



Nurul Najihah Binti Ishak

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EDUCATIONS

M.Phil. of Electrical Engineering, Universiti Teknologi Malaysia

Degree Mark : Pass with Minor Correction (B1)

Skudai, Johor

November 2023

M.Phil. Dissertation : Post-Modification of Facile Hydrothermal Titanium Dioxide Nanoflower for Dye-Sensitized Solar Cell

Bachelor (Hons) of Telecommunication Engineering, UniKL British Malaysian Institute

Cumulative GPA : 3.31

Gombak, Selangor

July 2020

Final Year Project : The Development of Home Automation Systems using Voice Activation

Diploma of Telecommunication Engineering, UniKL British Malaysian Institute

Cumulative GPA : 3.51

Gombak, Selangor

October 2017

Final Year Project: Development of Electronic Pigeon Hole Notification Systems

Sijil Pelajaran Malaysia, Maktab Rendah Sains MARA

Bahasa Malaysia (A+), Bahasa Inggeris (B), Pendidikan Islam (A), Sejarah (A+),

Matematik (A+), Matematik Tambahan (A-), Fizik (A-), Kimia (B+), Biologi (A-)

Batu Pahat, Johor

2013

PUBLICATIONS

- **N. N. Ishak**, N. Nayan, M. M. Ikhsan Megat Hasnan, M. Nafea, Y. M. Yunos and M. S. Mohamed Ali, "Nanothorn Photoanodes: A New Approach for Efficiency Enhancement in Dye-Sensitized Solar Cells," 2023 IEEE 23rd International Conference on Nanotechnology (NANO), Jeju City, Korea, Republic of, 2023, pp. 893-898, doi: 10.1109/NANO58406.2023.10231264.
- **N. N. Ishak**, N. Nayan, M. M. I. Megat Hasnan, N. K. Abd Hamed, Y. Md Yunos, and M. S. Mohamed Ali, "SrSnO₃ Perovskite post-deposition on Ag-doped TiO₂ rutile nanoflower for optoelectronic application," Mater. Chem. Phys., vol. 301, no. February, 2023, doi: 10.1016/j.matchemphys.2023.127608.
- **Ishak, N. N.**, Ali, M. S. M., Nayan, N., Hasnan, M. M. I. M., Othman, N. A., Ahmad, M. K., ... & Fazli, F. I. M. (2023, October). Investigation of GaN-AlN-TiO₂ nanoflower photoanode for dye-sensitized solar cell application. In AIP Conference Proceedings (Vol. 2564, No. 1). AIP Publishing. doi:10.1063/5.0124193
- **Ishak, N. N.**, Mohamed Ali, M. S., Nayan, N., M. M. I. Megat Hasnan, N. K. Abd Hamed and Ahmad, M. K. (2021). Performance Evaluation of Ag Doped TiO₂ Nanoflowers in Dye-sensitized Solar Cell. ELEKTRIKA- Journal of Electrical Engineering, 20(2-2), 41–48. Retrieved from https://elektrika.utm.my/index.php/ELEKTRIKA_Journal/article/view/306, (MYCITE, MyJurnal, UDLEDGE, Google Scholar Indexed)
- **Ishak, N. N.**, Nayan, N., Ali, M. S. M., Hasnan, M. M. I. M., Ahmad, M. K., Mustafa, M. K., ... & Mamat, M. H. (2021). Nano-Embedded High Performance Non-Toxic Solar Cell. *Science Proceedings Series*, 4(1), 42-46.
- **Ishak, N. N.**, (2019). The Development of Home Automation Systems using Voice Activation. Retrieved from <http://ir.unikl.edu.my/jspui/handle/123456789/23286>.

SELF-DEVELOPMENT AND VOLUNTEERISM

- Get an invitation for sharing sessions from various universities including UPSI, UIA, UniKL and NGOs
- Active in volunteering with NGOs: Pertubuhan IKRAM Malaysia, Mercy Mission Malaysia, Hidayah Center Foundation and Persatuan Belia Harmoni Malaysia.
- Para Lawn Bowl OKU Negeri Johor (Disability : Dwarfism)
- Vice-Chairman of STEM Exploration : Light Your DSSC of IEEE UTHM Student Branch, 2022

- Session Chair during IEEE Student Conference on Research and Development (SCOREd) 2020
- International Buddies Exchange Mobilities Programme with Mercu Buana University, Yogyakarta, 2019
- Pra-Humanitarian Mission to Philippines, 2019

CONFERENCE PRESENTATION AND EXPERIENCE

- Oral presentation, “Nanothorn Photoanodes: A New Approach for Efficiency Enhancement in Dye-Sensitized Solar Cells”, Institute of Electrical and Electronics Engineers (IEEE) of Nanotechnology, 2-5 July 2023, South Korea.
- Oral presentation, “Effect crystallinity of $\text{TiO}_2/\text{Ag}/\text{SrSnO}_3$ for conductivity photoanode DSSC”, 2nd International Conference on Semiconductor Materials and Technology (ICOSEMT), 8-9 November 2021, Universiti Sains Malaysia.
- Oral presentation, “Nano-Embedded High-Performance Non-Toxic Solar Cell”, Asia International Innovation Exhibition, 15th – 17th October 2021, Kuala Lumpur, Malaysia.
- Poster presentation, “Dye-Sensitized Solar Cell (DSSC) Module Kit for School Exploration”, International Research and Innovation Symposium and Exposition (RISE), 13-20 October 2021, Universiti Tun Hussein Onn Malaysia
- STEM Exploration, “Exploring DSSC”, 3 August 2022, Sekolah Menengah Kebangsaan Seri Gading, Batu Pahat
- Critical Thinking Workshop learning with student Form 1- 5 (SBP Tapah, SBP Muzaffar Shah SBPI Jempol, MRSM)
- Volunteering teaching under the organization Play and Pray, Mercy Mission Malaysia

