Using Two-Dimensional Device Simulator", *Solid-State Electronics* 138, 2017, pp 16–23

Conferences:

- 1) Zakaria, N.F., Kasjoo, S.R., Isa, M.M., Zailan, Z., Mokhar, M.B.M. and Juhari, N., 2020, January. Application of Taguchi method in optimization of structural parameters in self-switching diode to improve the rectification performance. In *AIP Conference Proceedings* (Vol. 2203, No. 1, p. 020047). AIP Publishing LLC.
- 2) Gan, Y.K., Zakaria, N.F., Mohamad, I.S. and Norizan, M.N., 2020, January. The effect of ZnO photoanode solution ageing to the performance of dye-sensitized solar cell (DSSC). In *AIP Conference Proceedings* (Vol. 2203, No. 1, p. 020048). AIP Publishing LLC.
- 3) Mokhar, M.M., Kasjoo, S.R., Juhari, N.J. and Zakaria, N.F., 2020, January. An overview of semiconductor rectifier operating in the millimeter wave and terahertz region. In *AIP Conference Proceedings* (Vol. 2203, No. 1, p. 020039). AIP Publishing LLC.
- 4) Ismail, N.A.N., Shaari, S., Juhari, N., Sabani, N., Ahmad, M.F. and Zakaria, N.F., 2020, May. Temperature effects on electrical and structural properties of MEH-PPV/PEIE OLED Device. In *Journal of Physics: Conference Series* (Vol.

1535, No. 1, p. 012020). IOP Publishing.

- 5) Norhisamudin, N.A., Sabani, N., Rosli, N., Ahmad, M.F., Juhari, N., Shaari, S. and Zakaria, N.F., 2020, January. The efficiency effect of dye sensitized solar cell using different ratio of organic polymer doped titanium dioxide at different annealing process temperature. In AIP Conference Proceedings (Vol. 2203, No. 1, p. 020052). AIP Publishing LLC.
- 6) Ismail, N.A.N., Shaari, S., Juhari, N., Sabani, N., Ahmad, M.F. and Zakaria, N.F., 2020, January. The effect of solvents on the performance of organic light-emitting diodes. In AIP Conference Proceedings (Vol. 2203, No. 1, p. 020051). AIP Publishing LLC.
- 7) Ismail, N.A.N., Shaari, S., Juhari, N., Sabani, N., Ahmad, M.F. and Zakaria, N.F., 2020, January. The effect of solvents on the performance of organic light-emitting diodes. In AIP Conference Proceedings (Vol. 2203, No. 1, p. 020051). AIP Publishing LLC.
- 8) Kasjoo, S.R., Mokhar, M.M., Zakaria, N.F. and Juhari, N.J., 2020, January. A brief overview of detectors used for terahertz imaging systems. In AIP Conference Proceedings (Vol. 2203, No. 1, p. 020020). AIP Publishing LLC.
- 9) Zarimawaty Zailan, Shahrir Rizal Kasjoo, Nor Farhani Zakaria, Muammar Mohamad Isa, Mohd Khairuddin Md Arshad and Sanna Taking, "Simulation of Unipolar Planar Device with Asymmetrical Barrier Profile: A Planar Barrier Diode", AIP Conference Proceedings 1885, 020239 (2017)
- 10) Shahrir Rizal Kasjoo, Zarimawaty Zailan, Nor Farhani Zakaria, Muammar Mohamad Isa, Mohd Khairuddin Md Arshad and Sanna Taking, "An overview of selfswitching diode rectifiers using green materials", AIP Conference Proceedings 1885, 020257 (2017)
- 11) N. F. Zakaria, S. R. Kasjoo, Z. Zailan, M. M. Isa, M. K. M. Arshad and S. Taking, "Rectification performance of self-switching diode in various geometries using ATLAS simulator", 3rd International Conference on Electronic Design (ICED), Phuket, 2016, pp 361-364.
- 12) N. F. Zakaria, Z. Zailan, M. M. Isa, S. Taking, M. K. M. Arshad and S. R. Kasjoo, "Permittivity and temperature effects to rectification performance of self-switching device using two-dimensional simulation," 2016 5th International Symposium on Next-Generation Electronics (ISNE), Hsinchu, 2016, pp. 1-2.
- 13) N.F. Zakaria, S.R. Kasjoo, and M.M. Isa, "Electrical Characterization and Rectification Performance of 5 nm Trench Self-Switching Diodes", 7th International Conference On Postgraduate Education (ICPE), 2016, pp 570 – 576
- 14) Zarimawaty Zailan, Nor Farhani Zakaria, Muammar Mohamad Isa, Sanna Taking, Mohd Khairuddin Md Arshad and Shahrir Rizal Kasjoo, "Characterization of selfswitching diodes as microwave rectifiers using ATLAS simulator," 2016 5th International Symposium on NextGeneration Electronics (ISNE), Hsinchu, 2016, pp. 1-2.
- 15) Zarimawaty Zailan, Shahrir Rizal Kasjoo, Nor Farhani Zakaria, Muammar Mohamad Isa, Mohd Khairuddin Md Arshad and Sanna Taking, "Rectification performance of self-switching diodes in silicon substrate using device simulator" 3rd International Conference on Electronic Design (ICED), Phuket, 2016, pp 373376.

- 16) Nor Farhani and Terumi Nobuyosi, "Interstitial Volume Characteristic of Integrated Fiber Type SMA Actuator", Optics & Photonics Japan (OPJ) Annual Academic Meeting, 24pE7, Oct 2012
- 17) Nor Farhani and Terumi Nobuyosi "Capacitance Calculation for Integrated Fiber Type SMA Actuator," Proceedings of 63rd IEICE Chugoku Branch Conference, Oct 2012.
- 18) Nor Farhani, and Terumi Nobuyoshi "Electrical Characteristics of SMA fiber for Optical Fiber Switch Applications, Proceedings of 62nd IEICE Chugoku Branch Conference, pp. 325, Oct 2011.
- 19) N.F. Zakaria, S. Mitachi, N.S. Ismail, S. Shaari, "Optical Response and Regeneration of retinal as a photoreceptive material", POP;S3/8, 25th RSCSST, 2009
- 20) N.S. Ismail, M.F. Mansor, N.F. Zakaria, S. Shaari, "Effects of Trench Depth and Epitaxial Thickness in Breakdown Voltage and Specific On-Resistance for Trench Power MOSFET", PTS;S3/6, 25th RSCSST, 2009
- 21) Nor Farhani and Seiko Mitachi, "Optical Response of Photo-receptive Device using Retinal and Their Molecular Orbital Analysis", 27pV2, 54th JSAP, 2007.
- 22) Seiko Mitachi, Nor Farhani, "Regeneration of Photo-receptive Device using Retinal", 24pI9, 53rd JSAP, 2006

*****All the columns need to be filled in