PROFESSIONAL CERTIFICATES

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| • Engineering Technologist – Graduate, No. T19465 (Applied: Telecommunication) | Malaysia Board of Technologist |
| • CCNA Routing and Switching | CISCO Networking Academy |
| • IBM Cybersecurity Analyst | IBM |
| • Introduction To Windows Server Administration | Alison Online Learning |
| • Palo Alto Network Academy Cybersecurity | Palo Alto-Coursera |
| • Interpersonal And Human Relations | Enerscorp International LLC |

PROFESSIONAL EXPERIENCE

Graphic Designer Freelance

2017 – Present

- Create designs for a variety of projects, such as posters, logos, marketing materials and print collateral.
- Work with clients to understand their needs and create designs that meet their requirements.
- Developed a variety of design software to create designs, such as Adobe Photoshop and Illustrator
- Stay up-to-date on design trends and techniques.
- Meet deadlines and deliver high-quality work.

Research Assistant, Universiti Tun Hussein Onn Malaysia

October 2020 – December 2022

- Accomplished Prototype Research Grant Scheme (PRGS) VOT K256 (Affordable and Reconfigurable Dye-Sensitized Solar Cell module for STEM Exploration) under the supervision of the principal researcher.
- Conduct literature reviews on the research topics.
- Prepare research materials for publication, such as manuscripts and presentations.
- Assist with research projects by performing experiments, collecting data, and analyzing results.
- Write reports on the progress of research projects.
- Attending research meetings and conferences.
- Other duties as assigned by the principal researcher.

Degree Internship Trainee, Telekom Malaysia Berhad (Branch: Batu Pahat)

January 2020 – July 2020

- Experience in maintaining Optical Line Termination (OLT), Optical Distribution Frame (ODF), Fiber Distribution Frame (FDF), Fiber Distribution Cabinet (FDC).
- Experience in maintaining Direct Exchange Line (DEL) and Streamyx at Main Distribution Frame (MDF) and Business as Usual (BAU).
- Experience in maintaining Network Integrated Division (NID), EPE Transmission system, Dense Wavelength Division Multiplexing (DWDM), Metro-E.
- Experience in using Optical Time-Domain Reflectometer (OTDR), Power Meter, Fiber Optic Visual Fault Locator.
- Experience in Civil duct (cable duct pipe and galvanized iron duct).
- Experience in Site Survey Migration Unifi and Documentation.

Diploma Internship Trainee, See Chuan Seng Multimedia Sdn. Bhd

August 2016 – December 2016

- Report on Sales and Marketing performance.
- Develop and implement marketing campaigns,
- Build and maintain relationships with customers.
- Designed for poster promotion for the product.

AWARDS AND PRIZES

- Bronze Medal, Lawn bowl OKU Singles National Tournament, 11-13 November 2023
- TOP 3 Young Disabilities Challenge by Kementerian Pengajian Tinggi Malaysia (2021)
- Best Oral Presenter, “Effect crystallinity of $\text{TiO}_2/\text{Ag}/\text{SrSnO}_3$ for conductivity photoanode DSSC” 2nd International Conference on Semiconductor Materials and Technology (ICOSEMT), 8 & 9 November 2021.
- Silver Award, “Nano-Embedded High-Performance Non-Toxic Solar Cell”, Asia International Innovation Exhibition, 15th – 17th October 2021.
- Silver Award, Virtual International Research and Innovation Symposium and Exposition (RISE), 2021 at UTHM
- Best Paper Award, “Performance Evaluation of Ag Doped TiO_2 Nanoflowers in Dye-sensitized Solar Cell”, International Conference on Electronics, Instrumentation and Devices (ICEID), 24TH June 2021
- Bronze Medal 9th MIU Final Year Project Competition 2019 – compete 13 campus UniKL in Malaysia
- TOP 5 Final Year Project UniKL BMI 2019. “The Development Home Automation System using Voice Activation”
- The Promising Leadership of the Year 2015, UniKL British Malaysian Institute
- Best Facilitator Welcoming Orientation 2015, UniKL British Malaysian Institute
- Ambassador Nano Technology Malaysia 2012, Kementerian Sains, Teknologi dan Inovasi (MOSTI)
- PMR Johor State Excellent Award 2011 – The award was received by the Ministry of Education Johor
- Best Student Leader SMK (P) Temenggong Ibrahim, Batu Pahat 2011

REFEREES

Assoc. Prof. Ir. Ts. Dr. Mohamed Sultan Bin Mohamed Ali, M.Phil Supervisor,
Faculty of Electrical Engineering, Universiti Teknologi Malaysia, Skudai.
Tel : +6019 7550201
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Prof. Dr. Nafarizal Bin Nayan, M.Phil Co-Supervisor,
Director at Research Management Centre (RMC), Universiti Tun Hussein Onn, Malaysia.
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